

***PHASE II ENVIRONMENTAL
SITE ASSESSMENT REPORT***

***Williams & Russell Development
City Block Northwest of the Intersection of N Williams Avenue and
N Russell Street
Portland, Oregon 97227***

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Prepared For:

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1. EXECUTIVE SUMMARY

Coles + Betts Environmental Consulting, LLC (C+BEC) was retained by Prosper Portland to perform a Phase I Environmental Site Assessment (ESA) per ASTM Standard E1527-13 for the Williams and Russell Property (the “Property” herein). The Phase I ESA identified historical commercial and industrial activities of concern on the Property, including a gas station, insect powder manufacturer, paints and wallpaper, tinning and dry cleaners; former underground storage tanks (USTs) associated with the gas station; and heating oil tanks associated with the commercial/industrial buildings and residences. Historical off-site land uses, including a service station, cleaners and dyeing, and electroplating, have the potential to impact soil vapor on the Property.

A Phase II ESA investigation on the Property was completed to address the items of environmental concern identified in the Phase I ESA. The Phase II ESA investigation activities included (1) a geophysical survey to identify USTs - no such evidence was found, and (2) soil and soil vapor sampling. Soil testing did not encounter significant contamination in the areas of environmental concern. Contamination was not identified in soil vapor samples.

Fill material was encountered in shallow soils across the entire Property, and to depths of approximately 8 feet and 12 feet on the east side of the block. The fill material consisted of silts with small pieces of brick, glass, and burnt wood fragments. Laboratory testing indicate the majority of the fill material exceeds Oregon Department of Environmental Quality (DEQ) Clean Fill Criteria and/or applicable screening levels, which would require disposal at a Subtitle D landfill (e.g., Waste Management’s Hillsboro Landfill) if removed from the site during future redevelopment.

Prior to redevelopment, C+BEC recommends a Contaminated Media Management Plan (CMMP) be prepared that protects the health and safety of construction and excavation workers and describes how to manage contaminated media. C+BEC also recommends a contingency budget be set aside prior to construction to address contaminated soils and/or fill material, as well as unforeseen features that could be encountered during redevelopment such as construction and demolition materials that may contain asbestos, USTs, drywells and old privy pits. It may be prudent to conduct confirmatory sampling after excavation activities to document soil conditions, and to install a vapor mitigation system in the new building. Obtaining a No Further Action (NFA) letter from DEQ’s Independent Cleanup Program or Voluntary Cleanup Program is also recommended, as is a geotechnical evaluation to address the fill materials on the Property.

2. INTRODUCTION

Coles + Betts Environmental Consulting, LLC (C+BEC) was retained by Prosper Portland (the Client) to perform a Phase II Environmental Site Assessment (ESA) for the vacant city block located northwest of the intersection of N Williams Avenue and N Russell Street, Portland, Multnomah County, Oregon (the “Subject Property” or “Property” herein) (Figures 1 and 2). The Phase II ESA investigation addressed the Recognized Environmental Condition (REC) for the Property as listed in the 2020 Phase I ESA Report prepared by C+BEC¹:

REC #1: Historical land uses on the Subject Property, including former automobile service station, dry cleaners, cattle and insect powder manufacturing, paints and wallpaper, tinning, and manufacturing operations, may have impacted near surface soils with solvents, pesticides, petroleum hydrocarbons and metals. Underground storage tanks associated with the former commercial and industrial activities, including the former service station, and heating oil underground storage tanks associated with the former residences and commercial buildings may also be present on the Property.

REC #2: Historical land uses on adjoining properties have the potential to impact soil vapor at the Subject Property. Adjacent operations of concern include cleaners and dyeing, electroplating, wallpaper and paints to the north; paints and laundry to the east; automobile repair and paint shop, scrap metal, and machine shop to the south; and a photo shop, auto body shop, and auto service station to the west, and businesses with underground storage tanks.

Recommendation: Complete a geophysical survey to identify any tanks or suspected underground storage tank locations and the extent of fill, if present (e.g., filled-in basement or fill placed across the Property). A general characterization of the Subject Property should also be conducted to identify risks associated with potential contamination of soil and soil vapor from underground storage tanks and historical practices. If underground storage tanks are on the Property, they are required to be decommissioned per Oregon Department of Environmental Quality (DEQ) standards. If drywells are located, they will also require characterization, decommissioning and/or registration. Pending the findings of the geophysical survey and the site investigation activities, a soil vapor survey may be required.

A Phase II ESA is intended to provide a general evaluation of overall site conditions and is not an exhaustive investigation to find and define the nature and extent of all potential contamination across the Property. The Williams & Russell development Phase II ESA activities were designed to investigate the RECs listed above, and to see if there is any associated, extensive contamination on the Property. The Phase II ESA activities include: (a) determining whether underground storage tanks (USTs), drywells or fill materials are present on

¹ Phase I Environmental Site Assessment Report, Williams & Russell Development, City Block Northwest of the Intersection of N. Williams Avenue and N. Russell Street, Portland, Oregon 97227 by C+BEC, dated July 23, 2020.

the Property, (b) documenting whether historical on- and off-site practices have impacted the soil and/or soil vapor on the Property, (c) determining whether contamination is present above the appropriate DEQ risk-based concentrations (RBCs) for future excavation and construction workers, and future building occupants, and (d) determining whether soil disturbed during future site redevelopment activities requires disposal at a regulated landfill. The findings of the Phase II ESA investigation are discussed herein.

3. INVESTIGATION ACTIVITIES

The Phase II ESA geophysical survey activities were completed on August 20 and 21, 2020, and the drilling and sampling activities were completed on December 7 and 8, 2020. These activities are described below.

3.1 Geophysical Survey Activities

The geophysical survey included the Property, the adjacent sidewalks and the southern half of N Knott Street from the curb to the northern parking lines. The geophysicists, Pacific Geophysics from Portland, Oregon, completed a magnetic survey and a ground penetrating radar (GPR) survey across the Property. Due to magnetic interference from some metallic street signs, bollards, and utility poles, the magnetic survey may have missed a small tank adjacent to these objects. The Property was traversed along survey lines set five feet apart for the GPR survey. The data quality allowed detection of features within the top 2 to 3 feet below ground surface (bgs).

Pacific Geophysics did not find evidence of USTs or drywells. Several large “flat” zones were detected just below the ground surface and they may be remnants of slab building floors. One disturbed soil zone was detected, and it may be associated with a former excavation. They did not appear to contain metal. C+BEC prepared a Property map that shows items of environmental concern with an overlay of the geophysical survey results (see Figure 2). The geophysical survey report is in Appendix A.

3.2 Drilling and Sampling Activities

Cascade Technical Services, LLC of Portland, Oregon, advanced 25 borings (B1 through B25) on the Property on December 7 and 8, 2020. The borings’ locations were spaced at regular intervals throughout the Property based on historical building locations, at down-gradient locations relative to adjacent contaminated sites, and at locations where fill material was encountered so that the Phase II ESA soil data may be used to guide soil and fill disposal or clean fill characterization. The locations of all 25 borings are indicated in Figure 2.

The borings B1 (by the former gas station), and B15 and B13 (by the former dry cleaners and print shop at the southeast corner) were installed up to 20 feet bgs. The borings B8 (by a GPR

anomaly), B16 and B20 (by former steam heater locations), and B17 (by the cleaner manufacturer) were installed up to 15 feet bgs. Except for borings B2 and B3, the remainder of the borings were installed up to 10 feet bgs. The boring depths, descriptions of the soil and/or fill material encountered, and field screening observations (odor, discoloration, and/or photoionization [PID] readings) are summarized in the table below. The discrepancy between the total depth drilled and the deepest sample depths are due to incomplete sample recovery (e.g., B1 was installed to 20 feet bgs, but media descriptions are to 19 feet bgs). Groundwater was not encountered during drilling activities.

Boring	Depth of Media (feet bgs)	Odor	Sheen	Discoloration	PID Reading (ppm)	Fill Material Observations
B1	0.0-1.5 Fill 1.5-15.8 Silt 15.8-16.3 Silty Sand 16.3-19.0 Silty Sand	- - - -	- - - -	- - - -	- - - -	Fill is silt with gravel
B2	0.0-0.5 Fill 0.5-4 Silty Sand	- -	- -	- -	- -	Fill is silt
B3	0.0-1.2 Fill 1.2-4.0 Sandy Silt 4.0-5.0 Silty Sand	- - -	- - -	- - -	- - -	Fill is silt
B4	0.0-2.0 Fill 2.0-8.0 Silt	- -	- -	- -	- -	Fill is gravel with silt
B5	0.0-2.5 Fill 2.5-9.0 Silty Sand	- -	- -	- -	- -	Fill is silt with brick, burnt wood
B6	0.0-1.7 Fill 1.7-5.0 Silt 6.0-8.5 Silty Sand	- - -	- - -	- - -	0.1 - 3.6 - -	Fill is silt with concrete
B7	0.0-0.4 Fill 0.4-2.5 Sandy Silt 2.5-9.5 Silty Sand	- - -	- - -	- - -	- - -	Fill is sandy silt with gravel
B8	0.0-4.0 Fill 5.0-9.5 Silt Sand	- -	- -	- -	- -	Fill is silt with concrete, brick, sand, wood debris
B9	0.0-1.4 Fill 1.4-7.5 Silty Sand	- -	- -	Dark Gray -	- -	Fill is silt with brick, gravel
B10	0.0-2.0 Fill 2.0-9.0 Silty Sandy	- -	- -	- -	- -	Fill is silt with brick, concrete
B11	0.0-1.5 Fill 1.5-5.0 Silt 5.0-8.0 Silty Sand	- - -	- - -	- - -	- - -	Fill is silt with sand, wood
B12	0.0-3.0 Fill 5.0-9.0 Silty Sand	- -	- -	Black -	- -	Fill is silt with black sandy material, brick, white material
B13	0.0-8.4 Fill 8.4-19.5 Silty Sand	- -	- -	- -	- -	Fill is silt with brick, concrete, black sandy material, wood debris

Boring	Depth of Media (feet bgs)	Odor	Sheen	Discoloration	PID Reading (ppm)	Fill Material Observations
B14	0.0-8.2 Fill 8.2-9.5 Silty Sand	- -	- -	Black -	- -	Fill is silt with gravel, coarse sand, coarse black sandy material, brick
B15	0.0-9.0 Fill 9.0-18.5 Silty Sand 18.5-19.0 Sandy Silt	- - -	- - -	Gray (7.5-8.5) - -	- - -	Fill is silt and clayey silt with gravel, glass, brick. Charcoal at 8.5 ft
B16	0.0-8.0 Fill 9.0-10.0 Concrete 10.0-14.0 Silty Sand	- - -	- - -	Gray (5.5-6.5) - -	- - -	Fill is silt with glass, brick, concrete, gravel
B17	0.0-11.5 Fill 11.5-11.8 Concrete 11.8-15.0	- - -	- - -	Gray 7.1-7.4 - -	- - -	Fill is silt with ceramic pieces, sand, crushed concrete
B18	0.0-5.5 Fill 5.5-9.5 Silty Sand	- -	- -	- -	8.0 -	Fill is silt
B19	0.0-12.0 Fill 12.0-15.0 Silty Sand	- -	- -	Dark Gray (5.5 to 12) -	1.0 -	Fill is silt with metal pieces at 3 ft, minor brick fragments, charred wood and ceramic pieces
B20	0.0-12.0 Fill 12.0-14 Silty Sand	- -	- -	- -	- -	Fill is silt with charred wood debris at 7.5 ft and gravel at 9.8 ft.
B21	0.5-6.5 Fill 6.5-9.0 Silty Sand	- -	- -	- -	- -	Fill is silty sand
B22	0.0-6.3 Fill 6.3 to 9.5 Silty Sand	- -	- -	- -	- -	Fill is silty sand, inch of white powder/ mortar at 9 inches bgs
B23	0.5-5.5 Fill 5.5-9 Silty Sand	- -	- -	- -	- -	Fill is brown silty sand
B24	0.0-5.5 Fill 5.5-9.5 Silty Sand	- -	- -	- -	- -	Fill is silt with gravel, includes brick, mortar, burned wood
B25	0.0-6.0 Fill 6.0-9.0 Silty Sand	- -	- -	- -	- -	Fill is silty sand

Note: “-” indicates not observed. For PID reading, “-” indicates a reading of 0.0 ppm.

Fill material was encountered across the Property as follows:

- On the east side of the block between approximately 8 feet bgs at the southeast corner of the Property and up to 12 feet bgs at the east central and northeastern portions of the Property. The fill material consisted of silt/silty sand/sandy silt with small pieces of brick, glass, ceramic material and burnt wood fragments. There was a presumed

concrete floor at 11.5 to 12 feet below ground surface on the eastern portion of the site (at boring B17), with fill material above the “floor”;

- Fill material encountered to approximately 5.5 feet bgs in the northwest corner of the Property was silt with gravel, with pieces of brick, metal, mortar and burned wood;
- Fill material on the north central portion of the Property, ranging between approximately 0.5 and 6.5 feet bgs, consisted of mostly silt or silty sand with fragments of burned wood, mortar, brick, concrete, glass and gravel; and
- Fill material encountered to approximately 4 feet bgs on the southwestern- and southcentral-portions of the Property was silt, silt with gravel, with pieces of brick, burned wood, concrete, wood debris, black sandy material, and white material.

Herein, soil samples refer to both fill material and native soil samples collected during drilling and sampling activities unless otherwise indicated. Soil samples were collected from each boring at approximate five-foot intervals as recovery allowed, from soils/fill material exhibiting field screening evidence of contamination, and/or from intervals with “worst case” evidence of contamination. Soil samples submitted for gasoline and/or solvent analyses were collected with syringes and placed into preserved vials by U.S. Environmental Protection Agency (EPA) Method 5035A.

Three subsurface vapor points were installed within the footprint of the former dry cleaners and former gas station to characterize subsurface conditions (Figure 2). Temporary soil vapor sampling points were installed in soil borings completed 5 feet below ground surface (bgs) using a direct-push drill rig. The vapor points were constructed using dedicated stainless-steel vapor tips connected to Teflon tubing. Three soil vapor samples were collected from the temporary subsurface vapor points using 1-liter, negative pressure stainless-steel canisters affixed with a flow control regulator (i.e., SUMMA canisters).

Soil sampling equipment was decontaminated between each boring. New nitrile gloves were used for each sampling location and disposed of off-site in the municipal trash. Disposable sampling equipment used for soil vapor sampling was also disposed of off-site in the municipal trash.

4. ANALYTICAL LABORATORY ANALYSES

4.1 Soil Analyses

Soils selected for laboratory analyses were based on field screening observations and PID readings, depth, fill content, and proximity to areas of concern, with the goal of the analyses to determine the soil characterization and disposal requirements, and whether there are any risk to future construction and excavation workers or Property occupants. The soils in all areas of

concern were not automatically submitted for laboratory analyses. Only soils that exhibited field evidence of contamination (e.g., discoloration, evidence of fill material) were analyzed. For example, soils at depth at the former steam heaters at borings B9 and B20 were not analyzed because they did not exhibit field evidence of contamination from a petroleum release (odor, discoloration, and/or sheen); while the shallow soils at these locations were analyzed because they contained fill material and required characterization for contaminants of concern and disposal.

Shallow soils in the upper 3.5 feet bgs consisted of fill material across the entire Property and individual soil samples were composited into six composite groups (C001 through C006) by the laboratory as directed by C+BEC. The individual samples selected for each composite group were selected by their locations relative to areas of environmental concern and on their similar characteristics as follows:

Composite Group	Sample(s) Within the Composite Group
C001	B24 1.5-2.9
C002	B25 0.5-1, B7 0.5-1, B23 2-2.5, B22 3-3.5, B21 1-2, and B18 0.5-1.5
C003	B1 3-3.5, B5 0.5-1, B6 0.5-1, B2 0.5-1, B9 0.5-1, and B10 2-2.5
C004	B8 1-1.5, B11 1-1.5, and B12 1-1.5
C005	B17 0.5-1.5 and B20 0.7-1.5
C006	B13 1-2, B14 0.5-1, and B15 0.5-1

The composite groups' areas' boundaries are indicated on Figure 3.

The soil samples were submitted to Apex Labs of Tigard, Oregon, for analysis as follows:

- Gasoline-range petroleum hydrocarbons by Method NWTPH-Gx;
- Diesel- and oil-range petroleum hydrocarbons by Method NWTPH-Dx; and
 - If diesel- and/or oil-range petroleum hydrocarbons are detected, "worst case" soil samples were be analyzed for:
 - Polychlorinated biphenyls (PCBs) by EPA Method 8082A/or
 - Semivolatile Organic Compounds (SVOCs) by EPA Method 8270E.
- Volatile Organic Compounds (VOCs) by EPA Method 8260C;
- Total Resource Conservation and Recovery Act (RCRA)-8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) by EPA Method 6010; and
- Organochlorine pesticides by EPA Method 8081B; and

The table below summarizes the analyses completed for each boring location and the area of concern the boring is located within or adjacent to, and the analyses completed for each composite group.

Sample Location	Analyses						
	Gx	Dx	VOCs	RCRA-8	PCBs	SVOCs	Chlorinated Pesticides
Former Gas Station							
B1	X		X				
Former Insect Power Manufacturer							
B4	X		X				X
B5	X		X				
Former Paints & Wallpaper Store, Warehouse, Storage, and Shop							
B5	X		X				
B6	X		X				
Geophysical Survey Flat Reflector, GPR Anomaly, or Disturbed Soil Zone							
B10	X		X	X			
B12	X	X	X	X			
B13	X	X	X	Lead only			
Former Dry Cleaners							
B13	X	X	X	Lead only			
B14	X		X				
Geophysical Survey Flat Reflector and Former Print Shop							
B15	X	X	X	X			
B16		X		X			
Former Steam Heater							
B16		X		X			
Former Cleaner Manufacturer							
B17	X	X	X	X			
B18		X					
Former Cleaner Manufacturer							
B19	X	X	X	X			
Composite Groups							
C001		X		X	X	X	
C002		X		X			
C003		X		X			
C004		X		X	X	X	
C005		X		X			
C006		X		X			

4.2 Soil Vapor Analyses

The three soil vapor samples were submitted to Friedman & Bruya in Seattle, Washington, for analysis of VOCs by EPA Method TO-15.

5. ANALYTICAL TESTING RESULTS

The soil analytical testing results are summarized in Table 1, and the soil vapor testing results are summarized in Table 2. Locations where soils exceeded DEQ RBCs and DEQ Clean Fill Criteria are indicated on Figure 3 (shallow soils) and Figure 4 (discrete samples). The detected results in soil vapor are indicated on Figure 5. The analytical laboratory reports and chain-of-custody documentation are included in Appendix B.

Based on the proposed future use of the Property (commercial or mixed-use building), the analytical testing results were compared to the following applicable DEQ RBCs:

DEQ Regulatory Criteria	Media	
	Soil	Soil Gas
DEQ RBCs		
Soil Ingestion, Dermal Contact and Inhalation Exposure Pathway		
Urban Residential Receptor Scenario	X	
Occupational Receptor Scenario	X	
Construction Worker Receptor Scenario	X	
Excavation Worker Receptor Scenario	X	
Soil Volatilization to Outdoor Air Exposure Pathway		
Urban Residential Receptor Scenario	X	
Occupational Receptor Scenario	X	
Soil & Soil Gas Vapor Intrusion into Buildings Exposure Pathway		
Urban Residential Receptor Scenario	X	X
Occupational Receptor Scenario	X	X
Soil Leaching to Groundwater		
Urban Residential Receptor Scenario	X	
Occupational Receptor Scenario	X	
DEQ Clean Fill Criteria (includes Background Metals for the Portland Basin)	X	
RCRA Hazardous Waste Characteristic Screening Level	X	

The laboratory results are discussed herein.

5.1 Metals

RCRA-8 metals were detected above laboratory reporting limits in almost all soil samples that were analyzed for metals.

5.1.1 Metals Above DEQ RBCs

The metals detected above DEQ RBCs are arsenic and lead as follows:

- Arsenic was detected between 3.97 and 25.7 milligrams per kilogram (mg/kg) across the Property, and are above the DEQ RBCs for Soil Ingestion, Dermal Contact, and Inhalation for an urban residential (1 mg/kg), occupational (1.9 mg/kg) and/or construction worker (15 mg/kg) risk pathways. However, the majority of detected arsenic levels are below the background, or naturally occurring, arsenic concentration for the Portland Basin region of Oregon (8.8 mg/kg). Detected arsenic below 8.8 mg/kg can therefore be eliminated as locations of environmental concern for arsenic. The locations where detected arsenic levels are above background levels are shallow composite samples C001 (13.8 mg/kg) and C002 (25.7 mg/kg).

- Lead was detected in soil between 7.37 and 1,720 mg/kg. The following boring locations contained lead above DEQ RBCs for Soil Ingestion, Dermal Contact, and Inhalation for urban residential (400 mg/kg), occupational (800 mg/kg), construction worker (800 mg/kg), and excavation worker (800 mg/kg) risk pathways: B10 1-2 feet bgs (717 mg/kg) and C001 (1,720 mg/kg). Lead was also above the DEQ RBC for Leaching to Groundwater (30 mg/kg) in all borings where lead was analyzed except for B10 2-2.5 feet bgs (10.9 mg/kg), B13 8.5-9 feet bgs (8.36 mg/kg), B17 11.5-12.5 feet bgs (7.37 mg/kg) and B19 12-13 feet bgs (7.78 mg/kg).

5.1.2 Metals Above DEQ Clean Fill Criteria

The metals arsenic, cadmium, lead and mercury were detected above DEQ Clean Fill Criteria. The results are summarized below:

- Arsenic was detected above the DEQ Clean Fill Criteria of 8.8 mg/kg within composite groups C001 (13.8 mg/kg) and C002 (25.7 mg/kg).
- Cadmium was detected above the DEQ Clean Fill Criteria of 0.63 mg/kg at B10 1-2 feet bgs (3.39 mg/kg), B12 1-1.5 feet bgs (0.887 mg/kg), B17 5.5-7.5 (0.637 mg/kg), C001 (0.871 mg/kg) and C004 (0.936 mg/kg).
- Lead was detected above the DEQ Clean Fill Criteria of 27 mg/kg at B10 1-2 feet bgs (717 mg/kg), B12 1-1.5 feet bgs (227 mg/kg), B15 7.5-8.5 feet bgs (48.4 mg/kg), B16 5.5-6 feet bgs (62.5 mg/kg), B17 5.5-7.5 feet bgs (308 mg/kg), B19 6.5-7 feet bgs (102 mg/kg), and at all composite groups. The composite group lead concentrations ranged between 60.4 mg/kg within C005 and 1,720 mg/kg within C001.
- Mercury was detected above the DEQ Clean Fill Criteria of 0.23 mg/kg in B10 1-2 feet bgs (0.810 mg/kg) and in composite groups C004 (0.292 mg/kg) and C006 (1.38 mg/kg).

Chromium and barium were detected above laboratory reporting limits and are below DEQ Clean Fill Criteria. Selenium was not detected above laboratory reporting limits between 1.09 mg/kg and 1.37 mg/kg, and the laboratory reporting limits were above the DEQ Clean Fill Criteria of 0.71 mg/kg. Silver has a statewide DEQ Clean Fill Criteria value (2.6 mg/kg). The two detected silver concentrations were 0.433 mg/kg in B10 1-2 feet bgs and 0.511 mg/kg in C004, and are below the DEQ Clean Fill Criteria.

5.1.3 Toxicity Characteristic/Soil Disposal Characterization

Soil sample results that exceeded the “20 times rule”, where the total metal’s concentration exceeds twenty times the toxicity characteristic for hazardous waste as defined by 40 CFR 261.24, were submitted for follow up analysis for toxicity characteristic leaching potential (TCLP) by EPA Method 6020/1311 to determine if the material is hazardous. The following seven soil samples selected for TCLP lead analyses were selected because of their maximum concentration, and/or because they are representative of the “worst case” contamination that would potentially be encountered during site redevelopment activities:

- B10 1-2 feet bgs
- B12 1-1.5 feet bgs
- B17 5.5-7.5 feet bgs
- B19 6.5-7 feet bgs
- C001
- C004
- C006

The data for the seven samples indicate the TCLP concentrations were either not detected above laboratory reporting limits, or were between 0.0668 milligram per liter (mg/L) and 0.994 mg/L, well below lead’s toxicity characteristic limit of 5.0 mg/L.

5.1.4 Summary of Metals Results

Based on the above, the DEQ RBCs for Soil Ingestion, Dermal Contact, and Inhalation for urban residential, occupational, construction worker and excavation worker for lead and/or arsenic were exceeded at C001, C002 and B10. The DEQ RBC for Leaching to Groundwater was exceeded at almost all locations except B10, B13, B17 and B19. The detected arsenic, cadmium, lead and mercury in the soil are above DEQ Clean Fill Criteria at the following locations:

- Arsenic in shallow soils at C001 and C002,
- Cadmium in shallow soils at B10, B12, B17, C001 and C004,
- Lead in shallow soils at B10, B12 and all composite groups (C001 through C006), and in deeper soils at B15, B16, B17 and B19, and
- Mercury in shallow soils at B10 and in composite groups C004 and C006.

Selenium laboratory detection limits exceed DEQ Clean Fill Criteria across the Property, and may exceed this DEQ criteria.

Furthermore, the TCLP lead data indicate the soil is non-hazardous, and excavated soils do not require disposal as a hazardous waste.

5.2 Organochlorine Pesticides

Organochlorine pesticides were not detected above laboratory reporting limits at the former cattle and insect powder manufacturing and storage (boring location B4).

5.3 VOCs

5.3.1 Soil VOC Results

The VOC naphthalene (a petroleum constituent) was the only VOC detected above laboratory reporting limits in soil at 0.439 mg/kg in boring B12 1 to 1.5 feet bgs.

5.3.1.1 Soil VOCs Above DEQ RBCs

The VOC naphthalene detection is above the DEQ RBCs for Soil Leaching to Groundwater for the urban residential (0.37 mg/kg) and occupational (0.34 mg/kg) exposure scenarios.

5.3.1.2 Soil VOCs Above DEQ Clean Fill Criteria

The laboratory reporting limits for the VOC naphthalene in all analyzed soil samples were between 0.118 mg/kg and 0.128 mg/kg, and the detected VOC naphthalene (0.439 mg/kg) are all above the DEQ Clean Fill Criteria (0.077 mg/kg).

5.3.1.3 Summary of Soil VOCs Results

Based on the above, naphthalene at B12 1 to 1.5 feet bgs exceeds DEQ Clean Fill Criteria and DEQ RBCs for Leaching to Groundwater for urban residential and occupational exposure. VOCs likely exceed naphthalene DEQ Clean Fill Criteria in fill materials on the eastern portion of the site between approximately 5.5 and 8.5 feet bgs in the vicinity of borings B15, B17 and B19.

5.3.2 Soil Vapor VOC Results

Soil vapor data detected numerous VOCs above laboratory reporting limits at all three soil gas sampling locations above laboratory reporting limits. All detected VOCs were well below their respective DEQ RBCs. The detected VOCs that do not have DEQ RBCs are consistent with soil vapor data collected at former industrial / commercial sites. The 2-

Propanol detections were flagged as exceeding the valid instrument calibration range, and is reported as an estimate. Isopropanol (2-Propanol) was used as a tracer gas for leak detection and while the results indicated leaks at sample connections, the reported VOC detections in the samples did not indicate the presence of gross contamination. Soil vapor data at each of the sample locations is indicated in Figure 5.

Based on these data, VOCs in soil vapor are not of environmental concern on the Property.

5.4 Total Petroleum Hydrocarbons

Gasoline-range and diesel-range petroleum hydrocarbons were not detected above laboratory reporting limits. The detected oil-range petroleum hydrocarbons in soil samples were between 87.0 mg/kg and 4,680 mg/kg.

5.4.1 Total Petroleum Hydrocarbons Above DEQ RBCs

The detected oil-range petroleum hydrocarbons did not exceed DEQ RBCs.

5.4.2 Total Petroleum Hydrocarbons Above DEQ Clean Fill Criteria

The DEQ Clean Fill Criteria for oil-range petroleum hydrocarbons (2,800 mg/kg) was exceeded at locations B12 1-1.5 feet bgs (4,240 mg/kg) and composite group C004 (4,680 mg/kg). Laboratory data flags indicate all but one of the detected oil concentrations (C001, 498 mg/kg) were elevated due to the presence of individual analyte peaks in the quantitation range that are not representative of the fuel pattern reported.

5.4.3 Summary of Total Petroleum Hydrocarbons Results

Based on the above, oil-range petroleum hydrocarbons in shallow soil are above DEQ Clean Fill Criteria in the vicinity of boring location B12 and composite group C004 on the Property.

5.5 PCBs

The “worst case” oil-range petroleum hydrocarbon detections (C001 and C004) were analyzed for PCBs. The oil-range petroleum hydrocarbon detections were 498 mg/kg in C001 and 4,680 mg/kg in C004. The “worst case” composite soil sample C004 contained discrete sample B12 (1 to 1.5 feet bgs) with the second-highest oil-range petroleum hydrocarbon detection of 4,240 mg/kg.

5.5.1 PCBs Above DEQ RBCs and Clean Fill Criteria

PCBs were only detected above laboratory reporting limits in C001 (Aroclor 1254 [0.0172 mg/kg] and Aroclor 1260 [0.0192 mg/kg]), and are well below the DEQ Clean Fill Criteria

(0.041 mg/kg for Aroclor 1254 and 0.23 mg/kg for Aroclor 1260) and the most conservative, combined PCB Aroclor DEQ RBC of 0.33 mg/kg.

5.5.2 Summary of PCB Results

The soils with the highest concentration of oil-range petroleum hydrocarbons had PCBs well below DEQ RBCs and DEQ Clean Fill Criteria. Based on these data, PCBs in soil are not of environmental concern in soils on the Property.

5.6 SVOCs

The “worst case” oil-range petroleum hydrocarbon detections (C001 and C004) were analyzed for SVOCs. The oil-range petroleum hydrocarbon detections were 498 mg/kg in C001 and 4,680 mg/kg in C004. The “worst case” composite soil sample C004 contained discrete sample B12 (1 to 1.5 feet bgs) with the second-highest oil-range petroleum hydrocarbon detection of 4,240 mg/kg. Multiple SVOCs were detected above laboratory method reporting limits, and are listed in Table 1. The results compared to DEQ RBCs and Clean Fill Criteria are discussed herein.

5.6.1 SVOCs Above DEQ RBCs

The detected SVOCs above DEQ RBCs in C001 were benzo(a)pyrene (0.664 mg/kg) for the Soil Ingestion, Dermal Contact and Inhalation for an urban residential exposure pathway (0.25 mg/kg). The following SVOCs in C001 had laboratory reporting limits above DEQ RBCs: Dibenzo(a)anthracene (0.311 mg/kg) is above DEQ RBCs of Soil Ingestion, Dermal Contact and Inhalation for an urban residential exposure pathway (0.25 mg/kg), and naphthalene (0.621 mg/kg) is above the DEQ RBCs for Soil Leaching to Groundwater for urban residential and occupational exposure scenarios.

Multiple SVOCs were detected in C004 above laboratory reporting limits, and benzo(a)anthracene (36.8 mg/kg), benzo(a)pyrene (46.8 mg/kg), benzo(b)fluoranthene (43.6 mg/kg), dibenzo(a,h)anthracene (4.88 mg/kg), indeno(1,2,3-cd)pyrene (26.3 mg/kg) were detected above their respective DEQ RBCs for Soil Ingestion, Dermal Contract and Inhalation for the urban residential and occupational scenarios. Benzo(a)pyrene was also above the DEQ RBC for Soil Ingestion, Dermal Contract and Inhalation for the construction worker scenario (17 mg/kg). Naphthalene (3.31 mg/kg) was detected above the DEQ RBCs for Soil Leaching to Groundwater for the urban residential and occupational exposure scenarios (0.37 mg/kg and 0.34 mg/kg, respectively).

5.6.2 SVOCs Above DEQ Clean Fill Criteria

Benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene and pyrene were detected above laboratory reporting limits in C001. Benzo(a)pyrene at 0.664 mg/kg was the only SVOC in C001 above the DEQ Clean Fill Criteria

of 0.11 mg/kg. The laboratory reporting limits for acenaphthene, dibenzo(a,h)anthracene, naphthalene and dibenzofuran in C001 were above their respective DEQ Clean Fill Criteria.

In soil sample C004, the majority of detected SVOCs were above their respective DEQ Clean Fill Criteria except for acenaphthylene, and carbazole; 2-methylnaphthalene does not have an established criterion.

5.6.3 *Summary of SVOCs Results*

Based on the above, SVOCs in soil in the vicinity of composite groups C001 and C004 are above DEQ RBCs for Soil Ingestion, Dermal Contact, and Inhalation for urban residential, occupational, and/or construction workers exposure scenarios, the Leaching to Groundwater for urban residential and occupational exposure scenarios in shallow soils, and DEQ Clean Fill Criteria.

6. IDW CHARACTERIZATION AND DISPOSAL

One 55-gallon steel drum of investigation-derived waste (IDW) was generated during Phase II ESA activities. The drum contained soil cuttings and decontamination water, and was disposed of on January 28, 2020 by WasteXpress of Portland, Oregon.

7. CONCLUSIONS

The contaminants of concern on the Property, as based on the field screening observations, and soil laboratory data are metals, oil-range petroleum hydrocarbons, VOCs (naphthalene only), and SVOCs (including naphthalene). A summary of all data above DEQ RBCs and Clean Fill Criteria is presented in Table 3. The analytical data indicate:

- The potential off-site contaminants related to historical operations adjacent to the Property do not appear to have migrated onto the Property.
- Soil vapor laboratory data indicate VOCs intruding into future structures on the Property are not likely to be of environmental concern.
- Fill material was encountered to 5.5 feet bgs at the northwestern corner of the Property, between 0.5 and 6.5 feet bgs in the north central portion of the Property, between 8 and 12 feet bgs on the eastern portion of the Property, and between 0.5 and 4 feet bgs on the southwestern- and southcentral-portions of the Property.
- The majority of shallow soils across the Property (i.e., between approximately 0.5 and 3.5 feet bgs) exceed DEQ RBCs and/or Clean Fill Criteria as summarized below.
 - DEQ Clean Fill Criteria was exceeded for metals (arsenic, cadmium, lead and mercury and possibly selenium), oil-range petroleum hydrocarbons, VOCs

and/or SVOCs (including naphthalene). Laboratory analyses of shallow soils indicate most contain low levels of oil-range petroleum hydrocarbons that would prevent their use as clean-fill off-site and if left on-site, would require special handling (e.g., capping with asphalt or the building foundation). Based on these data, shallow soils will require disposal at a regulated landfill if disturbed during site redevelopment activities.

- DEQ RBCs for Soil Ingestion, Dermal Contact, and Inhalation for urban residential, occupational, construction worker and/or excavation worker were exceeded for arsenic, lead, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. These exceedances require construction and excavation workers to don the appropriate PPE during future site redevelopment, excavation, and/or utility work activities.
- Toxicity characteristic testing for lead indicate the shallow soils would not be classified as hazardous waste if they are disturbed during future Property redevelopment, utility installation, or site grading activities.
- The eastern portion of the Property contains fill material that extends to depths up to 12 feet bgs. The material's lead concentrations exceed DEQ Clean Fill Criteria. The laboratory reporting limits for selenium and naphthalene exceed DEQ Clean Fill Criteria, and it should be assumed that these metals exceed DEQ Clean Fill Criteria. The laboratory data from samples collected below the fill material indicate native soils below the fill have not been impacted.
- The DEQ RBC Leaching to Groundwater exposure pathway for urban residential and occupational scenarios was exceeded for lead and naphthalene. This exposure pathway can be eliminated because the depth to groundwater is approximately 100 feet bgs, and the redeveloped Property will use municipal water.

8. RECOMMENDATIONS

C+BEC recommends the following:

- Construction and excavation workers working in shallow soils (upper 3.5 feet bgs) don the appropriate PPE. It may be prudent for workers to don PPE at all times due to the variability of fill materials across the Property.
- A lender, the U.S. Department of Housing and Urban Development (HUD), a future purchaser, or other party may require a DEQ No Further Action (NFA) letter. The Property may be enrolled in DEQ's Voluntary Cleanup Program (VCP) or Independent Cleanup Program (ICP) to obtain a NFA determination. Enrollment in the VCP


program allows DEQ to provide oversight of contaminated soil removal activities and confirmatory sampling (if completed) *before and during* site redevelopment activities. Enrolling in the VCP may provide additional insurance that DEQ will issue a NFA letter prior to submittal of a report documenting these activities. Enrollment in the VCP is more expensive than enrolling in the ICP. With enrollment in the ICP, DEQ would review a report documenting the contaminated soil removal and any confirmatory sampling activities *after* the site redevelopment activities are completed. It should be noted that DEQ can meet with interested parties prior to enrolling in the VCP or ICP to discuss and determine which program would work best to meet project goals.

- Prepare a Contaminated Media Management Plan (CMMP) for the Property that protects the health and safety for construction and excavation workers, and how to address contaminated media (fill, soil, groundwater [if encountered], and surface water pooled on contaminated media) encountered during future site redevelopment and/or utility work. The CMMP should include, but not limited to, the following:
 - PCBs were not detected in soil samples analyzed during the Phase II ESA. However, if oil-range petroleum hydrocarbons are found at different locations and/or if fill or contamination types (e.g., diesel and oil, or free product heavy oil) exhibits different characteristics than encountered during the Phase II ESA activities, C+BEC recommends additional PCB characterization is completed to protect construction and excavation workers, future occupants, and to characterize the soils prior to their disposal.
 - Characterization of soils for hazardous waste characteristics, particularly if different fill material is encountered than during the Phase II ESA (e.g., evidence of construction and demolition material like drywall or asphalt roofing), and determining the proper PPE for construction and excavation workers. If the analytical laboratory data result(s) characterize the soils as hazardous waste, the soil disposal activities must be reported to DEQ and EPA, a hazardous waste identification number must be obtained and handled and disposed of according to RCRA hazardous waste rules. Furthermore, if hazardous building materials are encountered during future excavation activities, they should be characterized and disposed of or recycled per local and State requirements. If suspected asbestos-containing materials like drywall or roofing are encountered during site redevelopment activities, these materials should be submitted to a laboratory for analyses to determine their asbestos content. Any asbestos-containing materials must be abated and disposed of per local and State requirements.
 - Groundwater, if encountered, or standing water in prolonged contact with excavated soils, that requires removal will have to be containerized, characterized, and transported and disposed of or treated off-site.

- Set aside a contingency budget prior to initiating redevelopment activities so that if USTs, underground injection controls (UICs) (including old drywells and privy pits), and contaminated fill, soil, and standing water in contact with contaminated media are encountered during construction activities, funds will be available to immediately address these items and avoid construction stand-by time. The contingency should include fees for UST and UIC decommissioning activities that meet DEQ regulations, backfilling with the appropriate compacted material, hazardous construction and demolition debris materials assessment, and transportation and disposal or abatement of contaminated media to a regulated landfill or treatment/recycling facility.
- It may be prudent to conduct confirmatory sampling subsequent to excavation activities to document the soil conditions left in-place and to document any contaminant “hot spots” in the event future work occurs in these areas.
- It may be prudent to install a vapor mitigation system for a new structure on the Property to prevent future occupants from being exposed to potential contaminants from vapor intrusion into the building originating from contaminated soils left in-place, and/or if off-site contamination migrates onto the Property in the future.
- Based on the field observations and soil characterization, geotechnical evaluation is recommended to address and evaluate the fill materials encountered at depths up to 12 feet bgs on the eastern portion of the Property, and how they may impact future redevelopment plans for the Property.

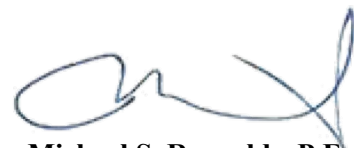
Please contact Jill Betts with any questions you may have.

Report Prepared By:



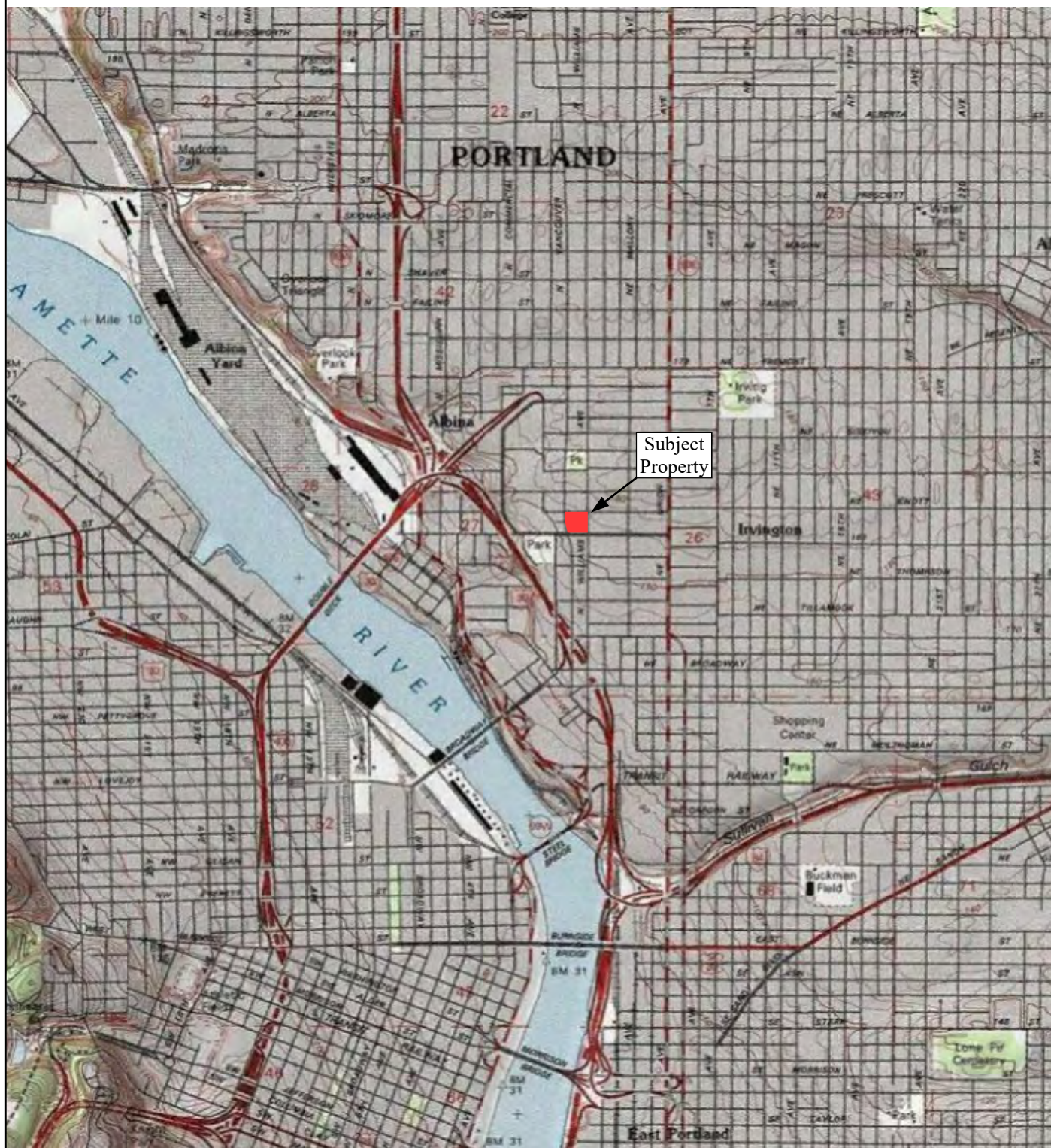
Jill Betts, R.G.
Principal

Report Reviewed by:



Michael S. Reynolds, P.E.
Principal

Note: Earth Point Topographical Map from Google Earth Pro.



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Approx. Scale: 1" = 27,700'

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Figure 1. Vicinity map showing the location of the Williams & Russell Property.

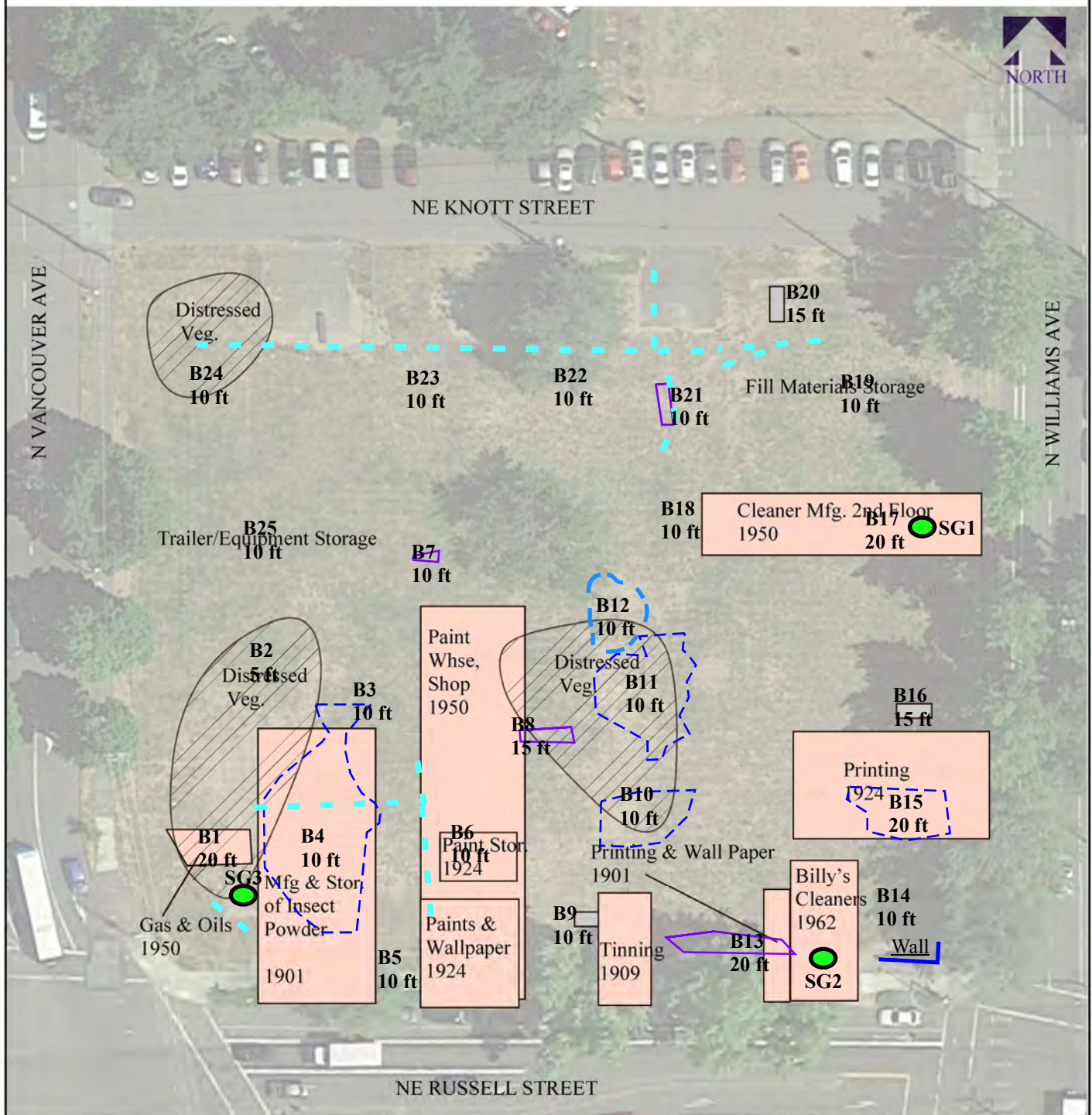
Map created in collaboration with Reynolds Engineering, LLC.


