

# Supplemental Remedial Investigation Report

Coleman Oil Company Wenatchee, Washington

Prepared for:  
Coleman Oil Company, LLC  
335 Mill Road  
Lewiston, Idaho 83501

August 8, 2018  
Revised October 1, 2018

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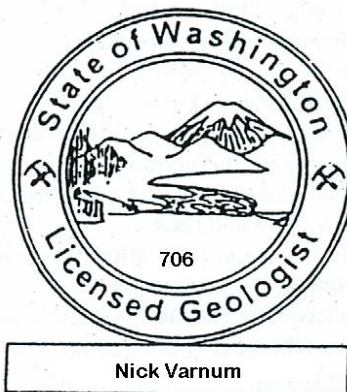
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## Acronyms

Able	Able Clean-up Technologies, Inc.
AEC	Anderson Environmental Contracting
AIA	Additional Interim Action
amsl	above mean sea level
Anchor	Anchor QEA
AST	Aboveground Storage Tank
bgs	below ground surface
BNSF	Burlington Northern – Santa Fe Railroad
BTEX	benzene, toluene, ethylbenzene, and total xylenes
cPAHs	carcinogenic polynuclear aromatic hydrocarbons
COC	Chemical of Concern
Coleman Oil	Coleman Oil Company
CBR	Columbia River Basalt
CUL	cleanup level
DRPH	diesel range petroleum hydrocarbons
Ecology	Washington Department of Ecology
EDB	1,2-dibromoethane
EDC	1,2-dichloroethane
EDR	Environmental Data Resources
EEC	Environmental Engineering & Consulting, Inc.
EPA	Environmental Protection Agency
EPH	Extractable Petroleum Hydrocarbons
ESA	Environmental Site Assessment
gmp	gallons per minute
GRPH	gasoline range petroleum hydrocarbons
HydroCon	HydroCon Environmental LLC
µg/L	micrograms per liter
mg/Kg	milligrams per Kilogram
LCS/LCSD	Laboratory Control Sample/ Laboratory Control Sample Duplicates
LNAPL	light nonaqueous-phase liquid
MDL	method detection limit
MRL	method reporting limit
MTBE	Methyl tert-butyl ether
MTCA	Model Toxics Control Act
NRCES	NRC Environmental Services, Inc.
ORPH	oil range petroleum hydrocarbons
OWS	oil water separator

### Acronyms (continued)

PAH	polynuclear aromatic hydrocarbons
PID	photoionization detector
POTW	Publically Owned Treatment Works
PUD	Public Utilities District
RAO	Remedial Action Objective
REC	recognized environmental concerns
SAP	Sampling and Analysis Plan



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## EXECUTIVE SUMMARY

This SRI Report provides the scope and findings of a subsurface investigation conducted in April 2018. The purpose of the SRI was to collect data necessary to adequately characterize the Site for the purposes of developing and evaluating cleanup action alternatives. The SRI was conducted in accordance with the SRI Work Plan (HydroCon 2018a) that reviewed existing environmental conditions, identified data gaps, and developed a plan to further characterize soil, groundwater, and sediment conditions at the Site.

The SRI was conducted primarily in response to a release of R99 Renewable Diesel at the Coleman Oil Property that was discovered in March 2017. Previous investigations indicated that the release resulted in a petroleum sheen discharge on the Columbia River approximately 400 feet north of the release. Other documented releases at the Property include gasoline releases in 2010 and 2013.

It was the opinion of the previous consultant (Farallon Consulting [Farallon]) that the contamination in the subsurface of the Site was primarily R99 biodiesel. Review of chromatograms from historic and recent sampling by Apex Laboratory's forensic chemist (Mr. Kurt Johnson) has revealed that several other types of petroleum products other than R99 Renewable diesel (gasoline; diesel; lube oil; petroleum byproducts (i.e, polar compounds); Bunker C; and benzene, toluene, ethylbenzene, and total xylenes (BTEX) are present under the Site.

The purpose of the SRI was to fill data gaps that include the following:

- Additional source identification
- Refine the understanding of the nature and extent of soil, groundwater, and sediment contamination
- Refine the understanding of composition and distribution of other petroleum products in the subsurface other than R99 Renewable diesel.
- Develop a better understanding of subsurface conditions and contaminant migration
- Review product recovery and effects of river stage and aquifer elevations
- Update the conceptual site model (CSM)

Due to poor sample recovery experienced by Farallon using the air rotary drilling method, HydroCon selected the sonic drilling method for all borings drilled at the Site. The need for high resolution sampling was necessary to observe the subsurface geology and understand the fate and transport of contamination at the Site, especially considering that the direction of groundwater flow at the Site is opposite the flow in the Columbia River which is adjacent to the Site. Onsite and offsite soil and groundwater conditions were further explored with fifteen borings. Thirteen of the borings were completed as 4-inch diameter monitoring wells. The sonic drilling method provided high quality soil samples and defined the presence of a bedrock layer (Chumstick Formation) which controls the direction of groundwater flow and contaminant transport at the Site. The surface of the bedrock dips to

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the north-north east at depths of 6 to 30 feet below the surface. Water levels measurements from the new and existing wells determined that groundwater flow closely parallels the surface of the bedrock.

Field screening (visual observations, odor, PID measurements, distribution of light nonaqueous-phase liquid [LNAPL]) and soil and groundwater laboratory analytical results show that contaminants are most concentrated near on-property sources and in groundwater near the contact of the overlying alluvium and the bedrock formation.

HydroCon conducted additional review of neighboring properties using regulatory database information provided by EDR, a contract information services company, Sanborn maps, historic air photos, historic city directories, historic topo maps, review of the Washington State Department of Ecology (Ecology) databases, and records requests with Ecology. This review identified two facilities (Chelan County PUD/Wenatchee Substation and Burlington Northern Santa Fe (BNSF) railroad), both located north of the Coleman property, that may be contributing to soil and groundwater impacts north of the property (e.g., in the area of MW22).

Product recovery efforts on the Columbia River, in monitoring wells, and in product recovery sumps have been in place since March 2017. The rates of product recovery have decreased significantly with less than 10 percent of the total accumulation of product occurring since January 2018 at most locations. Hydraulic testing in February and May 2018 and installation and operation of pumps in wells MW-9, MW-10 and BH-1 since early May has shown that there is high variability in subsurface flow rates along the migration pathway. This variability appears to be attributed to bedrock geology where complex fractures and/or localized channeling are controlling product migration. Maintaining summer time water levels in the three wells near the observed sheen discharge area (MW-9, MW-10 and BH-1) appears to be effective at reducing the occurrence of sheen in the river.

To date, three releases have been documented at the Site, R99 Renewable diesel (2017) and gasoline (2010 and 2013). This investigation focused on the R99 Renewable diesel release and its discharge to the river. This and previous investigations also document the presence of automotive gasoline, degraded diesel fuel, coal tar, Bunker C, petroleum byproducts (i.e., polar organics), and BTEX.

Investigations to date at the Site provide a reasonable estimate of the nature and extent of contamination on and offsite (the Site). The extent of soil and groundwater impacts is constrained to the south and does not extend south of the Property. Some site-related impact may extend west of the property, under the rail tracks, but groundwater flow is towards the east-northeast in this area. Groundwater was not sampled east of the property due to low water levels, but soil samples collected from MW15 and MW18 do not indicate impacts in this area. The northernmost and downgradient extent of the impacts appears to extend to the area north of the sheen discharge area to MW21. MW22 is also impacted, but there is strong evidence that the impacts are from a different source.

## Supplemental Remedial Investigation Work Plan

Coleman Oil Biodiesel Spill

Wenatchee, Washington

August 8, 2018, Revised October 1, 2018

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Exposure pathways and potential receptors were evaluated with currently available data. Impacted soil has resulted in groundwater contamination and the soil-to-groundwater pathway is complete. The direct contact pathway point of compliance for human receptors is 15 feet below ground surface. This pathway is complete at areas on the property near release areas and in surface soils near the sheen discharge area, however, contaminants beneath the majority of the property and the area between the property and sheen discharge area are at depths exceeding 15 feet. A remedial excavation was conducted in April-June 2017 in the central portion of the site, however, no confirmations samples were collected and impacted soil may be present at depths of 15 or less in this area. The vapor intrusion exposure pathway is considered to be potentially complete at the Site. Migration of contaminants to the Columbia River via groundwater discharge has been demonstrated at the Site and the surface water pathway is complete. Groundwater in the vicinity of the Site is not developed as a drinking water resource and is not likely to be developed in the future due to a well-established municipal water supply system and the groundwater/drinking water pathway is not complete. A Simplified TEE was conducted for the site. Using the scoring system of MTCA Table 749-1, the TEE can be ended and no further evaluation is required.