Key for Geophysical Anomalies

-  Piping
-  Flat Reflector
-  GPR Anomaly
-  Disturbed Soil Zone

Key for Phase II ESA Sampling Locations

- B20**
15 ft Temporary Boring Number and Depth
- SG1**  Soil Gas Sampling Point



 Steam Heater B. (1909)

Note: USTs associated with heating and/or historical commercial operations may be located across the Property

Map created with Reynolds Engineering.
Aerial photo, dated July, 2018, is from Google Earth Pro.



Approx. Scale: 1" = 55'

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Figure 2. Property map showing the geophysical survey findings, items of environmental concern, and Phase II ESA sampling locations

B20
15 ft = Temporary Boring Number and Depth

C001 = Composite sample group

RED = Concentration exceeds DEQ Risk-Based Criteria

0.25 = Concentration exceeds DEQ Clean Fill Criteria



Estimated Area of Contaminated Shallow Soil

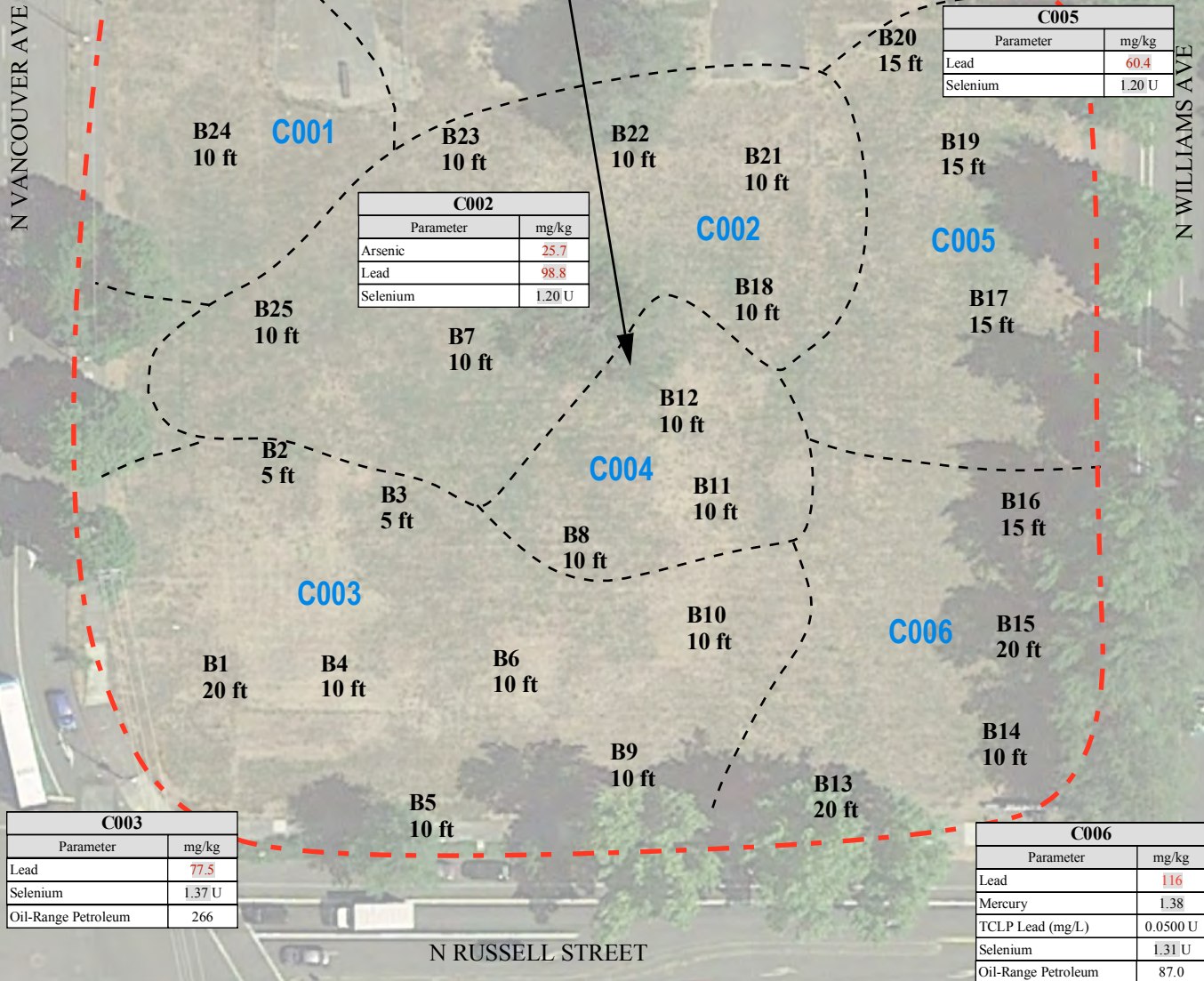
C004			
Parameter	mg/kg	Parameter	mg/kg
Cadmium	0.936	Benzo(k)fluoranthene	17.5
Lead	355	Benzo(g,h,i)perylene	27.6
TCLP Lead (mg/L)	0.0500 U	Chrysene	41.8
Mercury	0.292	Dibenz(a,h)anthracene	4.88
Selenium	1.22 U	Fluoranthene	80.2
Oil-Range Petroleum	4,680	Fluorene	4.32
Acenaphthene	6.37	Indeno(1,2,3-cd)pyrene	26.3
Anthracene	13.7	Naphthalene	3.31
Benzo(a)anthracene	36.8	Phenanthrene	56.4
Benzo(a)pyrene	46.8	Pyrene	93.0
Benzo(b)fluoranthene	43.6	Dibenzofuran	1.96



C001			
Parameter	mg/kg	Parameter	mg/kg
Arsenic	13.8	Oil-Range Petroleum	498
Cadmium	0.871	Acenaphthene	0.311 U
Lead	1,720	Benzo(a)pyrene	0.664
TCLP Lead (mg/L)	0.994	Dibenz(a,h)anthracene	0.311 U
Selenium	1.20 U	Naphthalene	0.621
		Dibenzofuran	0.311 U

C002	
Parameter	mg/kg
Arsenic	25.7
Lead	98.8
Selenium	1.20 U

C005	
Parameter	mg/kg
Lead	60.4
Selenium	1.20 U



NOTES:

Composite soil sample depths are from 0.5 to 3.5 feet bgs.

Map created with Reynolds Engineering.

Aerial photo, dated July, 2018, is from Google Earth Pro.

“U” = Not detected above the laboratory reporting limit indicated.

Detected oil-range petroleum hydrocarbons below DEQ RBCs and Clean Fill Criteria are shown to indicate areas where they are present and to plan for their excavation and disposal.



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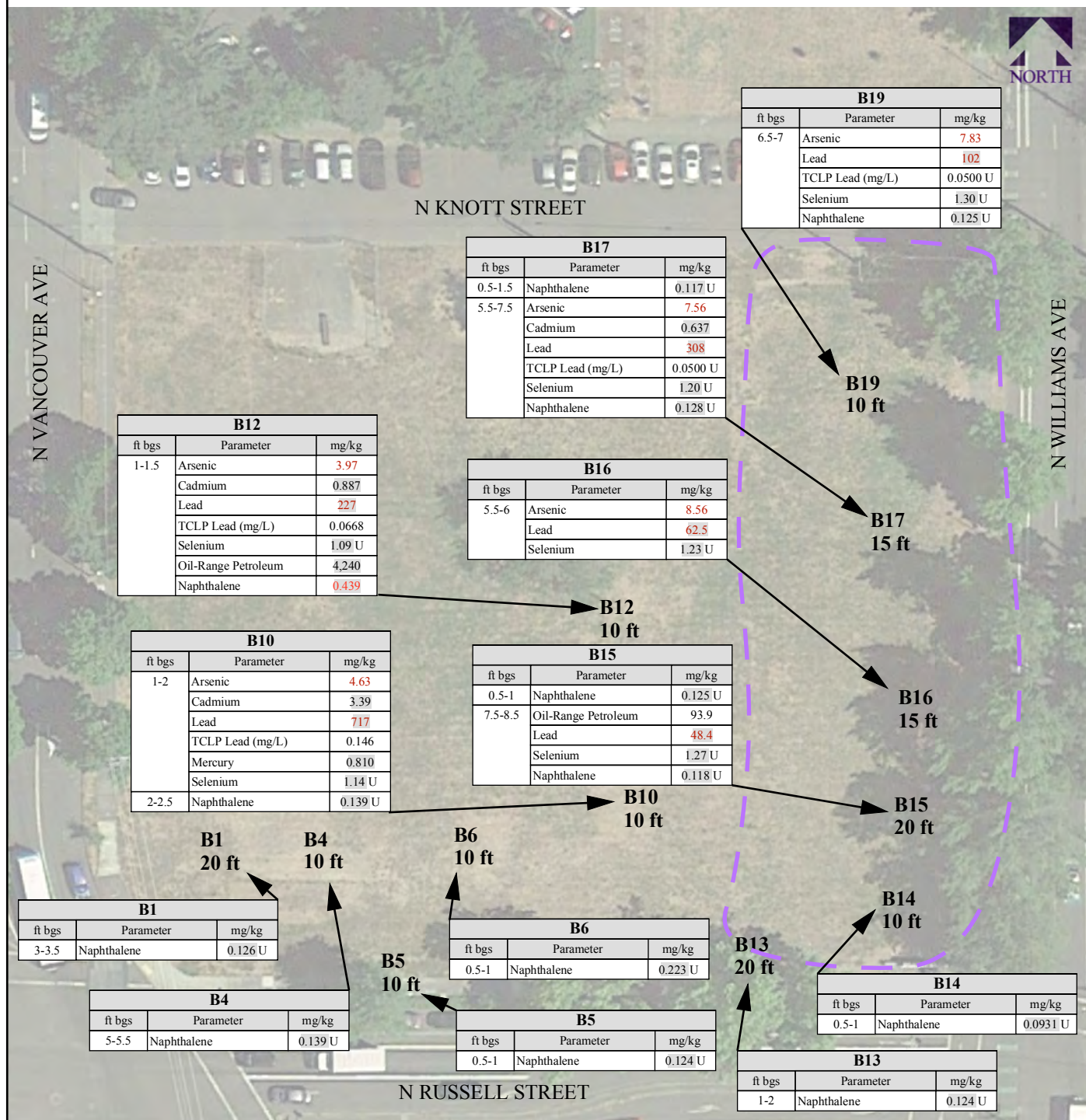
Figure 3. Property map showing composite shallow soil analytical results that exceed DEQ Clean Fill and/or Risk-Based Concentrations.

B20
15 ft = Temporary Boring Number and Depth

RED = Concentration exceeds DEQ Risk-Based Criteria

0.25 = Concentration exceeds DEQ Clean Fill Criteria

Estimated Extent of Fill Material That Extends
to Depths Between 8 and 12 Feet bgs



NOTES:

Map created with Reynolds Engineering.

Aerial photo, dated July, 2018, is from Google Earth Pro.

Detected oil-range petroleum hydrocarbons below DEQ RBCs and Clean Fill Criteria are shown to indicate areas where they are present and to plan for their excavation and disposal.



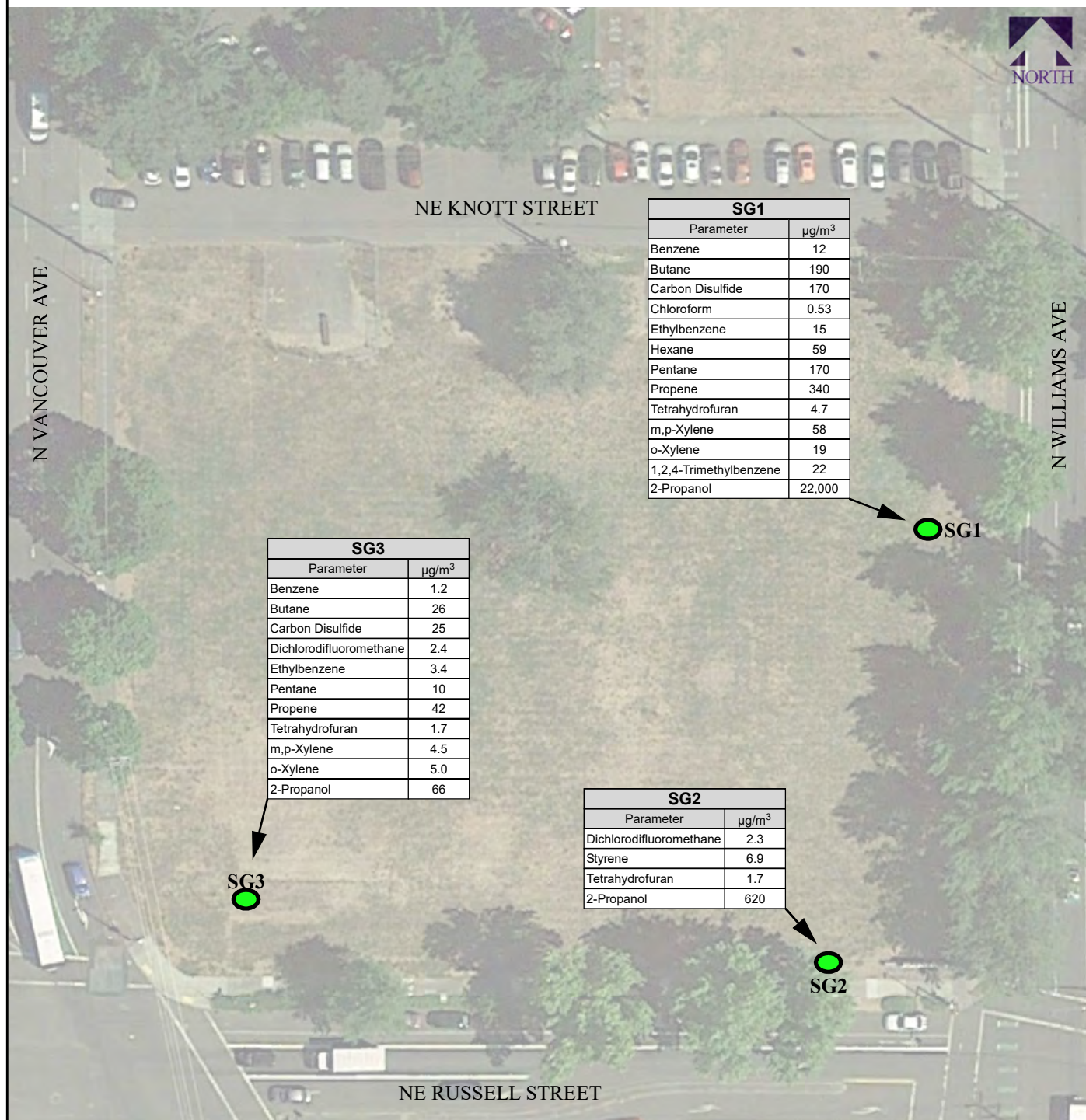
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Figure 4. Property map showing discrete soil analytical results that exceed DEQ Clean Fill and/or Risk-Based Concentrations.

● SG1 = Soil Gas Sampling Point



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Map created with Reynolds Engineering.
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Figure 5. Property map showing soil vapor analytical results.

Table 3. Summary of Soil Analytical Data Above DEQ Reference Levels

	Unit	OR DEQ Clean Fill Criteria ¹ and OR Background Metals for the Portland Basin ² OR DEQ RBC Soil Ingestion, Dermal Contact, and Inhalation (Urban Residential) ³ OR DEQ RBC Soil Ingestion, Dermal Contact, and Inhalation (Occupational) ³ OR DEQ Soil Ingestion, Dermal Contact, and Inhalation (Const Worker) ³ OR DEQ RBC Soil Ingestion, Dermal Contact, and Inhalation (Exc Worker) ³ OR DEQ RBC Volatilization to Outdoor Air (Urban Residential) ³ OR DEQ RBC Volatilization to Outdoor Air (Occupational) ³ OR DEQ RBC Vapor Intrusion into Buildings (Occupational) ³ OR DEQ RBC Soil Leaching to Groundwater (Urban Residential) ³ OR DEQ RBC Soil Leaching to Groundwater (Occupational) ³ RCRA Hazardous Waste Characteristic Screening Level (mg/L) ⁴	12/7/20	12/7/20	12/7/20	12/7/20	12/8/20	12/8/20	12/8/20	12/8/20
			810 1-2	812 1-1.5	815 7.5-8.5	816 5.5-6	817 5.5-7.5	819 6.5-7	C001	C002
Total Metals EPA 6020										
Arsenic	mg/kg	8.8	1	1.9	15	420	-	-	-	-
Cadmium	mg/kg	0.63	160	1,100	350	9,700	-	-	-	-
Lead	mg/kg	27	400	800	800	800	30	30	-	-
Mercury	mg/kg	0.23	47	350	110	2,900	-	-	-	-
Selenium	mg/kg	0.71	-	-	-	-	-	-	-	-
ICLTP Metals by EPA 6020B (ICPMS)										
Lead	mg/L	-	-	-	-	-	-	-	5	-
Total Petroleum Hydrocarbons by TPH-Gx and TPH-Dx										
Oil-Range	mg/kg	2,800	5,700	36,000	11,000	-	-	-	-	-
Volatiles Organic Compounds by EPA 5035A/8260C										
Naphthalene	mg/kg	0.077	25	23	580	16,000	15	83	83	0.37
Semivolatile Organic Compounds by EPA 8270E										
Acenaphthene	mg/kg	0.25	9,400	7,000	21,000	590,000	-	-	-	-
Anthracene	mg/kg	6.8	47,000	350,000	110,000	170	-	-	-	-
Benzo(a)anthracene	mg/kg	0.73	2.5	21	170	4,800	-	-	-	-
Benzo(a)pyrene	mg/kg	0.11	0.25	2.1	17	490	-	-	-	-
Benzo(b)fluoranthene	mg/kg	1.1	2.5	21	170	4,900	-	-	-	-
Benzo(k)fluoranthene	mg/kg	11	25	210	1,700	49,000	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	25	-	-	-	-	-	-	-	-
Chrysene	mg/kg	3.1	250	2,100	17,000	490,000	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.11	0.25	2.1	17	490	-	-	-	-
Fluoranthene	mg/kg	10	4,800	30,000	10,000	280,000	-	-	-	-
Fluorene	mg/kg	3.7	6,300	47,000	14,000	390,000	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	1.1	2.5	21	170	4,900	-	-	-	-
Naphthalene	mg/kg	0.077	25	23	580	16,000	15	83	83	0.37
Phenanthrene	mg/kg	5.5	-	-	-	-	-	-	-	-
Pyrene	mg/kg	10	3,600	23,000	75,000	210,000	-	-	-	-
Dibenzofuran	mg/kg	0.002	-	-	-	-	-	-	-	-

NOTES:

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

U = not detected above method detection limit shown

ND = not detected

Bold denotes concentration above laboratory method reporting limit.

Color denotes detected concentration exceeds DEQ RBC screening criteria.

Gray Shading denotes detected concentration exceeds DEQ Clean Fill Criteria.

1 = Oregon Department of Environmental Quality, Clean Fill Determinations, Dated February 21, 2019.

2 = Oregon Department of Environmental Quality, Table 1: Regional Default Background Concentrations for Metals in Soil, revised March 20, 2013.

3 = Oregon Department of Environmental Quality, Environmental Cleanup and Tanks Program, Risk-Based concentration for Individual Chemicals, revised May 2018.

4 = EPA Maximum Concentration of Contaminants for the Toxicity Characteristic (Table 1).

Samples analyzed by Apex Laboratories of Tigard, Oregon.

C-05 = Extract has undergone a Gel-Permeation Chromatography cleanup per EPA 3640A. Reporting levels may be raised due to dilution necessary for cleanup.

C-07 = Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.

F-03 = The result for this hydrocarbon range is elevated due to the presence of individual analyte peaks in the quantitation range that are not representative of the fuel pattern reported.

M-05 = Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.

P-12 = Result estimated due to the presence of multiple PCB Aroclors and/or PCB congeners not defined as Aroclors.

Q-42 = Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits.

Table 3. Summary of Soil Analytical Data Above DEQ Reference Levels

	Unit	OR DEQ Clean Fill Criteria ¹ and OR Background Metals for the Portland Basin ²	OR DEQ RBC Soil Ingestion, Dermal Contact, and Inhalation (Urban Residential) ³	OR DEQ RBC Soil Ingestion, Dermal Contact, and Inhalation (Occupational) ³	OR DEQ RBC Soil Ingestion, Dermal Contact, and Inhalation (Const Worker) ³	OR DEQ RBC Soil Ingestion, Dermal Contact, and Inhalation (Exc Worker) ³	OR DEQ RBC Volatilization to Outdoor Air (Urban Residential) ³	OR DEQ RBC Volatilization to Outdoor Air (Occupational) ³	OR DEQ RBC Vapor Intrusion into Buildings (Occupational) ³	OR DEQ RBC Soil Leaching to Groundwater (Urban Residential) ³	OR DEQ RBC Soil Leaching to Groundwater (Occupational) ³	RCRA Hazardous Waste Characteristic Screening Level (mg/L) ⁴	12/7/20	12/7/20	12/8/20	12/7/20				
Total Metals EPA 6020																				
Arsenic	mg/kg	8.8	1	1.9	15	420	-	-	-	-	-	-	6.37		6.05	6.76	7.30			
Cadmium	mg/kg	0.63	160	1,100	350	9,700	-	-	-	-	-	-	0.542		0.936	0.315	0.577			
Lead	mg/kg	27	400	800	800	800	-	-	-	30	30	-	77.5	Q-42	355	60.4	116			
Mercury	mg/kg	0.23	47	350	110	2,900	-	-	-	-	-	-	0.109	U	0.292	0.0964	1.38			
Selenium	mg/kg	0.71	-	-	-	-	-	-	-	-	-	-	1.37	U	1.22	1.20	1.31	U		
ICLTP Metals by EPA 6020B (ICPMS)																				
Lead	mg/L	-	-	-	-	-	-	-	-	-	-	5			0.0500	U	0.0500	U		
Total Petroleum Hydrocarbons by TPH-Gx and TPH-Dx																				
Oil-Range	mg/kg	2,800	5,700	36,000	11,000	-	-	-	-	-	-	-	266	F-03	4,680	F-03	50	U	87.0	F-03
Volatile Organic Compounds by EPA 5035A/8260C																				
Naphthalene	mg/kg	0.077	25	23	580	16,000	15	83	83	0.37	0.34	-								
Semivolatile Organic Compounds by EPA 8270E																				
Acenaphthene	mg/kg	0.25	9,400	7,000	21,000	590,000	-	-	-	-	-	-			6.37					
Anthracene	mg/kg	6.8	47,000	350,000	110,000		-	-	-	-	-	-			13.7					
Benzo[a]anthracene	mg/kg	0.73	2.5	21	170	4,800	-	-	-	6	-	-			36.8					
Benzo[a]pyrene	mg/kg	0.11	0.25	2.1	17	490	-	-	-	-	-	-			46.8					
Benzo[b]fluoranthene	mg/kg	1.1	2.5	21	170	4,900	-	-	-	-	-	-			43.6					
Benzo[k]fluoranthene	mg/kg	11	25	210	1,700	49,000	-	-	-	-	-	-			17.5	M-05				
Benzo[g,h,i]perylene	mg/kg	25	-	-	-	-	-	-	-	-	-	-			27.6					
Chrysene	mg/kg	3.1	250	2,100	17,000	490,000	-	-	-	-	-	-			41.8					
Dibenz[a,h]anthracene	mg/kg	0.11	0.25	2.1	17	490	-	-	-	-	-	-			4.88					
Fluoranthene	mg/kg	10	4,800	30,000	10,000	280,000	-	-	-	-	-	-			80.2					
Fluorene	mg/kg	3.7	6,300	47,000	14,000	390,000	-	-	-	-	-	-			4.32					
Indeno[1,2,3-cd]pyrene	mg/kg	1.1	2.5	21	170	4,900	-	-	-	-	-	-			26.3					
Naphthalene	mg/kg	0.077	25	23	580	16,000	15	83	83	0.37	0.34	-			3.31					
Phenanthrene	mg/kg	5.5	-	-	-	-	-	-	-	-	-	-			56.4					
Pyrene	mg/kg	10	3,600	23,000	75,000	210,000	-	-	-	-	-	-			93.0					
Dibenzofuran	mg/kg	0.002	-	-	-	-	-	-	-	-	-	-			1.96					

NOTES:

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

U = not detected above method detection limit shown

ND = not detected

Bold denotes concentration above laboratory method reporting limit.**Color** denotes detected concentration exceeds DEQ RBC screening criteria.

Gray Shading denotes detected concentration exceeds DEQ Clean Fill Criteria.

1 = Oregon Department of Environmental Quality, Clean Fill Determinations, Dated February 21, 2019.

2 = Oregon Department of Environmental Quality, Table 1: Regional Default Background Concentrations for Metals in Soil, revised March 20, 2013.

3 = Oregon Department of Environmental Quality, Environmental Cleanup and Tanks Program, Risk-Based concentration for Individual Chemicals, revised May 2018.

4 = EPA Maximum Concentration of Contaminants for the Toxicity Characteristic (Table 1).

Samples analyzed by Apex Laboratories of Tigard, Oregon.

C-05 = Extract has undergone a Gel-Permeation Chromatography cleanup per EPA 3640A. Reporting levels may be raised due to dilution necessary for cleanup.

C-07 = Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.

F-03 = The result for this hydrocarbon range is elevated due to the presence of individual analyte peaks in the quantitation range that are not representative of the fuel pattern reported.

M-05 = Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.

P-12 = Result estimated due to the presence of multiple PCB Aroclors and/or PCB congeners not defined as Aroclors.

Q-42 = Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits.

Table 2. Summary of Soil Vapor Analytical Data

	Unit	OR DEQ RBC Soil Gas, Vapor Intrusion into Buildings (Urban Residential) ¹	OR DEQ RBC Soil Gas, Vapor Intrusion into Buildings (Occupational) ¹	12/7/2020		12/7/2020		12/7/2020	
				SG1		SG2		SG3	
Volatile Organic Compounds by Method TO-15									
Benzene	µg/m ³	170	160	12		1.1	U	1.2	
Butane	µg/m ³	-	-	190		7.8	U	26	
Carbon Disulfide	µg/m ³	-	-	170		21	U	25	
Chloroform	µg/m ³	58	530	0.53		0.16	U	0.17	U
Dichlorodifluoromethane	µg/m ³	-	-	4.2	U	2.3		2.4	
Ethylbenzene	µg/m ³	530	4,900	15		1.4	U	3.4	
Hexane	µg/m ³	-	-	59		12	U	12	U
Pentane	µg/m ³	-	-	170		9.7	U	10	
Propene	µg/m ³	-	-	340		4.0	U	42	
Styrene	µg/m ³	210,000	4,400,000	7.2	U	6.9		2.9	U
Tetrahydrofuran	µg/m ³	-	-	4.7		1.7		1.7	
m,p-Xylene ²	µg/m ³	21,000	440,000	58		2.9	U	4.5	
o-Xylene ²	µg/m ³	21,000	440,000	19		1.4	U	5.0	
1,2,4-Trimethylbenzene	µg/m ³	-	-	22		8.1	U	8.4	U
2-Propanol	µg/m ³	-	-	22,000	ve	620	ve	66	
All other VOCs	µg/m ³			ND		ND		ND	

NOTES:

µg/m³ = micrograms per cubic meter

U = not detected above method detection limit shown

ND = not detected

Bold denotes concentration above laboratory method reporting limit.

1 = Oregon Department of Environmental Quality, Environmental Cleanup and Tanks Program, Risk-Based concentration for Individual Chemicals, revised

2 = Screening criteria is for xylenes.

Samples analyzed by Friedman & Bruya of Seattle, Washington.

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

Table 3. Summary of Soil Analytical Data Above DEQ Reference Levels

	Unit	OR DEQ Clean Fill Criteria ¹ and OR Background Metals for the Portland Basin ² OR DEQ RBC Soil Ingestion, Dermal Contact, and Inhalation (Urban Residential) ³ OR DEQ RBC Soil Ingestion, Dermal Contact, and Inhalation (Occupational) ³ OR DEQ RBC Soil Ingestion, Dermal Contact, and Inhalation (Const Worker) ³ OR DEQ RBC Soil Ingestion, Dermal Contact, and Inhalation (Exc Worker) ³ OR DEQ RBC Volatilization to Outdoor Air (Urban Residential) ³ OR DEQ RBC Volatilization to Outdoor Air (Occupational) ³ OR DEQ RBC Vapor Intrusion into Buildings (Occupational) ³ OR DEQ RBC Soil Leaching to Groundwater (Urban Residential) ³ OR DEQ RBC Soil Leaching to Groundwater (Occupational) ³ RCRA Hazardous Waste Characteristic Screening Level (mg/L) ⁴	12/7/20	12/7/20	12/7/20	12/7/20	12/8/20	12/8/20	12/8/20	12/8/20
			810 1-2	812 1-1.5	815 7.5-8.5	816 5.5-6	817 5.5-7.5	819 6.5-7	C001	C002
Total Metals EPA 6020										
Arsenic	mg/kg	8.8	1	1.9	15	420	-	-	-	-
Cadmium	mg/kg	0.63	160	1,100	350	9,700	-	-	-	-
Lead	mg/kg	27	400	800	800	800	30	30	-	-
Mercury	mg/kg	0.23	47	350	110	2,900	-	-	-	-
Selenium	mg/kg	0.71	-	-	-	-	-	-	-	-
ICLTP Metals by EPA 6020B (ICPMS)										
Lead	mg/L	-	-	-	-	-	-	-	5	-
Total Petroleum Hydrocarbons by TPH-Gx and TPH-Dx										
Oil-Range	mg/kg	2,800	5,700	36,000	11,000	-	-	-	-	-
Volatiles Organic Compounds by EPA 5035A/8260C										
Naphthalene	mg/kg	0.077	25	23	580	16,000	15	83	83	0.37
Semivolatile Organic Compounds by EPA 8270E										
Acenaphthene	mg/kg	0.25	9,400	7,000	21,000	590,000	-	-	-	-
Anthracene	mg/kg	6.8	47,000	350,000	110,000	170	-	-	-	-
Benzo(a)anthracene	mg/kg	0.73	2.5	21	170	4,800	-	-	-	-
Benzo(a)pyrene	mg/kg	0.11	0.25	2.1	17	490	-	-	-	-
Benzo(b)fluoranthene	mg/kg	1.1	2.5	21	170	4,900	-	-	-	-
Benzo(k)fluoranthene	mg/kg	11	25	210	1,700	49,000	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	25	-	-	-	-	-	-	-	-
Chrysene	mg/kg	3.1	250	2,100	17,000	490,000	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.11	0.25	2.1	17	490	-	-	-	-
Fluoranthene	mg/kg	10	4,800	30,000	10,000	280,000	-	-	-	-
Fluorene	mg/kg	3.7	6,300	47,000	14,000	390,000	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	1.1	2.5	21	170	4,900	-	-	-	-
Naphthalene	mg/kg	0.077	25	23	580	16,000	15	83	83	0.37
Phenanthrene	mg/kg	5.5	-	-	-	-	-	-	-	-
Pyrene	mg/kg	10	3,600	23,000	75,000	210,000	-	-	-	-
Dibenzofuran	mg/kg	0.002	-	-	-	-	-	-	-	-

NOTES:

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

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4 = EPA Maximum Concentration of Contaminants for the Toxicity Characteristic (Table 1).

Samples analyzed by Apex Laboratories of Tigard, Oregon.

C-05 = Extract has undergone a Gel-Permeation Chromatography cleanup per EPA 3640A. Reporting levels may be raised due to dilution necessary for cleanup.

C-07 = Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.

F-03 = The result for this hydrocarbon range is elevated due to the presence of individual analyte peaks in the quantitation range that are not representative of the fuel pattern reported.

M-05 = Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.

P-12 = Result estimated due to the presence of multiple PCB Aroclors and/or PCB congeners not defined as Aroclors.

Q-42 = Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits.

Table 3. Summary of Soil Analytical Data Above DEQ Reference Levels

	Unit	OR DEQ Clean Fill Criteria ¹ and OR Background Metals for the Portland Basin ²	OR DEQ RBC Soil Ingestion, Dermal Contact, and Inhalation (Urban Residential) ³	OR DEQ RBC Soil Ingestion, Dermal Contact, and Inhalation (Occupational) ³	OR DEQ RBC Soil Ingestion, Dermal Contact, and Inhalation (Const Worker) ³	OR DEQ RBC Soil Ingestion, Dermal Contact, and Inhalation (Exc Worker) ³	OR DEQ RBC Volatilization to Outdoor Air (Urban Residential) ³	OR DEQ RBC Volatilization to Outdoor Air (Occupational) ³	OR DEQ RBC Vapor Intrusion into Buildings (Occupational) ³	OR DEQ RBC Soil Leaching to Groundwater (Urban Residential) ³	OR DEQ RBC Soil Leaching to Groundwater (Occupational) ³	RCRA Hazardous Waste Characteristic Screening Level (mg/L) ⁴	12/7/20	12/7/20	12/8/20	12/7/20				
Total Metals EPA 6020																				
Arsenic	mg/kg	8.8	1	1.9	15	420	-	-	-	-	-	-	6.37		6.05	6.76	7.30			
Cadmium	mg/kg	0.63	160	1,100	350	9,700	-	-	-	-	-	-	0.542		0.936	0.315	0.577			
Lead	mg/kg	27	400	800	800	800	-	-	-	30	30	-	77.5	Q-42	355	60.4	116			
Mercury	mg/kg	0.23	47	350	110	2,900	-	-	-	-	-	-	0.109	U	0.292	0.0964	1.38			
Selenium	mg/kg	0.71	-	-	-	-	-	-	-	-	-	-	1.37	U	1.22	1.20	1.31	U		
ICLTP Metals by EPA 6020B (ICPMS)																				
Lead	mg/L	-	-	-	-	-	-	-	-	-	-	5			0.0500	U	0.0500	U		
Total Petroleum Hydrocarbons by TPH-Gx and TPH-Dx																				
Oil-Range	mg/kg	2,800	5,700	36,000	11,000	-	-	-	-	-	-	-	266	F-03	4,680	F-03	50	U	87.0	F-03
Volatile Organic Compounds by EPA 5035A/8260C																				
Naphthalene	mg/kg	0.077	25	23	580	16,000	15	83	83	0.37	0.34	-								
Semivolatile Organic Compounds by EPA 8270E																				
Acenaphthene	mg/kg	0.25	9,400	7,000	21,000	590,000	-	-	-	-	-	-			6.37					
Anthracene	mg/kg	6.8	47,000	350,000	110,000		-	-	-	-	-	-			13.7					
Benzo[a]anthracene	mg/kg	0.73	2.5	21	170	4,800	-	-	-	6	-	-			36.8					
Benzo[a]pyrene	mg/kg	0.11	0.25	2.1	17	490	-	-	-	-	-	-			46.8					
Benzo[b]fluoranthene	mg/kg	1.1	2.5	21	170	4,900	-	-	-	-	-	-			43.6					
Benzo[k]fluoranthene	mg/kg	11	25	210	1,700	49,000	-	-	-	-	-	-			17.5	M-05				
Benzo[g,h,i]perylene	mg/kg	25	-	-	-	-	-	-	-	-	-	-			27.6					
Chrysene	mg/kg	3.1	250	2,100	17,000	490,000	-	-	-	-	-	-			41.8					
Dibenz[a,h]anthracene	mg/kg	0.11	0.25	2.1	17	490	-	-	-	-	-	-			4.88					
Fluoranthene	mg/kg	10	4,800	30,000	10,000	280,000	-	-	-	-	-	-			80.2					
Fluorene	mg/kg	3.7	6,300	47,000	14,000	390,000	-	-	-	-	-	-			4.32					
Indeno[1,2,3-cd]pyrene	mg/kg	1.1	2.5	21	170	4,900	-	-	-	-	-	-			26.3					
Naphthalene	mg/kg	0.077	25	23	580	16,000	15	83	83	0.37	0.34	-			3.31					
Phenanthrene	mg/kg	5.5	-	-	-	-	-	-	-	-	-	-			56.4					
Pyrene	mg/kg	10	3,600	23,000	75,000	210,000	-	-	-	-	-	-			93.0					
Dibenzofuran	mg/kg	0.002	-	-	-	-	-	-	-	-	-	-			1.96					

NOTES:

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APPENDIX A

Geophysical Survey Report



UST Survey - Vacant Lot N Williams Avenue and NE Russell Street Block Portland, Oregon

A geophysical survey was conducted across the city block bordered by N. Williams Avenue, NE Russell Street, NE Knott Street and N. Vancouver Avenue in Portland, Oregon for Coles and Betts. The site is presently a grass-covered, flat, vacant lot. In the past, the property contained several residences and buildings including a paint store and warehouse, two cleaners, a printing shop, and an insect-powder manufacturer. The scope of this survey was to detect possible underground storage tanks (USTs) and/or excavations from which tanks had been removed, and remnants of the old structures. The adjacent sidewalks and the southern part of N. Knott Street from the curb to the parking lines to the north were included. No surface evidence of USTs, including fill ports and vent pipes, was seen in the survey areas.

A Geometrics G858 cesium-vapor magnetometer was used to collect magnetic data across the sidewalk. Data were collected along parallel survey lines established using a measuring wheel and tapes. Each data point was located to an accuracy of about 1 foot using a Geode 2 sub-meter-accuracy GPS system. Figure 1 shows the site location as well as magnetic data points.

Figure 2 shows the result of the magnetic survey. Data are contoured using a contour interval of 500 nT (nanoTesla). In the figure, magnetic anomalies higher in amplitude than the normal local magnetic background are shown in red and are usually found over areas where ferrous objects are located below the sensor, carried at a height of about 3 feet. USTs usually produce red-colored anomalies. Magnetic anomalies at or below the amplitude of the local magnetic field are shown in blue and are generally caused by ferrous objects located above the sensor. Telephone poles, metallic street signs and bollards located along the sidewalks created magnetic interference. A small UST located near these objects could have been missed.

This site was relatively clear of large buried metallic objects. A Schonstedt magnetic gradiometer and an Aqua-Tronics Tracer metal detector were used to locate and investigate the anomalies shown in the figure. The Tracer is excellent at determining if a buried object is linear (a possible pipe) or 3D (a possible UST). The anomalies were also examined using a GSSI SIR2000 ground-penetrating radar (GPR) system connected to a 400-MHz antenna during the subsequent ground penetrating radar (GPR) survey. None of the objects appeared to be three-dimensional; most appeared to be caused by pipes or surface features. They did not appear to be USTs.

Magnetometer Anomalies:

- A- possible pipe
- B- underground pipes
- C- surface object
- D- not a 3D object
- E- surface feature – bollard and sign
- F- not a 3D object
- G- not a 3D object
- H- underground pipes
- I- underground pipe, bollard
- J- surface features
- K- reinforced concrete
- L- decorative wall

The entire site was scanned using the GSSI GPR system. Traverses were made along survey lines set approximately 5 feet apart. The quality of the data was adequate to detect features within the top 2 to 3 feet.



Several large, “flat” zones were detected just below the ground surface (Figure 3). One, near the B anomalies, could be related to a former building (Insect Powder Manufacturer). These flat zones could be remnants of slab building floors. One disturbed soil zone (DSZ) was detected. It could be a former excavation. Several other GPR anomalies were detected; however, their identity could not be determined. They did not appear to contain metal and were only seen in one or two adjacent profiles.

No USTs were detected with this survey across the accessible areas of the site.

Jeff Mann and Nikos Tzetos of Pacific Geophysics conducted the survey for Ms. Jill Betts of Coles and Betts Environmental Consulting on August 20 and 21, 2020. This letter report was written by Jeff Mann, reviewed by Nikos Tzetos, and emailed to Ms. Betts on September 1, 2020.

Limitations

The conclusions presented in this report were based upon widely accepted geophysical principles, methods and equipment. This survey was conducted with limited knowledge of the site, the site history and the subsurface conditions.

The goal of near-surface geophysics is to provide a rapid means of characterizing the subsurface using non-intrusive methods. Conclusions based upon these methods are generally reliable; however, due to the inherent ambiguity of the methods, no single interpretation of the data can be made. As an example, rocks and roots produce radar reflections that may appear the same as pipes and tanks.

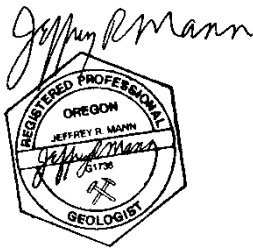
Under reasonable conditions, geophysical surveys are good at detecting changes in the subsurface caused by man-made objects or changes in subsurface conditions, but they are poor at actually identifying those objects or subsurface conditions.

Objects of interest are not always detectable due to surface and subsurface conditions. The deeper an object is buried, the more difficult it is to detect, and the less accurately it can be located.

The only way to see an object is to physically expose it.

Jeff Mann
Pacific Geophysics

August 24, 2020



Nikos Tzetos
Pacific Geophysics

August 29, 2020



FIGURE

1

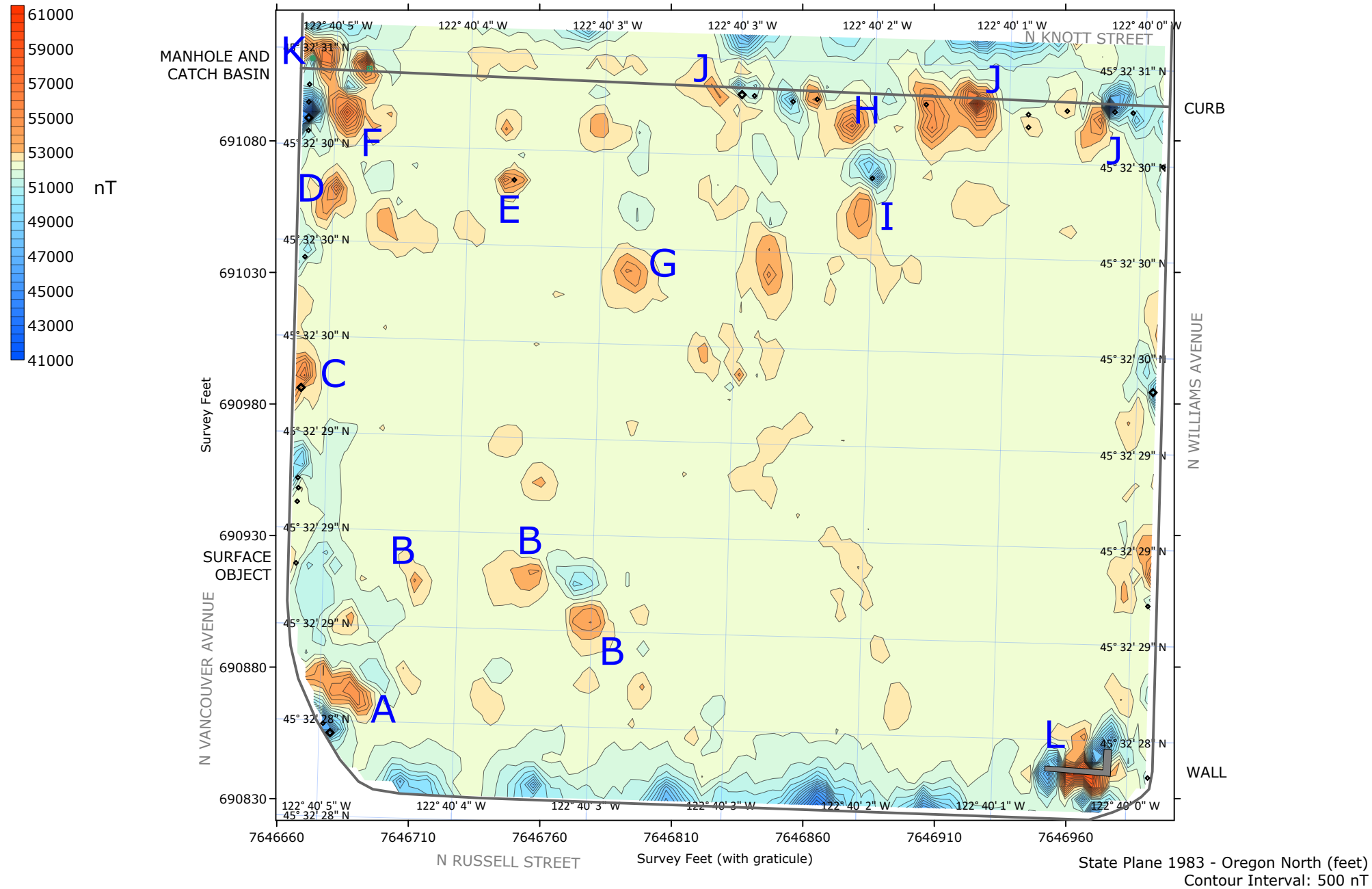
Survey Location and Coverage

Project:
200705

Vacant Lot
N Russell Str. at N Vancouver Ave.
Portland, Oregon

Drawn by : NT

Prepared for: Coles & Betts
Base Photo from Google Earth



FIGURE

2

Magnetic Contour Map

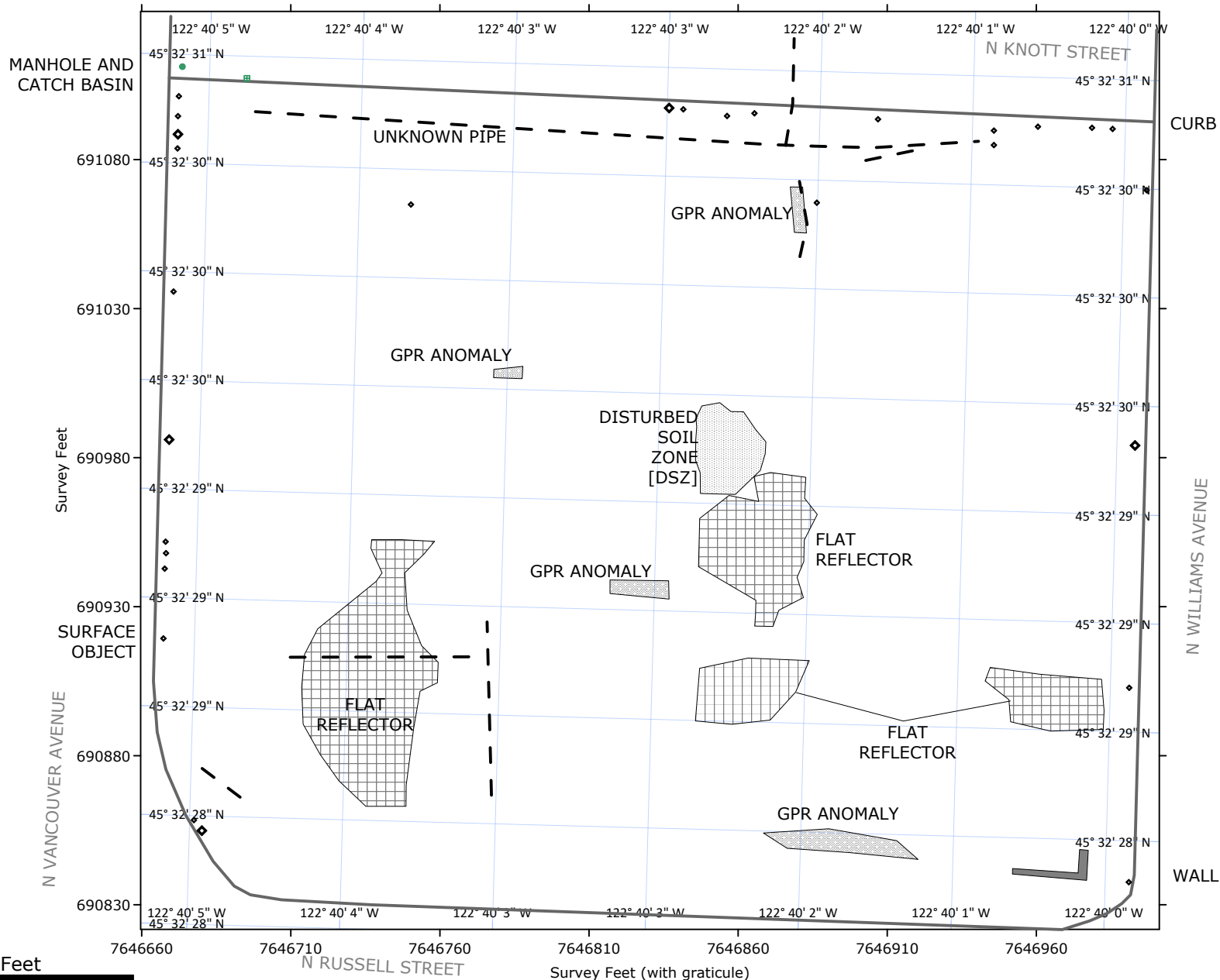
Project:
200705

Vacant Lot
N Russell Str. at N Vancouver Ave.
Portland, Oregon

Drawn by : NT

Prepared for: Coles & Betts

Survey Date: 8/20-21/2020



FIGURE

3

Interpretation Map

Project:
200705

Drawn by : NT

Vacant Lot
N Russell Str. at N Vancouver Ave.
Portland, Oregon

Prepared for: Coles & Betts

Survey Date: 8/20-21/2020



Appendix A. Geophysical Survey Methods

Magnetometer Surveys

Small disturbances in the Earth's local magnetic field are called "magnetic anomalies". These may be caused by naturally occurring features such as metallic mineral ore bodies, or from manmade features such as metal buildings, vehicles, fences, and underground storage tanks. The magnetometer only detects changes produced by ferrous objects. Aluminum and brass are non-ferrous metals and cannot be detected using a magnetometer.