## 1.0 INTRODUCTION

HydroCon Environmental, LLC (HydroCon), has prepared this Draft Supplemental Remedial Investigation (SRI) Report on behalf of Coleman Oil Company (Coleman Oil) to collect data to evaluate cleanup actions in response to a release of renewable diesel (R99) fuel from leaking underground piping at the Coleman Oil fuel storage facility at 3 Chehalis Street in Wenatchee, Washington (herein referred to as the Property). The SRI has been prepared to meet the requirements of Exhibit B – Scope of Work and Schedule of Agreed Order No. DE 15389 entered into by Coleman Oil Company, LLC; Coleman, Services IV, LLC; and Ecology with an effective date of October 30, 2017 (Agreed Order). The Agreed Order is a continuation of previous and ongoing significant oil spill response activities and removal actions conducted under the Administrative Order on Consent for Removal Activities issued by the U. S. Environmental Protection Agency (EPA) on May 5, 2017 (EPA Docket No. CWA-10-2017-0114).

The Site, as defined under the Washington State Model Toxics Control Act Cleanup Regulation (MTCA), Chapter 173-340 of the Washington Administrative Code (WAC §173-340-200), comprises the portion of the Property and adjacent properties where hazardous substances have come to be located in soil, groundwater, and surface water at concentrations suspected to exceed applicable cleanup levels (herein referred to as the Site) as a result of releases at the Property.

### 1.1 Document Purpose and Objectives

Environmental Engineering & Consulting, Inc. (EEC) and HydroCon have been retained by Coleman Oil to provide environmental consulting services for this project. This SRI Report provides the scope and findings of a subsurface investigation conducted in March through May 2018. The purpose of the SRI was to collect data necessary to adequately characterize the Site for the purposes of developing and evaluating cleanup action alternatives. The SRI was conducted in accordance with the SRI Work Plan (HydroCon 2018a) that reviewed existing environmental conditions, identified data gaps, and developed a plan to further characterize soil, groundwater, and sediment conditions at the Site.

### 1.2 Document Organization

The SRI report is organized as follows:

**Section 2, Background Information**, provides a description of the Site, Property ownership, and geologic and hydrogeologic setting.

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**Section 3, Previous Investigations**, describes the environmental investigations that have been completed at the Site previously.

**Section 4, Data Gaps**, identifies data gaps addressed in this investigation based on previous work conducted at the Site.

**Section 5, Supplemental Remedial Investigation Tasks**, presents and describes additional environmental investigations conducted during this SRI to define the nature and extent of impacts from Site releases.

**Section 6, Conceptual Site Model**, presents a conceptual model and an updated exposure assessment for the Site.

**Section 7, References**, lists the references cited in this report.

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## 2.0 BACKGROUND INFORMATION

The following section provides a summary of the Property location and description, geologic setting, historical land use, environmental history, and contaminants and media of concern at the Property. HydroCon began providing environmental consulting services for the project in December 2017. Most of the information provided for this section is adapted from Farallon's *Preliminary Cleanup Alternatives Evaluation* (2017b) and *Supplemental Data Summary Report* (2017c).

### 2.1 Site Description

The Property is located at 3 East Chehalis Street in Wenatchee, Washington (Figure 1). The Chelan County Assessor (2017) online records listed the street address as 600 South Worthen Street with a legal description of Manufacturers Amended Block 4 Lots 1-9, 1.27 acres. The Property was listed in the Chelan County Assessor (2017) online records as County Assessor Property Identification No. 10398, Treasurer Map Property Identification No. (Property ID) 55798, and Chelan County Assessor Parcel No. 222011693005 with a listed owner of Coleman Services V LLC.

The Site comprises the following four parcels:

- Chelan County Parcel No. 222011693005 with a listed owner of Coleman Services V LLC (Coleman property);
- Chelan County Parcel No. 222010693001 with a listed owner of Chelan County Public Utilities Department (PUD) (substation to north of Coleman property);
- Chelan County Parcel No. 222011693105 with a listed owner of Chelan County PUD (shoreline east of Coleman Property); and
- Chelan County Parcel No. 222011693100 with a listed owner of Chelan County PUD (shoreline to northeast of Coleman property).

The property and adjacent properties are within the City of Wenatchee's industrial zoning district as of July 14, 2017<sup>1</sup>.