A magnetometer is an electronic instrument designed to detect small changes in the Earth's local magnetic field. Over the years different technologies have been used in magnetometers. The Geometrics G-858 Portable Cesium Magnetometer used to collect magnetic data for Pacific Geophysics uses one of the most recent methods to detect magnetic anomalies. A detailed discussion describing the method this unit uses is available at Geometrics.com.

This magnetometer enables the operator to collect data rapidly and continuously rather than the older instruments that collected data at discrete points only. The G-858 is carried by hand across the site. The sensor is carried at waist level. Typically individual data points collected at normal walking speed are about 6" apart along survey lines usually 5 feet apart, depending on the dimensions of the target objects.

It is critical to know the exact location of each data point so that if an anomaly is detected it can be accurately plotted on a magnetic contour map. At most small sites, data are collected along straight, parallel survey lines set up on the site before the data collection stage begins. For very large, complex sites, the G-858 can be connected to a Global Positioning System (GPS) antenna which allows the operator to collect accurately-located data without establishing a survey grid. With GPS, data are collected and positioned wherever the operator walks. A limitation using GPS is that the GPS antenna must have line of sight with the GPS satellites. Data can be mislocated if the GPS antenna is under trees or near tall buildings.

Data are stored in the unit's memory for later downloading and processing. A magnetic contour map of the data is plotted in the field. Geographical features are plotted on the map. Magnetic anomalies appearing to be caused by objects of interest are then investigated on the site using several small hand-held metal detectors. If an object appears to be a possible object of interest, it may be investigated with GPR.

Magnetic contour maps may be printed in color in order to highlight anomalies caused by ferrous objects located under the magnetic sensor. Usually, ferrous objects situated below the sensor produce magnetic "highs" and anomalies located above the sensor produce magnetic "lows". Magnetic highs are of interest to the operator since most objects of interest are located underground.

Depending on the orientation, shape and mass of a metallic object, a high/low pair of magnetic anomalies may be present. In the northern hemisphere the magnetic low is located north of the object and the magnetic high toward the south. The object producing the anomaly is located part way between the high and the low anomalies.

Magnetometer surveys have limitations. Magnetometers only detect objects made of ferrous (iron-containing) metal. Large ferrous objects (buildings, cars, fences, etc.) within several feet of the magnetometer create interference that may hide the anomaly produced by a nearby object of interest.

Ground Penetrating Radar

A Geophysical Survey Systems, Inc. (GSSI) SIR-2000 GPR system coupled to GSSI antennas of various central frequencies is used to obtain the radar data for our surveys.

GPR antennas both transmit and receive electromagnetic energy. EM energy is transmitted into the material the antenna passes over. A portion of that energy is reflected back to the antenna and amplified. Reflections are displayed in real-time in a continuous cross section. Reflections are produced where there is a sufficient electrical contrast between two materials. Changes in the electrical properties (namely the dielectric constant) that produce radar reflections are caused by changes in the moisture content, porosity, mineralogy, and texture of the material. Metallic objects of interest exhibit a strong electrical contrast with the surrounding material and thus produce relatively strong reflections. Non-metallic objects of interest (septic tanks, cesspools, dry wells, and PVC and clay tile pipes) are not always good reflectors.



Radar data are ambiguous. It can be difficult to distinguish the reflection produced by an object of interest from the reflection caused by some natural feature. Rocks or tree roots have reflections that appear similar to reflections from pipes. In concrete investigations reflections produced by metal rebar look exactly like those from electrical conduit or post-tension cables. Objects with too small an electrical contrast may produce no reflections at all and may be missed. Target objects buried below objects with contrasting properties that also produce reflections may be missed (e.g. USTs below roots, concrete pieces, pipes or rocks). If an object of interest like a UST is buried below the depth of penetration of the radar signal, it will be missed.

In addition to interpreting ambiguous data, radar has several limitations that cannot be controlled by the operator. The radar signal is severely attenuated by electrically conductive material, including wet, clay-rich soil and reinforced concrete. The quality of the data is affected by the surface conditions over which the antenna is pulled. Ideally the antenna should rest firmly on a smooth surface. Rough terrain and tall grass reduce the quality of radar data.

It is the job of an experienced interpreter to examine the GPR profiles and deduce if reflections are from objects of interest. A GPR interpreter cannot see underground, but can only interpret reflections based on experience.

The only way to truly identify an object is to excavate.

Hand-held Metal detectors

Two small, non-recording metal detectors are used to locate suspect magnetic anomalies detected using the G-858 Magnetometer in order to determine the likely cause of the anomaly. First, the magnetic contour map and a Schonstedt Magnetic Gradiometer are used to locate the center of the magnetic anomalies.

Once the anomaly is located an Aqua-Tronics Tracer is used to determine if the object producing the anomaly is a possible object of interest. Most anomalies are at least in part produced by features observed on the ground surface.

Schonstedt Magnetic Gradiometer: This magnetometer has two magnetic sensors separated vertically by 10". The magnetic field surrounding a ferrous object is strongest near the object and decreases rapidly as the distance increases. If the magnitude measured by the sensor located in the tip of the Schonstedt is very high, and the magnetic field measured by the sensor located farther up the shaft of the Schonstedt is low, there is a large vertical magnetic gradient and the instrument responds with a loud whistle indicating the object is near the surface. If there is a small difference in the magnitudes measured by the two sensors, the object is deeper. The instrument responds with a softer tone. A discussion of this instrument is available at Schonstedt.com.

Aqua-Tronics A-6 Tracer: The Aqua-Tronics A-6 Tracer uses a different method of detecting metallic objects. This instrument measures the electrical conductivity of a metal object. It is capable of detecting any electrically conductive metal, including non-ferrous aluminum and brass. The Tracer is capable of detecting three-dimensional objects as well as pipes.

The Tracer consists of a transmitter coil and a receiver coil. In the absence of any electrically conductive material in the vicinity of the Tracer, the electromagnetic field around each coil is balanced.

Basically the electromagnetic field produced by the transmitter induces an electric current into the area surrounding the instrument. Nearby conductive objects distort the EM field. The balance between the two coils is disturbed and the instrument produces an audible tone and meter indication.

Radio Detection RD8000 PDL pipe and cable detector: This instrument may be used to detect buried, conductive pipes and utilities. It consists of a transmitter and a receiver and can be used in two configurations.

The transmitter may be used to directly apply a small electrical current to exposed, electrically conductive pipes and utilities. The RD receiver is then able to "trace" the underground portion of the pipe or utility, under some conditions for several hundred feet. The transmitter can also induce an electrical current into buried pipes and utilities where direct contact is not available.



The receiver can also be used alone. It has the capability to locate pipes and utilities by detecting the very small electrical currents induced into the features by nearby AM/FM radio stations.

The receiver also has an AC power function that may be used to detect underground power lines.

APPENDIX B

Analytical Laboratory Reports and Chain of Custody Documentation



Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Wednesday, February 10, 2021

Jill Betts

Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A0L0287 - 281 - 281

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A0L0287, which was received by the laboratory on 12/8/2020 at 2:06:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	6.0 degC	Cooler #2	3.2 degC
Cooler #3	5.7 degC		

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

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Darrell Auvil, Project Manager

**Apex Laboratories, LLC**

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**

Project Number: **281**

Project Manager: **Jill Betts**

Report ID:

A0L0287 - 02 10 21 0942

ANALYTICAL REPORT FOR SAMPLES**SAMPLE INFORMATION**

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B1 3-3.5	A0L0287-01	Soil	12/07/20 09:20	12/08/20 14:06
B1 16.5-17	A0L0287-02	Soil	12/07/20 09:25	12/08/20 14:06
B4 2-2.3	A0L0287-03	Soil	12/07/20 09:45	12/08/20 14:06
B4 5-5.5	A0L0287-04	Soil	12/07/20 09:50	12/08/20 14:06
B5 0.5-1	A0L0287-05	Soil	12/07/20 10:05	12/08/20 14:06
B5 4-4.5	A0L0287-06	Soil	12/07/20 10:10	12/08/20 14:06
B6 0.5-1	A0L0287-07	Soil	12/07/20 10:30	12/08/20 14:06
B6 1.5-2	A0L0287-08	Soil	12/07/20 10:35	12/08/20 14:06
B9 0.5-1	A0L0287-09	Soil	12/07/20 10:40	12/08/20 14:06
B9 1.5-2	A0L0287-10	Soil	12/07/20 10:45	12/08/20 14:06
B10 1-2	A0L0287-11	Soil	12/07/20 10:55	12/08/20 14:06
B10 2-2.5	A0L0287-12	Soil	12/07/20 11:00	12/08/20 14:06
B13 1-2	A0L0287-13	Soil	12/07/20 11:20	12/08/20 14:06
B13 8.5-9	A0L0287-14	Soil	12/07/20 11:25	12/08/20 14:06
B14 0.5-1	A0L0287-15	Soil	12/07/20 13:00	12/08/20 14:06
B14 8.5-9	A0L0287-16	Soil	12/07/20 13:05	12/08/20 14:06
B15 0.5-1	A0L0287-17	Soil	12/07/20 13:35	12/08/20 14:06
B15 7.5-8.5	A0L0287-18	Soil	12/07/20 13:40	12/08/20 14:06
B15 9-9.5	A0L0287-19	Soil	12/07/20 13:45	12/08/20 14:06
B16 5.5-6	A0L0287-20	Soil	12/07/20 14:15	12/08/20 14:06
B16 10.5-11	A0L0287-21	Soil	12/07/20 14:20	12/08/20 14:06
B11 1-1.5	A0L0287-22	Soil	12/07/20 14:25	12/08/20 14:06
B12 1-1.5	A0L0287-23	Soil	12/07/20 14:35	12/08/20 14:06
B8 1-1.5	A0L0287-24	Soil	12/07/20 14:45	12/08/20 14:06
B2 0.5-1	A0L0287-25	Soil	12/07/20 15:00	12/08/20 14:06
B25 0.5-1	A0L0287-26	Soil	12/08/20 09:10	12/08/20 14:06
B7 0.5-1	A0L0287-27	Soil	12/08/20 09:25	12/08/20 14:06
B18 0.5-1.5	A0L0287-28	Soil	12/08/20 09:30	12/08/20 14:06
B18 5.5-6.5	A0L0287-29	Soil	12/08/20 09:40	12/08/20 14:06
B17 0.5-1.5	A0L0287-30	Soil	12/08/20 09:50	12/08/20 14:06
B17 5.5-7.5	A0L0287-31	Soil	12/08/20 09:55	12/08/20 14:06
B17 11.5-12.5	A0L0287-32	Soil	12/08/20 10:10	12/08/20 14:06
B19 6.5-7	A0L0287-33	Soil	12/08/20 10:55	12/08/20 14:06

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Darrell Auvil, Project Manager



Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**

Project Number: **281**

Project Manager: **Jill Betts**

Report ID:

A0L0287 - 02 10 21 0942

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B19 12-13	A0L0287-34	Soil	12/08/20 11:00	12/08/20 14:06
B20 0.7-1.5	A0L0287-35	Soil	12/08/20 11:30	12/08/20 14:06
B20 12-12.5	A0L0287-36	Soil	12/08/20 11:35	12/08/20 14:06
B21 1-2	A0L0287-37	Soil	12/08/20 11:45	12/08/20 14:06
B22 3-3.5	A0L0287-38	Soil	12/08/20 12:00	12/08/20 14:06
B23 2-2.5	A0L0287-39	Soil	12/08/20 12:10	12/08/20 14:06
B24 1.5-2.9(A)	A0L0287-40	Soil	12/08/20 12:35	12/08/20 14:06
B24 1.5-2.9(B)	A0L0287-41	Soil	12/08/20 12:35	12/08/20 14:06
C001	A0L0287-42	Soil	12/08/20 12:35	12/08/20 14:06
C002	A0L0287-43	Soil	12/08/20 09:10	12/08/20 14:06
C003	A0L0287-44	Soil	12/07/20 09:20	12/08/20 14:06
C004	A0L0287-45	Soil	12/07/20 14:25	12/08/20 14:06
C005	A0L0287-46	Soil	12/08/20 09:50	12/08/20 14:06
C006	A0L0287-47	Soil	12/07/20 11:20	12/08/20 14:06

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Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS**Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B13 8.5-9 (A0L0287-14)				Matrix: Soil		Batch: 0120773		
Diesel	ND	---	25.0	mg/kg dry	1	12/21/20 22:42	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	12/21/20 22:42	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 52 %		Limits: 50-150 %	1	12/21/20 22:42	NWTPH-Dx	
B15 7.5-8.5 (A0L0287-18)				Matrix: Soil		Batch: 0120557		
Diesel	ND	---	25.0	mg/kg dry	1	12/16/20 01:42	NWTPH-Dx	
Oil	93.9	---	50.0	mg/kg dry	1	12/16/20 01:42	NWTPH-Dx	F-03
Surrogate: o-Terphenyl (Surr)		Recovery: 78 %		Limits: 50-150 %	1	12/16/20 01:42	NWTPH-Dx	
B15 9-9.5 (A0L0287-19)				Matrix: Soil		Batch: 0120773		
Diesel	ND	---	25.0	mg/kg dry	1	12/21/20 23:23	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	12/21/20 23:23	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 76 %		Limits: 50-150 %	1	12/21/20 23:23	NWTPH-Dx	
B16 5.5-6 (A0L0287-20)				Matrix: Soil		Batch: 0120451		
Diesel	ND	---	25.0	mg/kg dry	1	12/11/20 22:26	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	12/11/20 22:26	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 93 %		Limits: 50-150 %	1	12/11/20 22:26	NWTPH-Dx	
B16 10.5-11 (A0L0287-21)				Matrix: Soil		Batch: 0120773		
Diesel	ND	---	25.0	mg/kg dry	1	12/21/20 23:43	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	12/21/20 23:43	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 63 %		Limits: 50-150 %	1	12/21/20 23:43	NWTPH-Dx	
B12 1-1.5 (A0L0287-23)				Matrix: Soil		Batch: 0120773		
Diesel	ND	---	1050	mg/kg dry	50	12/22/20 00:04	NWTPH-Dx	
Oil	4240	---	2110	mg/kg dry	50	12/22/20 00:04	NWTPH-Dx	F-03
Surrogate: o-Terphenyl (Surr)		Recovery: %		Limits: 50-150 %	50	12/22/20 00:04	NWTPH-Dx	S-01
B18 5.5-6.5 (A0L0287-29)				Matrix: Soil		Batch: 0120773		
Diesel	ND	---	25.2	mg/kg dry	1	12/22/20 00:45	NWTPH-Dx	
Oil	ND	---	50.4	mg/kg dry	1	12/22/20 00:45	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 72 %		Limits: 50-150 %	1	12/22/20 00:45	NWTPH-Dx	

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Darrell Auvil, Project Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street
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ORELAP ID: OR100062

Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS**Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B17 5.5-7.5 (A0L0287-31)				Matrix: Soil		Batch: 0120557		
Diesel	ND	---	25.0	mg/kg dry	1	12/16/20 02:03	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	12/16/20 02:03	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 94 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/16/20 02:03</i>	<i>NWTPH-Dx</i>		
B19 6.5-7 (A0L0287-33)				Matrix: Soil		Batch: 0120557		
Diesel	ND	---	25.0	mg/kg dry	1	12/16/20 02:23	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	12/16/20 02:23	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 85 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/16/20 02:23</i>	<i>NWTPH-Dx</i>		
C001 (A0L0287-42)				Matrix: Soil		Batch: 0120601		
Diesel	ND	---	220	mg/kg dry	10	12/17/20 01:18	NWTPH-Dx	
Oil	498	---	441	mg/kg dry	10	12/17/20 01:18	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 74 %</i>	<i>Limits: 50-150 %</i>	<i>10</i>	<i>12/17/20 01:18</i>	<i>NWTPH-Dx</i>	<i>S-05</i>	
C002 (A0L0287-43)				Matrix: Soil		Batch: 0120601		
Diesel	ND	---	25.0	mg/kg dry	1	12/16/20 21:34	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	12/16/20 21:34	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 78 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/16/20 21:34</i>	<i>NWTPH-Dx</i>		
C003 (A0L0287-44)				Matrix: Soil		Batch: 0120601		
Diesel	ND	---	25.0	mg/kg dry	1	12/16/20 21:55	NWTPH-Dx	
Oil	266	---	50.0	mg/kg dry	1	12/16/20 21:55	NWTPH-Dx	F-03
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 71 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/16/20 21:55</i>	<i>NWTPH-Dx</i>		
C004 (A0L0287-45)				Matrix: Soil		Batch: 0120601		
Diesel	ND	---	929	mg/kg dry	40	12/16/20 22:15	NWTPH-Dx	
Oil	4680	---	1860	mg/kg dry	40	12/16/20 22:15	NWTPH-Dx	F-03
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: %</i>	<i>Limits: 50-150 %</i>	<i>40</i>	<i>12/16/20 22:15</i>	<i>NWTPH-Dx</i>	<i>S-01</i>	
C005 (A0L0287-46)				Matrix: Soil		Batch: 0120601		
Diesel	ND	---	25.0	mg/kg dry	1	12/16/20 22:55	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	12/16/20 22:55	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 51 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/16/20 22:55</i>	<i>NWTPH-Dx</i>		

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Darrell Auvil, Project Manager



Apex Laboratories, LLC

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5741 NE Flanders Street

Portland, OR 97213

Project: **281**

Project Number: **281**

Project Manager: **Jill Betts**

Report ID:

A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C006 (A0L0287-47)				Matrix: Soil		Batch: 0120601		
Diesel	ND	---	25.0	mg/kg dry	1	12/16/20 23:16	NWTPH-Dx	
Oil	87.0	---	50.0	mg/kg dry	1	12/16/20 23:16	NWTPH-Dx	F-03
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 66 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/16/20 23:16</i>	<i>NWTPH-Dx</i>	

Apex Laboratories

Darrell Auvil, Project Manager

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Portland, OR 97213

Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B1 3-3.5 (A0L0287-01)				Matrix: Soil		Batch: 0120412		
Gasoline Range Organics	ND	---	6.28	mg/kg dry	50	12/11/20 00:05	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 108 %	Limits: 50-150 %	1	12/11/20 00:05	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		104 %	50-150 %	1	12/11/20 00:05	NWTPH-Gx (MS)		
B4 5-5.5 (A0L0287-04)				Matrix: Soil		Batch: 0120412		
Gasoline Range Organics	ND	---	6.95	mg/kg dry	50	12/11/20 05:04	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 104 %	Limits: 50-150 %	1	12/11/20 05:04	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		104 %	50-150 %	1	12/11/20 05:04	NWTPH-Gx (MS)		
B5 0.5-1 (A0L0287-05)				Matrix: Soil		Batch: 0120412		
Gasoline Range Organics	ND	---	6.22	mg/kg dry	50	12/11/20 05:31	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 105 %	Limits: 50-150 %	1	12/11/20 05:31	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		105 %	50-150 %	1	12/11/20 05:31	NWTPH-Gx (MS)		
B6 0.5-1 (A0L0287-07)				Matrix: Soil		Batch: 0120428		
Gasoline Range Organics	ND	---	11.2	mg/kg dry	50	12/11/20 20:23	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 106 %	Limits: 50-150 %	1	12/11/20 20:23	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		104 %	50-150 %	1	12/11/20 20:23	NWTPH-Gx (MS)		
B10 2-2.5 (A0L0287-12)				Matrix: Soil		Batch: 0120428		V-15
Gasoline Range Organics	ND	---	6.96	mg/kg dry	50	12/11/20 17:40	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 107 %	Limits: 50-150 %	1	12/11/20 17:40	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		103 %	50-150 %	1	12/11/20 17:40	NWTPH-Gx (MS)		
B13 1-2 (A0L0287-13)				Matrix: Soil		Batch: 0120428		
Gasoline Range Organics	ND	---	6.22	mg/kg dry	50	12/11/20 21:17	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 103 %	Limits: 50-150 %	1	12/11/20 21:17	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		104 %	50-150 %	1	12/11/20 21:17	NWTPH-Gx (MS)		
B14 0.5-1 (A0L0287-15)				Matrix: Soil		Batch: 0120428		
Gasoline Range Organics	ND	---	4.65	mg/kg dry	50	12/11/20 22:12	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 104 %	Limits: 50-150 %	1	12/11/20 22:12	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		104 %	50-150 %	1	12/11/20 22:12	NWTPH-Gx (MS)		
B15 0.5-1 (A0L0287-17)				Matrix: Soil		Batch: 0120456		

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Darrell Auvil, Project Manager

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B15 0.5-1 (A0L0287-17)				Matrix: Soil		Batch: 0120456		
Gasoline Range Organics	ND	---	6.27	mg/kg dry	50	12/12/20 03:10	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 103 %	Limits: 50-150 %	1	12/12/20 03:10	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		103 %	50-150 %	1	12/12/20 03:10	NWTPH-Gx (MS)		
B15 7.5-8.5 (A0L0287-18RE1)				Matrix: Soil		Batch: 0120647		
Gasoline Range Organics	ND	---	5.88	mg/kg dry	50	12/17/20 19:26	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 100 %	Limits: 50-150 %	1	12/17/20 19:26	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		96 %	50-150 %	1	12/17/20 19:26	NWTPH-Gx (MS)		
B12 1-1.5 (A0L0287-23)				Matrix: Soil		Batch: 0120740		V-16
Gasoline Range Organics	ND	---	5.28	mg/kg dry	50	12/20/20 01:36	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 99 %	Limits: 50-150 %	1	12/20/20 01:36	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		86 %	50-150 %	1	12/20/20 01:36	NWTPH-Gx (MS)		
B17 0.5-1.5 (A0L0287-30)				Matrix: Soil		Batch: 0120456		
Gasoline Range Organics	ND	---	5.85	mg/kg dry	50	12/12/20 04:04	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 102 %	Limits: 50-150 %	1	12/12/20 04:04	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		103 %	50-150 %	1	12/12/20 04:04	NWTPH-Gx (MS)		
B17 5.5-7.5 (A0L0287-31RE1)				Matrix: Soil		Batch: 0120647		
Gasoline Range Organics	ND	---	6.38	mg/kg dry	50	12/17/20 19:53	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 100 %	Limits: 50-150 %	1	12/17/20 19:53	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		96 %	50-150 %	1	12/17/20 19:53	NWTPH-Gx (MS)		
B19 6.5-7 (A0L0287-33RE1)				Matrix: Soil		Batch: 0120647		
Gasoline Range Organics	ND	---	6.26	mg/kg dry	50	12/17/20 20:21	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 101 %	Limits: 50-150 %	1	12/17/20 20:21	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		96 %	50-150 %	1	12/17/20 20:21	NWTPH-Gx (MS)		

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**5741 NE Flanders Street
Portland, OR 97213**

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B1 3-3.5 (A0L0287-01)				Matrix: Soil		Batch: 0120412		
Acetone	ND	---	1260	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Acrylonitrile	ND	---	314	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Benzene	ND	---	12.6	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Bromobenzene	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Bromochloromethane	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Bromodichloromethane	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Bromoform	ND	---	126	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Bromomethane	ND	---	628	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
2-Butanone (MEK)	ND	---	628	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
n-Butylbenzene	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
sec-Butylbenzene	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
tert-Butylbenzene	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Carbon disulfide	ND	---	628	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Carbon tetrachloride	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Chlorobenzene	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Chloroethane	ND	---	628	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Chloroform	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Chloromethane	ND	---	314	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
2-Chlorotoluene	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
4-Chlorotoluene	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Dibromochloromethane	ND	---	126	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	314	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Dibromomethane	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,2-Dichlorobenzene	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,3-Dichlorobenzene	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,4-Dichlorobenzene	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Dichlorodifluoromethane	ND	---	126	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,1-Dichloroethane	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,1-Dichloroethene	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	

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Coles & Betts Environmental Consulting

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B1 3-3.5 (A0L0287-01)				Matrix: Soil		Batch: 0120412		
1,2-Dichloropropane	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,3-Dichloropropane	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
2,2-Dichloropropane	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,1-Dichloropropene	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	126	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Ethylbenzene	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Hexachlorobutadiene	ND	---	126	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
2-Hexanone	ND	---	628	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Isopropylbenzene	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
4-Isopropyltoluene	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Methylene chloride	ND	---	628	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	628	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Naphthalene	ND	---	126	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
n-Propylbenzene	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Styrene	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Toluene	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	314	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	314	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,1,1-Trichloroethane	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,1,2-Trichloroethane	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Trichloroethene (TCE)	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Trichlorofluoromethane	ND	---	126	ug/kg dry	50	12/11/20 00:05	5035A/8260D	EST
1,2,3-Trichloropropane	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
Vinyl chloride	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
m,p-Xylene	ND	---	62.8	ug/kg dry	50	12/11/20 00:05	5035A/8260D	
o-Xylene	ND	---	31.4	ug/kg dry	50	12/11/20 00:05	5035A/8260D	

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5741 NE Flanders Street
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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B1 3-3.5 (A0L0287-01)				Matrix: Soil		Batch: 0120412		
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 106 %	Limits: 80-120 %	1	12/11/20 00:05	5035A/8260D		
Toluene-d8 (Surr)		101 %	80-120 %	1	12/11/20 00:05	5035A/8260D		
4-Bromofluorobenzene (Surr)		98 %	79-120 %	1	12/11/20 00:05	5035A/8260D		
B4 5-5.5 (A0L0287-04)				Matrix: Soil		Batch: 0120412		
Acetone	ND	---	1390	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Acrylonitrile	ND	---	348	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Benzene	ND	---	13.9	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Bromobenzene	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Bromochloromethane	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Bromodichloromethane	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Bromoform	ND	---	139	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Bromomethane	ND	---	695	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
2-Butanone (MEK)	ND	---	695	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
n-Butylbenzene	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
sec-Butylbenzene	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
tert-Butylbenzene	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Carbon disulfide	ND	---	695	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Carbon tetrachloride	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Chlorobenzene	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Chloroethane	ND	---	695	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Chloroform	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Chloromethane	ND	---	348	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
2-Chlorotoluene	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
4-Chlorotoluene	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Dibromochloromethane	ND	---	139	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	348	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Dibromomethane	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,2-Dichlorobenzene	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,3-Dichlorobenzene	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,4-Dichlorobenzene	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Dichlorodifluoromethane	ND	---	139	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,1-Dichloroethane	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	

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Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B4 5-5.5 (A0L0287-04)				Matrix: Soil		Batch: 0120412		
1,2-Dichloroethane (EDC)	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,1-Dichloroethene	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,2-Dichloropropane	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,3-Dichloropropane	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
2,2-Dichloropropane	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,1-Dichloropropene	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	139	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Ethylbenzene	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Hexachlorobutadiene	ND	---	139	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
2-Hexanone	ND	---	695	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Isopropylbenzene	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
4-Isopropyltoluene	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Methylene chloride	ND	---	695	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	695	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Naphthalene	ND	---	139	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
n-Propylbenzene	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Styrene	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Toluene	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	348	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	348	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,1,1-Trichloroethane	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,1,2-Trichloroethane	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Trichloroethene (TCE)	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Trichlorofluoromethane	ND	---	139	ug/kg dry	50	12/11/20 05:04	5035A/8260D	EST
1,2,3-Trichloropropane	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	

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Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B4 5-5.5 (A0L0287-04)		Matrix: Soil			Batch: 0120412			
1,3,5-Trimethylbenzene	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
Vinyl chloride	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
m,p-Xylene	ND	---	69.5	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
o-Xylene	ND	---	34.8	ug/kg dry	50	12/11/20 05:04	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>12/11/20 05:04</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>	<i>1</i>	<i>12/11/20 05:04</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>	<i>1</i>	<i>12/11/20 05:04</i>	<i>5035A/8260D</i>	
B5 0.5-1 (A0L0287-05)		Matrix: Soil			Batch: 0120412			
Acetone	ND	---	1240	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Acrylonitrile	ND	---	311	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Benzene	ND	---	12.4	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Bromobenzene	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Bromochloromethane	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Bromodichloromethane	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Bromoform	ND	---	124	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Bromomethane	ND	---	622	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
2-Butanone (MEK)	ND	---	622	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
n-Butylbenzene	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
sec-Butylbenzene	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
tert-Butylbenzene	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Carbon disulfide	ND	---	622	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Carbon tetrachloride	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Chlorobenzene	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Chloroethane	ND	---	622	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Chloroform	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Chloromethane	ND	---	311	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
2-Chlorotoluene	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
4-Chlorotoluene	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Dibromochloromethane	ND	---	124	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	311	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Dibromomethane	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,2-Dichlorobenzene	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	

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Darrell Auvil, Project Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street
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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B5 0.5-1 (A0L0287-05)				Matrix: Soil		Batch: 0120412		
1,3-Dichlorobenzene	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,4-Dichlorobenzene	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Dichlorodifluoromethane	ND	---	124	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,1-Dichloroethane	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,1-Dichloroethene	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,2-Dichloropropane	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,3-Dichloropropane	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
2,2-Dichloropropane	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,1-Dichloropropene	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	124	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Ethylbenzene	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Hexachlorobutadiene	ND	---	124	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
2-Hexanone	ND	---	622	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Isopropylbenzene	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
4-Isopropyltoluene	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Methylene chloride	ND	---	622	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	---	622	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Naphthalene	ND	---	124	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
n-Propylbenzene	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Styrene	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Toluene	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	311	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	311	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,1,1-Trichloroethane	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,1,2-Trichloroethane	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B5 0.5-1 (A0L0287-05)				Matrix: Soil		Batch: 0120412		
Trichloroethene (TCE)	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Trichlorofluoromethane	ND	---	124	ug/kg dry	50	12/11/20 05:31	5035A/8260D	EST
1,2,3-Trichloropropane	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
Vinyl chloride	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
m,p-Xylene	ND	---	62.2	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
o-Xylene	ND	---	31.1	ug/kg dry	50	12/11/20 05:31	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>106 %</i>	<i>Limits:</i>	<i>80-120 %</i>	<i>1</i>	<i>12/11/20 05:31</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>			<i>102 %</i>		<i>80-120 %</i>	<i>1</i>	<i>12/11/20 05:31</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>		<i>79-120 %</i>	<i>1</i>	<i>12/11/20 05:31</i>	<i>5035A/8260D</i>
B6 0.5-1 (A0L0287-07)				Matrix: Soil		Batch: 0120428		
Acetone	ND	---	2230	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Acrylonitrile	ND	---	558	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Benzene	ND	---	22.3	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Bromobenzene	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Bromochloromethane	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Bromodichloromethane	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Bromoform	ND	---	223	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Bromomethane	ND	---	1120	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
2-Butanone (MEK)	ND	---	1120	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
n-Butylbenzene	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
sec-Butylbenzene	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
tert-Butylbenzene	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Carbon disulfide	ND	---	1120	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Carbon tetrachloride	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Chlorobenzene	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Chloroethane	ND	---	1120	ug/kg dry	50	12/11/20 20:23	5035A/8260D	Q-30
Chloroform	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Chloromethane	ND	---	558	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
2-Chlorotoluene	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
4-Chlorotoluene	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Dibromochloromethane	ND	---	223	ug/kg dry	50	12/11/20 20:23	5035A/8260D	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B6 0.5-1 (A0L0287-07)				Matrix: Soil		Batch: 0120428		
1,2-Dibromo-3-chloropropane	ND	---	558	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Dibromomethane	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,2-Dichlorobenzene	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,3-Dichlorobenzene	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,4-Dichlorobenzene	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Dichlorodifluoromethane	ND	---	223	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,1-Dichloroethane	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,1-Dichloroethene	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,2-Dichloropropane	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,3-Dichloropropane	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
2,2-Dichloropropane	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,1-Dichloropropene	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	223	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Ethylbenzene	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Hexachlorobutadiene	ND	---	223	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
2-Hexanone	ND	---	1120	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Isopropylbenzene	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
4-Isopropyltoluene	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Methylene chloride	ND	---	1120	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	---	1120	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Naphthalene	ND	---	223	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
n-Propylbenzene	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Styrene	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Toluene	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B6 0.5-1 (A0L0287-07)				Matrix: Soil		Batch: 0120428		
1,2,3-Trichlorobenzene	ND	---	558	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	558	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,1,1-Trichloroethane	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,1,2-Trichloroethane	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Trichloroethene (TCE)	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Trichlorofluoromethane	ND	---	223	ug/kg dry	50	12/11/20 20:23	5035A/8260D	EST
1,2,3-Trichloropropane	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
Vinyl chloride	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
m,p-Xylene	ND	---	112	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
o-Xylene	ND	---	55.8	ug/kg dry	50	12/11/20 20:23	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	105 %	<i>Limits:</i>	80-120 %	1	12/11/20 20:23	5035A/8260D
<i>Toluene-d8 (Surr)</i>			102 %		80-120 %	1	12/11/20 20:23	5035A/8260D
<i>4-Bromofluorobenzene (Surr)</i>			100 %		79-120 %	1	12/11/20 20:23	5035A/8260D
B10 2-2.5 (A0L0287-12)				Matrix: Soil		Batch: 0120428		V-15
Acetone	ND	---	1390	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Acrylonitrile	ND	---	348	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Benzene	ND	---	13.9	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Bromobenzene	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Bromochloromethane	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Bromodichloromethane	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Bromoform	ND	---	139	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Bromomethane	ND	---	696	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
2-Butanone (MEK)	ND	---	696	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
n-Butylbenzene	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
sec-Butylbenzene	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
tert-Butylbenzene	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Carbon disulfide	ND	---	696	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Carbon tetrachloride	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Chlorobenzene	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Chloroethane	ND	---	696	ug/kg dry	50	12/11/20 17:40	5035A/8260D	Q-30
Chloroform	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	

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Darrell Auvil, Project Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street
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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B10 2-2.5 (A0L0287-12)				Matrix: Soil		Batch: 0120428		V-15
Chloromethane	ND	---	348	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
2-Chlorotoluene	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
4-Chlorotoluene	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Dibromochloromethane	ND	---	139	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	348	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Dibromomethane	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,2-Dichlorobenzene	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,3-Dichlorobenzene	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,4-Dichlorobenzene	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Dichlorodifluoromethane	ND	---	139	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,1-Dichloroethane	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,1-Dichloroethene	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,2-Dichloropropane	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,3-Dichloropropane	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
2,2-Dichloropropane	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,1-Dichloropropene	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	139	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Ethylbenzene	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Hexachlorobutadiene	ND	---	139	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
2-Hexanone	ND	---	696	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Isopropylbenzene	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
4-Isopropyltoluene	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Methylene chloride	ND	---	696	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	---	696	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Naphthalene	ND	---	139	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
n-Propylbenzene	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Styrene	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B10 2-2.5 (A0L0287-12)				Matrix: Soil		Batch: 0120428		V-15
1,1,1,2-Tetrachloroethane	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Toluene	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	348	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	348	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,1,1-Trichloroethane	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,1,2-Trichloroethane	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Trichloroethene (TCE)	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Trichlorofluoromethane	ND	---	139	ug/kg dry	50	12/11/20 17:40	5035A/8260D	EST
1,2,3-Trichloropropane	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Vinyl chloride	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
m,p-Xylene	ND	---	69.6	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
o-Xylene	ND	---	34.8	ug/kg dry	50	12/11/20 17:40	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 106 %		Limits: 80-120 %	1	12/11/20 17:40	5035A/8260D	
Toluene-d8 (Surr)		99 %		80-120 %	1	12/11/20 17:40	5035A/8260D	
4-Bromofluorobenzene (Surr)		99 %		79-120 %	1	12/11/20 17:40	5035A/8260D	
B13 1-2 (A0L0287-13)				Matrix: Soil		Batch: 0120428		
Acetone	ND	---	1240	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Acrylonitrile	ND	---	311	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Benzene	ND	---	12.4	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Bromobenzene	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Bromochloromethane	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Bromodichloromethane	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Bromoform	ND	---	124	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Bromomethane	ND	---	622	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
2-Butanone (MEK)	ND	---	622	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
n-Butylbenzene	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
sec-Butylbenzene	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
tert-Butylbenzene	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Carbon disulfide	ND	---	622	ug/kg dry	50	12/11/20 21:17	5035A/8260D	

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B13 1-2 (A0L0287-13)				Matrix: Soil		Batch: 0120428		
Carbon tetrachloride	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Chlorobenzene	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Chloroethane	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	Q-30
Chloroform	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Chloromethane	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
2-Chlorotoluene	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
4-Chlorotoluene	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Dibromochloromethane	ND	---	124	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Dibromomethane	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,2-Dichlorobenzene	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,3-Dichlorobenzene	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,4-Dichlorobenzene	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Dichlorodifluoromethane	ND	---	124	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,1-Dichloroethane	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,1-Dichloroethene	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,2-Dichloropropane	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,3-Dichloropropane	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
2,2-Dichloropropane	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,1-Dichloropropene	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	124	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Ethylbenzene	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Hexachlorobutadiene	ND	---	124	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
2-Hexanone	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Isopropylbenzene	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
4-Isopropyltoluene	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Methylene chloride	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B13 1-2 (A0L0287-13)				Matrix: Soil		Batch: 0120428		
Methyl tert-butyl ether (MTBE)	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Naphthalene	ND	---	124	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
n-Propylbenzene	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Styrene	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Toluene	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	311	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	311	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,1,1-Trichloroethane	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,1,2-Trichloroethane	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Trichloroethene (TCE)	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Trichlorofluoromethane	ND	---	124	ug/kg dry	50	12/11/20 21:17	5035A/8260D	EST
1,2,3-Trichloropropane	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
Vinyl chloride	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
m,p-Xylene	ND	---	62.2	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
o-Xylene	ND	---	31.1	ug/kg dry	50	12/11/20 21:17	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>12/11/20 21:17</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>	<i>1</i>	<i>12/11/20 21:17</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>	<i>1</i>	<i>12/11/20 21:17</i>	<i>5035A/8260D</i>	

B14 0.5-1 (A0L0287-15)**Matrix: Soil****Batch: 0120428**

Acetone	ND	---	931	ug/kg dry	50	12/11/20 22:12	5035A/8260D
Acrylonitrile	ND	---	233	ug/kg dry	50	12/11/20 22:12	5035A/8260D
Benzene	ND	---	9.31	ug/kg dry	50	12/11/20 22:12	5035A/8260D
Bromobenzene	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D
Bromochloromethane	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D
Bromodichloromethane	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D
Bromoform	ND	---	93.1	ug/kg dry	50	12/11/20 22:12	5035A/8260D
Bromomethane	ND	---	465	ug/kg dry	50	12/11/20 22:12	5035A/8260D
2-Butanone (MEK)	ND	---	465	ug/kg dry	50	12/11/20 22:12	5035A/8260D

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Darrell Auvil, Project Manager

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Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B14 0.5-1 (A0L0287-15)				Matrix: Soil		Batch: 0120428		
n-Butylbenzene	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
sec-Butylbenzene	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
tert-Butylbenzene	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Carbon disulfide	ND	---	465	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Carbon tetrachloride	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Chlorobenzene	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Chloroethane	ND	---	465	ug/kg dry	50	12/11/20 22:12	5035A/8260D	Q-30
Chloroform	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Chloromethane	ND	---	233	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
2-Chlorotoluene	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
4-Chlorotoluene	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Dibromochloromethane	ND	---	93.1	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	233	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Dibromomethane	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,2-Dichlorobenzene	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,3-Dichlorobenzene	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,4-Dichlorobenzene	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Dichlorodifluoromethane	ND	---	93.1	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,1-Dichloroethane	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,1-Dichloroethene	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,2-Dichloropropane	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,3-Dichloropropane	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
2,2-Dichloropropane	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,1-Dichloropropene	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	93.1	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Ethylbenzene	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Hexachlorobutadiene	ND	---	93.1	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
2-Hexanone	ND	---	465	ug/kg dry	50	12/11/20 22:12	5035A/8260D	

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Darrell Auvil, Project Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B14 0.5-1 (A0L0287-15)				Matrix: Soil		Batch: 0120428		
Isopropylbenzene	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
4-Isopropyltoluene	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Methylene chloride	ND	---	465	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	465	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Naphthalene	ND	---	93.1	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
n-Propylbenzene	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Styrene	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Toluene	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	233	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	233	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,1,1-Trichloroethane	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,1,2-Trichloroethane	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Trichloroethene (TCE)	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Trichlorofluoromethane	ND	---	93.1	ug/kg dry	50	12/11/20 22:12	5035A/8260D	EST
1,2,3-Trichloropropane	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
Vinyl chloride	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
m,p-Xylene	ND	---	46.5	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
o-Xylene	ND	---	23.3	ug/kg dry	50	12/11/20 22:12	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>12/11/20 22:12</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>	<i>1</i>	<i>12/11/20 22:12</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>	<i>1</i>	<i>12/11/20 22:12</i>	<i>5035A/8260D</i>	

B15 0.5-1 (A0L0287-17)**Matrix: Soil****Batch: 0120456**

Acetone	ND	---	1250	ug/kg dry	50	12/12/20 03:10	5035A/8260D
Acrylonitrile	ND	---	313	ug/kg dry	50	12/12/20 03:10	5035A/8260D
Benzene	ND	---	12.5	ug/kg dry	50	12/12/20 03:10	5035A/8260D
Bromobenzene	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D
Bromochloromethane	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D

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Darrell Auvil, Project Manager

**Apex Laboratories, LLC**

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B15 0.5-1 (A0L0287-17)				Matrix: Soil		Batch: 0120456		
Bromodichloromethane	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Bromoform	ND	---	125	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Bromomethane	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
2-Butanone (MEK)	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
n-Butylbenzene	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
sec-Butylbenzene	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
tert-Butylbenzene	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Carbon disulfide	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Carbon tetrachloride	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Chlorobenzene	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Chloroethane	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	Q-30
Chloroform	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Chloromethane	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
2-Chlorotoluene	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
4-Chlorotoluene	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Dibromochloromethane	ND	---	125	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Dibromomethane	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,2-Dichlorobenzene	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,3-Dichlorobenzene	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,4-Dichlorobenzene	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Dichlorodifluoromethane	ND	---	125	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,1-Dichloroethane	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,1-Dichloroethene	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,2-Dichloropropane	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,3-Dichloropropane	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
2,2-Dichloropropane	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,1-Dichloropropene	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B15 0.5-1 (A0L0287-17)				Matrix: Soil		Batch: 0120456		
trans-1,3-Dichloropropene	ND	---	125	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Ethylbenzene	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Hexachlorobutadiene	ND	---	125	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
2-Hexanone	ND	---	627	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Isopropylbenzene	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
4-Isopropyltoluene	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Methylene chloride	ND	---	627	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	---	627	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Naphthalene	ND	---	125	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
n-Propylbenzene	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Styrene	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Toluene	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	313	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	313	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,1,1-Trichloroethane	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,1,2-Trichloroethane	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Trichloroethene (TCE)	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Trichlorofluoromethane	ND	---	125	ug/kg dry	50	12/12/20 03:10	5035A/8260D	EST
1,2,3-Trichloropropane	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Vinyl chloride	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
m,p-Xylene	ND	---	62.7	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
o-Xylene	ND	---	31.3	ug/kg dry	50	12/12/20 03:10	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 106 %		Limits: 80-120 %	1	12/12/20 03:10	5035A/8260D	
Toluene-d8 (Surr)		102 %		80-120 %	1	12/12/20 03:10	5035A/8260D	
4-Bromofluorobenzene (Surr)		100 %		79-120 %	1	12/12/20 03:10	5035A/8260D	

B15 7.5-8.5 (A0L0287-18RE1)**Matrix: Soil****Batch: 0120647**

Acetone	ND	---	1180	ug/kg dry	50	12/17/20 19:26	5035A/8260D
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Darrell Auvil, Project Manager



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Coles & Betts Environmental Consulting

5741 NE Flanders Street

Portland, OR 97213

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B15 7.5-8.5 (A0L0287-18RE1)				Matrix: Soil		Batch: 0120647		
Acrylonitrile	ND	---	294	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Benzene	ND	---	11.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Bromobenzene	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Bromochloromethane	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Bromodichloromethane	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Bromoform	ND	---	118	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Bromomethane	ND	---	588	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
2-Butanone (MEK)	ND	---	588	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
n-Butylbenzene	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
sec-Butylbenzene	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
tert-Butylbenzene	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Carbon disulfide	ND	---	588	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Carbon tetrachloride	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Chlorobenzene	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Chloroethane	ND	---	588	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Chloroform	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Chloromethane	ND	---	294	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
2-Chlorotoluene	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
4-Chlorotoluene	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Dibromochloromethane	ND	---	118	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	294	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Dibromomethane	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,2-Dichlorobenzene	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,3-Dichlorobenzene	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,4-Dichlorobenzene	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Dichlorodifluoromethane	ND	---	118	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,1-Dichloroethane	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,1-Dichloroethene	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,2-Dichloropropane	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B15 7.5-8.5 (A0L0287-18RE1)				Matrix: Soil		Batch: 0120647		
1,3-Dichloropropane	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
2,2-Dichloropropane	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,1-Dichloropropene	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	118	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Ethylbenzene	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Hexachlorobutadiene	ND	---	118	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
2-Hexanone	ND	---	588	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Isopropylbenzene	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
4-Isopropyltoluene	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Methylene chloride	ND	---	588	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	---	588	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Naphthalene	ND	---	118	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
n-Propylbenzene	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Styrene	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Toluene	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	294	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	294	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,1,1-Trichloroethane	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,1,2-Trichloroethane	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Trichloroethene (TCE)	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Trichlorofluoromethane	ND	---	118	ug/kg dry	50	12/17/20 19:26	5035A/8260D	EST
1,2,3-Trichloropropane	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Vinyl chloride	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
m,p-Xylene	ND	---	58.8	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
o-Xylene	ND	---	29.4	ug/kg dry	50	12/17/20 19:26	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 108 %		Limits: 80-120 %	1	12/17/20 19:26	5035A/8260D	

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Darrell Auvil, Project Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street
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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B15 7.5-8.5 (A0L0287-18RE1)				Matrix: Soil		Batch: 0120647		
Surrogate: Toluene-d8 (Surr)		Recovery: 99 %	Limits: 80-120 %	1	12/17/20 19:26	5035A/8260D		
4-Bromofluorobenzene (Surr)		102 %	79-120 %	1	12/17/20 19:26	5035A/8260D		
B12 1-1.5 (A0L0287-23)				Matrix: Soil		Batch: 0120740		V-16
Acetone	ND	---	1060	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Acrylonitrile	ND	---	106	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Benzene	ND	---	10.6	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Bromobenzene	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Bromochloromethane	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Bromodichloromethane	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Bromoform	ND	---	106	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Bromomethane	ND	---	528	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
2-Butanone (MEK)	ND	---	528	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
n-Butylbenzene	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
sec-Butylbenzene	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
tert-Butylbenzene	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Carbon disulfide	ND	---	528	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Carbon tetrachloride	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Chlorobenzene	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Chloroethane	ND	---	528	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Chloroform	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Chloromethane	ND	---	264	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
2-Chlorotoluene	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
4-Chlorotoluene	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Dibromochloromethane	ND	---	106	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	264	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Dibromomethane	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,2-Dichlorobenzene	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,3-Dichlorobenzene	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,4-Dichlorobenzene	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Dichlorodifluoromethane	ND	---	106	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,1-Dichloroethane	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	

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Darrell Auvil, Project Manager



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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

**5741 NE Flanders Street
Portland, OR 97213**

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B12 1-1.5 (A0L0287-23)				Matrix: Soil		Batch: 0120740		V-16
1,1-Dichloroethene	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,2-Dichloropropane	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,3-Dichloropropane	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
2,2-Dichloropropane	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,1-Dichloropropene	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Ethylbenzene	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Hexachlorobutadiene	ND	---	106	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
2-Hexanone	ND	---	528	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Isopropylbenzene	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
4-Isopropyltoluene	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Methylene chloride	ND	---	528	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	528	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Naphthalene	439	---	106	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
n-Propylbenzene	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Styrene	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Toluene	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	264	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	264	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,1,1-Trichloroethane	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,1,2-Trichloroethane	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Trichloroethene (TCE)	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Trichlorofluoromethane	ND	---	106	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,2,3-Trichloropropane	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B12 1-1.5 (A0L0287-23)				Matrix: Soil		Batch: 0120740		V-16
Vinyl chloride	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
m,p-Xylene	ND	---	52.8	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
o-Xylene	ND	---	26.4	ug/kg dry	50	12/20/20 01:36	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 94 %		Limits: 80-120 %	1	12/20/20 01:36	5035A/8260D	
Toluene-d8 (Surr)		95 %		80-120 %	1	12/20/20 01:36	5035A/8260D	
4-Bromofluorobenzene (Surr)		103 %		79-120 %	1	12/20/20 01:36	5035A/8260D	
B17 0.5-1.5 (A0L0287-30)				Matrix: Soil		Batch: 0120456		
Acetone	ND	---	1170	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Acrylonitrile	ND	---	292	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Benzene	ND	---	11.7	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Bromobenzene	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Bromochloromethane	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Bromodichloromethane	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Bromoform	ND	---	117	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Bromomethane	ND	---	585	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
2-Butanone (MEK)	ND	---	585	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
n-Butylbenzene	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
sec-Butylbenzene	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
tert-Butylbenzene	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Carbon disulfide	ND	---	585	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Carbon tetrachloride	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Chlorobenzene	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Chloroethane	ND	---	585	ug/kg dry	50	12/12/20 04:04	5035A/8260D	Q-30
Chloroform	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Chloromethane	ND	---	292	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
2-Chlorotoluene	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
4-Chlorotoluene	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Dibromochloromethane	ND	---	117	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	292	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Dibromomethane	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,2-Dichlorobenzene	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,3-Dichlorobenzene	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B17 0.5-1.5 (A0L0287-30)				Matrix: Soil		Batch: 0120456		
1,4-Dichlorobenzene	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Dichlorodifluoromethane	ND	---	117	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,1-Dichloroethane	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,1-Dichloroethene	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,2-Dichloropropane	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,3-Dichloropropane	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
2,2-Dichloropropane	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,1-Dichloropropene	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	117	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Ethylbenzene	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Hexachlorobutadiene	ND	---	117	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
2-Hexanone	ND	---	585	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Isopropylbenzene	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
4-Isopropyltoluene	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Methylene chloride	ND	---	585	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	---	585	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Naphthalene	ND	---	117	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
n-Propylbenzene	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Styrene	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Toluene	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	292	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	292	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,1,1-Trichloroethane	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,1,2-Trichloroethane	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Trichloroethene (TCE)	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B17 0.5-1.5 (A0L0287-30)				Matrix: Soil		Batch: 0120456		
Trichlorofluoromethane	ND	---	117	ug/kg dry	50	12/12/20 04:04	5035A/8260D	EST
1,2,3-Trichloropropane	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
Vinyl chloride	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
m,p-Xylene	ND	---	58.5	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
o-Xylene	ND	---	29.2	ug/kg dry	50	12/12/20 04:04	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>106 %</i>	<i>Limits:</i>	<i>80-120 %</i>	<i>1</i>	<i>12/12/20 04:04</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>		<i>80-120 %</i>	<i>1</i>	<i>12/12/20 04:04</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>		<i>79-120 %</i>	<i>1</i>	<i>12/12/20 04:04</i>	<i>5035A/8260D</i>
B17 5.5-7.5 (A0L0287-31RE1)				Matrix: Soil		Batch: 0120647		
Acetone	ND	---	1280	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Acrylonitrile	ND	---	319	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Benzene	ND	---	12.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Bromobenzene	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Bromochloromethane	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Bromodichloromethane	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Bromoform	ND	---	128	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Bromomethane	ND	---	638	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
2-Butanone (MEK)	ND	---	638	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
n-Butylbenzene	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
sec-Butylbenzene	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
tert-Butylbenzene	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Carbon disulfide	ND	---	638	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Carbon tetrachloride	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Chlorobenzene	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Chloroethane	ND	---	638	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Chloroform	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Chloromethane	ND	---	319	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
2-Chlorotoluene	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
4-Chlorotoluene	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Dibromochloromethane	ND	---	128	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	319	ug/kg dry	50	12/17/20 19:53	5035A/8260D	

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Darrell Auvil, Project Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street
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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B17 5.5-7.5 (A0L0287-31RE1)				Matrix: Soil		Batch: 0120647		
1,2-Dibromoethane (EDB)	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Dibromomethane	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,2-Dichlorobenzene	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,3-Dichlorobenzene	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,4-Dichlorobenzene	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Dichlorodifluoromethane	ND	---	128	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,1-Dichloroethane	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,1-Dichloroethene	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,2-Dichloropropane	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,3-Dichloropropane	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
2,2-Dichloropropane	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,1-Dichloropropene	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	128	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Ethylbenzene	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Hexachlorobutadiene	ND	---	128	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
2-Hexanone	ND	---	638	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Isopropylbenzene	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
4-Isopropyltoluene	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Methylene chloride	ND	---	638	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	---	638	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Naphthalene	ND	---	128	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
n-Propylbenzene	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Styrene	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Toluene	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	319	ug/kg dry	50	12/17/20 19:53	5035A/8260D	

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS**Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B17 5.5-7.5 (A0L0287-31RE1)				Matrix: Soil		Batch: 0120647		
1,2,4-Trichlorobenzene	ND	---	319	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,1,1-Trichloroethane	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,1,2-Trichloroethane	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Trichloroethene (TCE)	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Trichlorofluoromethane	ND	---	128	ug/kg dry	50	12/17/20 19:53	5035A/8260D	EST
1,2,3-Trichloropropane	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
Vinyl chloride	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
m,p-Xylene	ND	---	63.8	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
o-Xylene	ND	---	31.9	ug/kg dry	50	12/17/20 19:53	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>110 %</i>	<i>Limits:</i>	<i>80-120 %</i>	<i>1</i>	<i>12/17/20 19:53</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>		<i>80-120 %</i>	<i>1</i>	<i>12/17/20 19:53</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>		<i>79-120 %</i>	<i>1</i>	<i>12/17/20 19:53</i>	<i>5035A/8260D</i>
B19 6.5-7 (A0L0287-33RE1)				Matrix: Soil		Batch: 0120647		
Acetone	ND	---	1250	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Acrylonitrile	ND	---	313	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Benzene	ND	---	12.5	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Bromobenzene	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Bromochloromethane	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Bromodichloromethane	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Bromoform	ND	---	125	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Bromomethane	ND	---	626	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
2-Butanone (MEK)	ND	---	626	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
n-Butylbenzene	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
sec-Butylbenzene	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
tert-Butylbenzene	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Carbon disulfide	ND	---	626	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Carbon tetrachloride	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Chlorobenzene	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Chloroethane	ND	---	626	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Chloroform	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Chloromethane	ND	---	313	ug/kg dry	50	12/17/20 20:21	5035A/8260D	

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Darrell Auvil, Project Manager

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B19 6.5-7 (A0L0287-33RE1)				Matrix: Soil		Batch: 0120647		
2-Chlorotoluene	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
4-Chlorotoluene	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Dibromochloromethane	ND	---	125	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	---	313	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Dibromomethane	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,2-Dichlorobenzene	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,3-Dichlorobenzene	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,4-Dichlorobenzene	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Dichlorodifluoromethane	ND	---	125	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,1-Dichloroethane	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,1-Dichloroethene	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
cis-1,2-Dichloroethene	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
trans-1,2-Dichloroethene	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,2-Dichloropropane	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,3-Dichloropropane	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
2,2-Dichloropropane	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,1-Dichloropropene	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
cis-1,3-Dichloropropene	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
trans-1,3-Dichloropropene	ND	---	125	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Ethylbenzene	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Hexachlorobutadiene	ND	---	125	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
2-Hexanone	ND	---	626	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Isopropylbenzene	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
4-Isopropyltoluene	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Methylene chloride	ND	---	626	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	---	626	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Naphthalene	ND	---	125	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
n-Propylbenzene	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Styrene	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	

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Darrell Auvil, Project Manager

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B19 6.5-7 (A0L0287-33RE1)				Matrix: Soil		Batch: 0120647		
1,1,2,2-Tetrachloroethane	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Tetrachloroethene (PCE)	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Toluene	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,2,3-Trichlorobenzene	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,2,4-Trichlorobenzene	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,1,1-Trichloroethane	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,1,2-Trichloroethane	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Trichloroethene (TCE)	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Trichlorofluoromethane	ND	---	125	ug/kg dry	50	12/17/20 20:21	5035A/8260D	EST
1,2,3-Trichloropropane	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
Vinyl chloride	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
m,p-Xylene	ND	---	62.6	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
o-Xylene	ND	---	31.3	ug/kg dry	50	12/17/20 20:21	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 109 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>12/17/20 20:21</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>	<i>1</i>	<i>12/17/20 20:21</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>101 %</i>		<i>79-120 %</i>	<i>1</i>	<i>12/17/20 20:21</i>	<i>5035A/8260D</i>	

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Darrell Auvil, Project Manager

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5741 NE Flanders Street
Portland, OR 97213

Project: **281**

Project Number: **281**

Project Manager: **Jill Betts**

Report ID:

A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS**Polychlorinated Biphenyls by EPA 8082A**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C001 (A0L0287-42)		Matrix: Soil		Batch: 0120889		C-07		
Aroclor 1016	ND	---	11.5	ug/kg dry	1	12/29/20 11:07	EPA 8082A	
Aroclor 1221	ND	---	11.5	ug/kg dry	1	12/29/20 11:07	EPA 8082A	
Aroclor 1232	ND	---	11.5	ug/kg dry	1	12/29/20 11:07	EPA 8082A	
Aroclor 1242	ND	---	11.5	ug/kg dry	1	12/29/20 11:07	EPA 8082A	
Aroclor 1248	ND	---	11.5	ug/kg dry	1	12/29/20 11:07	EPA 8082A	
Aroclor 1254	17.2	---	11.5	ug/kg dry	1	12/29/20 11:07	EPA 8082A	P-12
Aroclor 1260	13.2	---	11.5	ug/kg dry	1	12/29/20 11:07	EPA 8082A	P-12
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 60-125 %</i>	<i>1</i>	<i>12/29/20 11:07</i>	<i>EPA 8082A</i>	
C004 (A0L0287-45)		Matrix: Soil		Batch: 0120889		C-07		
Aroclor 1016	ND	---	11.6	ug/kg dry	1	12/29/20 12:18	EPA 8082A	
Aroclor 1221	ND	---	11.6	ug/kg dry	1	12/29/20 12:18	EPA 8082A	
Aroclor 1232	ND	---	11.6	ug/kg dry	1	12/29/20 12:18	EPA 8082A	
Aroclor 1242	ND	---	11.6	ug/kg dry	1	12/29/20 12:18	EPA 8082A	
Aroclor 1248	ND	---	11.6	ug/kg dry	1	12/29/20 12:18	EPA 8082A	
Aroclor 1254	ND	---	11.6	ug/kg dry	1	12/29/20 12:18	EPA 8082A	
Aroclor 1260	ND	---	11.6	ug/kg dry	1	12/29/20 12:18	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 78 %</i>		<i>Limits: 60-125 %</i>	<i>1</i>	<i>12/29/20 12:18</i>	<i>EPA 8082A</i>	

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Darrell Auvil, Project Manager



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Coles & Betts Environmental Consulting

**5741 NE Flanders Street
Portland, OR 97213**

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B4 2-2.3 (A0L0287-03RE1)				Matrix: Soil		Batch: 0120466		C-05
Aldrin	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
alpha-BHC	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
beta-BHC	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
delta-BHC	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
gamma-BHC (Lindane)	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
cis-Chlordane	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
trans-Chlordane	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
4,4'-DDD	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
4,4'-DDE	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
4,4'-DDT	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
Dieldrin	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
Endosulfan I	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
Endosulfan II	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
Endosulfan sulfate	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
Endrin	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
Endrin Aldehyde	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
Endrin ketone	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
Heptachlor	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
Heptachlor epoxide	ND	---	2.33	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
Methoxychlor	ND	---	7.00	ug/kg dry	1	12/14/20 16:26	EPA 8081B	Q-31
Chlordane (Technical)	ND	---	70.0	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
Toxaphene (Total)	ND	---	70.0	ug/kg dry	1	12/14/20 16:26	EPA 8081B	
<i>Surrogate: 2,4,5,6-TCMX (Surr)</i>		<i>Recovery:</i>	47 %	<i>Limits:</i>	42-129 %	1	12/14/20 16:26	EPA 8081B
<i>Decachlorobiphenyl (Surr)</i>			78 %		55-130 %	1	12/14/20 16:26	EPA 8081B

Apex Laboratories

Darrell Auvil, Project Manager

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**6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323**

ORELAP ID: OR100062

Coles & Betts Environmental Consulting

**5741 NE Flanders Street
Portland, OR 97213**

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270E

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C001 (A0L0287-42)				Matrix: Soil		Batch: 0120742		
Acenaphthene	ND	---	311	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Acenaphthylene	ND	---	311	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Anthracene	ND	---	311	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Benz(a)anthracene	ND	---	311	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Benzo(a)pyrene	664	---	466	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Benzo(b)fluoranthene	755	---	466	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Benzo(k)fluoranthene	ND	---	466	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Benzo(g,h,i)perylene	583	---	311	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Chrysene	329	---	311	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Dibenz(a,h)anthracene	ND	---	311	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Fluoranthene	392	---	311	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Fluorene	ND	---	311	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Indeno(1,2,3-cd)pyrene	513	---	311	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
1-Methylnaphthalene	ND	---	621	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
2-Methylnaphthalene	ND	---	621	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Naphthalene	ND	---	621	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Phenanthrene	ND	---	311	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Pyrene	396	---	311	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Carbazole	ND	---	466	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Dibenzofuran	ND	---	311	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
2-Chlorophenol	ND	---	1550	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
4-Chloro-3-methylphenol	ND	---	3110	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
2,4-Dichlorophenol	ND	---	1550	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
2,4-Dimethylphenol	ND	---	1550	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
2,4-Dinitrophenol	ND	---	7770	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
4,6-Dinitro-2-methylphenol	ND	---	7770	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
2-Methylphenol	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
3+4-Methylphenol(s)	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
2-Nitrophenol	ND	---	3110	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
4-Nitrophenol	ND	---	3110	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Pentachlorophenol (PCP)	ND	---	3110	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Phenol	ND	---	621	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
2,3,4,6-Tetrachlorophenol	ND	---	1550	ug/kg dry	100	12/22/20 15:45	EPA 8270E	

Apex Laboratories

Darrell Auvil, Project Manager

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503-718-2323**

ORELAP ID: OR100062

Coles & Betts Environmental Consulting

**5741 NE Flanders Street
Portland, OR 97213**

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270E

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C001 (A0L0287-42)				Matrix: Soil		Batch: 0120742		
2,3,5,6-Tetrachlorophenol	ND	---	1550	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
2,4,5-Trichlorophenol	ND	---	1550	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Nitrobenzene	ND	---	3110	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
2,4,6-Trichlorophenol	ND	---	1550	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Bis(2-ethylhexyl)phthalate	ND	---	4660	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Butyl benzyl phthalate	ND	---	3110	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Diethylphthalate	ND	---	3110	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Dimethylphthalate	ND	---	3110	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Di-n-butylphthalate	ND	---	3110	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Di-n-octyl phthalate	ND	---	3110	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
N-Nitrosodimethylamine	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
N-Nitroso-di-n-propylamine	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
N-Nitrosodiphenylamine	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Bis(2-Chloroethoxy) methane	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Bis(2-Chloroethyl) ether	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
2,2'-Oxybis(1-Chloropropane)	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Hexachlorobenzene	ND	---	311	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Hexachlorobutadiene	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Hexachlorocyclopentadiene	ND	---	1550	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Hexachloroethane	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
2-Chloronaphthalene	ND	---	311	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
1,2,4-Trichlorobenzene	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
4-Bromophenyl phenyl ether	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
4-Chlorophenyl phenyl ether	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Aniline	ND	---	1550	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
4-Chloroaniline	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
2-Nitroaniline	ND	---	6210	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
3-Nitroaniline	ND	---	6210	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
4-Nitroaniline	ND	---	6210	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
2,4-Dinitrotoluene	ND	---	3110	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
2,6-Dinitrotoluene	ND	---	3110	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Benzoic acid	ND	---	38800	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Benzyl alcohol	ND	---	1550	ug/kg dry	100	12/22/20 15:45	EPA 8270E	

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Darrell Auvil, Project Manager



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503-718-2323**

ORELAP ID: OR100062

Coles & Betts Environmental Consulting

**5741 NE Flanders Street
Portland, OR 97213**

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270E

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C001 (A0L0287-42)		Matrix: Soil			Batch: 0120742			
Isophorone	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Azobenzene (1,2-DPH)	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Bis(2-Ethylhexyl) adipate	ND	---	7770	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
3,3'-Dichlorobenzidine	ND	---	6210	ug/kg dry	100	12/22/20 15:45	EPA 8270E	Q-52
1,2-Dinitrobenzene	ND	---	7770	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
1,3-Dinitrobenzene	ND	---	7770	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
1,4-Dinitrobenzene	ND	---	7770	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
Pyridine	ND	---	1550	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
1,2-Dichlorobenzene	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
1,3-Dichlorobenzene	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
1,4-Dichlorobenzene	ND	---	777	ug/kg dry	100	12/22/20 15:45	EPA 8270E	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>		<i>Recovery:</i>	46 %	<i>Limits:</i>	37-122 %	100	12/22/20 15:45	EPA 8270E S-05
<i>2-Fluorobiphenyl (Surr)</i>			58 %		44-120 %	100	12/22/20 15:45	EPA 8270E S-05
<i>Phenol-d6 (Surr)</i>			48 %		33-122 %	100	12/22/20 15:45	EPA 8270E S-05
<i>p-Terphenyl-d14 (Surr)</i>			59 %		54-127 %	100	12/22/20 15:45	EPA 8270E S-05
<i>2-Fluorophenol (Surr)</i>			46 %		35-120 %	100	12/22/20 15:45	EPA 8270E S-05
<i>2,4,6-Tribromophenol (Surr)</i>			161 %		39-132 %	100	12/22/20 15:45	EPA 8270E S-05
C004 (A0L0287-45)		Matrix: Soil			Batch: 0120742			
Acenaphthene	6370	---	614	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Acenaphthylene	5490	---	614	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Anthracene	13700	---	614	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Benz(a)anthracene	36800	---	614	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Benzo(a)pyrene	46800	---	920	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Benzo(b)fluoranthene	43600	---	920	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Benzo(k)fluoranthene	17500	---	920	ug/kg dry	200	12/22/20 16:21	EPA 8270E	M-05
Benzo(g,h,i)perylene	27600	---	614	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Chrysene	41800	---	614	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Dibenz(a,h)anthracene	4880	---	614	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Fluoranthene	80200	---	614	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Fluorene	4320	---	614	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Indeno(1,2,3-cd)pyrene	26300	---	614	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
1-Methylnaphthalene	ND	---	1230	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
2-Methylnaphthalene	1430	---	1230	ug/kg dry	200	12/22/20 16:21	EPA 8270E	

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Darrell Auvil, Project Manager



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503-718-2323**

ORELAP ID: OR100062

Coles & Betts Environmental Consulting

**5741 NE Flanders Street
Portland, OR 97213**

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270E

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C004 (A0L0287-45)				Matrix: Soil		Batch: 0120742		
Naphthalene	3310	---	1230	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Phenanthrene	56400	---	614	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Pyrene	93000	---	614	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Carbazole	3240	---	920	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Dibenzofuran	1960	---	614	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
2-Chlorophenol	ND	---	3060	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
4-Chloro-3-methylphenol	ND	---	6140	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
2,4-Dichlorophenol	ND	---	3060	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
2,4-Dimethylphenol	ND	---	3060	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
2,4-Dinitrophenol	ND	---	15300	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
4,6-Dinitro-2-methylphenol	ND	---	15300	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
2-Methylphenol	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
3+4-Methylphenol(s)	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
2-Nitrophenol	ND	---	6140	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
4-Nitrophenol	ND	---	6140	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Pentachlorophenol (PCP)	ND	---	6140	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Phenol	ND	---	1230	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
2,3,4,6-Tetrachlorophenol	ND	---	3060	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
2,3,5,6-Tetrachlorophenol	ND	---	3060	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
2,4,5-Trichlorophenol	ND	---	3060	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Nitrobenzene	ND	---	6140	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
2,4,6-Trichlorophenol	ND	---	3060	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Bis(2-ethylhexyl)phthalate	ND	---	9200	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Butyl benzyl phthalate	ND	---	6140	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Diethylphthalate	ND	---	6140	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Dimethylphthalate	ND	---	6140	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Di-n-butylphthalate	ND	---	6140	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Di-n-octyl phthalate	ND	---	6140	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
N-Nitrosodimethylamine	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
N-Nitroso-di-n-propylamine	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
N-Nitrosodiphenylamine	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Bis(2-Chloroethoxy) methane	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Bis(2-Chloroethyl) ether	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	

Apex Laboratories

Darrell Auvil, Project Manager

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****ANALYTICAL SAMPLE RESULTS****Semivolatile Organic Compounds by EPA 8270E**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C004 (A0L0287-45)				Matrix: Soil		Batch: 0120742		
2,2'-Oxybis(1-Chloropropane)	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Hexachlorobenzene	ND	---	614	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Hexachlorobutadiene	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Hexachlorocyclopentadiene	ND	---	3060	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Hexachloroethane	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
2-Chloronaphthalene	ND	---	614	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
1,2,4-Trichlorobenzene	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
4-Bromophenyl phenyl ether	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
4-Chlorophenyl phenyl ether	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Aniline	ND	---	3060	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
4-Chloroaniline	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
2-Nitroaniline	ND	---	12300	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
3-Nitroaniline	ND	---	12300	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
4-Nitroaniline	ND	---	12300	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
2,4-Dinitrotoluene	ND	---	6140	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
2,6-Dinitrotoluene	ND	---	6140	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Benzoic acid	ND	---	76600	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Benzyl alcohol	ND	---	3060	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Isophorone	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Azobenzene (1,2-DPH)	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Bis(2-Ethylhexyl) adipate	ND	---	15300	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
3,3'-Dichlorobenzidine	ND	---	12300	ug/kg dry	200	12/22/20 16:21	EPA 8270E	Q-52
1,2-Dinitrobenzene	ND	---	15300	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
1,3-Dinitrobenzene	ND	---	15300	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
1,4-Dinitrobenzene	ND	---	15300	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
Pyridine	ND	---	3060	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
1,2-Dichlorobenzene	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
1,3-Dichlorobenzene	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
1,4-Dichlorobenzene	ND	---	1530	ug/kg dry	200	12/22/20 16:21	EPA 8270E	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 64 %</i>		<i>Limits: 37-122 %</i>	200	12/22/20 16:21	EPA 8270E	S-05
<i>2-Fluorobiphenyl (Surr)</i>		<i>75 %</i>		<i>44-120 %</i>	200	12/22/20 16:21	EPA 8270E	S-05
<i>Phenol-d6 (Surr)</i>		<i>67 %</i>		<i>33-122 %</i>	200	12/22/20 16:21	EPA 8270E	S-05
<i>p-Terphenyl-d14 (Surr)</i>		<i>102 %</i>		<i>54-127 %</i>	200	12/22/20 16:21	EPA 8270E	S-05
<i>2-Fluorophenol (Surr)</i>		<i>59 %</i>		<i>35-120 %</i>	200	12/22/20 16:21	EPA 8270E	S-05

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Coles & Betts Environmental Consulting

**5741 NE Flanders Street
Portland, OR 97213**

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270E

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C004 (A0L0287-45)				Matrix: Soil		Batch: 0120742		
<i>Surrogate: 2,4,6-Tribromophenol (Surr)</i>		<i>Recovery: 298 %</i>	<i>Limits: 39-132 %</i>	<i>200</i>	<i>12/22/20 16:21</i>	<i>EPA 8270E</i>	<i>S-05</i>	

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Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS**Total Metals by EPA 6020B (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B10 1-2 (A0L0287-11) Matrix: Soil								
Batch: 0120536								
Arsenic	4.63	---	1.14	mg/kg dry	10	12/16/20 18:16	EPA 6020B	
Barium	238	---	1.14	mg/kg dry	10	12/16/20 18:16	EPA 6020B	
Cadmium	3.39	---	0.228	mg/kg dry	10	12/16/20 18:16	EPA 6020B	
Chromium	17.8	---	1.14	mg/kg dry	10	12/16/20 18:16	EPA 6020B	
Mercury	0.810	---	0.0910	mg/kg dry	10	12/16/20 18:16	EPA 6020B	
Selenium	ND	---	1.14	mg/kg dry	10	12/16/20 18:16	EPA 6020B	
Silver	0.433	---	0.228	mg/kg dry	10	12/16/20 18:16	EPA 6020B	
B10 1-2 (A0L0287-11RE1) Matrix: Soil								
Batch: 0120536								
Lead	717	---	1.14	mg/kg dry	50	12/17/20 18:58	EPA 6020B	
B10 2-2.5 (A0L0287-12) Matrix: Soil								
Batch: 1012667								
Lead	10.9	---	0.261	mg/kg dry	10	01/08/21 14:54	EPA 6020B	
B13 8.5-9 (A0L0287-14) Matrix: Soil								
Batch: 1012667								
Lead	8.36	---	0.241	mg/kg dry	10	01/08/21 14:59	EPA 6020B	
B15 7.5-8.5 (A0L0287-18) Matrix: Soil								
Batch: 0120478								
Arsenic	5.63	---	1.27	mg/kg dry	10	12/16/20 17:13	EPA 6020B	
Barium	172	---	1.27	mg/kg dry	10	12/16/20 17:13	EPA 6020B	
Cadmium	ND	---	0.254	mg/kg dry	10	12/16/20 17:13	EPA 6020B	
Chromium	20.5	---	1.27	mg/kg dry	10	12/16/20 17:13	EPA 6020B	
Lead	48.4	---	0.254	mg/kg dry	10	12/16/20 17:13	EPA 6020B	
Mercury	ND	---	0.102	mg/kg dry	10	12/16/20 17:13	EPA 6020B	
Selenium	ND	---	1.27	mg/kg dry	10	12/16/20 17:13	EPA 6020B	
Silver	ND	---	0.254	mg/kg dry	10	12/16/20 17:13	EPA 6020B	
B16 5.5-6 (A0L0287-20) Matrix: Soil								
Batch: 0120478								
Arsenic	8.56	---	1.23	mg/kg dry	10	12/16/20 17:18	EPA 6020B	

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Coles & Betts Environmental Consulting
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Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B16 5.5-6 (A0L0287-20) Matrix: Soil								
Barium	228	---	1.23	mg/kg dry	10	12/16/20 17:18	EPA 6020B	
Cadmium	0.464	---	0.245	mg/kg dry	10	12/16/20 17:18	EPA 6020B	
Chromium	25.0	---	1.23	mg/kg dry	10	12/16/20 17:18	EPA 6020B	
Lead	62.5	---	0.245	mg/kg dry	10	12/16/20 17:18	EPA 6020B	
Mercury	ND	---	0.0980	mg/kg dry	10	12/16/20 17:18	EPA 6020B	
Selenium	ND	---	1.23	mg/kg dry	10	12/16/20 17:18	EPA 6020B	
Silver	ND	---	0.245	mg/kg dry	10	12/16/20 17:18	EPA 6020B	
B12 1-1.5 (A0L0287-23) Matrix: Soil								
Batch: 0120759								
Arsenic	3.97	---	1.09	mg/kg dry	10	12/22/20 15:43	EPA 6020B	
Barium	246	---	1.09	mg/kg dry	10	12/22/20 15:43	EPA 6020B	
Cadmium	0.887	---	0.217	mg/kg dry	10	12/22/20 15:43	EPA 6020B	
Chromium	18.7	---	1.09	mg/kg dry	10	12/22/20 15:43	EPA 6020B	
Lead	227	---	0.217	mg/kg dry	10	12/22/20 15:43	EPA 6020B	
Mercury	0.191	---	0.0868	mg/kg dry	10	12/22/20 15:43	EPA 6020B	
Selenium	ND	---	1.09	mg/kg dry	10	12/22/20 15:43	EPA 6020B	
Silver	ND	---	0.217	mg/kg dry	10	12/22/20 15:43	EPA 6020B	
B17 5.5-7.5 (A0L0287-31) Matrix: Soil								
Batch: 0120478								
Arsenic	7.56	---	1.20	mg/kg dry	10	12/16/20 17:23	EPA 6020B	
Barium	315	---	1.20	mg/kg dry	10	12/16/20 17:23	EPA 6020B	
Cadmium	0.637	---	0.241	mg/kg dry	10	12/16/20 17:23	EPA 6020B	
Chromium	23.2	---	1.20	mg/kg dry	10	12/16/20 17:23	EPA 6020B	
Lead	308	---	0.241	mg/kg dry	10	12/16/20 17:23	EPA 6020B	
Mercury	ND	---	0.0963	mg/kg dry	10	12/16/20 17:23	EPA 6020B	
Selenium	ND	---	1.20	mg/kg dry	10	12/16/20 17:23	EPA 6020B	
Silver	ND	---	0.241	mg/kg dry	10	12/16/20 17:23	EPA 6020B	
B17 11.5-12.5 (A0L0287-32) Matrix: Soil								
Batch: 1012667								
Lead	8.72	---	0.257	mg/kg dry	10	01/08/21 15:04	EPA 6020B	

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Project: **281**

Project Number: **281**

Project Manager: **Jill Betts**

Report ID:

A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B19 6.5-7 (A0L0287-33) Matrix: Soil								
Batch: 0120478								
Arsenic	7.83	---	1.30	mg/kg dry	10	12/16/20 17:28	EPA 6020B	
Barium	228	---	1.30	mg/kg dry	10	12/16/20 17:28	EPA 6020B	
Cadmium	0.310	---	0.259	mg/kg dry	10	12/16/20 17:28	EPA 6020B	
Chromium	24.0	---	1.30	mg/kg dry	10	12/16/20 17:28	EPA 6020B	
Lead	102	---	0.259	mg/kg dry	10	12/16/20 17:28	EPA 6020B	
Mercury	ND	---	0.104	mg/kg dry	10	12/16/20 17:28	EPA 6020B	
Selenium	ND	---	1.30	mg/kg dry	10	12/16/20 17:28	EPA 6020B	
Silver	ND	---	0.259	mg/kg dry	10	12/16/20 17:28	EPA 6020B	
B19 12-13 (A0L0287-34) Matrix: Soil								
Batch: 1012667								
Lead	9.29	---	0.241	mg/kg dry	10	01/08/21 15:10	EPA 6020B	
C001 (A0L0287-42) Matrix: Soil								
Batch: 0120759								
Arsenic	13.8	---	1.20	mg/kg dry	10	12/22/20 15:47	EPA 6020B	
Barium	738	---	1.20	mg/kg dry	10	12/22/20 15:47	EPA 6020B	
Cadmium	0.871	---	0.239	mg/kg dry	10	12/22/20 15:47	EPA 6020B	
Chromium	21.0	---	1.20	mg/kg dry	10	12/22/20 15:47	EPA 6020B	
Mercury	0.175	---	0.0957	mg/kg dry	10	12/22/20 15:47	EPA 6020B	
Selenium	ND	---	1.20	mg/kg dry	10	12/22/20 15:47	EPA 6020B	
Silver	ND	---	0.239	mg/kg dry	10	12/22/20 15:47	EPA 6020B	
C001 (A0L0287-42RE1) Matrix: Soil								
Batch: 0120759								
Lead	1720	---	1.20	mg/kg dry	50	12/22/20 20:23	EPA 6020B	
C002 (A0L0287-43) Matrix: Soil								
Batch: 0120759								
Arsenic	25.7	---	1.20	mg/kg dry	10	12/22/20 15:52	EPA 6020B	
Barium	180	---	1.20	mg/kg dry	10	12/22/20 15:52	EPA 6020B	
Cadmium	0.284	---	0.241	mg/kg dry	10	12/22/20 15:52	EPA 6020B	
Chromium	18.3	---	1.20	mg/kg dry	10	12/22/20 15:52	EPA 6020B	
Lead	98.8	---	0.241	mg/kg dry	10	12/22/20 15:52	EPA 6020B	

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Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C002 (A0L0287-43) Matrix: Soil								
Mercury	0.119	---	0.0962	mg/kg dry	10	12/22/20 15:52	EPA 6020B	
Selenium	ND	---	1.20	mg/kg dry	10	12/22/20 15:52	EPA 6020B	
Silver	ND	---	0.241	mg/kg dry	10	12/22/20 15:52	EPA 6020B	
C003 (A0L0287-44) Matrix: Soil								
Batch: 0120759								
Arsenic	6.37	---	1.37	mg/kg dry	10	12/22/20 15:57	EPA 6020B	
Barium	141	---	1.37	mg/kg dry	10	12/22/20 15:57	EPA 6020B	Q-42
Cadmium	0.542	---	0.274	mg/kg dry	10	12/22/20 15:57	EPA 6020B	
Chromium	16.1	---	1.37	mg/kg dry	10	12/22/20 15:57	EPA 6020B	
Lead	77.5	---	0.274	mg/kg dry	10	12/22/20 15:57	EPA 6020B	Q-42
Mercury	ND	---	0.109	mg/kg dry	10	12/22/20 15:57	EPA 6020B	
Selenium	ND	---	1.37	mg/kg dry	10	12/22/20 15:57	EPA 6020B	
Silver	ND	---	0.274	mg/kg dry	10	12/22/20 15:57	EPA 6020B	
C004 (A0L0287-45) Matrix: Soil								
Batch: 0120759								
Arsenic	6.05	---	1.22	mg/kg dry	10	12/22/20 16:23	EPA 6020B	
Barium	613	---	1.22	mg/kg dry	10	12/22/20 16:23	EPA 6020B	
Cadmium	0.936	---	0.243	mg/kg dry	10	12/22/20 16:23	EPA 6020B	
Chromium	31.9	---	1.22	mg/kg dry	10	12/22/20 16:23	EPA 6020B	
Lead	355	---	0.243	mg/kg dry	10	12/22/20 16:23	EPA 6020B	
Mercury	0.292	---	0.0972	mg/kg dry	10	12/22/20 16:23	EPA 6020B	
Selenium	ND	---	1.22	mg/kg dry	10	12/22/20 16:23	EPA 6020B	
Silver	0.511	---	0.243	mg/kg dry	10	12/22/20 16:23	EPA 6020B	
C005 (A0L0287-46) Matrix: Soil								
Batch: 0120759								
Arsenic	6.76	---	1.20	mg/kg dry	10	12/22/20 16:28	EPA 6020B	
Barium	231	---	1.20	mg/kg dry	10	12/22/20 16:28	EPA 6020B	
Cadmium	0.315	---	0.241	mg/kg dry	10	12/22/20 16:28	EPA 6020B	
Chromium	19.5	---	1.20	mg/kg dry	10	12/22/20 16:28	EPA 6020B	
Lead	60.4	---	0.241	mg/kg dry	10	12/22/20 16:28	EPA 6020B	
Mercury	ND	---	0.0964	mg/kg dry	10	12/22/20 16:28	EPA 6020B	

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Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C005 (A0L0287-46)				Matrix: Soil				
Selenium	ND	---	1.20	mg/kg dry	10	12/22/20 16:28	EPA 6020B	
Silver	ND	---	0.241	mg/kg dry	10	12/22/20 16:28	EPA 6020B	
C006 (A0L0287-47)				Matrix: Soil				
Batch: 0120759								
Arsenic	7.30	---	1.31	mg/kg dry	10	12/22/20 16:33	EPA 6020B	
Barium	232	---	1.31	mg/kg dry	10	12/22/20 16:33	EPA 6020B	
Cadmium	0.577	---	0.261	mg/kg dry	10	12/22/20 16:33	EPA 6020B	
Chromium	21.4	---	1.31	mg/kg dry	10	12/22/20 16:33	EPA 6020B	
Lead	116	---	0.261	mg/kg dry	10	12/22/20 16:33	EPA 6020B	
Mercury	1.38	---	0.104	mg/kg dry	10	12/22/20 16:33	EPA 6020B	
Selenium	ND	---	1.31	mg/kg dry	10	12/22/20 16:33	EPA 6020B	
Silver	ND	---	0.261	mg/kg dry	10	12/22/20 16:33	EPA 6020B	

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Project: **281**

Project Number: **281**

Project Manager: **Jill Betts**

Report ID:

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ANALYTICAL SAMPLE RESULTS

TCLP Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B10 1-2 (A0L0287-11) Matrix: Soil								
Batch: 1012692								
Lead	0.146	---	0.0500	mg/L	10	01/08/21 20:15	1311/6020B	
B12 1-1.5 (A0L0287-23) Matrix: Soil								
Batch: 1012692								
Lead	0.0668	---	0.0500	mg/L	10	01/08/21 20:20	1311/6020B	
B17 5.5-7.5 (A0L0287-31) Matrix: Soil								
Batch: 1012692								
Lead	ND	---	0.0500	mg/L	10	01/08/21 20:25	1311/6020B	
B19 6.5-7 (A0L0287-33) Matrix: Soil								
Batch: 1012692								
Lead	ND	---	0.0500	mg/L	10	01/08/21 20:31	1311/6020B	
C001 (A0L0287-42) Matrix: Soil								
Batch: 1012692								
Lead	0.994	---	0.0500	mg/L	10	01/08/21 20:36	1311/6020B	
C004 (A0L0287-45) Matrix: Soil								
Batch: 1012692								
Lead	ND	---	0.0500	mg/L	10	01/08/21 20:41	1311/6020B	
C006 (A0L0287-47) Matrix: Soil								
Batch: 1012692								
Lead	ND	---	0.0500	mg/L	10	01/08/21 20:57	1311/6020B	

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Project Number: **281**
Project Manager: **Jill Betts**

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B1 3-3.5 (A0L0287-01)				Matrix: Soil		Batch: 0120369		
% Solids	78.6	---	1.00	%	1	12/11/20 07:24	EPA 8000D	
B4 2-2.3 (A0L0287-03)				Matrix: Soil		Batch: 0120369		
% Solids	78.5	---	1.00	%	1	12/11/20 07:24	EPA 8000D	
B4 5-5.5 (A0L0287-04)				Matrix: Soil		Batch: 0120369		
% Solids	75.8	---	1.00	%	1	12/11/20 07:24	EPA 8000D	
B5 0.5-1 (A0L0287-05)				Matrix: Soil		Batch: 0120369		
% Solids	77.8	---	1.00	%	1	12/11/20 07:24	EPA 8000D	
B6 0.5-1 (A0L0287-07)				Matrix: Soil		Batch: 0120369		
% Solids	53.2	---	1.00	%	1	12/11/20 07:24	EPA 8000D	
B9 0.5-1 (A0L0287-09)				Matrix: Soil		Batch: 0120369		
% Solids	76.5	---	1.00	%	1	12/11/20 07:24	EPA 8000D	
B10 1-2 (A0L0287-11)				Matrix: Soil		Batch: 0120369		
% Solids	90.2	---	1.00	%	1	12/11/20 07:24	EPA 8000D	
B10 2-2.5 (A0L0287-12)				Matrix: Soil		Batch: 0120369		
% Solids	81.0	---	1.00	%	1	12/11/20 07:24	EPA 8000D	
B13 1-2 (A0L0287-13)				Matrix: Soil		Batch: 0120369		
% Solids	82.8	---	1.00	%	1	12/11/20 07:24	EPA 8000D	
B13 8.5-9 (A0L0287-14)				Matrix: Soil		Batch: 0120848		
% Solids	88.5	---	1.00	%	1	12/28/20 07:34	EPA 8000D	
B14 0.5-1 (A0L0287-15)				Matrix: Soil		Batch: 0120369		
% Solids	83.5	---	1.00	%	1	12/11/20 07:24	EPA 8000D	
B15 0.5-1 (A0L0287-17)				Matrix: Soil		Batch: 0120369		
% Solids	81.9	---	1.00	%	1	12/11/20 07:24	EPA 8000D	
B15 7.5-8.5 (A0L0287-18)				Matrix: Soil		Batch: 0120472		

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Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B15 7.5-8.5 (A0L0287-18)				Matrix: Soil		Batch: 0120472		
% Solids	84.9	---	1.00	%	1	12/15/20 08:35	EPA 8000D	
B15 9-9.5 (A0L0287-19)				Matrix: Soil		Batch: 0120892		
% Solids	81.0	---	1.00	%	1	12/29/20 08:57	EPA 8000D	
B16 5.5-6 (A0L0287-20)				Matrix: Soil		Batch: 0120369		
% Solids	82.1	---	1.00	%	1	12/11/20 07:24	EPA 8000D	
B16 10.5-11 (A0L0287-21)				Matrix: Soil		Batch: 0120848		
% Solids	86.5	---	1.00	%	1	12/28/20 07:34	EPA 8000D	
B12 1-1.5 (A0L0287-23)				Matrix: Soil		Batch: 0120688		
% Solids	89.5	---	1.00	%	1	12/21/20 07:31	EPA 8000D	
B8 1-1.5 (A0L0287-24)				Matrix: Soil		Batch: 0120369		
% Solids	81.1	---	1.00	%	1	12/11/20 07:24	EPA 8000D	
B2 0.5-1 (A0L0287-25)				Matrix: Soil		Batch: 0120369		
% Solids	81.5	---	1.00	%	1	12/11/20 07:24	EPA 8000D	
B18 5.5-6.5 (A0L0287-29)				Matrix: Soil		Batch: 0120892		
% Solids	76.9	---	1.00	%	1	12/29/20 08:57	EPA 8000D	
B17 0.5-1.5 (A0L0287-30)				Matrix: Soil		Batch: 0120369		
% Solids	80.9	---	1.00	%	1	12/11/20 07:24	EPA 8000D	
B17 5.5-7.5 (A0L0287-31)				Matrix: Soil		Batch: 0120472		
% Solids	82.1	---	1.00	%	1	12/15/20 08:35	EPA 8000D	
B17 11.5-12.5 (A0L0287-32)				Matrix: Soil		Batch: 1020269		
% Solids	84.5	---	1.00	%	1	02/09/21 07:54	EPA 8000D	
B19 6.5-7 (A0L0287-33)				Matrix: Soil		Batch: 0120472		
% Solids	79.6	---	1.00	%	1	12/15/20 08:35	EPA 8000D	
B19 12-13 (A0L0287-34)				Matrix: Soil		Batch: 1020269		

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Portland, OR 97213**

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B19 12-13 (A0L0287-34)				Matrix: Soil		Batch: 1020269		
% Solids	83.8	---	1.00	%	1	02/09/21 07:54	EPA 8000D	
B20 0.7-1.5 (A0L0287-35)				Matrix: Soil		Batch: 0120369		
% Solids	79.2	---	1.00	%	1	12/11/20 07:24	EPA 8000D	
C001 (A0L0287-42)				Matrix: Soil		Batch: 0120537		
% Solids	85.7	---	1.00	%	1	12/16/20 07:39	EPA 8000D	
C002 (A0L0287-43)				Matrix: Soil		Batch: 0120537		
% Solids	81.5	---	1.00	%	1	12/16/20 07:39	EPA 8000D	
C003 (A0L0287-44)				Matrix: Soil		Batch: 0120537		
% Solids	78.6	---	1.00	%	1	12/16/20 07:39	EPA 8000D	
C004 (A0L0287-45)				Matrix: Soil		Batch: 0120537		
% Solids	85.3	---	1.00	%	1	12/16/20 07:39	EPA 8000D	
C005 (A0L0287-46)				Matrix: Soil		Batch: 0120537		
% Solids	80.9	---	1.00	%	1	12/16/20 07:39	EPA 8000D	
C006 (A0L0287-47)				Matrix: Soil		Batch: 0120537		
% Solids	81.7	---	1.00	%	1	12/16/20 07:39	EPA 8000D	

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Project Manager: **Jill Betts**

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ANALYTICAL SAMPLE RESULTS

TCLP Extraction by EPA 1311

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B10 1-2 (A0L0287-11)				Matrix: Soil		Batch: 1012586		
TCLP Extraction	PREP	---		N/A	1	01/07/21 15:15	EPA 1311	
B12 1-1.5 (A0L0287-23)				Matrix: Soil		Batch: 1012586		
TCLP Extraction	PREP	---		N/A	1	01/07/21 15:15	EPA 1311	
B17 5.5-7.5 (A0L0287-31)				Matrix: Soil		Batch: 1012586		
TCLP Extraction	PREP	---		N/A	1	01/07/21 15:15	EPA 1311	
B19 6.5-7 (A0L0287-33)				Matrix: Soil		Batch: 1012586		
TCLP Extraction	PREP	---		N/A	1	01/07/21 15:15	EPA 1311	
C001 (A0L0287-42)				Matrix: Soil		Batch: 1012586		
TCLP Extraction	PREP	---		N/A	1	01/07/21 15:15	EPA 1311	
C004 (A0L0287-45)				Matrix: Soil		Batch: 1012586		
TCLP Extraction	PREP	---		N/A	1	01/07/21 15:15	EPA 1311	
C006 (A0L0287-47)				Matrix: Soil		Batch: 1012586		
TCLP Extraction	PREP	---		N/A	1	01/07/21 15:15	EPA 1311	