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<sup>1</sup> <http://www.wenatcheewa.gov/home/showdocument?id=17440>

## 2.2 Property Ownership and Operational History

The historical information provided herein regarding the Property was acquired from Blue Mountain Environmental Consulting (2007) and Farallon (2017b).

The Property was first owned and occupied by Standard Oil Company and has been a bulk fuel facility since 1921. Based on information obtained from Sanborn maps, two vertical gasoline aboveground storage tanks (ASTs), four oil ASTs, one kerosene AST, and four structures were present on the Property in the 1920s. The number and configurations of ASTs have changed over time. A 4,000-square-foot, wood-framed building used for offices and warehouse storage was constructed on the northwestern corner of the Property in 1935. By the 1950s, a tank farm was present on the south-central portion of the Property and included 10 approximately 20,000-gallon vertical ASTs.

The Chelan County Assessor (2017) online records indicated that North Central Petroleum, Inc. purchased the Property in 1980. In the early 1990s, a tank farm was present south of the warehouse and office building and contained eleven 19,000-gallon horizontal ASTs and one 1,000-gallon horizontal waste oil AST. An underground storage tank (UST) and cardlock system were installed in 1997, which included inventory control and tank monitoring features and two pump islands (Blue Mountain Environmental Consulting, 2007). This UST has four compartments.

Coleman Services IV, LLC purchased the Property in January 2007 from North Central Petroleum, Inc. (Chelan County Assessor 2017). Some features of the Property were modified over the next 10 years. The eleven 19,000-gallon ASTs were replaced by eight 2,100-gallon ASTs (Tank Farm B) (Figure 2), and one of the two pump islands was dismantled. From 2010 to 2017, the Property included a 4,000-square-foot wood-framed building used for offices and warehouse storage; a 1,591-square-foot, wood-framed storage building on the northeastern corner of the Property; a truck fuel loading rack east of the warehouse and office building; a four-compartment UST and associated card lock pump island on the eastern and south-central portions of the Property; and two tank farms (Figure 2). Tank Farm B, south of the warehouse and office building, included eight 2,100-gallon petroleum ASTs and associated pumps (Figure 2). Tank Farm A, located on the south-central portion of the Property included two 25,000-gallon ASTs, two 20,000-gallon ASTs, one 19,500-gallon AST, five 19,400-gallon ASTs, and associated pumps and piping (Figure 2). The northern portion of the Property was fenced, including the buildings, bulk fuel tank farms, and truck fuel loading rack. The card lock pump island was present south of and outside of the fence (Blue Mountain Environmental Consulting, 2007).

In March and April 2017, the truck fuel loading rack, associated piping, and the eight 2,100-gallon ASTs in Tank Farm B were dismantled and removed from the Property. In June and July 2017, the 4,000-square-foot, wood-framed warehouse and office building and the 1,591-square-foot storage building were demolished and removed, and the remaining ASTs were emptied of petroleum and cleaned.

Currently, only the USTs, card lock pump island, and a fenced truck parking area to the south of the card lock are used in fueling operations conducted at the Property.

### 2.3 Geologic & Hydrogeologic Setting

The Property is located in the Wenatchee Valley approximately 40 feet west south-west of the Columbia River at an elevation of approximately 660 feet above mean sea level (Figure 1). The topography of the Property slopes very gently to the north north-east parallel to the Columbia River. The area is dominated by basalt lava flows of the Columbia River Basalt (CBR) Supergroup, alluvial ice-age flood deposits from the Columbia River and tributaries, and the Chumstick Formation at depth.

The US Geological Survey (Gresens et. al., 1981) describes the alluvial deposits (Qcgu) as moderately sorted mixed-lithology cobble-to-boulder gravel containing rare angular boulders as large as 2 m of Swakane Biotite Gneiss and quartz diorite mantled with 0.5 to 1.5 m of loess. Soil contains neither textural B-horizon nor K-horizon, calcification being restricted to overgrowths less than 1 mm thick on the undersides of stones. The Qcgl Unit is mapped at the Site and is similar to Qcgu. Gravel bars are 60 to 90 m above the river and embellished with giant current dunes spaced at 100 m.