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Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
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QUALITY CONTROL (QC) SAMPLE RESULTS**Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120451 - EPA 3546 (Fuels)						Soil						
Blank (0120451-BLK1)			Prepared: 12/11/20 16:17			Analyzed: 12/11/20 21:46						
NWTPH-Dx												
Diesel	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	36.4	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 94 %		Limits: 50-150 %		Dilution: 1x						
LCS (0120451-BS1)			Prepared: 12/11/20 16:17			Analyzed: 12/11/20 22:06						
NWTPH-Dx												
Diesel	106	---	20.0	mg/kg wet	1	125	---	84	73-115%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 96 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (0120451-DUP1)			Prepared: 12/11/20 16:17			Analyzed: 12/11/20 22:46						
QC Source Sample: B16 5.5-6 (A0L0287-20)												
NWTPH-Dx												
Diesel	ND	---	23.2	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	---	46.5	mg/kg dry	1	---	46.9	---	---	***	30%	
Surr: o-Terphenyl (Surr)		Recovery: 89 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (0120451-DUP2)			Prepared: 12/11/20 16:17			Analyzed: 12/11/20 22:50						
QC Source Sample: Non-SDG (A0L0383-02)												
Diesel	ND	---	21.2	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	102	---	42.4	mg/kg dry	1	---	104	---	---	1	30%	F-03
Surr: o-Terphenyl (Surr)		Recovery: 87 %		Limits: 50-150 %		Dilution: 1x						
Batch 0120557 - EPA 3546 (Fuels)						Soil						
Blank (0120557-BLK1)			Prepared: 12/15/20 12:42			Analyzed: 12/16/20 01:02						
NWTPH-Dx												
Diesel	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	36.4	mg/kg wet	1	---	---	---	---	---	---	
Mineral Oil	ND	---	36.4	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 99 %		Limits: 50-150 %		Dilution: 1x						
LCS (0120557-BS1)			Prepared: 12/15/20 12:42			Analyzed: 12/16/20 01:22						

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QUALITY CONTROL (QC) SAMPLE RESULTS**Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120557 - EPA 3546 (Fuels)						Soil						
LCS (0120557-BS1)			Prepared: 12/15/20 12:42 Analyzed: 12/16/20 01:22									
<u>NWTPH-Dx</u>												
Diesel	114	---	20.0	mg/kg wet	1	125	---	91	73-115%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 100 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (0120557-DUP1)			Prepared: 12/15/20 12:42 Analyzed: 12/16/20 03:03									
<u>QC Source Sample: Non-SDG (A0L0333-02)</u>												
Diesel	ND	---	20.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	---	40.0	mg/kg dry	1	---	ND	---	---	---	30%	
Mineral Oil	62.4	---	40.0	mg/kg dry	1	---	62.6	---	---	0.2	30%	
Surr: o-Terphenyl (Surr)		Recovery: 81 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (0120557-DUP2)			Prepared: 12/15/20 12:42 Analyzed: 12/16/20 08:42									
<u>QC Source Sample: Non-SDG (A0L0391-01)</u>												
Diesel	ND	---	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	---	50.0	mg/kg dry	1	---	ND	---	---	---	30%	
Mineral Oil	ND	---	45.2	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 99 %		Limits: 50-150 %		Dilution: 1x						

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QUALITY CONTROL (QC) SAMPLE RESULTS**Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120601 - EPA 3546 (Fuels)						Soil						
Blank (0120601-BLK1)			Prepared: 12/16/20 11:09		Analyzed: 12/16/20 21:34							
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 87 %		Limits: 50-150 %		Dilution: 1x						
LCS (0120601-BS1)			Prepared: 12/16/20 11:09		Analyzed: 12/16/20 21:55							
NWTPH-Dx												
Diesel	102	---	20.0	mg/kg wet	1	125	---	82	73-115%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 85 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (0120601-DUP2)			Prepared: 12/16/20 11:09		Analyzed: 12/16/20 23:35							
QC Source Sample: Non-SDG (A0L0407-11)												
Diesel	ND	---	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	112	---	50.0	mg/kg dry	1	---	88.9	---	---	23	30%	F-03
Surr: o-Terphenyl (Surr)		Recovery: 83 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (0120601-DUP3)			Prepared: 12/16/20 11:09		Analyzed: 12/17/20 12:20							
QC Source Sample: Non-SDG (A0L0263-01RE1)												
Diesel	ND	---	19.9	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	162	---	39.8	mg/kg dry	1	---	162	---	---	0.02	30%	
Surr: o-Terphenyl (Surr)		Recovery: 83 %		Limits: 50-150 %		Dilution: 1x						

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QUALITY CONTROL (QC) SAMPLE RESULTS**Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120773 - EPA 3546 (Fuels)						Soil						
Blank (0120773-BLK1)			Prepared: 12/21/20 13:12 Analyzed: 12/21/20 22:01									
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 88 %		Limits: 50-150 %		Dilution: 1x						
LCS (0120773-BS1)			Prepared: 12/21/20 13:12 Analyzed: 12/21/20 22:21									
NWTPH-Dx												
Diesel	104	---	20.0	mg/kg wet	1	125	---	83	73-115%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 90 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (0120773-DUP1)			Prepared: 12/21/20 13:12 Analyzed: 12/21/20 23:02									
QC Source Sample: B13 8.5-9 (A0L0287-14)												
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	---	50.0	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 66 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (0120773-DUP2)			Prepared: 12/21/20 13:13 Analyzed: 12/22/20 00:45									
QC Source Sample: Non-SDG (A0L0763-05)												
Diesel	ND	---	24.4	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	---	48.8	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 84 %		Limits: 50-150 %		Dilution: 1x						

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Project: **281**
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QUALITY CONTROL (QC) SAMPLE RESULTS**Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120412 - EPA 5035A						Soil						
Blank (0120412-BLK1)			Prepared: 12/10/20 09:00 Analyzed: 12/10/20 19:34									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 102 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		106 %		50-150 %		"						
LCS (0120412-BS2)			Prepared: 12/10/20 09:00 Analyzed: 12/10/20 19:07									
NWTPH-Gx (MS)												
Gasoline Range Organics	24.5	---	5.00	mg/kg wet	50	25.0	---	98	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 103 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		107 %		50-150 %		"						
Duplicate (0120412-DUP1)			Prepared: 12/08/20 17:58 Analyzed: 12/10/20 23:38								V-15	
QC Source Sample: Non-SDG (A0L0266-01)												
Gasoline Range Organics	33.1	---	7.51	mg/kg dry	50	---	29.6	---	---	11	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 114 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		105 %		50-150 %		"						
Duplicate (0120412-DUP2)			Prepared: 12/07/20 09:20 Analyzed: 12/11/20 00:33									
QC Source Sample: B1 3-3.5 (A0L0287-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	6.29	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 108 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		106 %		50-150 %		"						

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Project Manager: **Jill Betts**

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QUALITY CONTROL (QC) SAMPLE RESULTS**Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120428 - EPA 5035A						Soil						
Blank (0120428-BLK1)			Prepared: 12/11/20 09:00 Analyzed: 12/11/20 11:19									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	102 %	Limits:	50-150 %	Dilution:		1x				
1,4-Difluorobenzene (Sur)			103 %		50-150 %			"				
LCS (0120428-BS2)			Prepared: 12/11/20 09:00 Analyzed: 12/11/20 10:52									
NWTPH-Gx (MS)												
Gasoline Range Organics	25.1	---	5.00	mg/kg wet	50	25.0	---	100	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	99 %	Limits:	50-150 %	Dilution:		1x				
1,4-Difluorobenzene (Sur)			106 %		50-150 %			"				
Duplicate (0120428-DUP1)			Prepared: 12/07/20 10:30 Analyzed: 12/11/20 20:50									
QC Source Sample: B6 0.5-1 (A0L0287-07)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	10.7	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	104 %	Limits:	50-150 %	Dilution:		1x				
1,4-Difluorobenzene (Sur)			104 %		50-150 %			"				
Duplicate (0120428-DUP2)			Prepared: 12/07/20 11:20 Analyzed: 12/11/20 21:44									
QC Source Sample: B13 1-2 (A0L0287-13)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	5.64	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	104 %	Limits:	50-150 %	Dilution:		1x				
1,4-Difluorobenzene (Sur)			103 %		50-150 %			"				

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120456 - EPA 5035A						Soil						
Blank (0120456-BLK1)			Prepared: 12/11/20 09:00 Analyzed: 12/12/20 00:54									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	B-02
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 102 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		103 %		50-150 %		"						
LCS (0120456-BS2)			Prepared: 12/11/20 09:00 Analyzed: 12/12/20 00:27									
NWTPH-Gx (MS)												
Gasoline Range Organics	24.0	---	5.00	mg/kg wet	50	25.0	---	96	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 100 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		105 %		50-150 %		"						
Duplicate (0120456-DUP1)			Prepared: 12/07/20 13:35 Analyzed: 12/12/20 03:37									
QC Source Sample: B15 0.5-1 (A0L0287-17)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	6.61	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 102 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		103 %		50-150 %		"						
Duplicate (0120456-DUP2)			Prepared: 12/08/20 09:50 Analyzed: 12/12/20 04:32									
QC Source Sample: B17 0.5-1.5 (A0L0287-30)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	6.02	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 102 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		103 %		50-150 %		"						

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Coles & Betts Environmental Consulting
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Portland, OR 97213

Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS**Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120647 - EPA 5035A						Soil						
Blank (0120647-BLK1)			Prepared: 12/17/20 09:00 Analyzed: 12/17/20 12:36									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	102 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			98 %	50-150 %		"						
LCS (0120647-BS2)			Prepared: 12/17/20 09:00 Analyzed: 12/17/20 12:09									
NWTPH-Gx (MS)												
Gasoline Range Organics	20.9	---	5.00	mg/kg wet	50	25.0	---	83	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	102 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			95 %	50-150 %		"						
Duplicate (0120647-DUP1)			Prepared: 12/14/20 10:32 Analyzed: 12/17/20 21:42									
QC Source Sample: Non-SDG (A0L0492-01)												
Gasoline Range Organics	ND	---	6.85	mg/kg dry	50	---	16.9	---	---	***	30%	Q-04
Surr: 4-Bromofluorobenzene (Sur)		Recovery:	102 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			96 %	50-150 %		"						

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Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS**Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120740 - EPA 5035A						Soil						
Blank (0120740-BLK1)			Prepared: 12/19/20 09:00 Analyzed: 12/19/20 17:53									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 95 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		90 %		50-150 %		"						
LCS (0120740-BS2)			Prepared: 12/19/20 09:00 Analyzed: 12/19/20 17:26									
NWTPH-Gx (MS)												
Gasoline Range Organics	21.2	---	5.00	mg/kg wet	50	25.0	---	85	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 96 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		90 %		50-150 %		"						
Duplicate (0120740-DUP1)			Prepared: 12/07/20 11:23 Analyzed: 12/19/20 21:58									
QC Source Sample: Non-SDG (A0L0292-08)												
Gasoline Range Organics	ND	---	8.28	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 95 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		85 %		50-150 %		"						
Duplicate (0120740-DUP2)			Prepared: 12/07/20 12:20 Analyzed: 12/19/20 22:53									
QC Source Sample: Non-SDG (A0L0292-16)												
Gasoline Range Organics	ND	---	8.11	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 97 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		86 %		50-150 %		"						

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120412 - EPA 5035A						Soil						
Blank (0120412-BLK1)			Prepared: 12/10/20 09:00		Analyzed: 12/10/20 19:34							
5035A/8260D												
Acetone	ND	---	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	

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Project: **281**

Project Number: **281**

Project Manager: **Jill Betts**

Report ID:

A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120412 - EPA 5035A						Soil						
Blank (0120412-BLK1)			Prepared: 12/10/20 09:00		Analyzed: 12/10/20 19:34							
1,2-Dichloropropane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	EST
1,2,3-Trichloropropane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120412 - EPA 5035A						Soil						
Blank (0120412-BLK1)			Prepared: 12/10/20 09:00		Analyzed: 12/10/20 19:34							
Surr: Toluene-d8 (Surr)		Recovery: 103 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		100 %		79-120 %		"						
LCS (0120412-BS1)			Prepared: 12/10/20 09:00		Analyzed: 12/10/20 18:40							
5035A/8260D												
Acetone	2160	---	1000	ug/kg wet	50	2000	---	108	80-120%	---	---	Q-56
Acrylonitrile	1200	---	250	ug/kg wet	50	1000	---	120	80-120%	---	---	
Benzene	1120	---	10.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
Bromobenzene	1060	---	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Bromochloromethane	1180	---	50.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
Bromodichloromethane	1200	---	50.0	ug/kg wet	50	1000	---	120	80-120%	---	---	
Bromoform	952	---	100	ug/kg wet	50	1000	---	95	80-120%	---	---	
Bromomethane	1130	---	500	ug/kg wet	50	1000	---	113	80-120%	---	---	
2-Butanone (MEK)	2200	---	500	ug/kg wet	50	2000	---	110	80-120%	---	---	
n-Butylbenzene	1140	---	50.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
sec-Butylbenzene	1120	---	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
tert-Butylbenzene	1060	---	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Carbon disulfide	1380	---	500	ug/kg wet	50	1000	---	138	80-120%	---	---	Q-56
Carbon tetrachloride	1150	---	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
Chlorobenzene	1000	---	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Chloroethane	915	---	500	ug/kg wet	50	1000	---	92	80-120%	---	---	
Chloroform	1090	---	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Chloromethane	1140	---	250	ug/kg wet	50	1000	---	114	80-120%	---	---	
2-Chlorotoluene	1100	---	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
4-Chlorotoluene	1130	---	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Dibromochloromethane	980	---	100	ug/kg wet	50	1000	---	98	80-120%	---	---	
1,2-Dibromo-3-chloropropane	979	---	250	ug/kg wet	50	1000	---	98	80-120%	---	---	
1,2-Dibromoethane (EDB)	1080	---	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Dibromomethane	1120	---	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,2-Dichlorobenzene	1060	---	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,3-Dichlorobenzene	1090	---	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
1,4-Dichlorobenzene	996	---	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Dichlorodifluoromethane	1250	---	100	ug/kg wet	50	1000	---	125	80-120%	---	---	E-05
1,1-Dichloroethane	1150	---	25.0	ug/kg wet	50	1000	---	115	80-120%	---	---	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120412 - EPA 5035A						Soil						
LCS (0120412-BS1)			Prepared: 12/10/20 09:00		Analyzed: 12/10/20 18:40							
1,2-Dichloroethane (EDC)	992	---	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
1,1-Dichloroethene	1160	---	25.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
cis-1,2-Dichloroethene	1170	---	25.0	ug/kg wet	50	1000	---	117	80-120%	---	---	
trans-1,2-Dichloroethene	1160	---	25.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
1,2-Dichloropropane	1170	---	25.0	ug/kg wet	50	1000	---	117	80-120%	---	---	
1,3-Dichloropropane	1060	---	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
2,2-Dichloropropane	1550	---	50.0	ug/kg wet	50	1000	---	155	80-120%	---	---	Q-56
1,1-Dichloropropene	1120	---	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
cis-1,3-Dichloropropene	1120	---	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
trans-1,3-Dichloropropene	1090	---	100	ug/kg wet	50	1000	---	109	80-120%	---	---	
Ethylbenzene	1060	---	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Hexachlorobutadiene	1040	---	100	ug/kg wet	50	1000	---	104	80-120%	---	---	
2-Hexanone	1990	---	500	ug/kg wet	50	2000	---	100	80-120%	---	---	
Isopropylbenzene	1070	---	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
4-Isopropyltoluene	1100	---	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Methylene chloride	1050	---	500	ug/kg wet	50	1000	---	105	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	2130	---	500	ug/kg wet	50	2000	---	107	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1130	---	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Naphthalene	1020	---	100	ug/kg wet	50	1000	---	102	80-120%	---	---	
n-Propylbenzene	1090	---	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Styrene	1030	---	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1010	---	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,1,2,2-Tetrachloroethane	1130	---	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Tetrachloroethene (PCE)	1010	---	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Toluene	988	---	50.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
1,2,3-Trichlorobenzene	1030	---	250	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,2,4-Trichlorobenzene	1020	---	250	ug/kg wet	50	1000	---	102	80-120%	---	---	
1,1,1-Trichloroethane	1140	---	25.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
1,1,2-Trichloroethane	1080	---	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Trichloroethene (TCE)	1120	---	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
Trichlorofluoromethane	626	---	100	ug/kg wet	50	1000	---	63	80-120%	---	---	EST
1,2,3-Trichloropropane	1050	---	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
1,2,4-Trimethylbenzene	1140	---	50.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
1,3,5-Trimethylbenzene	1140	---	50.0	ug/kg wet	50	1000	---	114	80-120%	---	---	

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 0120412 - EPA 5035A							Soil						
LCS (0120412-BS1)			Prepared: 12/10/20 09:00		Analyzed: 12/10/20 18:40								
Vinyl chloride	1340	---	25.0	ug/kg wet	50	1000	---	134	80-120%	---	---	Q-56	
m,p-Xylene	2100	---	50.0	ug/kg wet	50	2000	---	105	80-120%	---	---		
o-Xylene	1050	---	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---		
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x							
Toluene-d8 (Surr)		101 %		80-120 %		"							
4-Bromofluorobenzene (Surr)		99 %		79-120 %		"							
Duplicate (0120412-DUP1)			Prepared: 12/08/20 17:58		Analyzed: 12/10/20 23:38								V-15
QC Source Sample: Non-SDG (A0L0266-01)													
Acetone	ND	---	1500	ug/kg dry	50	---	ND	---	---	---	30%		
Acrylonitrile	ND	---	376	ug/kg dry	50	---	ND	---	---	---	30%		
Benzene	308	---	15.0	ug/kg dry	50	---	256	---	---	19	30%		
Bromobenzene	ND	---	37.6	ug/kg dry	50	---	ND	---	---	---	30%		
Bromochloromethane	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%		
Bromodichloromethane	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%		
Bromoform	ND	---	150	ug/kg dry	50	---	ND	---	---	---	30%		
Bromomethane	ND	---	751	ug/kg dry	50	---	ND	---	---	---	30%		
2-Butanone (MEK)	ND	---	751	ug/kg dry	50	---	ND	---	---	---	30%		
n-Butylbenzene	ND	---	75.1	ug/kg dry	50	---	78.3	---	---	***	30%	Q-05	
sec-Butylbenzene	ND	---	75.1	ug/kg dry	50	---	77.6	---	---	***	30%		
tert-Butylbenzene	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%		
Carbon disulfide	ND	---	751	ug/kg dry	50	---	ND	---	---	---	30%		
Carbon tetrachloride	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%		
Chlorobenzene	ND	---	37.6	ug/kg dry	50	---	ND	---	---	---	30%		
Chloroethane	ND	---	751	ug/kg dry	50	---	ND	---	---	---	30%		
Chloroform	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%		
Chloromethane	ND	---	376	ug/kg dry	50	---	ND	---	---	---	30%		
2-Chlorotoluene	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%		
4-Chlorotoluene	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%		
Dibromochloromethane	ND	---	150	ug/kg dry	50	---	ND	---	---	---	30%		
1,2-Dibromo-3-chloropropane	ND	---	376	ug/kg dry	50	---	ND	---	---	---	30%		
1,2-Dibromoethane (EDB)	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%		
Dibromomethane	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%		
1,2-Dichlorobenzene	ND	---	37.6	ug/kg dry	50	---	ND	---	---	---	30%		

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120412 - EPA 5035A						Soil						
Duplicate (0120412-DUP1)			Prepared: 12/08/20 17:58		Analyzed: 12/10/20 23:38		V-15					
QC Source Sample: Non-SDG (A0L0266-01)												
1,3-Dichlorobenzene	ND	---	37.6	ug/kg dry	50	---	ND	---	---	---	30%	Q-04
1,4-Dichlorobenzene	ND	---	37.6	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	150	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	37.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	37.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	37.6	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	37.6	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	37.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	37.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	150	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	491	---	37.6	ug/kg dry	50	---	320	---	---	42	30%	
Hexachlorobutadiene	ND	---	150	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	751	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	110	---	75.1	ug/kg dry	50	---	82.9	---	---	28	30%	
4-Isopropyltoluene	ND	---	75.1	ug/kg dry	50	---	43.0	---	---	***	30%	
Methylene chloride	ND	---	751	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	751	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	292	---	150	ug/kg dry	50	---	257	---	---	13	30%	
n-Propylbenzene	164	---	37.6	ug/kg dry	50	---	160	---	---	2	30%	
Styrene	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	37.6	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	376	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	376	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	37.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	37.6	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120412 - EPA 5035A						Soil						
Duplicate (0120412-DUP1)			Prepared: 12/08/20 17:58 Analyzed: 12/10/20 23:38						V-15			
QC Source Sample: Non-SDG (A0L0266-01)												
Trichloroethene (TCE)	ND	---	37.6	ug/kg dry	50	---	ND	---	---	---	30%	EST
Trichlorofluoromethane	ND	---	150	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	75.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	352	---	75.1	ug/kg dry	50	---	238	---	---	38	30%	Q-05
1,3,5-Trimethylbenzene	101	---	75.1	ug/kg dry	50	---	76.0	---	---	29	30%	
Vinyl chloride	ND	---	37.6	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	238	---	75.1	ug/kg dry	50	---	141	---	---	52	30%	Q-05
o-Xylene	69.1	---	37.6	ug/kg dry	50	---	45.3	---	---	42	30%	Q-05
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		99 %		79-120 %		"						

Duplicate (0120412-DUP2)

Prepared: 12/07/20 09:20 Analyzed: 12/11/20 00:33

QC Source Sample: B1 3-3.5 (A0L0287-01)**5035A/8260D**

Acetone	ND	---	1260	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	315	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	---	12.6	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	---	126	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	629	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	629	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	629	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	629	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	---	315	ug/kg dry	50	---	ND	---	---	---	30%	

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Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120412 - EPA 5035A						Soil						
Duplicate (0120412-DUP2)			Prepared: 12/07/20 09:20		Analyzed: 12/11/20 00:33							
QC Source Sample: B1 3-3.5 (A0L0287-01)												
2-Chlorotoluene	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	126	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	315	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	126	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	126	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	126	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	629	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	629	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	629	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	126	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120412 - EPA 5035A						Soil						
Duplicate (0120412-DUP2)			Prepared: 12/07/20 09:20		Analyzed: 12/11/20 00:33							
QC Source Sample: B1 3-3.5 (A0L0287-01)												
1,1,2,2-Tetrachloroethane	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	EST
Tetrachloroethene (PCE)	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	315	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	315	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	126	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	62.9	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	---	31.5	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 106 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		103 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		100 %		79-120 %		"						

Matrix Spike (0120412-MS1)

Prepared: 12/07/20 10:05 Analyzed: 12/11/20 05:58

QC Source Sample: B5 0.5-1 (A0L0287-05)**5035A/8260D**

Acetone	2230	---	1240	ug/kg dry	50	2490	ND	89	36-164%	---	---
Acrylonitrile	1090	---	311	ug/kg dry	50	1240	ND	88	65-134%	---	---
Benzene	1370	---	12.4	ug/kg dry	50	1240	ND	110	77-121%	---	---
Bromobenzene	1290	---	31.1	ug/kg dry	50	1240	ND	104	78-121%	---	---
Bromochloromethane	1460	---	62.2	ug/kg dry	50	1240	ND	117	78-125%	---	---
Bromodichloromethane	1460	---	62.2	ug/kg dry	50	1240	ND	118	75-127%	---	---
Bromoform	1190	---	124	ug/kg dry	50	1240	ND	95	67-132%	---	---
Bromomethane	1350	---	622	ug/kg dry	50	1240	ND	109	53-143%	---	---
2-Butanone (MEK)	2820	---	622	ug/kg dry	50	2490	ND	113	51-148%	---	---
n-Butylbenzene	1270	---	62.2	ug/kg dry	50	1240	ND	102	70-128%	---	---
sec-Butylbenzene	1290	---	62.2	ug/kg dry	50	1240	ND	103	73-126%	---	---

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Darrell Auvil, Project Manager

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120412 - EPA 5035A						Soil						
Matrix Spike (0120412-MS1)			Prepared: 12/07/20 10:05		Analyzed: 12/11/20 05:58							
QC Source Sample: B5 0.5-1 (A0L0287-05)												
tert-Butylbenzene	1240	---	62.2	ug/kg dry	50	1240	ND	100	73-125%	---	---	Q-54d
Carbon disulfide	1680	---	622	ug/kg dry	50	1240	ND	135	63-132%	---	---	
Carbon tetrachloride	1380	---	62.2	ug/kg dry	50	1240	ND	111	70-135%	---	---	
Chlorobenzene	1230	---	31.1	ug/kg dry	50	1240	ND	99	79-120%	---	---	
Chloroethane	965	---	622	ug/kg dry	50	1240	ND	78	59-139%	---	---	E-05, Q-54k
Chloroform	1320	---	62.2	ug/kg dry	50	1240	ND	106	78-123%	---	---	
Chloromethane	1360	---	311	ug/kg dry	50	1240	ND	109	50-136%	---	---	
2-Chlorotoluene	1330	---	62.2	ug/kg dry	50	1240	ND	107	75-122%	---	---	
4-Chlorotoluene	1350	---	62.2	ug/kg dry	50	1240	ND	108	72-124%	---	---	
Dibromochloromethane	1190	---	124	ug/kg dry	50	1240	ND	96	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1200	---	311	ug/kg dry	50	1240	ND	97	61-132%	---	---	
1,2-Dibromoethane (EDB)	1310	---	62.2	ug/kg dry	50	1240	ND	105	78-122%	---	---	
Dibromomethane	1360	---	62.2	ug/kg dry	50	1240	ND	109	78-125%	---	---	
1,2-Dichlorobenzene	1300	---	31.1	ug/kg dry	50	1240	ND	105	78-121%	---	---	
1,3-Dichlorobenzene	1320	---	31.1	ug/kg dry	50	1240	ND	106	77-121%	---	---	Q-54h
1,4-Dichlorobenzene	1210	---	31.1	ug/kg dry	50	1240	ND	98	75-120%	---	---	
Dichlorodifluoromethane	1500	---	124	ug/kg dry	50	1240	ND	121	29-149%	---	---	
1,1-Dichloroethane	1430	---	31.1	ug/kg dry	50	1240	ND	115	76-125%	---	---	
1,2-Dichloroethane (EDC)	1230	---	31.1	ug/kg dry	50	1240	ND	99	73-128%	---	---	
1,1-Dichloroethene	1410	---	31.1	ug/kg dry	50	1240	ND	114	70-131%	---	---	
cis-1,2-Dichloroethene	1420	---	31.1	ug/kg dry	50	1240	ND	114	77-123%	---	---	
trans-1,2-Dichloroethene	1400	---	31.1	ug/kg dry	50	1240	ND	112	74-125%	---	---	
1,2-Dichloropropane	1440	---	31.1	ug/kg dry	50	1240	ND	116	76-123%	---	---	
1,3-Dichloropropane	1310	---	62.2	ug/kg dry	50	1240	ND	106	77-121%	---	---	
2,2-Dichloropropane	1250	---	62.2	ug/kg dry	50	1240	ND	100	67-133%	---	---	
1,1-Dichloropropene	1340	---	62.2	ug/kg dry	50	1240	ND	108	76-125%	---	---	
cis-1,3-Dichloropropene	1290	---	62.2	ug/kg dry	50	1240	ND	104	74-126%	---	---	
trans-1,3-Dichloropropene	1250	---	124	ug/kg dry	50	1240	ND	100	71-130%	---	---	
Ethylbenzene	1290	---	31.1	ug/kg dry	50	1240	ND	104	76-122%	---	---	
Hexachlorobutadiene	1230	---	124	ug/kg dry	50	1240	ND	99	61-135%	---	---	
2-Hexanone	2660	---	622	ug/kg dry	50	2490	ND	107	53-145%	---	---	
Isopropylbenzene	1280	---	62.2	ug/kg dry	50	1240	ND	103	68-134%	---	---	
4-Isopropyltoluene	1260	---	62.2	ug/kg dry	50	1240	ND	101	73-127%	---	---	

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120412 - EPA 5035A						Soil						
Matrix Spike (0120412-MS1)			Prepared: 12/07/20 10:05		Analyzed: 12/11/20 05:58							
QC Source Sample: B5 0.5-1 (A0L0287-05)												
Methylene chloride	1340	---	622	ug/kg dry	50	1240	ND	108	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	2800	---	622	ug/kg dry	50	2490	ND	113	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1330	---	62.2	ug/kg dry	50	1240	ND	107	73-125%	---	---	
Naphthalene	1130	---	124	ug/kg dry	50	1240	ND	91	62-129%	---	---	
n-Propylbenzene	1260	---	31.1	ug/kg dry	50	1240	ND	101	73-125%	---	---	
Styrene	1290	---	62.2	ug/kg dry	50	1240	ND	104	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1220	---	62.2	ug/kg dry	50	1240	ND	98	78-125%	---	---	
1,1,2,2-Tetrachloroethane	1370	---	62.2	ug/kg dry	50	1240	ND	110	70-124%	---	---	
Tetrachloroethene (PCE)	1220	---	31.1	ug/kg dry	50	1240	ND	98	73-128%	---	---	
Toluene	1200	---	62.2	ug/kg dry	50	1240	ND	97	77-121%	---	---	
1,2,3-Trichlorobenzene	1210	---	311	ug/kg dry	50	1240	ND	97	66-130%	---	---	
1,2,4-Trichlorobenzene	1160	---	311	ug/kg dry	50	1240	ND	93	67-129%	---	---	
1,1,1-Trichloroethane	1360	---	31.1	ug/kg dry	50	1240	ND	110	73-130%	---	---	
1,1,2-Trichloroethane	1320	---	31.1	ug/kg dry	50	1240	ND	106	78-121%	---	---	
Trichloroethene (TCE)	1370	---	31.1	ug/kg dry	50	1240	ND	110	77-123%	---	---	
Trichlorofluoromethane	2270	---	124	ug/kg dry	50	1240	ND	182	62-140%	---	---	EST
1,2,3-Trichloropropane	1330	---	62.2	ug/kg dry	50	1240	ND	107	73-125%	---	---	
1,2,4-Trimethylbenzene	1320	---	62.2	ug/kg dry	50	1240	ND	106	75-123%	---	---	
1,3,5-Trimethylbenzene	1330	---	62.2	ug/kg dry	50	1240	ND	107	73-124%	---	---	
Vinyl chloride	1720	---	31.1	ug/kg dry	50	1240	ND	139	56-135%	---	---	Q-54c
m,p-Xylene	2590	---	62.2	ug/kg dry	50	2490	ND	104	77-124%	---	---	
o-Xylene	1290	---	31.1	ug/kg dry	50	1240	ND	104	77-123%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		79-120 %		"						

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120428 - EPA 5035A						Soil						
Blank (0120428-BLK1)			Prepared: 12/11/20 09:00		Analyzed: 12/11/20 11:19							
5035A/8260D												
Acetone	ND	---	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	Q-30
Chloroform	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120428 - EPA 5035A						Soil						
Blank (0120428-BLK1)			Prepared: 12/11/20 09:00		Analyzed: 12/11/20 11:19							
1,2-Dichloropropane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	EST
1,2,3-Trichloropropane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120428 - EPA 5035A						Soil						
Blank (0120428-BLK1)			Prepared: 12/11/20 09:00		Analyzed: 12/11/20 11:19							
Surr: Toluene-d8 (Surr)		Recovery: 101 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		100 %		79-120 %		"						
LCS (0120428-BS1)			Prepared: 12/11/20 09:00		Analyzed: 12/11/20 10:25							
5035A/8260D												
Acetone	1840	---	1000	ug/kg wet	50	2000	---	92	80-120%	---	---	
Acrylonitrile	970	---	250	ug/kg wet	50	1000	---	97	80-120%	---	---	
Benzene	1150	---	10.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
Bromobenzene	1100	---	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Bromochloromethane	1150	---	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
Bromodichloromethane	1220	---	50.0	ug/kg wet	50	1000	---	122	80-120%	---	---	Q-56
Bromoform	982	---	100	ug/kg wet	50	1000	---	98	80-120%	---	---	
Bromomethane	1090	---	500	ug/kg wet	50	1000	---	109	80-120%	---	---	
2-Butanone (MEK)	2230	---	500	ug/kg wet	50	2000	---	112	80-120%	---	---	
n-Butylbenzene	1120	---	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
sec-Butylbenzene	1160	---	50.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
tert-Butylbenzene	1070	---	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Carbon disulfide	1410	---	500	ug/kg wet	50	1000	---	141	80-120%	---	---	Q-56
Carbon tetrachloride	1210	---	50.0	ug/kg wet	50	1000	---	121	80-120%	---	---	Q-56
Chlorobenzene	1060	---	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Chloroethane	690	---	500	ug/kg wet	50	1000	---	69	80-120%	---	---	Q-30
Chloroform	1130	---	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Chloromethane	1120	---	250	ug/kg wet	50	1000	---	112	80-120%	---	---	
2-Chlorotoluene	1130	---	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
4-Chlorotoluene	1130	---	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Dibromochloromethane	1010	---	100	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,2-Dibromo-3-chloropropane	980	---	250	ug/kg wet	50	1000	---	98	80-120%	---	---	
1,2-Dibromoethane (EDB)	1120	---	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
Dibromomethane	1130	---	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
1,2-Dichlorobenzene	1090	---	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
1,3-Dichlorobenzene	1130	---	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
1,4-Dichlorobenzene	1030	---	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Dichlorodifluoromethane	1270	---	100	ug/kg wet	50	1000	---	127	80-120%	---	---	E-05
1,1-Dichloroethane	1150	---	25.0	ug/kg wet	50	1000	---	115	80-120%	---	---	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120428 - EPA 5035A						Soil						
LCS (0120428-BS1)			Prepared: 12/11/20 09:00		Analyzed: 12/11/20 10:25							
1,2-Dichloroethane (EDC)	1020	---	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
1,1-Dichloroethene	1180	---	25.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
cis-1,2-Dichloroethene	1180	---	25.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
trans-1,2-Dichloroethene	1190	---	25.0	ug/kg wet	50	1000	---	119	80-120%	---	---	
1,2-Dichloropropane	1170	---	25.0	ug/kg wet	50	1000	---	117	80-120%	---	---	
1,3-Dichloropropane	1090	---	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
2,2-Dichloropropane	1570	---	50.0	ug/kg wet	50	1000	---	157	80-120%	---	---	Q-56
1,1-Dichloropropene	1150	---	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
cis-1,3-Dichloropropene	1140	---	50.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
trans-1,3-Dichloropropene	1100	---	100	ug/kg wet	50	1000	---	110	80-120%	---	---	
Ethylbenzene	1100	---	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Hexachlorobutadiene	1070	---	100	ug/kg wet	50	1000	---	107	80-120%	---	---	
2-Hexanone	1970	---	500	ug/kg wet	50	2000	---	98	80-120%	---	---	
Isopropylbenzene	1100	---	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
4-Isopropyltoluene	1130	---	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Methylene chloride	1070	---	500	ug/kg wet	50	1000	---	107	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	2090	---	500	ug/kg wet	50	2000	---	104	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1100	---	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Naphthalene	939	---	100	ug/kg wet	50	1000	---	94	80-120%	---	---	
n-Propylbenzene	1110	---	25.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Styrene	1080	---	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1060	---	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,1,2,2-Tetrachloroethane	1120	---	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
Tetrachloroethene (PCE)	1100	---	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Toluene	1030	---	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,2,3-Trichlorobenzene	1060	---	250	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,2,4-Trichlorobenzene	992	---	250	ug/kg wet	50	1000	---	99	80-120%	---	---	
1,1,1-Trichloroethane	1190	---	25.0	ug/kg wet	50	1000	---	119	80-120%	---	---	
1,1,2-Trichloroethane	1110	---	25.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Trichloroethene (TCE)	1160	---	25.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
Trichlorofluoromethane	518	---	100	ug/kg wet	50	1000	---	52	80-120%	---	---	EST
1,2,3-Trichloropropane	1060	---	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,2,4-Trimethylbenzene	1140	---	50.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
1,3,5-Trimethylbenzene	1170	---	50.0	ug/kg wet	50	1000	---	117	80-120%	---	---	

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Darrell Auvil, Project Manager

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120428 - EPA 5035A							Soil					
LCS (0120428-BS1)			Prepared: 12/11/20 09:00		Analyzed: 12/11/20 10:25							
Vinyl chloride	1330	---	25.0	ug/kg wet	50	1000	---	133	80-120%	---	---	Q-56
m,p-Xylene	2190	---	50.0	ug/kg wet	50	2000	---	110	80-120%	---	---	
o-Xylene	1090	---	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 106 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		102 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		79-120 %		"						
Duplicate (0120428-DUP1)			Prepared: 12/07/20 10:30		Analyzed: 12/11/20 20:50							
OC Source Sample: B6 0.5-1 (A0L0287-07)												
5035A/8260D												
Acetone	ND	---	2150	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	537	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	---	21.5	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	---	215	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	1070	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	1070	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	1070	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	1070	ug/kg dry	50	---	ND	---	---	---	30%	Q-30
Chloroform	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	---	537	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	215	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	537	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120428 - EPA 5035A						Soil						
Duplicate (0120428-DUP1)			Prepared: 12/07/20 10:30		Analyzed: 12/11/20 20:50							
QC Source Sample: B6 0.5-1 (A0L0287-07)												
1,2-Dichlorobenzene	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	215	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	215	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	215	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	1070	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	1070	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	1070	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	215	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	537	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	537	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Project Manager

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120428 - EPA 5035A						Soil						
Duplicate (0120428-DUP1)			Prepared: 12/07/20 10:30		Analyzed: 12/11/20 20:50							
QC Source Sample: B6 0.5-1 (A0L0287-07)												
1,1,2-Trichloroethane	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	EST
Trichloroethene (TCE)	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	215	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	107	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	---	53.7	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		102 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		100 %		79-120 %		"						
Duplicate (0120428-DUP2)			Prepared: 12/07/20 11:20		Analyzed: 12/11/20 21:44							
QC Source Sample: B13 1-2 (A0L0287-13)												
5035A/8260D												
Acetone	ND	---	1130	ug/kg dry	50	---	ND	---	---	---	30%	Q-30
Acrylonitrile	ND	---	282	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	---	11.3	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	---	113	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120428 - EPA 5035A						Soil						
Duplicate (0120428-DUP2)			Prepared: 12/07/20 11:20 Analyzed: 12/11/20 21:44									
QC Source Sample: B13 1-2 (A0L0287-13)												
Chloromethane	ND	---	282	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	113	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	282	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	113	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	113	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	113	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	113	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120428 - EPA 5035A						Soil						
Duplicate (0120428-DUP2)			Prepared: 12/07/20 11:20 Analyzed: 12/11/20 21:44									
QC Source Sample: B13 1-2 (A0L0287-13)												
1,1,1,2-Tetrachloroethane	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	EST
1,1,2,2-Tetrachloroethane	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	282	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	282	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	113	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	56.4	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	---	28.2	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		99 %		79-120 %		"						

Matrix Spike (0120428-MS1)

Prepared: 12/07/20 13:00 Analyzed: 12/11/20 22:39

QC Source Sample: B14 0.5-1 (A0L0287-15)**5035A/8260D**

Acetone	1640	---	931	ug/kg dry	50	1860	ND	88	36-164%	---	---	
Acrylonitrile	801	---	233	ug/kg dry	50	929	ND	86	65-134%	---	---	
Benzene	1020	---	9.31	ug/kg dry	50	929	ND	110	77-121%	---	---	
Bromobenzene	987	---	23.3	ug/kg dry	50	929	ND	106	78-121%	---	---	
Bromochloromethane	1060	---	46.5	ug/kg dry	50	929	ND	115	78-125%	---	---	
Bromodichloromethane	1090	---	46.5	ug/kg dry	50	929	ND	117	75-127%	---	---	Q-54e
Bromoform	889	---	93.1	ug/kg dry	50	929	ND	96	67-132%	---	---	
Bromomethane	1040	---	465	ug/kg dry	50	929	ND	112	53-143%	---	---	
2-Butanone (MEK)	1540	---	465	ug/kg dry	50	1860	ND	83	51-148%	---	---	
n-Butylbenzene	992	---	46.5	ug/kg dry	50	929	ND	107	70-128%	---	---	

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120428 - EPA 5035A						Soil						
Matrix Spike (0120428-MS1)			Prepared: 12/07/20 13:00		Analyzed: 12/11/20 22:39							
QC Source Sample: B14 0.5-1 (A0L0287-15)												
sec-Butylbenzene	1010	---	46.5	ug/kg dry	50	929	ND	109	73-126%	---	---	
tert-Butylbenzene	945	---	46.5	ug/kg dry	50	929	ND	102	73-125%	---	---	
Carbon disulfide	1250	---	465	ug/kg dry	50	929	ND	135	63-132%	---	---	Q-54f
Carbon tetrachloride	1050	---	46.5	ug/kg dry	50	929	ND	113	70-135%	---	---	Q-54
Chlorobenzene	934	---	23.3	ug/kg dry	50	929	ND	100	79-120%	---	---	
Chloroethane	695	---	465	ug/kg dry	50	929	ND	75	59-139%	---	---	Q-30
Chloroform	996	---	46.5	ug/kg dry	50	929	ND	107	78-123%	---	---	
Chloromethane	1000	---	233	ug/kg dry	50	929	ND	108	50-136%	---	---	
2-Chlorotoluene	1000	---	46.5	ug/kg dry	50	929	ND	108	75-122%	---	---	
4-Chlorotoluene	1020	---	46.5	ug/kg dry	50	929	ND	110	72-124%	---	---	
Dibromochloromethane	893	---	93.1	ug/kg dry	50	929	ND	96	74-126%	---	---	
1,2-Dibromo-3-chloropropane	890	---	233	ug/kg dry	50	929	ND	96	61-132%	---	---	
1,2-Dibromoethane (EDB)	981	---	46.5	ug/kg dry	50	929	ND	105	78-122%	---	---	
Dibromomethane	1020	---	46.5	ug/kg dry	50	929	ND	110	78-125%	---	---	
1,2-Dichlorobenzene	985	---	23.3	ug/kg dry	50	929	ND	106	78-121%	---	---	
1,3-Dichlorobenzene	998	---	23.3	ug/kg dry	50	929	ND	107	77-121%	---	---	
1,4-Dichlorobenzene	908	---	23.3	ug/kg dry	50	929	ND	98	75-120%	---	---	
Dichlorodifluoromethane	1130	---	93.1	ug/kg dry	50	929	ND	122	29-149%	---	---	E-05
1,1-Dichloroethane	1060	---	23.3	ug/kg dry	50	929	ND	114	76-125%	---	---	
1,2-Dichloroethane (EDC)	909	---	23.3	ug/kg dry	50	929	ND	98	73-128%	---	---	
1,1-Dichloroethene	1060	---	23.3	ug/kg dry	50	929	ND	114	70-131%	---	---	
cis-1,2-Dichloroethene	1060	---	23.3	ug/kg dry	50	929	ND	114	77-123%	---	---	
trans-1,2-Dichloroethene	1040	---	23.3	ug/kg dry	50	929	ND	112	74-125%	---	---	
1,2-Dichloropropane	1070	---	23.3	ug/kg dry	50	929	ND	115	76-123%	---	---	
1,3-Dichloropropane	974	---	46.5	ug/kg dry	50	929	ND	105	77-121%	---	---	
2,2-Dichloropropane	1110	---	46.5	ug/kg dry	50	929	ND	120	67-133%	---	---	Q-54i
1,1-Dichloropropene	1010	---	46.5	ug/kg dry	50	929	ND	109	76-125%	---	---	
cis-1,3-Dichloropropene	995	---	46.5	ug/kg dry	50	929	ND	107	74-126%	---	---	
trans-1,3-Dichloropropene	962	---	93.1	ug/kg dry	50	929	ND	104	71-130%	---	---	
Ethylbenzene	976	---	23.3	ug/kg dry	50	929	ND	105	76-122%	---	---	
Hexachlorobutadiene	960	---	93.1	ug/kg dry	50	929	ND	103	61-135%	---	---	
2-Hexanone	1890	---	465	ug/kg dry	50	1860	ND	102	53-145%	---	---	
Isopropylbenzene	975	---	46.5	ug/kg dry	50	929	ND	105	68-134%	---	---	

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120428 - EPA 5035A						Soil						
Matrix Spike (0120428-MS1)			Prepared: 12/07/20 13:00		Analyzed: 12/11/20 22:39							
QC Source Sample: B14 0.5-1 (A0L0287-15)												
4-Isopropyltoluene	988	---	46.5	ug/kg dry	50	929	ND	106	73-127%	---	---	
Methylene chloride	999	---	465	ug/kg dry	50	929	ND	108	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	2000	---	465	ug/kg dry	50	1860	ND	108	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	990	---	46.5	ug/kg dry	50	929	ND	107	73-125%	---	---	
Naphthalene	866	---	93.1	ug/kg dry	50	929	ND	93	62-129%	---	---	
n-Propylbenzene	968	---	23.3	ug/kg dry	50	929	ND	104	73-125%	---	---	
Styrene	972	---	46.5	ug/kg dry	50	929	ND	105	76-124%	---	---	
1,1,1,2-Tetrachloroethane	930	---	46.5	ug/kg dry	50	929	ND	100	78-125%	---	---	
1,1,2,2-Tetrachloroethane	1020	---	46.5	ug/kg dry	50	929	ND	110	70-124%	---	---	
Tetrachloroethene (PCE)	930	---	23.3	ug/kg dry	50	929	ND	100	73-128%	---	---	
Toluene	904	---	46.5	ug/kg dry	50	929	ND	97	77-121%	---	---	
1,2,3-Trichlorobenzene	929	---	233	ug/kg dry	50	929	ND	100	66-130%	---	---	
1,2,4-Trichlorobenzene	895	---	233	ug/kg dry	50	929	ND	96	67-129%	---	---	
1,1,1-Trichloroethane	1040	---	23.3	ug/kg dry	50	929	ND	111	73-130%	---	---	
1,1,2-Trichloroethane	982	---	23.3	ug/kg dry	50	929	ND	106	78-121%	---	---	
Trichloroethene (TCE)	1030	---	23.3	ug/kg dry	50	929	ND	111	77-123%	---	---	
Trichlorofluoromethane	1020	---	93.1	ug/kg dry	50	929	ND	110	62-140%	---	---	EST
1,2,3-Trichloropropane	989	---	46.5	ug/kg dry	50	929	ND	106	73-125%	---	---	
1,2,4-Trimethylbenzene	1020	---	46.5	ug/kg dry	50	929	ND	109	75-123%	---	---	
1,3,5-Trimethylbenzene	1040	---	46.5	ug/kg dry	50	929	ND	112	73-124%	---	---	
Vinyl chloride	1250	---	23.3	ug/kg dry	50	929	ND	134	56-135%	---	---	Q-54b
m,p-Xylene	1950	---	46.5	ug/kg dry	50	1860	ND	105	77-124%	---	---	
o-Xylene	974	---	23.3	ug/kg dry	50	929	ND	105	77-123%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		99 %		79-120 %		"						

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120456 - EPA 5035A						Soil						
Blank (0120456-BLK1)			Prepared: 12/11/20 09:00		Analyzed: 12/12/20 00:54							
5035A/8260D												
Acetone	ND	---	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	Q-30
Chloroform	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	

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Darrell Auvil, Project Manager

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120456 - EPA 5035A						Soil						
Blank (0120456-BLK1)			Prepared: 12/11/20 09:00		Analyzed: 12/12/20 00:54							
1,2-Dichloropropane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	B-02
Hexachlorobutadiene	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	17.0	---	16.7	ug/kg wet	50	---	---	---	---	---	---	B
Styrene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	EST
1,2,3-Trichloropropane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	124	---	33.3	ug/kg wet	50	---	---	---	---	---	---	B
1,3,5-Trimethylbenzene	48.7	---	33.3	ug/kg wet	50	---	---	---	---	---	---	B
Vinyl chloride	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	73.0	---	33.3	ug/kg wet	50	---	---	---	---	---	---	B
o-Xylene	23.3	---	16.7	ug/kg wet	50	---	---	---	---	---	---	B
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 104 %		Limits: 80-120 %		Dilution: 1x						

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120456 - EPA 5035A												Soil
Blank (0120456-BLK1)												Prepared: 12/11/20 09:00 Analyzed: 12/12/20 00:54
<i>Surr: Toluene-d8 (Surr)</i>												<i>Recovery: 102 % Limits: 80-120 % Dilution: 1x</i>
<i>4-Bromofluorobenzene (Surr)</i>												<i>99 % 79-120 % "</i>
LCS (0120456-BS1)												Prepared: 12/11/20 09:00 Analyzed: 12/12/20 00:00
5035A/8260D												
Acetone	1880	---	1000	ug/kg wet	50	2000	---	94	80-120%	---	---	
Acrylonitrile	937	---	250	ug/kg wet	50	1000	---	94	80-120%	---	---	
Benzene	1110	---	10.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Bromobenzene	1060	---	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Bromochloromethane	1150	---	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
Bromodichloromethane	1180	---	50.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
Bromoform	954	---	100	ug/kg wet	50	1000	---	95	80-120%	---	---	
Bromomethane	1070	---	500	ug/kg wet	50	1000	---	107	80-120%	---	---	
2-Butanone (MEK)	2230	---	500	ug/kg wet	50	2000	---	112	80-120%	---	---	
n-Butylbenzene	1080	---	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
sec-Butylbenzene	1090	---	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
tert-Butylbenzene	1020	---	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Carbon disulfide	1330	---	500	ug/kg wet	50	1000	---	133	80-120%	---	---	Q-56
Carbon tetrachloride	1140	---	50.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
Chlorobenzene	1020	---	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Chloroethane	692	---	500	ug/kg wet	50	1000	---	69	80-120%	---	---	Q-30
Chloroform	1080	---	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Chloromethane	1080	---	250	ug/kg wet	50	1000	---	108	80-120%	---	---	
2-Chlorotoluene	1070	---	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
4-Chlorotoluene	1110	---	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Dibromochloromethane	972	---	100	ug/kg wet	50	1000	---	97	80-120%	---	---	
1,2-Dibromo-3-chloropropane	972	---	250	ug/kg wet	50	1000	---	97	80-120%	---	---	
1,2-Dibromoethane (EDB)	1070	---	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Dibromomethane	1110	---	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
1,2-Dichlorobenzene	1060	---	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,3-Dichlorobenzene	1100	---	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
1,4-Dichlorobenzene	1000	---	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Dichlorodifluoromethane	1150	---	100	ug/kg wet	50	1000	---	115	80-120%	---	---	E-05
1,1-Dichloroethane	1140	---	25.0	ug/kg wet	50	1000	---	114	80-120%	---	---	

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120456 - EPA 5035A						Soil						
LCS (0120456-BS1)			Prepared: 12/11/20 09:00		Analyzed: 12/12/20 00:00							
1,2-Dichloroethane (EDC)	998	---	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,1-Dichloroethene	1120	---	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
cis-1,2-Dichloroethene	1140	---	25.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
trans-1,2-Dichloroethene	1120	---	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,2-Dichloropropane	1150	---	25.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
1,3-Dichloropropane	1060	---	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
2,2-Dichloropropane	1280	---	50.0	ug/kg wet	50	1000	---	128	80-120%	---	---	Q-56
1,1-Dichloropropene	1070	---	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
cis-1,3-Dichloropropene	1070	---	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
trans-1,3-Dichloropropene	1060	---	100	ug/kg wet	50	1000	---	106	80-120%	---	---	
Ethylbenzene	1050	---	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	B-02
Hexachlorobutadiene	1040	---	100	ug/kg wet	50	1000	---	104	80-120%	---	---	
2-Hexanone	1940	---	500	ug/kg wet	50	2000	---	97	80-120%	---	---	
Isopropylbenzene	1050	---	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
4-Isopropyltoluene	1070	---	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Methylene chloride	1060	---	500	ug/kg wet	50	1000	---	106	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	2080	---	500	ug/kg wet	50	2000	---	104	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1080	---	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Naphthalene	926	---	100	ug/kg wet	50	1000	---	93	80-120%	---	---	
n-Propylbenzene	1050	---	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	B
Styrene	1030	---	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1020	---	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
1,1,2,2-Tetrachloroethane	1070	---	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Tetrachloroethene (PCE)	1010	---	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Toluene	972	---	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
1,2,3-Trichlorobenzene	1000	---	250	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,2,4-Trichlorobenzene	955	---	250	ug/kg wet	50	1000	---	96	80-120%	---	---	
1,1,1-Trichloroethane	1130	---	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
1,1,2-Trichloroethane	1080	---	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Trichloroethene (TCE)	1150	---	25.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
Trichlorofluoromethane	578	---	100	ug/kg wet	50	1000	---	58	80-120%	---	---	EST, Q-55
1,2,3-Trichloropropane	1030	---	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,2,4-Trimethylbenzene	1110	---	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	B
1,3,5-Trimethylbenzene	1140	---	50.0	ug/kg wet	50	1000	---	114	80-120%	---	---	B

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120456 - EPA 5035A							Soil					
LCS (0120456-BS1)			Prepared: 12/11/20 09:00		Analyzed: 12/12/20 00:00							
Vinyl chloride	1280	---	25.0	ug/kg wet	50	1000	---	128	80-120%	---	---	Q-56
m,p-Xylene	2120	---	50.0	ug/kg wet	50	2000	---	106	80-120%	---	---	B
o-Xylene	1050	---	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	B
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		79-120 %		"						

Duplicate (0120456-DUP1)

Prepared: 12/07/20 13:35 Analyzed: 12/12/20 03:37

QC Source Sample: B15 0.5-1 (A0L0287-17)**5035A/8260D**

Acetone	ND	---	1320	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	331	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	---	13.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	---	132	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	661	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	661	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	661	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	661	ug/kg dry	50	---	ND	---	---	---	30%	Q-30
Chloroform	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	---	331	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	132	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	331	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120456 - EPA 5035A						Soil						
Duplicate (0120456-DUP1)			Prepared: 12/07/20 13:35 Analyzed: 12/12/20 03:37									
QC Source Sample: B15 0.5-1 (A0L0287-17)												
1,2-Dichlorobenzene	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	132	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	132	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	132	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	132	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	331	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	331	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120456 - EPA 5035A						Soil						
Duplicate (0120456-DUP1)			Prepared: 12/07/20 13:35		Analyzed: 12/12/20 03:37							
QC Source Sample: B15 0.5-1 (A0L0287-17)												
1,1,2-Trichloroethane	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	EST
Trichloroethene (TCE)	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	132	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	66.1	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	---	33.1	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 106 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		101 %		79-120 %		"						
Duplicate (0120456-DUP2)			Prepared: 12/08/20 09:50		Analyzed: 12/12/20 04:32							
QC Source Sample: B17 0.5-1.5 (A0L0287-30)												
5035A/8260D												
Acetone	ND	---	1200	ug/kg dry	50	---	ND	---	---	---	30%	Q-30
Acrylonitrile	ND	---	301	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	---	12.0	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	---	120	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	602	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	602	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	602	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	602	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120456 - EPA 5035A						Soil						
Duplicate (0120456-DUP2)			Prepared: 12/08/20 09:50 Analyzed: 12/12/20 04:32									
QC Source Sample: B17 0.5-1.5 (A0L0287-30)												
Chloromethane	ND	---	301	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	120	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	301	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	120	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	120	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	120	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	602	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	602	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	602	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	120	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Project Manager

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120456 - EPA 5035A						Soil						
Duplicate (0120456-DUP2)			Prepared: 12/08/20 09:50 Analyzed: 12/12/20 04:32									
QC Source Sample: B17 0.5-1.5 (A0L0287-30)												
1,1,1,2-Tetrachloroethane	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	EST
1,1,2,2-Tetrachloroethane	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	301	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	301	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	120	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	---	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 104 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		101 %		79-120 %		"						

Matrix Spike (0120456-MS1)

Prepared: 12/07/20 12:05 Analyzed: 12/12/20 05:26

QC Source Sample: Non-SDG (A0L0292-13)**5035A/8260D**

Acetone	2480	---	1450	ug/kg dry	50	2890	ND	86	36-164%	---	---
Acrylonitrile	1280	---	362	ug/kg dry	50	1450	ND	88	65-134%	---	---
Benzene	1570	---	14.5	ug/kg dry	50	1450	ND	108	77-121%	---	---
Bromobenzene	1490	---	36.2	ug/kg dry	50	1450	ND	103	78-121%	---	---
Bromochloromethane	1640	---	72.4	ug/kg dry	50	1450	ND	113	78-125%	---	---
Bromodichloromethane	1750	---	72.4	ug/kg dry	50	1450	ND	121	75-127%	---	---
Bromoform	1460	---	145	ug/kg dry	50	1450	ND	101	67-132%	---	---
Bromomethane	1630	---	724	ug/kg dry	50	1450	ND	112	53-143%	---	---
2-Butanone (MEK)	3070	---	724	ug/kg dry	50	2890	ND	106	51-148%	---	---
n-Butylbenzene	1640	---	72.4	ug/kg dry	50	1450	ND	113	70-128%	---	---

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120456 - EPA 5035A						Soil						
Matrix Spike (0120456-MS1)			Prepared: 12/07/20 12:05		Analyzed: 12/12/20 05:26							
QC Source Sample: Non-SDG (A0L0292-13)												
sec-Butylbenzene	1600	---	72.4	ug/kg dry	50	1450	ND	111	73-126%	---	---	Q-54b
tert-Butylbenzene	1550	---	72.4	ug/kg dry	50	1450	ND	104	73-125%	---	---	
Carbon disulfide	1960	---	724	ug/kg dry	50	1450	ND	136	63-132%	---	---	
Carbon tetrachloride	1650	---	72.4	ug/kg dry	50	1450	ND	114	70-135%	---	---	
Chlorobenzene	1450	---	36.2	ug/kg dry	50	1450	ND	100	79-120%	---	---	Q-30
Chloroethane	1480	---	724	ug/kg dry	50	1450	ND	102	59-139%	---	---	
Chloroform	1580	---	72.4	ug/kg dry	50	1450	ND	109	78-123%	---	---	
Chloromethane	1500	---	362	ug/kg dry	50	1450	ND	104	50-136%	---	---	
2-Chlorotoluene	1580	---	72.4	ug/kg dry	50	1450	ND	109	75-122%	---	---	E-05
4-Chlorotoluene	1580	---	72.4	ug/kg dry	50	1450	ND	109	72-124%	---	---	
Dibromochloromethane	1430	---	145	ug/kg dry	50	1450	ND	99	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1510	---	362	ug/kg dry	50	1450	ND	105	61-132%	---	---	
1,2-Dibromoethane (EDB)	1540	---	72.4	ug/kg dry	50	1450	ND	106	78-122%	---	---	Q-54I
Dibromomethane	1590	---	72.4	ug/kg dry	50	1450	ND	110	78-125%	---	---	
1,2-Dichlorobenzene	1570	---	36.2	ug/kg dry	50	1450	ND	109	78-121%	---	---	
1,3-Dichlorobenzene	1550	---	36.2	ug/kg dry	50	1450	ND	107	77-121%	---	---	
1,4-Dichlorobenzene	1440	---	36.2	ug/kg dry	50	1450	ND	99	75-120%	---	---	B-02
Dichlorodifluoromethane	1750	---	145	ug/kg dry	50	1450	ND	121	29-149%	---	---	
1,1-Dichloroethane	1620	---	36.2	ug/kg dry	50	1450	ND	112	76-125%	---	---	
1,2-Dichloroethane (EDC)	1460	---	36.2	ug/kg dry	50	1450	ND	101	73-128%	---	---	
1,1-Dichloroethene	1660	---	36.2	ug/kg dry	50	1450	ND	115	70-131%	---	---	Q-54I
cis-1,2-Dichloroethene	1610	---	36.2	ug/kg dry	50	1450	ND	112	77-123%	---	---	
trans-1,2-Dichloroethene	1580	---	36.2	ug/kg dry	50	1450	ND	109	74-125%	---	---	
1,2-Dichloropropane	1620	---	36.2	ug/kg dry	50	1450	ND	112	76-123%	---	---	
1,3-Dichloropropane	1470	---	72.4	ug/kg dry	50	1450	ND	102	77-121%	---	---	B-02
2,2-Dichloropropane	1590	---	72.4	ug/kg dry	50	1450	ND	110	67-133%	---	---	
1,1-Dichloropropene	1520	---	72.4	ug/kg dry	50	1450	ND	105	76-125%	---	---	
cis-1,3-Dichloropropene	1460	---	72.4	ug/kg dry	50	1450	ND	101	74-126%	---	---	
trans-1,3-Dichloropropene	1450	---	145	ug/kg dry	50	1450	ND	100	71-130%	---	---	B-02
Ethylbenzene	1510	---	36.2	ug/kg dry	50	1450	ND	104	76-122%	---	---	
Hexachlorobutadiene	1670	---	145	ug/kg dry	50	1450	ND	116	61-135%	---	---	
2-Hexanone	2930	---	724	ug/kg dry	50	2890	ND	101	53-145%	---	---	
Isopropylbenzene	1570	---	72.4	ug/kg dry	50	1450	ND	109	68-134%	---	---	

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120456 - EPA 5035A						Soil						
Matrix Spike (0120456-MS1)			Prepared: 12/07/20 12:05 Analyzed: 12/12/20 05:26									
QC Source Sample: Non-SDG (A0L0292-13)												
4-Isopropyltoluene	1580	---	72.4	ug/kg dry	50	1450	ND	109	73-127%	---	---	
Methylene chloride	1550	---	724	ug/kg dry	50	1450	ND	107	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	3100	---	724	ug/kg dry	50	2890	ND	107	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1560	---	72.4	ug/kg dry	50	1450	ND	108	73-125%	---	---	
Naphthalene	1520	---	145	ug/kg dry	50	1450	ND	105	62-129%	---	---	
n-Propylbenzene	1470	---	36.2	ug/kg dry	50	1450	ND	101	73-125%	---	---	B
Styrene	1570	---	72.4	ug/kg dry	50	1450	ND	109	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1470	---	72.4	ug/kg dry	50	1450	ND	102	78-125%	---	---	
1,1,2,2-Tetrachloroethane	1670	---	72.4	ug/kg dry	50	1450	ND	109	70-124%	---	---	
Tetrachloroethene (PCE)	1460	---	36.2	ug/kg dry	50	1450	ND	101	73-128%	---	---	
Toluene	1360	---	72.4	ug/kg dry	50	1450	ND	94	77-121%	---	---	
1,2,3-Trichlorobenzene	1500	---	362	ug/kg dry	50	1450	ND	103	66-130%	---	---	
1,2,4-Trichlorobenzene	1540	---	362	ug/kg dry	50	1450	ND	106	67-129%	---	---	
1,1,1-Trichloroethane	1650	---	36.2	ug/kg dry	50	1450	ND	114	73-130%	---	---	
1,1,2-Trichloroethane	1520	---	36.2	ug/kg dry	50	1450	ND	105	78-121%	---	---	
Trichloroethene (TCE)	1590	---	36.2	ug/kg dry	50	1450	ND	110	77-123%	---	---	
Trichlorofluoromethane	3830	---	145	ug/kg dry	50	1450	ND	265	62-140%	---	---	EST, Q-54n
1,2,3-Trichloropropane	1540	---	72.4	ug/kg dry	50	1450	ND	106	73-125%	---	---	
1,2,4-Trimethylbenzene	1560	---	72.4	ug/kg dry	50	1450	ND	108	75-123%	---	---	B
1,3,5-Trimethylbenzene	1570	---	72.4	ug/kg dry	50	1450	ND	109	73-124%	---	---	B
Vinyl chloride	1890	---	36.2	ug/kg dry	50	1450	ND	131	56-135%	---	---	Q-54l
m,p-Xylene	3030	---	72.4	ug/kg dry	50	2890	ND	105	77-124%	---	---	B
o-Xylene	1610	---	36.2	ug/kg dry	50	1450	ND	112	77-123%	---	---	B
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		98 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		99 %		79-120 %		"						

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120647 - EPA 5035A						Soil						
Blank (0120647-BLK1)			Prepared: 12/17/20 09:00		Analyzed: 12/17/20 12:36							
5035A/8260D												
Acetone	ND	---	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120647 - EPA 5035A						Soil						
Blank (0120647-BLK1)			Prepared: 12/17/20 09:00		Analyzed: 12/17/20 12:36							
1,2-Dichloropropane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	EST
1,2,3-Trichloropropane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 103 %		Limits: 80-120 %		Dilution: 1x						

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120647 - EPA 5035A						Soil						
Blank (0120647-BLK1)			Prepared: 12/17/20 09:00		Analyzed: 12/17/20 12:36							
Surr: Toluene-d8 (Surr)		Recovery: 99 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		101 %		79-120 %		"						
LCS (0120647-BS1)			Prepared: 12/17/20 09:00		Analyzed: 12/17/20 11:41							
5035A/8260D												
Acetone	2050	---	1000	ug/kg wet	50	2000	---	103	80-120%	---	---	
Acrylonitrile	939	---	250	ug/kg wet	50	1000	---	94	80-120%	---	---	
Benzene	1000	---	10.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Bromobenzene	1060	---	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Bromochloromethane	1010	---	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Bromodichloromethane	1230	---	50.0	ug/kg wet	50	1000	---	123	80-120%	---	---	Q-56
Bromoform	1210	---	100	ug/kg wet	50	1000	---	121	80-120%	---	---	Q-56
Bromomethane	1070	---	500	ug/kg wet	50	1000	---	107	80-120%	---	---	
2-Butanone (MEK)	1860	---	500	ug/kg wet	50	2000	---	93	80-120%	---	---	
n-Butylbenzene	971	---	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
sec-Butylbenzene	1010	---	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
tert-Butylbenzene	976	---	50.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
Carbon disulfide	926	---	500	ug/kg wet	50	1000	---	93	80-120%	---	---	
Carbon tetrachloride	1270	---	50.0	ug/kg wet	50	1000	---	127	80-120%	---	---	Q-56
Chlorobenzene	1010	---	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Chloroethane	1130	---	500	ug/kg wet	50	1000	---	113	80-120%	---	---	
Chloroform	1070	---	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Chloromethane	697	---	250	ug/kg wet	50	1000	---	70	80-120%	---	---	Q-55
2-Chlorotoluene	996	---	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
4-Chlorotoluene	1010	---	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Dibromochloromethane	1120	---	100	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,2-Dibromo-3-chloropropane	1040	---	250	ug/kg wet	50	1000	---	104	80-120%	---	---	
1,2-Dibromoethane (EDB)	1070	---	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Dibromomethane	1110	---	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
1,2-Dichlorobenzene	1040	---	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
1,3-Dichlorobenzene	1070	---	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,4-Dichlorobenzene	1000	---	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Dichlorodifluoromethane	867	---	100	ug/kg wet	50	1000	---	87	80-120%	---	---	E-05
1,1-Dichloroethane	971	---	25.0	ug/kg wet	50	1000	---	97	80-120%	---	---	

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Darrell Auvil, Project Manager

**Apex Laboratories, LLC**

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120647 - EPA 5035A						Soil						
LCS (0120647-BS1)			Prepared: 12/17/20 09:00		Analyzed: 12/17/20 11:41							
1,2-Dichloroethane (EDC)	1030	---	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	Q-55
1,1-Dichloroethene	791	---	25.0	ug/kg wet	50	1000	---	79	80-120%	---	---	
cis-1,2-Dichloroethene	1020	---	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
trans-1,2-Dichloroethene	994	---	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
1,2-Dichloropropane	979	---	25.0	ug/kg wet	50	1000	---	98	80-120%	---	---	Q-56
1,3-Dichloropropane	972	---	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
2,2-Dichloropropane	1550	---	50.0	ug/kg wet	50	1000	---	155	80-120%	---	---	
1,1-Dichloropropene	996	---	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
cis-1,3-Dichloropropene	1030	---	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	Q-56
trans-1,3-Dichloropropene	1100	---	100	ug/kg wet	50	1000	---	110	80-120%	---	---	
Ethylbenzene	1030	---	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Hexachlorobutadiene	1160	---	100	ug/kg wet	50	1000	---	116	80-120%	---	---	
2-Hexanone	1610	---	500	ug/kg wet	50	2000	---	81	80-120%	---	---	Q-56
Isopropylbenzene	1050	---	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
4-Isopropyltoluene	1020	---	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Methylene chloride	928	---	500	ug/kg wet	50	1000	---	93	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	1780	---	500	ug/kg wet	50	2000	---	89	80-120%	---	---	Q-56
Methyl tert-butyl ether (MTBE)	1030	---	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Naphthalene	849	---	100	ug/kg wet	50	1000	---	85	80-120%	---	---	
n-Propylbenzene	935	---	25.0	ug/kg wet	50	1000	---	93	80-120%	---	---	
Styrene	1090	---	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	Q-56
1,1,1,2-Tetrachloroethane	1150	---	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
1,1,2,2-Tetrachloroethane	993	---	50.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Tetrachloroethene (PCE)	1110	---	25.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Toluene	943	---	50.0	ug/kg wet	50	1000	---	94	80-120%	---	---	Q-56
1,2,3-Trichlorobenzene	1050	---	250	ug/kg wet	50	1000	---	105	80-120%	---	---	
1,2,4-Trichlorobenzene	975	---	250	ug/kg wet	50	1000	---	98	80-120%	---	---	
1,1,1-Trichloroethane	1190	---	25.0	ug/kg wet	50	1000	---	119	80-120%	---	---	
1,1,2-Trichloroethane	1070	---	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	Q-56
Trichloroethene (TCE)	1050	---	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Trichlorofluoromethane	1090	---	100	ug/kg wet	50	1000	---	109	80-120%	---	---	
1,2,3-Trichloropropane	1040	---	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
1,2,4-Trimethylbenzene	1040	---	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	EST
1,3,5-Trimethylbenzene	1050	---	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	

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Coles & Betts Environmental Consulting

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Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120647 - EPA 5035A						Soil						
LCS (0120647-BS1)			Prepared: 12/17/20 09:00		Analyzed: 12/17/20 11:41							
Vinyl chloride	822	---	25.0	ug/kg wet	50	1000	---	82	80-120%	---	---	
m,p-Xylene	2110	---	50.0	ug/kg wet	50	2000	---	105	80-120%	---	---	
o-Xylene	1020	---	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 101 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		96 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		79-120 %		"						
Duplicate (0120647-DUP1)			Prepared: 12/14/20 10:32		Analyzed: 12/17/20 21:42							
QC Source Sample: Non-SDG (A0L0492-01)												
Acetone	ND	---	1370	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	342	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	---	13.7	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	---	137	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	685	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	685	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	685	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	685	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	---	342	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	137	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	342	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	

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Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120647 - EPA 5035A						Soil						
Duplicate (0120647-DUP1)			Prepared: 12/14/20 10:32 Analyzed: 12/17/20 21:42									
QC Source Sample: Non-SDG (A0L0492-01)												
1,3-Dichlorobenzene	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	137	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	137	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	137	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	685	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	685	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	685	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	137	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	342	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	342	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120647 - EPA 5035A						Soil						
Duplicate (0120647-DUP1)			Prepared: 12/14/20 10:32 Analyzed: 12/17/20 21:42									
QC Source Sample: Non-SDG (A0L0492-01)												
Trichloroethene (TCE)	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	EST
Trichlorofluoromethane	ND	---	137	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	---	34.2	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 108 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		98 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		103 %		79-120 %		"						

Matrix Spike (0120647-MS1)

Prepared: 12/16/20 13:20 Analyzed: 12/17/20 22:37

V-15**QC Source Sample: Non-SDG (A0L0571-01)****5035A/8260D**

Acetone	2800	---	1510	ug/kg dry	50	3020	ND	93	36-164%	---	---
Acrylonitrile	1470	---	377	ug/kg dry	50	1510	ND	97	65-134%	---	---
Benzene	1550	---	15.1	ug/kg dry	50	1510	ND	103	77-121%	---	---
Bromobenzene	1570	---	37.7	ug/kg dry	50	1510	ND	104	78-121%	---	---
Bromochloromethane	1550	---	75.4	ug/kg dry	50	1510	ND	103	78-125%	---	---
Bromodichloromethane	1780	---	75.4	ug/kg dry	50	1510	ND	118	75-127%	---	---
Bromoform	1630	---	151	ug/kg dry	50	1510	ND	108	67-132%	---	---
Bromomethane	1660	---	754	ug/kg dry	50	1510	ND	110	53-143%	---	---
2-Butanone (MEK)	2690	---	754	ug/kg dry	50	3020	ND	89	51-148%	---	---
n-Butylbenzene	1400	---	75.4	ug/kg dry	50	1510	ND	93	70-128%	---	---
sec-Butylbenzene	1490	---	75.4	ug/kg dry	50	1510	ND	99	73-126%	---	---
tert-Butylbenzene	1350	---	75.4	ug/kg dry	50	1510	ND	89	73-125%	---	---
Carbon disulfide	1970	---	754	ug/kg dry	50	1510	ND	130	63-132%	---	---
Carbon tetrachloride	1790	---	75.4	ug/kg dry	50	1510	ND	119	70-135%	---	---
Chlorobenzene	1510	---	37.7	ug/kg dry	50	1510	ND	100	79-120%	---	---
Chloroethane	1450	---	754	ug/kg dry	50	1510	ND	96	59-139%	---	---
Chloroform	1570	---	75.4	ug/kg dry	50	1510	ND	104	78-123%	---	---
Chloromethane	1240	---	377	ug/kg dry	50	1510	ND	82	50-136%	---	---

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120647 - EPA 5035A						Soil						
Matrix Spike (0120647-MS1)			Prepared: 12/16/20 13:20		Analyzed: 12/17/20 22:37		V-15					
QC Source Sample: Non-SDG (A0L0571-01)												
2-Chlorotoluene	1500	---	75.4	ug/kg dry	50	1510	ND	99	75-122%	---	---	E-05
4-Chlorotoluene	1490	---	75.4	ug/kg dry	50	1510	ND	99	72-124%	---	---	
Dibromochloromethane	1560	---	151	ug/kg dry	50	1510	ND	103	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1420	---	377	ug/kg dry	50	1510	ND	94	61-132%	---	---	
1,2-Dibromoethane (EDB)	1600	---	75.4	ug/kg dry	50	1510	ND	106	78-122%	---	---	
Dibromomethane	1640	---	75.4	ug/kg dry	50	1510	ND	108	78-125%	---	---	
1,2-Dichlorobenzene	1550	---	37.7	ug/kg dry	50	1510	ND	103	78-121%	---	---	
1,3-Dichlorobenzene	1580	---	37.7	ug/kg dry	50	1510	ND	105	77-121%	---	---	
1,4-Dichlorobenzene	1460	---	37.7	ug/kg dry	50	1510	ND	97	75-120%	---	---	
Dichlorodifluoromethane	1340	---	151	ug/kg dry	50	1510	ND	89	29-149%	---	---	
1,1-Dichloroethane	1580	---	37.7	ug/kg dry	50	1510	ND	105	76-125%	---	---	
1,2-Dichloroethane (EDC)	1440	---	37.7	ug/kg dry	50	1510	ND	96	73-128%	---	---	
1,1-Dichloroethene	1570	---	37.7	ug/kg dry	50	1510	ND	104	70-131%	---	---	
cis-1,2-Dichloroethene	1600	---	37.7	ug/kg dry	50	1510	ND	106	77-123%	---	---	
trans-1,2-Dichloroethene	1530	---	37.7	ug/kg dry	50	1510	ND	101	74-125%	---	---	
1,2-Dichloropropane	1540	---	37.7	ug/kg dry	50	1510	ND	102	76-123%	---	---	
1,3-Dichloropropane	1460	---	75.4	ug/kg dry	50	1510	ND	97	77-121%	---	---	
2,2-Dichloropropane	1730	---	75.4	ug/kg dry	50	1510	ND	115	67-133%	---	---	
1,1-Dichloropropene	1500	---	75.4	ug/kg dry	50	1510	ND	100	76-125%	---	---	
cis-1,3-Dichloropropene	1480	---	75.4	ug/kg dry	50	1510	ND	98	74-126%	---	---	
trans-1,3-Dichloropropene	1510	---	151	ug/kg dry	50	1510	ND	100	71-130%	---	---	
Ethylbenzene	1530	---	37.7	ug/kg dry	50	1510	ND	101	76-122%	---	---	
Hexachlorobutadiene	1570	---	151	ug/kg dry	50	1510	ND	104	61-135%	---	---	
2-Hexanone	2440	---	75.4	ug/kg dry	50	3020	ND	81	53-145%	---	---	
Isopropylbenzene	1540	---	75.4	ug/kg dry	50	1510	ND	102	68-134%	---	---	
4-Isopropyltoluene	1460	---	75.4	ug/kg dry	50	1510	ND	96	73-127%	---	---	
Methylene chloride	1510	---	75.4	ug/kg dry	50	1510	ND	100	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	2620	---	75.4	ug/kg dry	50	3020	ND	87	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1580	---	75.4	ug/kg dry	50	1510	ND	104	73-125%	---	---	
Naphthalene	1250	---	151	ug/kg dry	50	1510	ND	82	62-129%	---	---	
n-Propylbenzene	1380	---	37.7	ug/kg dry	50	1510	ND	92	73-125%	---	---	
Styrene	1560	---	75.4	ug/kg dry	50	1510	ND	104	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1620	---	75.4	ug/kg dry	50	1510	ND	108	78-125%	---	---	

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120647 - EPA 5035A						Soil						
Matrix Spike (0120647-MS1)			Prepared: 12/16/20 13:20		Analyzed: 12/17/20 22:37		V-15					
QC Source Sample: Non-SDG (A0L0571-01)												
1,1,2,2-Tetrachloroethane	1510	---	75.4	ug/kg dry	50	1510	ND	100	70-124%	---	---	EST
Tetrachloroethene (PCE)	1590	---	37.7	ug/kg dry	50	1510	ND	105	73-128%	---	---	
Toluene	1440	---	75.4	ug/kg dry	50	1510	ND	95	77-121%	---	---	
1,2,3-Trichlorobenzene	1490	---	377	ug/kg dry	50	1510	ND	99	66-130%	---	---	
1,2,4-Trichlorobenzene	1390	---	377	ug/kg dry	50	1510	ND	92	67-129%	---	---	
1,1,1-Trichloroethane	1680	---	37.7	ug/kg dry	50	1510	ND	112	73-130%	---	---	
1,1,2-Trichloroethane	1600	---	37.7	ug/kg dry	50	1510	ND	106	78-121%	---	---	
Trichloroethene (TCE)	1680	---	37.7	ug/kg dry	50	1510	ND	111	77-123%	---	---	
Trichlorofluoromethane	1580	---	151	ug/kg dry	50	1510	ND	105	62-140%	---	---	
1,2,3-Trichloropropane	1470	---	75.4	ug/kg dry	50	1510	ND	98	73-125%	---	---	
1,2,4-Trimethylbenzene	1490	---	75.4	ug/kg dry	50	1510	ND	99	75-123%	---	---	
1,3,5-Trimethylbenzene	1550	---	75.4	ug/kg dry	50	1510	ND	102	73-124%	---	---	
Vinyl chloride	1570	---	37.7	ug/kg dry	50	1510	ND	104	56-135%	---	---	
m,p-Xylene	3070	---	75.4	ug/kg dry	50	3020	ND	102	77-124%	---	---	
o-Xylene	1490	---	37.7	ug/kg dry	50	1510	ND	99	77-123%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 106 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		97 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		97 %		79-120 %		"						

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Coles & Betts Environmental Consulting

5741 NE Flanders Street

Portland, OR 97213

Project: **281**

Project Number: **281**

Project Manager: **Jill Betts**

Report ID:

A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120740 - EPA 5035A						Soil						
Blank (0120740-BLK1)			Prepared: 12/19/20 09:00		Analyzed: 12/19/20 17:53							
5035A/8260D												
Acetone	ND	---	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120740 - EPA 5035A						Soil						
Blank (0120740-BLK1)			Prepared: 12/19/20 09:00		Analyzed: 12/19/20 17:53							
1,2-Dichloropropane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	66.7	ug/kg wet	50	---	---	---	---	---	---	EST
1,2,3-Trichloropropane	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	---	16.7	ug/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						

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5741 NE Flanders Street
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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120740 - EPA 5035A						Soil						
Blank (0120740-BLK1)			Prepared: 12/19/20 09:00		Analyzed: 12/19/20 17:53							
Surr: Toluene-d8 (Surr)		Recovery: 96 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		101 %		79-120 %		"						
LCS (0120740-BS1)			Prepared: 12/19/20 09:00		Analyzed: 12/19/20 16:58							
5035A/8260D												
Acetone	1750	---	1000	ug/kg wet	50	2000	---	87	80-120%	---	---	
Acrylonitrile	932	---	250	ug/kg wet	50	1000	---	93	80-120%	---	---	
Benzene	963	---	10.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
Bromobenzene	1060	---	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Bromochloromethane	933	---	50.0	ug/kg wet	50	1000	---	93	80-120%	---	---	
Bromodichloromethane	1180	---	50.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
Bromoform	1160	---	100	ug/kg wet	50	1000	---	116	80-120%	---	---	
Bromomethane	1070	---	500	ug/kg wet	50	1000	---	107	80-120%	---	---	
2-Butanone (MEK)	1660	---	500	ug/kg wet	50	2000	---	83	80-120%	---	---	
n-Butylbenzene	918	---	50.0	ug/kg wet	50	1000	---	92	80-120%	---	---	
sec-Butylbenzene	981	---	50.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
tert-Butylbenzene	899	---	50.0	ug/kg wet	50	1000	---	90	80-120%	---	---	
Carbon disulfide	1310	---	500	ug/kg wet	50	1000	---	131	80-120%	---	---	Q-56
Carbon tetrachloride	1240	---	50.0	ug/kg wet	50	1000	---	124	80-120%	---	---	Q-56
Chlorobenzene	967	---	25.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
Chloroethane	1030	---	500	ug/kg wet	50	1000	---	103	80-120%	---	---	
Chloroform	1010	---	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Chloromethane	772	---	250	ug/kg wet	50	1000	---	77	80-120%	---	---	Q-55
2-Chlorotoluene	1020	---	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
4-Chlorotoluene	960	---	50.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
Dibromochloromethane	1060	---	100	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,2-Dibromo-3-chloropropane	1030	---	250	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,2-Dibromoethane (EDB)	1050	---	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Dibromomethane	1080	---	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
1,2-Dichlorobenzene	1040	---	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
1,3-Dichlorobenzene	1070	---	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,4-Dichlorobenzene	969	---	25.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
Dichlorodifluoromethane	1060	---	100	ug/kg wet	50	1000	---	106	80-120%	---	---	E-05
1,1-Dichloroethane	948	---	25.0	ug/kg wet	50	1000	---	95	80-120%	---	---	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120740 - EPA 5035A						Soil						
LCS (0120740-BS1)			Prepared: 12/19/20 09:00		Analyzed: 12/19/20 16:58							
1,2-Dichloroethane (EDC)	944	---	25.0	ug/kg wet	50	1000	---	94	80-120%	---	---	
1,1-Dichloroethene	1050	---	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
cis-1,2-Dichloroethene	989	---	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
trans-1,2-Dichloroethene	958	---	25.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
1,2-Dichloropropane	918	---	25.0	ug/kg wet	50	1000	---	92	80-120%	---	---	
1,3-Dichloropropane	928	---	50.0	ug/kg wet	50	1000	---	93	80-120%	---	---	
2,2-Dichloropropane	1500	---	50.0	ug/kg wet	50	1000	---	150	80-120%	---	---	Q-56
1,1-Dichloropropene	963	---	50.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
cis-1,3-Dichloropropene	974	---	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
trans-1,3-Dichloropropene	1020	---	100	ug/kg wet	50	1000	---	102	80-120%	---	---	
Ethylbenzene	971	---	25.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
Hexachlorobutadiene	1110	---	100	ug/kg wet	50	1000	---	111	80-120%	---	---	
2-Hexanone	1430	---	500	ug/kg wet	50	2000	---	72	80-120%	---	---	Q-55
Isopropylbenzene	996	---	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
4-Isopropyltoluene	987	---	50.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Methylene chloride	927	---	500	ug/kg wet	50	1000	---	93	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	1560	---	500	ug/kg wet	50	2000	---	78	80-120%	---	---	Q-55
Methyl tert-butyl ether (MTBE)	1020	---	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Naphthalene	846	---	100	ug/kg wet	50	1000	---	85	80-120%	---	---	
n-Propylbenzene	891	---	25.0	ug/kg wet	50	1000	---	89	80-120%	---	---	
Styrene	1000	---	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1100	---	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
1,1,2,2-Tetrachloroethane	938	---	50.0	ug/kg wet	50	1000	---	94	80-120%	---	---	
Tetrachloroethene (PCE)	1110	---	25.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Toluene	894	---	50.0	ug/kg wet	50	1000	---	89	80-120%	---	---	
1,2,3-Trichlorobenzene	1050	---	250	ug/kg wet	50	1000	---	105	80-120%	---	---	
1,2,4-Trichlorobenzene	985	---	250	ug/kg wet	50	1000	---	98	80-120%	---	---	
1,1,1-Trichloroethane	1140	---	25.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
1,1,2-Trichloroethane	1040	---	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
Trichloroethene (TCE)	1110	---	25.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Trichlorofluoromethane	1020	---	100	ug/kg wet	50	1000	---	102	80-120%	---	---	EST
1,2,3-Trichloropropane	986	---	50.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
1,2,4-Trimethylbenzene	1000	---	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,3,5-Trimethylbenzene	1020	---	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120740 - EPA 5035A						Soil						
LCS (0120740-BS1)			Prepared: 12/19/20 09:00		Analyzed: 12/19/20 16:58							
Vinyl chloride	982	---	25.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
m,p-Xylene	1970	---	50.0	ug/kg wet	50	2000	---	99	80-120%	---	---	
o-Xylene	955	---	25.0	ug/kg wet	50	1000	---	95	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		95 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		102 %		79-120 %		"						
Duplicate (0120740-DUP1)			Prepared: 12/07/20 11:23		Analyzed: 12/19/20 21:58							
QC Source Sample: Non-SDG (A0L0292-08)												
Acetone	ND	---	1660	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	414	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	---	16.6	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	---	166	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	828	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	828	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	828	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	828	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	---	414	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	166	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	414	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120740 - EPA 5035A						Soil						
Duplicate (0120740-DUP1)			Prepared: 12/07/20 11:23 Analyzed: 12/19/20 21:58									
QC Source Sample: Non-SDG (A0L0292-08)												
1,3-Dichlorobenzene	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	166	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	166	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	166	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	828	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	828	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	828	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	166	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	414	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	414	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120740 - EPA 5035A						Soil						
Duplicate (0120740-DUP1)			Prepared: 12/07/20 11:23 Analyzed: 12/19/20 21:58									
QC Source Sample: Non-SDG (A0L0292-08)												
Trichloroethene (TCE)	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	EST
Trichlorofluoromethane	ND	---	166	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	82.8	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	---	41.4	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 97 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		96 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		104 %		79-120 %		"						

Duplicate (0120740-DUP2) Prepared: 12/07/20 12:20 Analyzed: 12/19/20 22:53

QC Source Sample: Non-SDG (A0L0292-16)												
Acetone	ND	---	1620	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	405	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	---	16.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	---	162	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	811	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	811	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	811	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	811	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	---	405	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120740 - EPA 5035A						Soil						
Duplicate (0120740-DUP2)			Prepared: 12/07/20 12:20		Analyzed: 12/19/20 22:53							
QC Source Sample: Non-SDG (A0L0292-16)												
4-Chlorotoluene	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	162	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	405	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	162	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	162	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	162	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	811	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	811	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	811	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	162	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120740 - EPA 5035A						Soil						
Duplicate (0120740-DUP2)			Prepared: 12/07/20 12:20		Analyzed: 12/19/20 22:53							
QC Source Sample: Non-SDG (A0L0292-16)												
Tetrachloroethene (PCE)	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	EST
Toluene	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	405	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	405	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	162	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	---	40.5	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 97 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		95 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		99 %		79-120 %		"						

Matrix Spike (0120740-MS1)

Prepared: 12/07/20 12:20 Analyzed: 12/20/20 03:52

V-15**QC Source Sample: Non-SDG (A0L0736-04)****5035A/8260D**

Acetone	1730	---	1060	ug/kg dry	50	2110	ND	82	36-164%	---	---	
Acrylonitrile	747	---	264	ug/kg dry	50	1060	ND	71	65-134%	---	---	
Benzene	809	---	10.6	ug/kg dry	50	1060	ND	76	77-121%	---	---	Q-01
Bromobenzene	1050	---	26.4	ug/kg dry	50	1060	ND	99	78-121%	---	---	
Bromochloromethane	1010	---	52.8	ug/kg dry	50	1060	ND	95	78-125%	---	---	
Bromodichloromethane	1170	---	52.8	ug/kg dry	50	1060	ND	111	75-127%	---	---	
Bromoform	1380	---	106	ug/kg dry	50	1060	ND	131	67-132%	---	---	
Bromomethane	1230	---	528	ug/kg dry	50	1060	ND	116	53-143%	---	---	
2-Butanone (MEK)	1790	---	528	ug/kg dry	50	2110	ND	85	51-148%	---	---	
n-Butylbenzene	823	---	52.8	ug/kg dry	50	1060	ND	78	70-128%	---	---	
sec-Butylbenzene	903	---	52.8	ug/kg dry	50	1060	ND	85	73-126%	---	---	
tert-Butylbenzene	903	---	52.8	ug/kg dry	50	1060	ND	85	73-125%	---	---	

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ORELAP ID: OR100062

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5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120740 - EPA 5035A						Soil						
Matrix Spike (0120740-MS1)			Prepared: 12/07/20 12:20		Analyzed: 12/20/20 03:52		V-15					
QC Source Sample: Non-SDG (A0L0736-04)												
Carbon disulfide	1420	---	528	ug/kg dry	50	1060	ND	134	63-132%	---	---	Q-54a
Carbon tetrachloride	1500	---	52.8	ug/kg dry	50	1060	ND	142	70-135%	---	---	Q-54j
Chlorobenzene	1030	---	26.4	ug/kg dry	50	1060	ND	97	79-120%	---	---	
Chloroethane	1660	---	528	ug/kg dry	50	1060	ND	157	59-139%	---	---	Q-01
Chloroform	1160	---	52.8	ug/kg dry	50	1060	ND	110	78-123%	---	---	
Chloromethane	589	---	264	ug/kg dry	50	1060	ND	56	50-136%	---	---	Q-54o
2-Chlorotoluene	924	---	52.8	ug/kg dry	50	1060	ND	87	75-122%	---	---	
4-Chlorotoluene	924	---	52.8	ug/kg dry	50	1060	ND	87	72-124%	---	---	
Dibromochloromethane	1240	---	106	ug/kg dry	50	1060	ND	117	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1030	---	264	ug/kg dry	50	1060	ND	97	61-132%	---	---	
1,2-Dibromoethane (EDB)	1090	---	52.8	ug/kg dry	50	1060	ND	103	78-122%	---	---	
Dibromomethane	1010	---	52.8	ug/kg dry	50	1060	ND	95	78-125%	---	---	
1,2-Dichlorobenzene	1020	---	26.4	ug/kg dry	50	1060	ND	96	78-121%	---	---	
1,3-Dichlorobenzene	1050	---	26.4	ug/kg dry	50	1060	ND	100	77-121%	---	---	
1,4-Dichlorobenzene	965	---	26.4	ug/kg dry	50	1060	ND	91	75-120%	---	---	
Dichlorodifluoromethane	1030	---	106	ug/kg dry	50	1060	ND	97	29-149%	---	---	E-05
1,1-Dichloroethane	1070	---	26.4	ug/kg dry	50	1060	ND	101	76-125%	---	---	
1,2-Dichloroethane (EDC)	1030	---	26.4	ug/kg dry	50	1060	ND	97	73-128%	---	---	
1,1-Dichloroethene	1180	---	26.4	ug/kg dry	50	1060	ND	111	70-131%	---	---	
cis-1,2-Dichloroethene	1090	---	26.4	ug/kg dry	50	1060	ND	103	77-123%	---	---	
trans-1,2-Dichloroethene	1020	---	26.4	ug/kg dry	50	1060	ND	96	74-125%	---	---	
1,2-Dichloropropane	721	---	26.4	ug/kg dry	50	1060	ND	68	76-123%	---	---	Q-01
1,3-Dichloropropane	926	---	52.8	ug/kg dry	50	1060	ND	88	77-121%	---	---	
2,2-Dichloropropane	1260	---	52.8	ug/kg dry	50	1060	ND	119	67-133%	---	---	Q-54g
1,1-Dichloropropene	1000	---	52.8	ug/kg dry	50	1060	ND	95	76-125%	---	---	
cis-1,3-Dichloropropene	922	---	52.8	ug/kg dry	50	1060	ND	87	74-126%	---	---	
trans-1,3-Dichloropropene	1050	---	106	ug/kg dry	50	1060	ND	99	71-130%	---	---	
Ethylbenzene	1030	---	26.4	ug/kg dry	50	1060	ND	97	76-122%	---	---	
Hexachlorobutadiene	1190	---	106	ug/kg dry	50	1060	ND	112	61-135%	---	---	
2-Hexanone	1510	---	528	ug/kg dry	50	2110	ND	72	53-145%	---	---	Q-54p
Isopropylbenzene	1080	---	52.8	ug/kg dry	50	1060	ND	103	68-134%	---	---	
4-Isopropyltoluene	935	---	52.8	ug/kg dry	50	1060	ND	88	73-127%	---	---	
Methvlene chloride	1020	---	528	ug/kg dry	50	1060	ND	96	70-128%	---	---	

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Darrell Auvil, Project Manager

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120740 - EPA 5035A						Soil						
Matrix Spike (0120740-MS1)			Prepared: 12/07/20 12:20			Analyzed: 12/20/20 03:52					V-15	
QC Source Sample: Non-SDG (A0L0736-04)												
4-Methyl-2-pentanone (MiBK)	1610	---	528	ug/kg dry	50	2110	ND	76	65-135%	---	---	Q-54m
Methyl tert-butyl ether (MTBE)	1090	---	52.8	ug/kg dry	50	1060	ND	103	73-125%	---	---	
Naphthalene	778	---	106	ug/kg dry	50	1060	ND	74	62-129%	---	---	
n-Propylbenzene	807	---	26.4	ug/kg dry	50	1060	ND	76	73-125%	---	---	
Styrene	1100	---	52.8	ug/kg dry	50	1060	ND	104	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1290	---	52.8	ug/kg dry	50	1060	ND	122	78-125%	---	---	
1,1,2,2-Tetrachloroethane	811	---	52.8	ug/kg dry	50	1060	ND	77	70-124%	---	---	
Tetrachloroethene (PCE)	1220	---	26.4	ug/kg dry	50	1060	ND	115	73-128%	---	---	
Toluene	913	---	52.8	ug/kg dry	50	1060	ND	86	77-121%	---	---	
1,2,3-Trichlorobenzene	1030	---	264	ug/kg dry	50	1060	ND	98	66-130%	---	---	
1,2,4-Trichlorobenzene	954	---	264	ug/kg dry	50	1060	ND	90	67-129%	---	---	
1,1,1-Trichloroethane	1370	---	26.4	ug/kg dry	50	1060	ND	129	73-130%	---	---	
1,1,2-Trichloroethane	1040	---	26.4	ug/kg dry	50	1060	ND	98	78-121%	---	---	
Trichloroethene (TCE)	1060	---	26.4	ug/kg dry	50	1060	114	89	77-123%	---	---	
Trichlorofluoromethane	2960	---	106	ug/kg dry	50	1060	ND	280	62-140%	---	---	EST
1,2,3-Trichloropropane	1030	---	52.8	ug/kg dry	50	1060	ND	97	73-125%	---	---	
1,2,4-Trimethylbenzene	970	---	52.8	ug/kg dry	50	1060	ND	92	75-123%	---	---	
1,3,5-Trimethylbenzene	988	---	52.8	ug/kg dry	50	1060	ND	93	73-124%	---	---	
Vinyl chloride	914	---	26.4	ug/kg dry	50	1060	ND	86	56-135%	---	---	
m,p-Xylene	2170	---	52.8	ug/kg dry	50	2110	ND	103	77-124%	---	---	
o-Xylene	1050	---	26.4	ug/kg dry	50	1060	ND	99	77-123%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery:		90 %		Limits:		80-120 %		Dilution: 1x		
Toluene-d8 (Surr)				93 %				80-120 %		"		
4-Bromofluorobenzene (Surr)				97 %				79-120 %		"		

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Polychlorinated Biphenyls by EPA 8082A**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120889 - EPA 3546						Soil						
Blank (0120889-BLK1)			Prepared: 12/28/20 07:02		Analyzed: 12/29/20 10:32		C-07					
EPA 8082A												
Aroclor 1016	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1221	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1232	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1242	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1248	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1254	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1260	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Surr: Decachlorobiphenyl (Surr)		Recovery: 99 %		Limits: 60-125 %		Dilution: 1x						
LCS (0120889-BS1)			Prepared: 12/28/20 07:02		Analyzed: 12/29/20 10:50		C-07					
EPA 8082A												
Aroclor 1016	232	---	10.0	ug/kg wet	1	250	---	93	47-134%	---	---	
Aroclor 1260	266	---	10.0	ug/kg wet	1	250	---	106	53-140%	---	---	
Surr: Decachlorobiphenyl (Surr)		Recovery: 108 %		Limits: 60-125 %		Dilution: 1x						
Duplicate (0120889-DUP1)			Prepared: 12/28/20 07:02		Analyzed: 12/29/20 11:43		C-07					
QC Source Sample: C001 (A0L0287-42)												
EPA 8082A												
Aroclor 1016	ND	---	11.6	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1221	ND	---	11.6	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1232	ND	---	29.6	ug/kg dry	1	---	ND	---	---	---	30%	R-02
Aroclor 1242	ND	---	11.6	ug/kg dry	1	---	8.49	---	---	***	30%	Q-05
Aroclor 1248	ND	---	11.6	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1254	13.2	---	11.6	ug/kg dry	1	---	17.2	---	---	26	30%	P-12
Aroclor 1260	ND	---	11.6	ug/kg dry	1	---	13.2	---	---	***	30%	
Surr: Decachlorobiphenyl (Surr)		Recovery: 93 %		Limits: 60-125 %		Dilution: 1x						
Matrix Spike (0120889-MS1)			Prepared: 12/28/20 07:02		Analyzed: 12/29/20 12:53		C-07					
QC Source Sample: C004 (A0L0287-45)												
EPA 8082A												
Aroclor 1016	198	---	11.7	ug/kg dry	1	292	ND	68	47-134%	---	---	
Aroclor 1260	221	---	11.7	ug/kg dry	1	292	6.46	73	53-140%	---	---	

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Coles & Betts Environmental Consulting

**5741 NE Flanders Street
Portland, OR 97213**

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120889 - EPA 3546							Soil					
Matrix Spike (0120889-MS1)			Prepared: 12/28/20 07:02 Analyzed: 12/29/20 12:53									C-07
QC Source Sample: C004 (A0L0287-45)												
Surr: Decachlorobiphenyl (Surr)				Recovery: 81 %		Limits: 60-125 %		Dilution: 1x				

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5741 NE Flanders Street
Portland, OR 97213

Project: **281**

Project Number: **281**

Project Manager: **Jill Betts**

Report ID:

A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120466 - EPA 3546/3640A (GPC)						Soil						
Blank (0120466-BLK1)			Prepared: 12/11/20 07:09		Analyzed: 12/14/20 14:26						C-05	
EPA 8081B												
Aldrin	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
alpha-BHC	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
beta-BHC	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
delta-BHC	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
gamma-BHC (Lindane)	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
cis-Chlordane	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
trans-Chlordane	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
4,4'-DDD	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
4,4'-DDE	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
4,4'-DDT	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
Dieldrin	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
Endosulfan I	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
Endosulfan II	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
Endosulfan sulfate	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
Endrin	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
Endrin Aldehyde	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
Endrin ketone	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
Heptachlor	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
Heptachlor epoxide	ND	---	1.82	ug/kg wet	1	---	---	---	---	---	---	
Methoxychlor	ND	---	5.45	ug/kg wet	1	---	---	---	---	---	---	
Chlordane (Technical)	ND	---	54.5	ug/kg wet	1	---	---	---	---	---	---	
Toxaphene (Total)	ND	---	54.5	ug/kg wet	1	---	---	---	---	---	---	
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 59 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		94 %		55-130 %		"						

LCS (0120466-BS1)

Prepared: 12/11/20 07:09 Analyzed: 12/14/20 14:43

C-05

EPA 8081B												
Aldrin	30.7	---	2.00	ug/kg wet	1	50.0	---	61	45-136%	---	---	
alpha-BHC	33.7	---	2.00	ug/kg wet	1	50.0	---	67	45-137%	---	---	
beta-BHC	32.9	---	2.00	ug/kg wet	1	50.0	---	66	50-136%	---	---	
delta-BHC	33.4	---	2.00	ug/kg wet	1	50.0	---	67	47-139%	---	---	
gamma-BHC (Lindane)	35.0	---	2.00	ug/kg wet	1	50.0	---	70	49-135%	---	---	
cis-Chlordane	35.6	---	2.00	ug/kg wet	1	50.0	---	71	54-133%	---	---	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Organochlorine Pesticides by EPA 8081B**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120466 - EPA 3546/3640A (GPC)						Soil						
LCS (0120466-BS1)			Prepared: 12/11/20 07:09		Analyzed: 12/14/20 14:43		C-05					
trans-Chlordane	34.3	---	2.00	ug/kg wet	1	50.0	---	69	53-135%	---	---	
4,4'-DDD	42.4	---	2.00	ug/kg wet	1	50.0	---	85	56-139%	---	---	
4,4'-DDE	37.4	---	2.00	ug/kg wet	1	50.0	---	75	56-134%	---	---	
Dieldrin	44.0	---	2.00	ug/kg wet	1	50.0	---	88	56-136%	---	---	
Endosulfan I	39.3	---	2.00	ug/kg wet	1	50.0	---	79	53-132%	---	---	
Endosulfan II	44.9	---	2.00	ug/kg wet	1	50.0	---	90	53-134%	---	---	
Endosulfan sulfate	48.9	---	2.00	ug/kg wet	1	50.0	---	98	55-136%	---	---	
Endrin	53.3	---	2.00	ug/kg wet	1	50.0	---	107	57-140%	---	---	Q-41
Endrin Aldehyde	36.3	---	2.00	ug/kg wet	1	50.0	---	73	35-137%	---	---	
Endrin ketone	41.5	---	2.00	ug/kg wet	1	50.0	---	83	55-136%	---	---	Q-31
Heptachlor	35.1	---	2.00	ug/kg wet	1	50.0	---	70	47-136%	---	---	
Heptachlor epoxide	37.8	---	2.00	ug/kg wet	1	50.0	---	76	52-136%	---	---	
Methoxychlor	49.3	---	6.00	ug/kg wet	1	50.0	---	99	52-143%	---	---	Q-31
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 54 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		94 %		55-130 %		"						
LCS (0120466-BS2)			Prepared: 12/15/20 18:12		Analyzed: 12/15/20 18:12		C-05					
EPA 8081B												
4,4'-DDT	50.7	---	2.00	ug/kg wet	1	50.0	---	101	50-141%	---	---	
Duplicate (0120466-DUP1)			Prepared: 12/11/20 07:09		Analyzed: 12/14/20 15:17		C-05					
QC Source Sample: Non-SDG (A0L0062-03RE3)												
Aldrin	ND	---	1.96	ug/kg wet	1	---	ND	---	---	---	30%	
alpha-BHC	ND	---	1.96	ug/kg wet	1	---	ND	---	---	---	30%	
beta-BHC	ND	---	1.96	ug/kg wet	1	---	ND	---	---	---	30%	
delta-BHC	ND	---	1.96	ug/kg wet	1	---	ND	---	---	---	30%	
gamma-BHC (Lindane)	ND	---	1.96	ug/kg wet	1	---	ND	---	---	---	30%	
cis-Chlordane	ND	---	1.96	ug/kg wet	1	---	ND	---	---	---	30%	
trans-Chlordane	ND	---	1.96	ug/kg wet	1	---	ND	---	---	---	30%	
4,4'-DDD	15.3	---	1.96	ug/kg wet	1	---	13.3	---	---	14	30%	
4,4'-DDE	28.4	---	1.96	ug/kg wet	1	---	24.4	---	---	15	30%	
4,4'-DDT	ND	---	1.96	ug/kg wet	1	---	1.74	---	---	***	30%	Q-31
Dieldrin	ND	---	1.96	ug/kg wet	1	---	ND	---	---	---	30%	
Endosulfan I	ND	---	1.96	ug/kg wet	1	---	ND	---	---	---	30%	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Organochlorine Pesticides by EPA 8081B**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120466 - EPA 3546/3640A (GPC)						Soil						
Duplicate (0120466-DUP1)			Prepared: 12/11/20 07:09		Analyzed: 12/14/20 15:17		C-05					
QC Source Sample: Non-SDG (A0L0062-03RE3)												
Endosulfan II	ND	---	1.96	ug/kg wet	1	---	ND	---	---	---	30%	
Endosulfan sulfate	ND	---	1.96	ug/kg wet	1	---	ND	---	---	---	30%	
Endrin	ND	---	1.96	ug/kg wet	1	---	ND	---	---	---	30%	
Endrin Aldehyde	ND	---	1.96	ug/kg wet	1	---	ND	---	---	---	30%	
Endrin ketone	ND	---	1.96	ug/kg wet	1	---	ND	---	---	---	30%	
Heptachlor	ND	---	1.96	ug/kg wet	1	---	ND	---	---	---	30%	
Heptachlor epoxide	ND	---	1.96	ug/kg wet	1	---	ND	---	---	---	30%	
Methoxychlor	ND	---	5.88	ug/kg wet	1	---	ND	---	---	---	30%	
Chlordane (Technical)	ND	---	58.8	ug/kg wet	1	---	ND	---	---	---	30%	
Toxaphene (Total)	ND	---	58.8	ug/kg wet	1	---	ND	---	---	---	30%	
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 43 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		82 %		55-130 %		"						
Matrix Spike (0120466-MS1)						Prepared: 12/11/20 07:09		Analyzed: 12/14/20 15:34		C-05		
QC Source Sample: Non-SDG (A0L0062-03RE3)												
EPA 8081B												
Aldrin	21.1	---	1.95	ug/kg wet	1	48.8	ND	43	45-136%	---	---	Q-01
alpha-BHC	19.4	---	1.95	ug/kg wet	1	48.8	ND	40	45-137%	---	---	Q-01
beta-BHC	29.4	---	1.95	ug/kg wet	1	48.8	ND	60	50-136%	---	---	
delta-BHC	27.5	---	1.95	ug/kg wet	1	48.8	ND	56	47-139%	---	---	
gamma-BHC (Lindane)	22.2	---	1.95	ug/kg wet	1	48.8	ND	46	49-135%	---	---	Q-01
cis-Chlordane	29.0	---	1.95	ug/kg wet	1	48.8	ND	60	54-133%	---	---	
trans-Chlordane	28.3	---	1.95	ug/kg wet	1	48.8	ND	58	53-135%	---	---	
4,4'-DDD	42.6	---	1.95	ug/kg wet	1	48.8	13.3	60	56-139%	---	---	
4,4'-DDE	50.5	---	1.95	ug/kg wet	1	48.8	24.4	54	56-134%	---	---	Q-01
4,4'-DDT	32.9	---	1.95	ug/kg wet	1	48.8	1.74	64	50-141%	---	---	Q-31
Dieldrin	31.6	---	1.95	ug/kg wet	1	48.8	ND	65	56-136%	---	---	
Endosulfan I	28.4	---	1.95	ug/kg wet	1	48.8	ND	58	53-132%	---	---	
Endosulfan II	32.0	---	1.95	ug/kg wet	1	48.8	ND	66	53-134%	---	---	
Endosulfan sulfate	31.8	---	1.95	ug/kg wet	1	48.8	ND	65	55-136%	---	---	
Endrin	38.1	---	1.95	ug/kg wet	1	48.8	ND	78	57-140%	---	---	Q-41
Endrin Aldehyde	24.7	---	1.95	ug/kg wet	1	48.8	ND	51	35-137%	---	---	
Endrin ketone	35.7	---	1.95	ug/kg wet	1	48.8	ND	73	55-136%	---	---	

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Organochlorine Pesticides by EPA 8081B**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120466 - EPA 3546/3640A (GPC)							Soil					
Matrix Spike (0120466-MS1)			Prepared: 12/11/20 07:09		Analyzed: 12/14/20 15:34				C-05			
QC Source Sample: Non-SDG (A0L0062-03RE3)												
Heptachlor	22.2	---	1.95	ug/kg wet	1	48.8	ND	46	47-136%	---	---	Q-01
Heptachlor epoxide	33.6	---	1.95	ug/kg wet	1	48.8	ND	69	52-136%	---	---	Q-41
Methoxychlor	38.1	---	5.85	ug/kg wet	1	48.8	ND	78	52-143%	---	---	Q-41
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 33 %		Limits: 42-129 %		Dilution: 1x		S-03				
Decachlorobiphenyl (Surr)		73 %		55-130 %		"						

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Semivolatile Organic Compounds by EPA 8270E**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120742 - EPA 3546						Soil						
Blank (0120742-BLK2)			Prepared: 12/21/20 07:03		Analyzed: 12/22/20 14:33							
EPA 8270E												
Acenaphthene	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	3.75	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	3.75	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	3.75	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	5.00	ug/kg wet	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	5.00	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	---	5.00	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
Carbazole	ND	---	3.75	ug/kg wet	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
2-Chlorophenol	ND	---	12.5	ug/kg wet	1	---	---	---	---	---	---	
4-Chloro-3-methylphenol	ND	---	25.0	ug/kg wet	1	---	---	---	---	---	---	
2,4-Dichlorophenol	ND	---	12.5	ug/kg wet	1	---	---	---	---	---	---	
2,4-Dimethylphenol	ND	---	12.5	ug/kg wet	1	---	---	---	---	---	---	
2,4-Dinitrophenol	ND	---	62.5	ug/kg wet	1	---	---	---	---	---	---	
4,6-Dinitro-2-methylphenol	ND	---	62.5	ug/kg wet	1	---	---	---	---	---	---	
2-Methylphenol	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---	
3+4-Methylphenol(s)	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---	
2-Nitrophenol	ND	---	25.0	ug/kg wet	1	---	---	---	---	---	---	
4-Nitrophenol	ND	---	25.0	ug/kg wet	1	---	---	---	---	---	---	
Pentachlorophenol (PCP)	ND	---	25.0	ug/kg wet	1	---	---	---	---	---	---	
Phenol	ND	---	5.00	ug/kg wet	1	---	---	---	---	---	---	
2,3,4,6-Tetrachlorophenol	ND	---	12.5	ug/kg wet	1	---	---	---	---	---	---	

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Semivolatile Organic Compounds by EPA 8270E**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120742 - EPA 3546						Soil						
Blank (0120742-BLK2)			Prepared: 12/21/20 07:03		Analyzed: 12/22/20 14:33							
2,3,5,6-Tetrachlorophenol	ND	---	12.5	ug/kg wet	1	---	---	---	---	---	---	
2,4,5-Trichlorophenol	ND	---	12.5	ug/kg wet	1	---	---	---	---	---	---	
Nitrobenzene	ND	---	25.0	ug/kg wet	1	---	---	---	---	---	---	
2,4,6-Trichlorophenol	ND	---	12.5	ug/kg wet	1	---	---	---	---	---	---	
Bis(2-ethylhexyl)phthalate	ND	---	37.5	ug/kg wet	1	---	---	---	---	---	---	
Butyl benzyl phthalate	ND	---	25.0	ug/kg wet	1	---	---	---	---	---	---	
Diethylphthalate	ND	---	25.0	ug/kg wet	1	---	---	---	---	---	---	
Dimethylphthalate	ND	---	25.0	ug/kg wet	1	---	---	---	---	---	---	
Di-n-butylphthalate	ND	---	25.0	ug/kg wet	1	---	---	---	---	---	---	
Di-n-octyl phthalate	ND	---	25.0	ug/kg wet	1	---	---	---	---	---	---	
N-Nitrosodimethylamine	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---	
N-Nitroso-di-n-propylamine	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---	
N-Nitrosodiphenylamine	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---	
Bis(2-Chloroethoxy) methane	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---	
Bis(2-Chloroethyl) ether	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---	
2,2'-Oxybis(1-Chloropropane)	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---	
Hexachlorobenzene	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---	
Hexachlorocyclopentadiene	ND	---	12.5	ug/kg wet	1	---	---	---	---	---	---	
Hexachloroethane	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---	
2-Chloronaphthalene	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---	
4-Bromophenyl phenyl ether	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---	
4-Chlorophenyl phenyl ether	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---	
Aniline	ND	---	12.5	ug/kg wet	1	---	---	---	---	---	---	
4-Chloroaniline	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---	
2-Nitroaniline	ND	---	50.0	ug/kg wet	1	---	---	---	---	---	---	
3-Nitroaniline	ND	---	50.0	ug/kg wet	1	---	---	---	---	---	---	
4-Nitroaniline	ND	---	50.0	ug/kg wet	1	---	---	---	---	---	---	
2,4-Dinitrotoluene	ND	---	25.0	ug/kg wet	1	---	---	---	---	---	---	
2,6-Dinitrotoluene	ND	---	25.0	ug/kg wet	1	---	---	---	---	---	---	
Benzoic acid	ND	---	312	ug/kg wet	1	---	---	---	---	---	---	
Benzyl alcohol	ND	---	12.5	ug/kg wet	1	---	---	---	---	---	---	B-02
Isophorone	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---	

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Darrell Auvil, Project Manager

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Semivolatile Organic Compounds by EPA 8270E**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 0120742 - EPA 3546						Soil							
Blank (0120742-BLK2)			Prepared: 12/21/20 07:03		Analyzed: 12/22/20 14:33								
Azobenzene (1,2-DPH)	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---	Q-52	
Bis(2-Ethylhexyl) adipate	ND	---	62.5	ug/kg wet	1	---	---	---	---	---	---		
3,3'-Dichlorobenzidine	ND	---	50.0	ug/kg wet	1	---	---	---	---	---	---		
1,2-Dinitrobenzene	ND	---	62.5	ug/kg wet	1	---	---	---	---	---	---		
1,3-Dinitrobenzene	ND	---	62.5	ug/kg wet	1	---	---	---	---	---	---		
1,4-Dinitrobenzene	ND	---	62.5	ug/kg wet	1	---	---	---	---	---	---		
Pyridine	ND	---	12.5	ug/kg wet	1	---	---	---	---	---	---		
1,2-Dichlorobenzene	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---		
1,3-Dichlorobenzene	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---		
1,4-Dichlorobenzene	ND	---	6.25	ug/kg wet	1	---	---	---	---	---	---		
Surr: Nitrobenzene-d5 (Surr)			Recovery: 83 %		Limits: 37-122 %		Dilution: 1x						
2-Fluorobiphenyl (Surr)			82 %		44-120 %		"						
Phenol-d6 (Surr)			85 %		33-122 %		"						
p-Terphenyl-d14 (Surr)			92 %		54-127 %		"						
2-Fluorophenol (Surr)			82 %		35-120 %		"						
2,4,6-Tribromophenol (Surr)			63 %		39-132 %		"						
LCS (0120742-BS2)			Prepared: 12/21/20 07:03		Analyzed: 12/22/20 15:09								Q-18
EPA 8270E													
Acenaphthene	479	---	5.34	ug/kg wet	2	533	---	90	40-123%	---	---		
Acenaphthylene	517	---	5.34	ug/kg wet	2	533	---	97	32-132%	---	---		
Anthracene	514	---	5.34	ug/kg wet	2	533	---	96	47-123%	---	---		
Benz(a)anthracene	512	---	5.34	ug/kg wet	2	533	---	96	49-126%	---	---		
Benzo(a)pyrene	522	---	8.00	ug/kg wet	2	533	---	98	45-129%	---	---		
Benzo(b)fluoranthene	504	---	8.00	ug/kg wet	2	533	---	95	45-132%	---	---		
Benzo(k)fluoranthene	501	---	8.00	ug/kg wet	2	533	---	94	47-132%	---	---		
Benzo(g,h,i)perylene	532	---	5.34	ug/kg wet	2	533	---	100	43-134%	---	---		
Chrysene	498	---	5.34	ug/kg wet	2	533	---	93	50-124%	---	---		
Dibenz(a,h)anthracene	504	---	5.34	ug/kg wet	2	533	---	95	45-134%	---	---		
Fluoranthene	520	---	5.34	ug/kg wet	2	533	---	97	50-127%	---	---		
Fluorene	492	---	5.34	ug/kg wet	2	533	---	92	43-125%	---	---		
Indeno(1,2,3-cd)pyrene	496	---	5.34	ug/kg wet	2	533	---	93	45-133%	---	---		
1-Methylnaphthalene	468	---	10.7	ug/kg wet	2	533	---	88	40-120%	---	---		
2-Methylnaphthalene	476	---	10.7	ug/kg wet	2	533	---	89	38-122%	---	---		

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Coles & Betts Environmental Consulting

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Semivolatile Organic Compounds by EPA 8270E**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120742 - EPA 3546						Soil						
LCS (0120742-BS2)						Prepared: 12/21/20 07:03 Analyzed: 12/22/20 15:09						Q-18
Naphthalene	436	---	10.7	ug/kg wet	2	533	---	82	35-123%	---	---	
Phenanthrene	484	---	5.34	ug/kg wet	2	533	---	91	50-121%	---	---	
Pyrene	515	---	5.34	ug/kg wet	2	533	---	97	47-127%	---	---	
Carbazole	537	---	8.00	ug/kg wet	2	533	---	101	50-123%	---	---	
Dibenzofuran	474	---	5.34	ug/kg wet	2	533	---	89	44-120%	---	---	
2-Chlorophenol	465	---	26.6	ug/kg wet	2	533	---	87	34-121%	---	---	
4-Chloro-3-methylphenol	470	---	53.4	ug/kg wet	2	533	---	88	45-122%	---	---	
2,4-Dichlorophenol	479	---	26.6	ug/kg wet	2	533	---	90	40-122%	---	---	
2,4-Dimethylphenol	530	---	26.6	ug/kg wet	2	533	---	99	30-127%	---	---	
2,4-Dinitrophenol	451	---	133	ug/kg wet	2	533	---	85	10-137%	---	---	
4,6-Dinitro-2-methylphenol	443	---	133	ug/kg wet	2	533	---	83	29-132%	---	---	
2-Methylphenol	483	---	13.3	ug/kg wet	2	533	---	91	32-122%	---	---	
3+4-Methylphenol(s)	486	---	13.3	ug/kg wet	2	533	---	91	34-120%	---	---	
2-Nitrophenol	460	---	53.4	ug/kg wet	2	533	---	86	36-123%	---	---	
4-Nitrophenol	499	---	53.4	ug/kg wet	2	533	---	94	30-132%	---	---	
Pentachlorophenol (PCP)	525	---	53.4	ug/kg wet	2	533	---	98	25-133%	---	---	
Phenol	469	---	10.7	ug/kg wet	2	533	---	88	34-121%	---	---	
2,3,4,6-Tetrachlorophenol	483	---	26.6	ug/kg wet	2	533	---	91	44-125%	---	---	
2,3,5,6-Tetrachlorophenol	520	---	26.6	ug/kg wet	2	533	---	98	40-120%	---	---	
2,4,5-Trichlorophenol	472	---	26.6	ug/kg wet	2	533	---	89	41-124%	---	---	
Nitrobenzene	451	---	53.4	ug/kg wet	2	533	---	85	34-122%	---	---	
2,4,6-Trichlorophenol	489	---	26.6	ug/kg wet	2	533	---	92	39-126%	---	---	
Bis(2-ethylhexyl)phthalate	504	---	80.0	ug/kg wet	2	533	---	94	51-133%	---	---	
Butyl benzyl phthalate	546	---	53.4	ug/kg wet	2	533	---	102	48-132%	---	---	
Diethylphthalate	502	---	53.4	ug/kg wet	2	533	---	94	50-124%	---	---	
Dimethylphthalate	513	---	53.4	ug/kg wet	2	533	---	96	48-124%	---	---	
Di-n-butylphthalate	544	---	53.4	ug/kg wet	2	533	---	102	51-128%	---	---	
Di-n-octyl phthalate	530	---	53.4	ug/kg wet	2	533	---	99	45-140%	---	---	
N-Nitrosodimethylamine	435	---	13.3	ug/kg wet	2	533	---	82	23-120%	---	---	
N-Nitroso-di-n-propylamine	480	---	13.3	ug/kg wet	2	533	---	90	36-120%	---	---	
N-Nitrosodiphenylamine	520	---	13.3	ug/kg wet	2	533	---	98	38-127%	---	---	
Bis(2-Chloroethoxy) methane	460	---	13.3	ug/kg wet	2	533	---	86	36-121%	---	---	
Bis(2-Chloroethyl) ether	426	---	13.3	ug/kg wet	2	533	---	80	31-120%	---	---	
2,2'-Oxybis(1-Chloropropane)	429	---	13.3	ug/kg wet	2	533	---	81	33-131%	---	---	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Semivolatile Organic Compounds by EPA 8270E**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120742 - EPA 3546						Soil						
LCS (0120742-BS2)						Prepared: 12/21/20 07:03 Analyzed: 12/22/20 15:09						Q-18
Hexachlorobenzene	486	---	5.34	ug/kg wet	2	533	---	91	45-122%	---	---	
Hexachlorobutadiene	428	---	13.3	ug/kg wet	2	533	---	80	32-123%	---	---	
Hexachlorocyclopentadiene	430	---	26.6	ug/kg wet	2	533	---	81	10-140%	---	---	
Hexachloroethane	437	---	13.3	ug/kg wet	2	533	---	82	28-120%	---	---	
2-Chloronaphthalene	452	---	5.34	ug/kg wet	2	533	---	85	41-120%	---	---	
1,2,4-Trichlorobenzene	430	---	13.3	ug/kg wet	2	533	---	81	34-120%	---	---	
4-Bromophenyl phenyl ether	499	---	13.3	ug/kg wet	2	533	---	94	46-124%	---	---	
4-Chlorophenyl phenyl ether	482	---	13.3	ug/kg wet	2	533	---	90	45-121%	---	---	
Aniline	429	---	26.6	ug/kg wet	2	533	---	80	10-120%	---	---	
4-Chloroaniline	431	---	13.3	ug/kg wet	2	533	---	81	17-120%	---	---	
2-Nitroaniline	488	---	107	ug/kg wet	2	533	---	91	44-127%	---	---	
3-Nitroaniline	457	---	107	ug/kg wet	2	533	---	86	33-120%	---	---	
4-Nitroaniline	485	---	107	ug/kg wet	2	533	---	91	70-138%	---	---	
2,4-Dinitrotoluene	486	---	53.4	ug/kg wet	2	533	---	91	48-126%	---	---	
2,6-Dinitrotoluene	460	---	53.4	ug/kg wet	2	533	---	86	46-124%	---	---	
Benzoic acid	935	---	666	ug/kg wet	2	1070	---	88	10-140%	---	---	
Benzyl alcohol	466	---	26.6	ug/kg wet	2	533	---	87	29-122%	---	---	B-02
Isophorone	520	---	13.3	ug/kg wet	2	533	---	98	30-122%	---	---	
Azobenzene (1,2-DPH)	482	---	13.3	ug/kg wet	2	533	---	90	39-125%	---	---	
Bis(2-Ethylhexyl) adipate	512	---	133	ug/kg wet	2	533	---	96	61-121%	---	---	
3,3'-Dichlorobenzidine	1400	---	107	ug/kg wet	2	1070	---	131	22-121%	---	---	Q-29
1,2-Dinitrobenzene	478	---	133	ug/kg wet	2	533	---	90	44-120%	---	---	
1,3-Dinitrobenzene	475	---	133	ug/kg wet	2	533	---	89	43-127%	---	---	
1,4-Dinitrobenzene	466	---	133	ug/kg wet	2	533	---	87	37-132%	---	---	
Pyridine	338	---	26.6	ug/kg wet	2	533	---	63	10-120%	---	---	
1,2-Dichlorobenzene	426	---	13.3	ug/kg wet	2	533	---	80	33-120%	---	---	
1,3-Dichlorobenzene	422	---	13.3	ug/kg wet	2	533	---	79	30-120%	---	---	
1,4-Dichlorobenzene	426	---	13.3	ug/kg wet	2	533	---	80	31-120%	---	---	
<i>Surr: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 80 %</i>		<i>Limits: 37-122 %</i>		<i>Dilution: 2x</i>						
<i>2-Fluorobiphenyl (Surr)</i>		<i>80 %</i>		<i>44-120 %</i>		<i>"</i>						
<i>Phenol-d6 (Surr)</i>		<i>86 %</i>		<i>33-122 %</i>		<i>"</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>91 %</i>		<i>54-127 %</i>		<i>"</i>						
<i>2-Fluorophenol (Surr)</i>		<i>82 %</i>		<i>35-120 %</i>		<i>"</i>						
<i>2,4,6-Tribromophenol (Surr)</i>		<i>93 %</i>		<i>39-132 %</i>		<i>"</i>						

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Darrell Auvil, Project Manager

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Semivolatile Organic Compounds by EPA 8270E**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120742 - EPA 3546						Soil						
Duplicate (0120742-DUP2)												
Prepared: 12/21/20 07:03 Analyzed: 12/22/20 16:58												
QC Source Sample: C004 (A0L0287-45)												
EPA 8270E												
Acenaphthene	7380	---	615	ug/kg dry	200	---	6370	---	---	15	30%	M-05
Acenaphthylene	4880	---	615	ug/kg dry	200	---	5490	---	---	12	30%	
Anthracene	13700	---	615	ug/kg dry	200	---	13700	---	---	0.3	30%	
Benz(a)anthracene	34000	---	615	ug/kg dry	200	---	36800	---	---	8	30%	
Benzo(a)pyrene	43000	---	921	ug/kg dry	200	---	46800	---	---	8	30%	
Benzo(b)fluoranthene	41200	---	921	ug/kg dry	200	---	43600	---	---	6	30%	
Benzo(k)fluoranthene	13600	---	921	ug/kg dry	200	---	17500	---	---	25	30%	
Benzo(g,h,i)perylene	25000	---	615	ug/kg dry	200	---	27600	---	---	10	30%	
Chrysene	37500	---	615	ug/kg dry	200	---	41800	---	---	11	30%	
Dibenz(a,h)anthracene	4460	---	615	ug/kg dry	200	---	4880	---	---	9	30%	
Fluoranthene	72300	---	615	ug/kg dry	200	---	80200	---	---	10	30%	
Fluorene	4960	---	615	ug/kg dry	200	---	4320	---	---	14	30%	
Indeno(1,2,3-cd)pyrene	23500	---	615	ug/kg dry	200	---	26300	---	---	11	30%	
1-Methylnaphthalene	1500	---	1230	ug/kg dry	200	---	1180	---	---	24	30%	
2-Methylnaphthalene	1790	---	1230	ug/kg dry	200	---	1430	---	---	23	30%	
Naphthalene	3760	---	1230	ug/kg dry	200	---	3310	---	---	13	30%	
Phenanthrene	58300	---	615	ug/kg dry	200	---	56400	---	---	3	30%	
Pyrene	84000	---	615	ug/kg dry	200	---	93000	---	---	10	30%	
Carbazole	3340	---	921	ug/kg dry	200	---	3240	---	---	3	30%	
Dibenzofuran	2260	---	615	ug/kg dry	200	---	1960	---	---	14	30%	
2-Chlorophenol	ND	---	3060	ug/kg dry	200	---	ND	---	---	---	30%	
4-Chloro-3-methylphenol	ND	---	6150	ug/kg dry	200	---	ND	---	---	---	30%	
2,4-Dichlorophenol	ND	---	3060	ug/kg dry	200	---	ND	---	---	---	30%	
2,4-Dimethylphenol	ND	---	3060	ug/kg dry	200	---	ND	---	---	---	30%	
2,4-Dinitrophenol	ND	---	15400	ug/kg dry	200	---	ND	---	---	---	30%	
4,6-Dinitro-2-methylphenol	ND	---	15400	ug/kg dry	200	---	ND	---	---	---	30%	
2-Methylphenol	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
3+4-Methylphenol(s)	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
2-Nitrophenol	ND	---	6150	ug/kg dry	200	---	ND	---	---	---	30%	
4-Nitrophenol	ND	---	6150	ug/kg dry	200	---	ND	---	---	---	30%	
Pentachlorophenol (PCP)	ND	---	6150	ug/kg dry	200	---	ND	---	---	---	30%	

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Semivolatile Organic Compounds by EPA 8270E**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120742 - EPA 3546						Soil						
Duplicate (0120742-DUP2)			Prepared: 12/21/20 07:03		Analyzed: 12/22/20 16:58							
QC Source Sample: C004 (A0L0287-45)												
Phenol	ND	---	1230	ug/kg dry	200	---	ND	---	---	---	30%	
2,3,4,6-Tetrachlorophenol	ND	---	3060	ug/kg dry	200	---	ND	---	---	---	30%	
2,3,5,6-Tetrachlorophenol	ND	---	3060	ug/kg dry	200	---	ND	---	---	---	30%	
2,4,5-Trichlorophenol	ND	---	3060	ug/kg dry	200	---	ND	---	---	---	30%	
Nitrobenzene	ND	---	6150	ug/kg dry	200	---	ND	---	---	---	30%	
2,4,6-Trichlorophenol	ND	---	3060	ug/kg dry	200	---	ND	---	---	---	30%	
Bis(2-ethylhexyl)phthalate	ND	---	9210	ug/kg dry	200	---	ND	---	---	---	30%	
Butyl benzyl phthalate	ND	---	6150	ug/kg dry	200	---	ND	---	---	---	30%	
Diethylphthalate	ND	---	6150	ug/kg dry	200	---	ND	---	---	---	30%	
Dimethylphthalate	ND	---	6150	ug/kg dry	200	---	ND	---	---	---	30%	
Di-n-butylphthalate	ND	---	6150	ug/kg dry	200	---	ND	---	---	---	30%	
Di-n-octyl phthalate	ND	---	6150	ug/kg dry	200	---	ND	---	---	---	30%	
N-Nitrosodimethylamine	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
N-Nitroso-di-n-propylamine	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
N-Nitrosodiphenylamine	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
Bis(2-Chloroethoxy) methane	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
Bis(2-Chloroethyl) ether	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
2,2'-Oxybis(1-Chloropropane)	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
Hexachlorobenzene	ND	---	615	ug/kg dry	200	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
Hexachlorocyclopentadiene	ND	---	3060	ug/kg dry	200	---	ND	---	---	---	30%	
Hexachloroethane	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
2-Chloronaphthalene	ND	---	615	ug/kg dry	200	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
4-Bromophenyl phenyl ether	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
4-Chlorophenyl phenyl ether	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
Aniline	ND	---	3060	ug/kg dry	200	---	ND	---	---	---	30%	
4-Chloroaniline	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
2-Nitroaniline	ND	---	12300	ug/kg dry	200	---	ND	---	---	---	30%	
3-Nitroaniline	ND	---	12300	ug/kg dry	200	---	ND	---	---	---	30%	
4-Nitroaniline	ND	---	12300	ug/kg dry	200	---	ND	---	---	---	30%	
2,4-Dinitrotoluene	ND	---	6150	ug/kg dry	200	---	ND	---	---	---	30%	
2,6-Dinitrotoluene	ND	---	6150	ug/kg dry	200	---	ND	---	---	---	30%	

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Coles & Betts Environmental Consulting

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Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Semivolatile Organic Compounds by EPA 8270E**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120742 - EPA 3546						Soil						
Duplicate (0120742-DUP2)			Prepared: 12/21/20 07:03		Analyzed: 12/22/20 16:58							
QC Source Sample: C004 (A0L0287-45)												
Benzoic acid	ND	---	76700	ug/kg dry	200	---	ND	---	---	---	30%	Q-52
Benzyl alcohol	ND	---	3060	ug/kg dry	200	---	ND	---	---	---	30%	
Isophorone	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
Azobenzene (1,2-DPH)	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
Bis(2-Ethylhexyl) adipate	ND	---	15400	ug/kg dry	200	---	ND	---	---	---	30%	
3,3'-Dichlorobenzidine	ND	---	12300	ug/kg dry	200	---	ND	---	---	---	30%	
1,2-Dinitrobenzene	ND	---	15400	ug/kg dry	200	---	ND	---	---	---	30%	
1,3-Dinitrobenzene	ND	---	15400	ug/kg dry	200	---	ND	---	---	---	30%	
1,4-Dinitrobenzene	ND	---	15400	ug/kg dry	200	---	ND	---	---	---	30%	
Pyridine	ND	---	3060	ug/kg dry	200	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	1540	ug/kg dry	200	---	ND	---	---	---	30%	
Surr: Nitrobenzene-d5 (Surr)		Recovery: 69 %		Limits: 37-122 %		Dilution: 200x		S-05				
2-Fluorobiphenyl (Surr)		72 %		44-120 %		"		S-05				
Phenol-d6 (Surr)		65 %		33-122 %		"		S-05				
p-Terphenyl-d14 (Surr)		92 %		54-127 %		"		S-05				
2-Fluorophenol (Surr)		66 %		35-120 %		"		S-05				
2,4,6-Tribromophenol (Surr)		302 %		39-132 %		"		S-05				

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Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS**Total Metals by EPA 6020B (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120478 - EPA 3051A												Soil
Blank (0120478-BLK1)												Prepared: 12/14/20 09:02 Analyzed: 12/16/20 15:22
EPA 6020B												
Arsenic	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	---	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
LCS (0120478-BS1)												Prepared: 12/14/20 09:02 Analyzed: 12/16/20 15:32
EPA 6020B												
Arsenic	52.8	---	1.00	mg/kg wet	10	50.0	---	106	80-120%	---	---	
Barium	50.3	---	1.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Cadmium	52.0	---	0.200	mg/kg wet	10	50.0	---	104	80-120%	---	---	
Chromium	50.7	---	1.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Lead	53.4	---	0.200	mg/kg wet	10	50.0	---	107	80-120%	---	---	
Mercury	1.03	---	0.0800	mg/kg wet	10	1.00	---	103	80-120%	---	---	
Selenium	26.4	---	1.00	mg/kg wet	10	25.0	---	106	80-120%	---	---	
Silver	26.4	---	0.200	mg/kg wet	10	25.0	---	105	80-120%	---	---	
Duplicate (0120478-DUP1)												Prepared: 12/14/20 09:02 Analyzed: 12/16/20 16:11
QC Source Sample: Non-SDG (A0L0222-01)												
Arsenic	8.38	---	1.21	mg/kg dry	10	---	6.60	---	---	24	20%	Q-04
Barium	161	---	1.21	mg/kg dry	10	---	135	---	---	18	20%	
Cadmium	ND	---	0.241	mg/kg dry	10	---	0.171	---	---	***	20%	Q-05
Chromium	21.7	---	1.21	mg/kg dry	10	---	18.5	---	---	16	20%	
Lead	44.4	---	0.241	mg/kg dry	10	---	34.1	---	---	26	20%	Q-04
Mercury	ND	---	0.0966	mg/kg dry	10	---	ND	---	---	---	20%	
Selenium	ND	---	1.21	mg/kg dry	10	---	ND	---	---	---	20%	
Silver	ND	---	0.241	mg/kg dry	10	---	ND	---	---	---	20%	

Matrix Spike (0120478-MS1)

Prepared: 12/14/20 09:02 Analyzed: 12/16/20 16:16

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Total Metals by EPA 6020B (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120478 - EPA 3051A						Soil						
Matrix Spike (0120478-MS1)			Prepared: 12/14/20 09:02 Analyzed: 12/16/20 16:16									
QC Source Sample: Non-SDG (A0L0222-01)												
EPA 6020B												
Arsenic	69.9	---	1.23	mg/kg dry	10	61.6	6.60	103	75-125%	---	---	
Barium	204	---	1.23	mg/kg dry	10	61.6	135	113	75-125%	---	---	
Cadmium	63.4	---	0.246	mg/kg dry	10	61.6	0.171	103	75-125%	---	---	
Chromium	81.7	---	1.23	mg/kg dry	10	61.6	18.5	103	75-125%	---	---	
Lead	92.7	---	0.246	mg/kg dry	10	61.6	34.1	95	75-125%	---	---	
Mercury	1.27	---	0.0985	mg/kg dry	10	1.23	ND	103	75-125%	---	---	
Selenium	29.1	---	1.23	mg/kg dry	10	30.8	ND	94	75-125%	---	---	
Silver	32.3	---	0.246	mg/kg dry	10	30.8	ND	105	75-125%	---	---	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Total Metals by EPA 6020B (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120536 - EPA 3051A												
Soil												
Blank (0120536-BLK1)												
Prepared: 12/15/20 08:36 Analyzed: 12/16/20 18:06												
EPA 6020B												
Arsenic	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	---	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
LCS (0120536-BS1)												
Prepared: 12/15/20 08:36 Analyzed: 12/16/20 18:11												
EPA 6020B												
Arsenic	54.5	---	1.00	mg/kg wet	10	50.0	---	109	80-120%	---	---	
Barium	50.8	---	1.00	mg/kg wet	10	50.0	---	102	80-120%	---	---	
Cadmium	53.6	---	0.200	mg/kg wet	10	50.0	---	107	80-120%	---	---	
Chromium	52.8	---	1.00	mg/kg wet	10	50.0	---	106	80-120%	---	---	
Lead	54.4	---	0.200	mg/kg wet	10	50.0	---	109	80-120%	---	---	
Mercury	1.08	---	0.0800	mg/kg wet	10	1.00	---	108	80-120%	---	---	
Selenium	26.8	---	1.00	mg/kg wet	10	25.0	---	107	80-120%	---	---	
Silver	27.7	---	0.200	mg/kg wet	10	25.0	---	111	80-120%	---	---	
Duplicate (0120536-DUP1)												
Prepared: 12/15/20 08:36 Analyzed: 12/16/20 18:36												
QC Source Sample: Non-SDG (A0L0292-10)												
Arsenic	10.8	---	1.44	mg/kg dry	10	---	8.28	---	---	26	20%	Q-04
Barium	149	---	1.44	mg/kg dry	10	---	156	---	---	5	20%	
Cadmium	ND	---	0.288	mg/kg dry	10	---	ND	---	---	---	20%	
Chromium	21.9	---	1.44	mg/kg dry	10	---	23.3	---	---	6	20%	
Lead	13.5	---	0.288	mg/kg dry	10	---	14.5	---	---	7	20%	
Mercury	ND	---	0.115	mg/kg dry	10	---	ND	---	---	---	20%	
Selenium	ND	---	1.44	mg/kg dry	10	---	ND	---	---	---	20%	
Silver	ND	---	0.288	mg/kg dry	10	---	ND	---	---	---	20%	

Matrix Spike (0120536-MS1)

Prepared: 12/15/20 08:36 Analyzed: 12/16/20 18:50

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Darrell Auvil, Project Manager

**Apex Laboratories, LLC**

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Total Metals by EPA 6020B (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120536 - EPA 3051A						Soil						
Matrix Spike (0120536-MS1)			Prepared: 12/15/20 08:36		Analyzed: 12/16/20 18:50							
QC Source Sample: Non-SDG (A0L0292-10)												
EPA 6020B												
Arsenic	92.6	---	1.52	mg/kg dry	10	76.2	8.28	111	75-125%	---	---	
Barium	248	---	1.52	mg/kg dry	10	76.2	156	121	75-125%	---	---	
Cadmium	83.9	---	0.305	mg/kg dry	10	76.2	ND	110	75-125%	---	---	
Chromium	107	---	1.52	mg/kg dry	10	76.2	23.3	110	75-125%	---	---	
Lead	96.5	---	0.305	mg/kg dry	10	76.2	14.5	108	75-125%	---	---	
Mercury	1.61	---	0.122	mg/kg dry	10	1.52	ND	106	75-125%	---	---	
Selenium	40.5	---	1.52	mg/kg dry	10	38.1	ND	106	75-125%	---	---	
Silver	43.0	---	0.305	mg/kg dry	10	38.1	ND	113	75-125%	---	---	

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Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Total Metals by EPA 6020B (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120759 - EPA 3051A												
Soil												
Blank (0120759-BLK1)												
Prepared: 12/21/20 10:57 Analyzed: 12/22/20 15:33												
EPA 6020B												
Arsenic	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	---	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
LCS (0120759-BS1)												
Prepared: 12/21/20 10:57 Analyzed: 12/22/20 15:38												
EPA 6020B												
Arsenic	52.9	---	1.00	mg/kg wet	10	50.0	---	106	80-120%	---	---	
Barium	50.9	---	1.00	mg/kg wet	10	50.0	---	102	80-120%	---	---	
Cadmium	51.5	---	0.200	mg/kg wet	10	50.0	---	103	80-120%	---	---	
Chromium	50.7	---	1.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Lead	49.0	---	0.200	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Mercury	0.943	---	0.0800	mg/kg wet	10	1.00	---	94	80-120%	---	---	
Selenium	25.3	---	1.00	mg/kg wet	10	25.0	---	101	80-120%	---	---	
Silver	25.7	---	0.200	mg/kg wet	10	25.0	---	103	80-120%	---	---	
Duplicate (0120759-DUP1)												
Prepared: 12/21/20 10:57 Analyzed: 12/22/20 16:03												
QC Source Sample: C003 (A0L0287-44)												
EPA 6020B												
Arsenic	5.96	---	1.23	mg/kg dry	10	---	6.37	---	---	7	20%	
Barium	150	---	1.23	mg/kg dry	10	---	141	---	---	6	20%	
Cadmium	0.481	---	0.246	mg/kg dry	10	---	0.542	---	---	12	20%	
Chromium	17.7	---	1.23	mg/kg dry	10	---	16.1	---	---	9	20%	
Lead	68.9	---	0.246	mg/kg dry	10	---	77.5	---	---	12	20%	
Mercury	ND	---	0.0984	mg/kg dry	10	---	0.0644	---	---	***	20%	
Selenium	ND	---	1.23	mg/kg dry	10	---	ND	---	---	---	20%	
Silver	ND	---	0.246	mg/kg dry	10	---	ND	---	---	---	20%	

Matrix Spike (0120759-MS1)

Prepared: 12/21/20 10:57 Analyzed: 12/22/20 16:08

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Total Metals by EPA 6020B (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120759 - EPA 3051A						Soil						
Matrix Spike (0120759-MS1)			Prepared: 12/21/20 10:57 Analyzed: 12/22/20 16:08									
QC Source Sample: C003 (A0L0287-44)												
EPA 6020B												
Arsenic	73.9	---	1.30	mg/kg dry	10	64.9	6.37	104	75-125%	---	---	A-01, Q-01
Barium	227	---	1.30	mg/kg dry	10	64.9	141	132	75-125%	---	---	
Cadmium	66.5	---	0.260	mg/kg dry	10	64.9	0.542	102	75-125%	---	---	
Chromium	84.2	---	1.30	mg/kg dry	10	64.9	16.1	105	75-125%	---	---	A-01, Q-01
Lead	124	---	0.260	mg/kg dry	10	64.9	77.5	72	75-125%	---	---	
Mercury	1.21	---	0.104	mg/kg dry	10	1.30	0.0644	88	75-125%	---	---	
Selenium	31.0	---	1.30	mg/kg dry	10	32.4	ND	96	75-125%	---	---	
Silver	33.1	---	0.260	mg/kg dry	10	32.4	ND	102	75-125%	---	---	

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Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****QUALITY CONTROL (QC) SAMPLE RESULTS****Total Metals by EPA 6020B (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1012667 - EPA 3051A						Soil						
Blank (1012667-BLK1)			Prepared: 01/08/21 08:40 Analyzed: 01/08/21 14:43									
<u>EPA 6020B</u>												
Lead	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
LCS (1012667-BS1)			Prepared: 01/08/21 08:40 Analyzed: 01/08/21 14:49									
<u>EPA 6020B</u>												
Lead	54.4	---	0.200	mg/kg wet	10	50.0	---	109	80-120%	---	---	
Duplicate (1012667-DUP1)			Prepared: 01/08/21 08:40 Analyzed: 01/08/21 15:15									
<u>QC Source Sample: B19 12-13 (A0L0287-34)</u>												
<u>EPA 6020B</u>												
Lead	9.30	---	0.249	mg/kg dry	10	---	9.29	---	---	0.02	20%	
Matrix Spike (1012667-MS1)			Prepared: 01/08/21 08:40 Analyzed: 01/08/21 15:20									
<u>QC Source Sample: B19 12-13 (A0L0287-34)</u>												
<u>EPA 6020B</u>												
Lead	74.5	---	0.257	mg/kg dry	10	64.2	9.29	102	75-125%	---	---	

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Portland, OR 97213

Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS**TCLP Metals by EPA 6020B (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1012692 - EPA 1311/3015						Soil						
Blank (1012692-BLK1)			Prepared: 01/08/21 12:16 Analyzed: 01/08/21 20:02									
1311/6020B												
Lead	ND	---	0.0500	mg/L	10	---	---	---	---	---	---	TCLP
LCS (1012692-BS1)			Prepared: 01/08/21 12:16 Analyzed: 01/08/21 20:07									
1311/6020B												
Lead	4.97	---	0.0500	mg/L	10	5.00	---	99	80-120%	---	---	TCLP
Matrix Spike (1012692-MS1)			Prepared: 01/08/21 12:16 Analyzed: 01/08/21 21:02									
QC Source Sample: C006 (A0L0287-47)												
1311/6020B												
Lead	5.08	---	0.0500	mg/L	10	5.00	0.0457	101	50-150%	---	---	
Matrix Spike (1012692-MS2)			Prepared: 01/08/21 12:16 Analyzed: 01/08/21 21:13									
QC Source Sample: Non-SDG (A1A0084-01)												
1311/6020B												
Lead	5.21	---	0.0500	mg/L	10	5.00	0.169	101	50-150%	---	---	

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Portland, OR 97213

Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS**Percent Dry Weight**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120369 - Total Solids (Dry Weight)							Soil					
Duplicate (0120369-DUP1)			Prepared: 12/10/20 08:17 Analyzed: 12/11/20 07:24									
QC Source Sample: B1 3-3.5 (A0L0287-01)												
EPA 8000D												
% Solids	78.7	---	1.00	%	1	---	78.6	---	---	0.2	10%	
Duplicate (0120369-DUP2)			Prepared: 12/10/20 08:17 Analyzed: 12/11/20 07:24									
QC Source Sample: B15 0.5-1 (A0L0287-17)												
EPA 8000D												
% Solids	82.1	---	1.00	%	1	---	81.9	---	---	0.3	10%	
Duplicate (0120369-DUP3)			Prepared: 12/10/20 08:17 Analyzed: 12/11/20 07:24									
QC Source Sample: Non-SDG (A0L0292-06)												
% Solids	71.1	---	1.00	%	1	---	71.3	---	---	0.2	10%	
Duplicate (0120369-DUP4)			Prepared: 12/10/20 08:17 Analyzed: 12/11/20 07:24									
QC Source Sample: Non-SDG (A0L0292-19)												
% Solids	72.0	---	1.00	%	1	---	72.4	---	---	0.5	10%	
Duplicate (0120369-DUP5)			Prepared: 12/10/20 19:28 Analyzed: 12/11/20 07:24									
QC Source Sample: Non-SDG (A0L0370-02)												
% Solids	91.7	---	1.00	%	1	---	91.1	---	---	0.6	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS**Percent Dry Weight**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120472 - Total Solids (Dry Weight)							Soil					
Duplicate (0120472-DUP1)			Prepared: 12/14/20 07:37 Analyzed: 12/15/20 08:35									
QC Source Sample: B15 7.5-8.5 (A0L0287-18)												
EPA 8000D												
% Solids	84.6	---	1.00	%	1	---	84.9	---	---	0.4	10%	
Duplicate (0120472-DUP2)			Prepared: 12/14/20 07:37 Analyzed: 12/15/20 08:35									
QC Source Sample: Non-SDG (A0L0327-08)												
% Solids	75.7	---	1.00	%	1	---	75.6	---	---	0.2	10%	
Duplicate (0120472-DUP3)			Prepared: 12/14/20 07:39 Analyzed: 12/15/20 08:35									
QC Source Sample: Non-SDG (A0L0364-01)												
% Solids	71.5	---	1.00	%	1	---	72.0	---	---	0.7	10%	
Duplicate (0120472-DUP4)			Prepared: 12/14/20 07:39 Analyzed: 12/15/20 08:35									
QC Source Sample: Non-SDG (A0L0391-01)												
% Solids	85.1	---	1.00	%	1	---	86.3	---	---	1	10%	
Duplicate (0120472-DUP5)			Prepared: 12/14/20 19:51 Analyzed: 12/15/20 08:35									
QC Source Sample: Non-SDG (A0L0440-01)												
% Solids	92.1	---	1.00	%	1	---	91.8	---	---	0.4	10%	
Duplicate (0120472-DUP6)			Prepared: 12/14/20 19:51 Analyzed: 12/15/20 08:35									
QC Source Sample: Non-SDG (A0L0440-16)												
% Solids	82.1	---	1.00	%	1	---	83.1	---	---	1	10%	
Duplicate (0120472-DUP7)			Prepared: 12/14/20 19:51 Analyzed: 12/15/20 08:35									
QC Source Sample: Non-SDG (A0L0465-02)												
% Solids	80.2	---	1.00	%	1	---	82.0	---	---	2	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS**Percent Dry Weight**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120537 - Total Solids (Dry Weight)							Soil					
Duplicate (0120537-DUP1)			Prepared: 12/15/20 08:41		Analyzed: 12/16/20 07:39							
QC Source Sample: Non-SDG (A0L0264-02)												
% Solids	95.1	---	1.00	%	1	---	95.1	---	---	0.06	10%	
Duplicate (0120537-DUP2)			Prepared: 12/15/20 08:41		Analyzed: 12/16/20 07:39							
QC Source Sample: Non-SDG (A0L0363-03)												
% Solids	87.5	---	1.00	%	1	---	87.4	---	---	0.06	10%	
Duplicate (0120537-DUP3)			Prepared: 12/15/20 08:41		Analyzed: 12/16/20 07:39							
QC Source Sample: Non-SDG (A0L0407-03)												
% Solids	93.0	---	1.00	%	1	---	94.3	---	---	1	10%	
Duplicate (0120537-DUP4)			Prepared: 12/15/20 08:41		Analyzed: 12/16/20 07:39							
QC Source Sample: Non-SDG (A0L0407-11)												
% Solids	82.9	---	1.00	%	1	---	82.1	---	---	0.9	10%	
Duplicate (0120537-DUP5)			Prepared: 12/15/20 08:41		Analyzed: 12/16/20 07:39							
QC Source Sample: Non-SDG (A0L0430-05)												
% Solids	77.7	---	1.00	%	1	---	77.9	---	---	0.2	10%	
Duplicate (0120537-DUP6)			Prepared: 12/15/20 08:41		Analyzed: 12/16/20 07:39							
QC Source Sample: Non-SDG (A0L0456-08)												
% Solids	87.4	---	1.00	%	1	---	88.5	---	---	1	10%	
Duplicate (0120537-DUP7)			Prepared: 12/15/20 20:51		Analyzed: 12/16/20 07:39							
QC Source Sample: Non-SDG (A0L0505-01)												
% Solids	76.2	---	1.00	%	1	---	76.0	---	---	0.3	10%	
Duplicate (0120537-DUP8)			Prepared: 12/15/20 20:51		Analyzed: 12/16/20 07:39							
QC Source Sample: Non-SDG (A0L0509-09)												
% Solids	78.9	---	1.00	%	1	---	78.7	---	---	0.2	10%	

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**5741 NE Flanders Street
Portland, OR 97213**

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120537 - Total Solids (Dry Weight)							Soil					
Duplicate (0120537-DUP9)			Prepared: 12/15/20 20:51		Analyzed: 12/16/20 07:39							
QC Source Sample: Non-SDG (A0L0513-01)												
% Solids	81.1	---	1.00	%	1	---	81.0	---	---	0.07	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS**Percent Dry Weight**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120688 - Total Solids (Dry Weight)							Soil					
Duplicate (0120688-DUP1)			Prepared: 12/18/20 08:51 Analyzed: 12/21/20 07:31									
QC Source Sample: Non-SDG (A0L0619-01)												
% Solids	66.3	---	1.00	%	1	---	67.2	---	---	1	10%	
Duplicate (0120688-DUP2)			Prepared: 12/18/20 08:51 Analyzed: 12/21/20 07:31									
QC Source Sample: Non-SDG (A0L0685-02)												
% Solids	83.3	---	1.00	%	1	---	80.3	---	---	4	10%	
Duplicate (0120688-DUP3)			Prepared: 12/18/20 17:05 Analyzed: 12/21/20 07:31									
QC Source Sample: Non-SDG (A0L0730-01)												
% Solids	87.3	---	1.00	%	1	---	87.3	---	---	0.09	10%	
Duplicate (0120688-DUP4)			Prepared: 12/18/20 18:11 Analyzed: 12/21/20 07:31									
QC Source Sample: Non-SDG (A0L0736-01)												
% Solids	80.4	---	1.00	%	1	---	79.5	---	---	1	10%	
Duplicate (0120688-DUP5)			Prepared: 12/18/20 18:34 Analyzed: 12/21/20 07:31									
QC Source Sample: Non-SDG (A0L0739-05)												
% Solids	85.1	---	1.00	%	1	---	84.8	---	---	0.4	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120848 - Total Solids (Dry Weight)						Soil						
Duplicate (0120848-DUP1)			Prepared: 12/23/20 07:44 Analyzed: 12/28/20 07:34									
QC Source Sample: B13 8.5-9 (A0L0287-14)												
EPA 8000D												
% Solids	88.3	---	1.00	%	1	---	88.5	---	---	0.2	10%	
Duplicate (0120848-DUP2)			Prepared: 12/23/20 07:44 Analyzed: 12/28/20 07:34									
QC Source Sample: Non-SDG (A0L0785-04)												
% Solids	78.6	---	1.00	%	1	---	76.7	---	---	2	10%	
Duplicate (0120848-DUP3)			Prepared: 12/23/20 07:44 Analyzed: 12/28/20 07:34									
QC Source Sample: Non-SDG (A0L0888-05)												
% Solids	65.1	---	1.00	%	1	---	66.7	---	---	3	10%	
Duplicate (0120848-DUP4)			Prepared: 12/23/20 18:46 Analyzed: 12/28/20 07:34									
QC Source Sample: Non-SDG (A0L0925-04)												
% Solids	75.7	---	1.00	%	1	---	76.3	---	---	0.9	10%	
Duplicate (0120848-DUP5)			Prepared: 12/23/20 18:46 Analyzed: 12/28/20 07:34									
QC Source Sample: Non-SDG (A0L0926-02)												
% Solids	78.6	---	1.00	%	1	---	78.9	---	---	0.3	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Portland, OR 97213

Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS**Percent Dry Weight**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 0120892 - Total Solids (Dry Weight)							Soil					
Duplicate (0120892-DUP1)			Prepared: 12/28/20 07:47 Analyzed: 12/29/20 08:57									
QC Source Sample: B15 9-9.5 (A0L0287-19)												
EPA 8000D												
% Solids	81.2	---	1.00	%	1	---	81.0	---	---	0.3	10%	
Duplicate (0120892-DUP2)			Prepared: 12/28/20 07:47 Analyzed: 12/29/20 08:57									
QC Source Sample: Non-SDG (A0L0920-05)												
% Solids	76.2	---	1.00	%	1	---	77.1	---	---	1	10%	
Duplicate (0120892-DUP3)			Prepared: 12/28/20 07:47 Analyzed: 12/29/20 08:57									
QC Source Sample: Non-SDG (A0L0929-12)												
% Solids	84.7	---	1.00	%	1	---	83.7	---	---	1	10%	
Duplicate (0120892-DUP4)			Prepared: 12/28/20 18:12 Analyzed: 12/29/20 08:57									
QC Source Sample: Non-SDG (A0L0958-01)												
% Solids	75.0	---	1.00	%	1	---	75.2	---	---	0.2	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Portland, OR 97213

Project: **281**
Project Number: **281**
Project Manager: **Jill Betts**

Report ID:
A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS**Percent Dry Weight**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1020269 - Total Solids (Dry Weight)							Soil					
Duplicate (1020269-DUP1)			Prepared: 02/08/21 07:33 Analyzed: 02/09/21 07:54									
QC Source Sample: Non-SDG (A1B0240-01)												
% Solids	85.7	---	1.00	%	1	---	86.8	---	---	1	10%	
Duplicate (1020269-DUP2)			Prepared: 02/08/21 07:33 Analyzed: 02/09/21 07:54									
QC Source Sample: Non-SDG (A1B0242-01)												
% Solids	75.0	---	1.00	%	1	---	73.9	---	---	1	10%	
Duplicate (1020269-DUP3)			Prepared: 02/08/21 12:59 Analyzed: 02/09/21 07:54									
QC Source Sample: Non-SDG (A1B0279-06)												
% Solids	90.6	---	1.00	%	1	---	90.2	---	---	0.4	10%	
Duplicate (1020269-DUP4)			Prepared: 02/08/21 12:59 Analyzed: 02/09/21 07:54									
QC Source Sample: Non-SDG (A1B0264-04)												
% Solids	83.2	---	1.00	%	1	---	82.1	---	---	1	10%	
Duplicate (1020269-DUP5)			Prepared: 02/08/21 19:13 Analyzed: 02/09/21 07:54									
QC Source Sample: B17 11.5-12.5 (A0L0287-32)												
EPA 8000D												
% Solids	84.7	---	1.00	%	1	---	84.5	---	---	0.2	10%	
Duplicate (1020269-DUP6)			Prepared: 02/08/21 19:13 Analyzed: 02/09/21 07:54									
QC Source Sample: Non-SDG (A1B0286-07)												
% Solids	94.0	---	1.00	%	1	---	93.8	---	---	0.2	10%	
Duplicate (1020269-DUP7)			Prepared: 02/08/21 19:13 Analyzed: 02/09/21 07:54									
QC Source Sample: Non-SDG (A1B0288-06)												
% Solids	86.0	---	1.00	%	1	---	85.5	---	---	0.6	10%	
Duplicate (1020269-DUP8)			Prepared: 02/08/21 19:13 Analyzed: 02/09/21 07:54									
QC Source Sample: Non-SDG (A1B0295-02)												
% Solids	75.0	---	1.00	%	1	---	74.7	---	---	0.5	10%	

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Coles & Betts Environmental Consulting

5741 NE Flanders Street

Portland, OR 97213

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1020269 - Total Solids (Dry Weight)							Soil					
Duplicate (1020269-DUP9)			Prepared: 02/08/21 19:13 Analyzed: 02/09/21 07:54									
QC Source Sample: Non-SDG (A1B0302-02)												
% Solids	86.5	---	1.00	%	1	---	85.1	---	---	2	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****SAMPLE PREPARATION INFORMATION****Diesel and/or Oil Hydrocarbons by NWTPH-Dx****Prep: EPA 3546 (Fuels)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 0120451							
A0L0287-20	Soil	NWTPH-Dx	12/07/20 14:15	12/11/20 16:17	10.44g/5mL	10g/5mL	0.96
Batch: 0120557							
A0L0287-18	Soil	NWTPH-Dx	12/07/20 13:40	12/15/20 12:42	10.39g/5mL	10g/5mL	0.96
A0L0287-31	Soil	NWTPH-Dx	12/08/20 09:55	12/15/20 12:42	10.27g/5mL	10g/5mL	0.97
A0L0287-33	Soil	NWTPH-Dx	12/08/20 10:55	12/15/20 12:42	10.94g/5mL	10g/5mL	0.91
Batch: 0120601							
A0L0287-42	Soil	NWTPH-Dx	12/08/20 12:35	12/16/20 11:09	10.59g/5mL	10g/5mL	0.94
A0L0287-43	Soil	NWTPH-Dx	12/08/20 09:10	12/16/20 11:09	10.65g/5mL	10g/5mL	0.94
A0L0287-44	Soil	NWTPH-Dx	12/07/20 09:20	12/16/20 11:09	10.34g/5mL	10g/5mL	0.97
A0L0287-45	Soil	NWTPH-Dx	12/07/20 14:25	12/16/20 11:09	10.09g/5mL	10g/5mL	0.99
A0L0287-46	Soil	NWTPH-Dx	12/08/20 09:50	12/16/20 11:09	10.15g/5mL	10g/5mL	0.99
A0L0287-47	Soil	NWTPH-Dx	12/07/20 11:20	12/16/20 11:09	10.51g/5mL	10g/5mL	0.95
Batch: 0120773							
A0L0287-14	Soil	NWTPH-Dx	12/07/20 11:25	12/21/20 13:13	10.37g/5mL	10g/5mL	0.96
A0L0287-19	Soil	NWTPH-Dx	12/07/20 13:45	12/21/20 13:13	10.51g/5mL	10g/5mL	0.95
A0L0287-21	Soil	NWTPH-Dx	12/07/20 14:20	12/21/20 13:13	10.18g/5mL	10g/5mL	0.98
A0L0287-23	Soil	NWTPH-Dx	12/07/20 14:35	12/21/20 13:13	10.61g/5mL	10g/5mL	0.94
A0L0287-29	Soil	NWTPH-Dx	12/08/20 09:40	12/21/20 13:13	10.32g/5mL	10g/5mL	0.97

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 0120412							
A0L0287-01	Soil	NWTPH-Gx (MS)	12/07/20 09:20	12/07/20 09:20	6.47g/5mL	5g/5mL	0.77
A0L0287-04	Soil	NWTPH-Gx (MS)	12/07/20 09:50	12/07/20 09:50	6.15g/5mL	5g/5mL	0.81
A0L0287-05	Soil	NWTPH-Gx (MS)	12/07/20 10:05	12/07/20 10:05	6.7g/5mL	5g/5mL	0.75
Batch: 0120428							
A0L0287-07	Soil	NWTPH-Gx (MS)	12/07/20 10:30	12/07/20 10:30	6.93g/5mL	5g/5mL	0.72
A0L0287-12	Soil	NWTPH-Gx (MS)	12/07/20 11:00	12/08/20 18:38	5.34g/5mL	5g/5mL	0.94
A0L0287-13	Soil	NWTPH-Gx (MS)	12/07/20 11:20	12/07/20 11:20	5.83g/5mL	5g/5mL	0.86
A0L0287-15	Soil	NWTPH-Gx (MS)	12/07/20 13:00	12/07/20 13:00	8.17g/5mL	5g/5mL	0.61
Batch: 0120456							
A0L0287-17	Soil	NWTPH-Gx (MS)	12/07/20 13:35	12/07/20 13:35	5.91g/5mL	5g/5mL	0.85

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****SAMPLE PREPARATION INFORMATION****Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx****Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A0L0287-30	Soil	NWTPH-Gx (MS)	12/08/20 09:50	12/08/20 09:50	6.62g/5mL	5g/5mL	0.76
Batch: 0120647							
A0L0287-18RE1	Soil	NWTPH-Gx (MS)	12/07/20 13:40	12/07/20 13:40	5.9g/5mL	5g/5mL	0.85
A0L0287-31RE1	Soil	NWTPH-Gx (MS)	12/08/20 09:55	12/08/20 09:55	5.76g/5mL	5g/5mL	0.87
A0L0287-33RE1	Soil	NWTPH-Gx (MS)	12/08/20 10:55	12/08/20 10:55	6.3g/5mL	5g/5mL	0.79
Batch: 0120740							
A0L0287-23	Soil	NWTPH-Gx (MS)	12/07/20 14:35	12/18/20 16:53	5.95g/5mL	5g/5mL	0.84

Volatile Organic Compounds by EPA 8260D**Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 0120412							
A0L0287-01	Soil	5035A/8260D	12/07/20 09:20	12/07/20 09:20	6.47g/5mL	5g/5mL	0.77
A0L0287-04	Soil	5035A/8260D	12/07/20 09:50	12/07/20 09:50	6.15g/5mL	5g/5mL	0.81
A0L0287-05	Soil	5035A/8260D	12/07/20 10:05	12/07/20 10:05	6.7g/5mL	5g/5mL	0.75
Batch: 0120428							
A0L0287-07	Soil	5035A/8260D	12/07/20 10:30	12/07/20 10:30	6.93g/5mL	5g/5mL	0.72
A0L0287-12	Soil	5035A/8260D	12/07/20 11:00	12/08/20 18:38	5.34g/5mL	5g/5mL	0.94
A0L0287-13	Soil	5035A/8260D	12/07/20 11:20	12/07/20 11:20	5.83g/5mL	5g/5mL	0.86
A0L0287-15	Soil	5035A/8260D	12/07/20 13:00	12/07/20 13:00	8.17g/5mL	5g/5mL	0.61
Batch: 0120456							
A0L0287-17	Soil	5035A/8260D	12/07/20 13:35	12/07/20 13:35	5.91g/5mL	5g/5mL	0.85
A0L0287-30	Soil	5035A/8260D	12/08/20 09:50	12/08/20 09:50	6.62g/5mL	5g/5mL	0.76
Batch: 0120647							
A0L0287-18RE1	Soil	5035A/8260D	12/07/20 13:40	12/07/20 13:40	5.9g/5mL	5g/5mL	0.85
A0L0287-31RE1	Soil	5035A/8260D	12/08/20 09:55	12/08/20 09:55	5.76g/5mL	5g/5mL	0.87
A0L0287-33RE1	Soil	5035A/8260D	12/08/20 10:55	12/08/20 10:55	6.3g/5mL	5g/5mL	0.79
Batch: 0120740							
A0L0287-23	Soil	5035A/8260D	12/07/20 14:35	12/18/20 16:53	5.95g/5mL	5g/5mL	0.84

Polychlorinated Biphenyls by EPA 8082A**Prep: EPA 3546**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
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Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****SAMPLE PREPARATION INFORMATION****Polychlorinated Biphenyls by EPA 8082A****Prep: EPA 3546**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 0120889							
A0L0287-42	Soil	EPA 8082A	12/08/20 12:35	12/28/20 07:02	10.16g/5mL	10g/5mL	0.98
A0L0287-45	Soil	EPA 8082A	12/07/20 14:25	12/28/20 07:02	10.14g/5mL	10g/5mL	0.99

Organochlorine Pesticides by EPA 8081B**Prep: EPA 3546/3640A (GPC)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 0120466							
A0L0287-03RE1	Soil	EPA 8081B	12/07/20 09:45	12/11/20 10:39	10.93g/10mL	10g/5mL	1.83

Semivolatile Organic Compounds by EPA 8270E**Prep: EPA 3546**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 0120742							
A0L0287-42	Soil	EPA 8270E	12/08/20 12:35	12/21/20 11:38	15.04g/2mL	15g/2mL	1.00
A0L0287-45	Soil	EPA 8270E	12/07/20 14:25	12/21/20 07:06	15.28g/2mL	15g/2mL	0.98

Total Metals by EPA 6020B (ICPMS)**Prep: EPA 3051A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 0120478							
A0L0287-18	Soil	EPA 6020B	12/07/20 13:40	12/14/20 09:02	0.464g/50mL	0.5g/50mL	1.08
A0L0287-20	Soil	EPA 6020B	12/07/20 14:15	12/14/20 09:02	0.497g/50mL	0.5g/50mL	1.01
A0L0287-31	Soil	EPA 6020B	12/08/20 09:55	12/14/20 09:02	0.506g/50mL	0.5g/50mL	0.99
A0L0287-33	Soil	EPA 6020B	12/08/20 10:55	12/14/20 09:02	0.484g/50mL	0.5g/50mL	1.03
Batch: 0120536							
A0L0287-11	Soil	EPA 6020B	12/07/20 10:55	12/15/20 08:36	0.487g/50mL	0.5g/50mL	1.03
A0L0287-11RE1	Soil	EPA 6020B	12/07/20 10:55	12/15/20 08:36	0.487g/50mL	0.5g/50mL	1.03
Batch: 0120759							
A0L0287-23	Soil	EPA 6020B	12/07/20 14:35	12/21/20 10:57	0.515g/50mL	0.5g/50mL	0.97
A0L0287-42	Soil	EPA 6020B	12/08/20 12:35	12/21/20 10:57	0.488g/50mL	0.5g/50mL	1.02
A0L0287-42RE1	Soil	EPA 6020B	12/08/20 12:35	12/21/20 10:57	0.488g/50mL	0.5g/50mL	1.02
A0L0287-43	Soil	EPA 6020B	12/08/20 09:10	12/21/20 10:57	0.51g/50mL	0.5g/50mL	0.98

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**

Project Number: **281**

Project Manager: **Jill Betts**

Report ID:

A0L0287 - 02 10 21 0942

SAMPLE PREPARATION INFORMATION**Total Metals by EPA 6020B (ICPMS)****Prep: EPA 3051A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A0L0287-44	Soil	EPA 6020B	12/07/20 09:20	12/21/20 10:57	0.465g/50mL	0.5g/50mL	1.08
A0L0287-45	Soil	EPA 6020B	12/07/20 14:25	12/21/20 10:57	0.482g/50mL	0.5g/50mL	1.04
A0L0287-46	Soil	EPA 6020B	12/08/20 09:50	12/21/20 10:57	0.513g/50mL	0.5g/50mL	0.98
A0L0287-47	Soil	EPA 6020B	12/07/20 11:20	12/21/20 10:57	0.469g/50mL	0.5g/50mL	1.07

Batch: 1012667

A0L0287-12	Soil	EPA 6020B	12/07/20 11:00	01/08/21 08:40	0.473g/50mL	0.5g/50mL	1.06
A0L0287-14	Soil	EPA 6020B	12/07/20 11:25	01/08/21 08:40	0.469g/50mL	0.5g/50mL	1.07
A0L0287-32	Soil	EPA 6020B	12/08/20 10:10	01/08/21 08:40	0.46g/50mL	0.5g/50mL	1.09
A0L0287-34	Soil	EPA 6020B	12/08/20 11:00	01/08/21 08:40	0.495g/50mL	0.5g/50mL	1.01

TCLP Metals by EPA 6020B (ICPMS)**Prep: EPA 1311/3015**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A0L0287-11	Soil	1311/6020B	12/07/20 10:55	01/08/21 12:16	10mL/50mL	10mL/50mL	1.00
A0L0287-23	Soil	1311/6020B	12/07/20 14:35	01/08/21 12:16	10mL/50mL	10mL/50mL	1.00
A0L0287-31	Soil	1311/6020B	12/08/20 09:55	01/08/21 12:16	10mL/50mL	10mL/50mL	1.00
A0L0287-33	Soil	1311/6020B	12/08/20 10:55	01/08/21 12:16	10mL/50mL	10mL/50mL	1.00
A0L0287-42	Soil	1311/6020B	12/08/20 12:35	01/08/21 12:16	10mL/50mL	10mL/50mL	1.00
A0L0287-45	Soil	1311/6020B	12/07/20 14:25	01/08/21 12:16	10mL/50mL	10mL/50mL	1.00
A0L0287-47	Soil	1311/6020B	12/07/20 11:20	01/08/21 12:16	10mL/50mL	10mL/50mL	1.00

Percent Dry Weight**Prep: Total Solids (Dry Weight)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A0L0287-01	Soil	EPA 8000D	12/07/20 09:20	12/10/20 08:17			NA
A0L0287-03	Soil	EPA 8000D	12/07/20 09:45	12/10/20 08:17			NA
A0L0287-04	Soil	EPA 8000D	12/07/20 09:50	12/10/20 08:17			NA
A0L0287-05	Soil	EPA 8000D	12/07/20 10:05	12/10/20 08:17			NA
A0L0287-07	Soil	EPA 8000D	12/07/20 10:30	12/10/20 08:17			NA
A0L0287-09	Soil	EPA 8000D	12/07/20 10:40	12/10/20 08:17			NA
A0L0287-11	Soil	EPA 8000D	12/07/20 10:55	12/10/20 08:17			NA
A0L0287-12	Soil	EPA 8000D	12/07/20 11:00	12/10/20 08:17			NA
A0L0287-13	Soil	EPA 8000D	12/07/20 11:20	12/10/20 08:17			NA

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Darrell Auvil, Project Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****SAMPLE PREPARATION INFORMATION****Percent Dry Weight****Prep: Total Solids (Dry Weight)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A0L0287-15	Soil	EPA 8000D	12/07/20 13:00	12/10/20 08:17			NA
A0L0287-17	Soil	EPA 8000D	12/07/20 13:35	12/10/20 08:17			NA
A0L0287-20	Soil	EPA 8000D	12/07/20 14:15	12/10/20 08:17			NA
A0L0287-24	Soil	EPA 8000D	12/07/20 14:45	12/10/20 08:17			NA
A0L0287-25	Soil	EPA 8000D	12/07/20 15:00	12/10/20 08:17			NA
A0L0287-30	Soil	EPA 8000D	12/08/20 09:50	12/10/20 08:17			NA
A0L0287-35	Soil	EPA 8000D	12/08/20 11:30	12/10/20 08:17			NA
<u>Batch: 0120472</u>							
A0L0287-18	Soil	EPA 8000D	12/07/20 13:40	12/14/20 07:37			NA
A0L0287-31	Soil	EPA 8000D	12/08/20 09:55	12/14/20 07:37			NA
A0L0287-33	Soil	EPA 8000D	12/08/20 10:55	12/14/20 07:37			NA
<u>Batch: 0120537</u>							
A0L0287-42	Soil	EPA 8000D	12/08/20 12:35	12/15/20 08:41			NA
A0L0287-43	Soil	EPA 8000D	12/08/20 09:10	12/15/20 08:41			NA
A0L0287-44	Soil	EPA 8000D	12/07/20 09:20	12/15/20 08:41			NA
A0L0287-45	Soil	EPA 8000D	12/07/20 14:25	12/15/20 08:41			NA
A0L0287-46	Soil	EPA 8000D	12/08/20 09:50	12/15/20 08:41			NA
A0L0287-47	Soil	EPA 8000D	12/07/20 11:20	12/15/20 08:41			NA
<u>Batch: 0120688</u>							
A0L0287-23	Soil	EPA 8000D	12/07/20 14:35	12/18/20 17:05			NA
<u>Batch: 0120848</u>							
A0L0287-14	Soil	EPA 8000D	12/07/20 11:25	12/23/20 07:44			NA
A0L0287-21	Soil	EPA 8000D	12/07/20 14:20	12/23/20 07:44			NA
<u>Batch: 0120892</u>							
A0L0287-19	Soil	EPA 8000D	12/07/20 13:45	12/28/20 07:47			NA
A0L0287-29	Soil	EPA 8000D	12/08/20 09:40	12/28/20 07:47			NA
<u>Batch: 1020269</u>							
A0L0287-32	Soil	EPA 8000D	12/08/20 10:10	02/08/21 19:13			NA
A0L0287-34	Soil	EPA 8000D	12/08/20 11:00	02/08/21 19:13			NA

TCLP Extraction by EPA 1311**Prep: EPA 1311 (TCLP)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1012586</u>							

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Darrell Auvil, Project Manager

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**Project Number: **281**Project Manager: **Jill Betts****Report ID:****A0L0287 - 02 10 21 0942****SAMPLE PREPARATION INFORMATION****TCLP Extraction by EPA 1311****Prep: EPA 1311 (TCLP)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A0L0287-11	Soil	EPA 1311	12/07/20 10:55	01/07/21 15:15	100g/1997mL	100g/2000mL	NA
A0L0287-23	Soil	EPA 1311	12/07/20 14:35	01/07/21 15:15	100g/1985.3mL	100g/2000mL	NA
A0L0287-31	Soil	EPA 1311	12/08/20 09:55	01/07/21 15:15	100g/1985.2mL	100g/2000mL	NA
A0L0287-33	Soil	EPA 1311	12/08/20 10:55	01/07/21 15:15	100g/1987.8mL	100g/2000mL	NA
A0L0287-42	Soil	EPA 1311	12/08/20 12:35	01/07/21 15:15	100g/1995.6mL	100g/2000mL	NA
A0L0287-45	Soil	EPA 1311	12/07/20 14:25	01/07/21 15:15	100g/1988mL	100g/2000mL	NA
A0L0287-47	Soil	EPA 1311	12/07/20 11:20	01/07/21 15:15	100g/1985.8mL	100g/2000mL	NA

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**

Project Number: **281**

Project Manager: **Jill Betts**

Report ID:

A0L0287 - 02 10 21 0942

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- A-01** Serial dilution was performed and passes acceptance criteria. Data are acceptable.
- B** Analyte detected in an associated blank at a level above the MRL. (See Notes and Conventions below.)
- B-02** Analyte detected in an associated blank at a level between one-half the MRL and the MRL. (See Notes and Conventions below.)
- C-05** Extract has undergone a GPC (Gel-Permeation Chromatography) cleanup per EPA 3640A. Reporting levels may be raised due to dilution necessary for cleanup. Sample Final Volume includes the GPC dilution factor, see the Prep page for details.
- C-07** Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.
- E-05** Estimated Result. Initial Calibration Verification (ICV) failed high. No affect on non-detect results.
- EST** Result reported as an Estimated Value. Results Estimated. Initial Calibration level refit percent error failed method criteria.
- F-03** The result for this hydrocarbon range is elevated due to the presence of individual analyte peaks in the quantitation range that are not representative of the fuel pattern reported.
- M-05** Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
- P-12** Result estimated due to the presence of multiple PCB Aroclors and/or PCB congeners not defined as Aroclors.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-04** Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-18** Matrix Spike results for this extraction batch are not reported due to the high dilution necessary for analysis of the source sample.
- Q-29** Recovery for Lab Control Spike (LCS) is above the upper control limit. Data may be biased high.
- Q-30** Recovery for Lab Control Spike (LCS) is below the lower control limit. Data may be biased low.
- Q-31** Estimated Results. Recovery of Continuing Calibration Verification sample below lower control limit for this analyte. Results are likely biased low.
- Q-41** Estimated Results. Recovery of Continuing Calibration Verification sample above upper control limit for this analyte. Results are likely biased high.
- Q-42** Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)
- Q-52** Due to known erratic recoveries, the result and reporting levels for this analyte are reported as Estimated Values. This analyte may not have passed all QC requirements for this method.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +1%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +11%. The results are reported as Estimated Values.

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Darrell Auvil, Project Manager



Coles & Betts Environmental Consulting

**5741 NE Flanders Street
Portland, OR 97213**

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +13%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +14%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +18%. The results are reported as Estimated Values.
- Q-54e** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +2%. The results are reported as Estimated Values.
- Q-54f** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +21%. The results are reported as Estimated Values.
- Q-54g** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +30%. The results are reported as Estimated Values.
- Q-54h** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +35%. The results are reported as Estimated Values.
- Q-54i** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +37%. The results are reported as Estimated Values.
- Q-54j** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +4%. The results are reported as Estimated Values.
- Q-54k** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +5%. The results are reported as Estimated Values.
- Q-54l** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +8%. The results are reported as Estimated Values.
- Q-54m** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -2%. The results are reported as Estimated Values.
- Q-54n** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -22%. The results are reported as Estimated Values.
- Q-54o** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -3%. The results are reported as Estimated Values.
- Q-54p** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -8%. The results are reported as Estimated Values.
- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- S-01** Surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
- S-03** Reextraction and analysis, or analysis of laboratory duplicate, confirms surrogate failure due to sample matrix effect.
- S-05** Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
- TCLP** This batch QC sample was prepared with TCLP or SPLP fluid from preparation batch 1012586.

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Darrell Auvil, Project Manager



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503-718-2323**

ORELAP ID: OR100062

Coles & Betts Environmental Consulting

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Portland, OR 97213**

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

- V-15** Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.
- V-16** Sample aliquot was subsampled from the sample container in the laboratory. The subsampled aliquot was not preserved within 48 hours of sampling.

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A handwritten signature in black ink, appearing to read "Darrell Auvil".

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Darrell Auvil, Project Manager

**Apex Laboratories, LLC**

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **281**

Project Number: **281**

Project Manager: **Jill Betts**

Report ID:

A0L0287 - 02 10 21 0942

REPORTING NOTES AND CONVENTIONS:**Abbreviations:**

DET Analyte DETECTED at or above the detection or reporting limit.
ND Analyte NOT DETECTED at or above the detection or reporting limit.
NR Result Not Reported
RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

"dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
"wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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Coles & Betts Environmental Consulting

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Portland, OR 97213

Project: **281**

Project Number: **281**

Project Manager: **Jill Betts**

Report ID:

A0L0287 - 02 10 21 0942

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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Darrell Auvil, Project Manager

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5741 NE Flanders Street
Portland, OR 97213

Project: **281**

Project Number: **281**

Project Manager: **Jill Betts**

Report ID:

A0L0287 - 02 10 21 0942

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -

EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
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All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.

Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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Darrell Auvil, Project Manager

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: 281

Project Number: 281

Project Manager: **Jill Betts**

Report ID:

A0L0287 - 02 10 21 0942

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-319-2835				Laboratory Apex Labs		CHAIN OF CUSTODY								
Project Manager Jill Betts				Lab Project No.		Chain of Custody No. /								
Project No. 281				Liquid with Sediment Sample Test Filtrate Test Sediment Test Both		Samples Received at 4C (Y or N) /								
Project Name B-Oct-04				Multi-Phase Sample Test One (which) Test Separately Shake		Appropriate Containers Used (Y or N) /								
Collected by Michael Reynolds and Jill Betts						Provide Verbal Results (Y or N) No								
						Provide Preliminary Fax Results Yes								
Comments PAHs and PCBs will only be analyzed if Dx- and/or oil-range detections. Jill will contact Apex to determine which samples, if any, will be run for PCBs and/or PAHs.														
Lab ID	Sample #	Date	Time	Sample Description	Matrix	Analyses to be Performed			RUSH	Remarks				
	B13-35	12/7/20	9:20		Soil	NWTPH-DX	NWTPH-GX	RCRA8 Method 6010	VOCs by EPA 8260C	Chlorinated Pesticides by EPA Method 8081B	PAHs 8270 SIM	PCBs by EPA Method 8082		
	B165-17	12/7/20	9:25		X	✓	✓	✓	✓					
	B4 2-23	12/7/20	9:45			✓				✓				HOLD
	B4 5-55	12/7/20	9:50			✓	✓	✓	✓					
	B5 05-1	12/7/20	10:05			✓	✓	✓	✓					
	B5 4-15	12/7/20	10:10			✓	✓	✓	✓					
	B6 05-1	12/7/20	10:30			✓	✓	✓	✓					
	B6 15-2	12/7/20	10:35			✓	✓	✓	✓					
	B8 05-1	12/7/20	10:40			✓		✓						HOLD
	B8 15-2	12/7/20	10:45			✓								
	B10 1-2	12/7/20	10:55		✓			✓						HOLD
Relinquished by Jill Betts				Company CETEC		Date 12/8/20		Time 1400		Received by C. Amstrong		Company Apex Labs		
Relinquished by				Company		Date		Time		Received by		Company		
Relinquished by				Company		Date		Time		Received by		Company		

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Quinn T. Smith



Apex Laboratories, LLC

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Coles & Betts Environmental Consulting

5741 NE Flanders Street

Portland, OR 97213

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC				Laboratory		Apex Labs		CHAIN OF CUSTODY	
5741 NE Flanders St., Portland, OR 97213				Lab Project No.		Chain of Custody No. 2			
office: 503-477-6150 mobile: 503-819-2835									
Project Manager Jill Betts				Test Filtrate		Test Sediment		Samples Received at 4C (Y or N)	
Project No. 281				Test One (which)		Test Separately		Appropriate Containers Used (Y or N)	
Project Name 8-Oct-04				Multi-Phase Sample		Shake		Provide Verbal Results (Y or N)	
Collected by Michael Reynolds and Jill Betts				Matrix		Analyses to be Performed		Provide Preliminary Fax Results	
Comments PAHs and PCBs will only be analyzed if Dx-and/or oil-range detections. Jill will contact Apex to determine which samples, if any, will be run for PCBs and/or PAHs.				Soil		PCBs by EPA Method 8082		Yes	
Lab ID				Sample Description		Time		Remarks	
B10 2-25				12/1/20		11:00			
B13 1-2				11:20		11:20		HOLD	
B13 85-9				11:25		11:25		HOLD	
B14 0-51				1:00		1:00		HOLD	
B14 5-59				1:05		1:05		HOLD	
B15 0-51				1:35		1:35		HOLD	
B15 5-85				1:40		1:40		HOLD	
B15 9-95				1:45		1:45		HOLD	
B16 55-6				2:15		2:15		HOLD	
B16 105-1				2:20		2:20		HOLD	
B11 1-15				2:25		2:25		HOLD	
Relinquished by Jill Betts				Company C-BEC		Date 12/1/20		Time 1400	
Relinquished by				Company		Date		Time	
Relinquished by				Company		Date		Time	

Apex Laboratories

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Darrell Auvil

Darrell Auvil, Project Manager



Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street

Portland, OR 97213

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC				Laboratory		Apex Labs		CHAIN OF CUSTODY			
5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835				Lab Project No.		Chain of Custody No. 3					
Project Manager Jill Betts		Project No. 281		Test Filtrate		Test Sediment		Samples Received at 4C (Y or N)			
Project Name 8-Oct-04		Collected by Michael Reynolds and Jill Betts		Multi-Phase Sample		Test One (which)		Appropriate Containers Used (Y or N)			
								Provide Verbal Results (Y or N)			
								Provide Preliminary Fax Results			
								Yes			
								No			
Comments PAHs and PCBs will only be analyzed if Dc- and/or oil-range detections. Jill will contact Apex to determine which samples, if any, will be run for PCBs and/or PAHs.				Matrix		Number of Containers		Analytes to be Performed		Remarks	
				Soil	Water	Other	NWTPH-Dx	NWTPH-Gx	RCRA Method 6010	VOCs by EPA 8260C	Chlorinated Pesticides by EPA Method 8081B
Lab ID	Sample #	Date	Time	Sample Description							
	B2 15	12/7/00	2:35		X						HOLD
	B2 1-15	12/7/00	2:45		X						
	B2 051	12/7/00	3:00		X						
	B2 05-1	12/8/00	9:10		X						HOLD
	B7 051		9:25		X						HOLD
	B10 05-15		9:30		X						
	B10 55-65		9:40		X						
	B11 05-15		9:50		X						
	B17 55-65		9:55		X						HOLD
	B17 15-25		10:10		X						HOLD
	B19 65-7		10:55		X						HOLD
Relinquished by											
Relinquished by											
Relinquished by											

Apex Laboratories

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Darrell Auvil

Darrell Auvil, Project Manager

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: 281

Project Number: 281

Project Manager: **Jill Betts**

Report ID:

A0L0287 - 02 10 21 0942

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC				Laboratory		Apex Labs		CHAIN OF CUSTODY			
5741 NE Flanders St., Portland, OR 97213				Lab Project No.		Apex Labs		Chain of Custody No. 4			
Office: 503-477-6150 mobile: 503-819-2835				Lab Project No.		Apex Labs		Chain of Custody No. 4			
Project Manager		Jill Betts		Liquid with Sediment Sample		Test Sediment		Test Both			
Project No.		281		Test Fillrate		Test Sediment		Test Both			
Project Name		B-Oct-04		Multi-Phase Sample		Test Sediment		Test Both			
Collected by		Michael Reynolds and Jill Betts		Test One (which)		Test Separately		State			
Comments PAHs and PCBs will only be analyzed if Dx- and/or oil-range detections. Jill will contact Apex to determine which samples, if any, will be run for PCBs and/or PAHs.				Analyses to be Performed NWTPH-DX NWTPH-GX RCRAS Method 6010 VOCs by EPA 8260C Chlorinated Pesticides by EPA Method 8081B PAHs 8270 SIM PCBs by EPA Method 8082							
Matrix Soil Water Other				Number of Containers 4 1 1 1 1 2							
Lab ID B4 12-13 B40 01-15 B40 12-15 B41 12 B42 3-35 B43 2-25 B44 15-28				Date 12-8-20 11-20 11-25 11-45 12-00 12-10 12-25				Time 11:00 11:20 11:35 11:45 12:00 12:10 12:25			
Sample # B4 12-13 B40 01-15 B40 12-15 B41 12 B42 3-35 B43 2-25 B44 15-28				Time 11:00 11:20 11:35 11:45 12:00 12:10 12:25				Remarks HOLD HOLD HOLD HOLD HOLD HOLD HOLD			
Requisitioned by Jm Betts				Company CTRC				Date 12-5-22			
Requisitioned by Jm Betts				Company CTRC				Date 12-5-22			
Requisitioned by Jm Betts				Company CTRC				Date 12-5-22			

Apex Laboratories

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Answer to mail

Darrell Auvil, Project Manager



Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street

Portland, OR 97213

Project: 281

Project Number: 281

Project Manager: Jill Betts

Report ID:

A0L0287 - 02 10 21 0942

APEX LABS COOLER RECEIPT FORM

Client: Coles & Betts Environmental Consulting, LLC Element WO#: A0 L0287

Project/Project #: #281

Delivery Info:

Date/time received: 12/8/20 @ 1400 By: AKK

Delivered by: Apex ☐ Client ☒ ESS ☐ FedEx ☐ UPS ☐ Swift ☐ Senvoy ☐ SDS ☐ Other ☐

Cooler Inspection Date/time inspected: 12/8/20 @ 1410 By: AKK

Chain of Custody included? Yes ☒ No ☐ Custody seals? Yes ☐ No ☒

Signed/dated by client? Yes ☒ No ☐

Signed/dated by Apex? Yes ☒ No ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>6.0</u>	<u>3.2</u>	<u>5.7</u>				
Received on ice? (Y/N)	<u>Y</u>	<u>Y</u>	<u>Y</u>				
Temp. blanks? (Y/N)	<u>Y</u>	<u>Y</u>	<u>Y</u>				
Ice type: (Gel/Real/Other)	<u>Gel</u>	<u>Gel</u>	<u>Gel</u>				
Condition:	<u>Good</u>	<u>Good</u>	<u>Good</u>				

Cooler out of temp? (Y/N) ☒ Possible reason why:

If some coolers are in temp and some out, were green dots applied to out of temperature samples? Yes/No/NA ☒

Out of temperature samples form initiated? Yes/No/NA ☒

Samples Inspection: Date/time inspected: 12/8/20 @ 1833 By: AKK

All samples intact? Yes ☒ No ☐ Comments:

Bottle labels/COCs agree? Yes ☐ No ☒ Comments: B18 0.5-1.5 ID on 12 jars + 22

VOAs reads B18, matched by DIT. B18 5.5-6.5 ID on jar reads 5.5-6.5,

COC/container discrepancies form initiated? Yes ☐ No ☒

Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments:

Do VOA vials have visible headspace? Yes ☐ No ☐ NA ☒

Comments:

Water samples: pH checked: Yes ☐ No ☐ NA ☒ pH appropriate? Yes ☐ No ☐ NA ☒

Comments:

Additional information: matched by DIT. B19 6.5-7 ID on Cnts. read B19 6.5-7.5.

Labeled by:

AKK

Witness:

[Signature]

Cooler Inspected by:

AKK

See Project Contact Form: Y

Apex Laboratories

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[Signature]

Darrell Auvil, Project Manager

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