The Chumstick Formation is bedrock of middle Eocene age consisting of alluvial sandstones with lacustrine mudstone common near the top of the formation. The formation is thousands feet thick and rests on crystalline bedrock (Gresens et. al., 1981). The Chumstick Formation (Tc) is described as sandstone, shale, and conglomerate. The formation is white, locally gray, medium- to coarse-grained, micaceous feldspathic sandstone averaging 35 to 40 percent quartz and 10 to 15 percent lithic clasts, 90 percent volcanic rock that is cross-bedded and channeled, and interbedded with lesser amounts of thin pebbly sandstone and green to bluish shale. Naturally occurring hydrocarbons are possibly present in the upper lacustrine portion of the formation. Type III organic matter (originating from terrestrial plants) has been detected in lacustrine facies by others (Tennyson and Totman, 1987).

The soil beneath the surface of the Property is consistent with alluvial deposits and consists primarily of silt and silty sand, with layers of clay, sand, gravel and cobbles. Boulders up to 4 feet in diameter were excavated during trenching activities conducted at the Site in 2017. The Chumstick Formation is present beneath the alluvial deposits at depths ranging from 12 to 35 feet and extending below the maximum depth explored.

The groundwater hydraulic gradient at the Site is variable and steepens to the east with proximity to the Columbia River. Near the southern portion of the Coleman property, groundwater flow to the east then flows northeast to north. The depth to groundwater and the groundwater flow direction appears to be coincident with the top of the Chumstick Formation. Additional discussion on groundwater is provided in Section 5.7.2.



Farallon's (2017b) initial assessment of the sanitary sewer and other subsurface utilities in South Worthen Street (Figure 2) indicated that groundwater levels are likely well below the utilities and concluded that the utility lines cannot be acting as preferential migration pathways.

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## 3.0 PREVIOUS INVESTIGATIONS

The following Sections 3.1 through 3.2 describe the environmental investigations at the Site as described by Farallon (2017b). Other environmental investigations of the Site are described in Sections 3.3 through 3.6.

### 3.1 2010 to 2013 Environmental Investigations

On June 2, 2010, a review of daily inventory records for AST 15A by Coleman Oil personnel revealed a discrepancy of approximately 180 gallons of unleaded gasoline (Farallon 2014). Subsequent inspection of AST 15A and associated piping revealed gasoline leaking from a fill valve and flowing onto the concrete ground surface in the AST 15A valve control box on the southern portion of Tank Farm A. In addition, gasoline was observed on the ground surface east of the AST 15A valve control box in an unpaved area between the Tank Farm A containment area and the south-adjacent former fuel dispenser island. Coleman Oil personnel immediately stopped the flow of gasoline from the AST to the leaking fill valve; contacted emergency spill response contractor NRC Environmental Services, Inc. of Spokane, Washington (NRCES) to address the spill; and reported the spill to the appropriate regulatory agencies.

The gasoline release appeared to be limited to a narrow unpaved area between the Tank Farm A containment area and the south-adjacent former fuel dispenser island (Figure 2a). NRCES excavated soil containing gasoline from this area to a depth of approximately 2 feet below ground surface (bgs) using hand tools. Feasible alternatives for excavation of additional material between the Tank Farm A containment area and the south-adjacent former fuel dispenser island were limited due to concerns regarding the structural integrity of the Tank Farm A containment area and the presence of large boulders in the excavation area.

Initial follow-up characterization activities conducted by Environmental Compliance Associates, LLC of Kennewick, Washington included completion of shallow borings using a push-probe drilling rig and completion of a deeper boring using an air rotary drilling rig. Results of the follow-up characterization indicated that concentrations of total petroleum hydrocarbons as gasoline-range petroleum hydrocarbons (GRPH) and benzene, toluene, ethylbenzene, and xylenes (BTEX) in soil decreased significantly with distance both laterally and vertically from the spill area.

Farallon (2014) conducted a subsurface investigation at the Site in July and September 2010 to evaluate whether the surface spill of gasoline had migrated beneath the Site to a deeper groundwater-bearing zone that may be in hydraulic communication with surface water in the adjacent

Columbia River. Monitoring wells MW-1 through MW-4 were installed on the Property, and monitoring well MW-5 was installed east of South Worthen Street (Figure 2).

Groundwater samples were collected from the monitoring wells on an approximately quarterly basis from soon after installation in July and September 2010 until 2013 depending on the well locations (Farallon 2014). GRPH was detected at a concentration exceeding the MTCA Method A cleanup level on one occasion in a groundwater sample collected from monitoring well MW-1. Benzene was detected at concentrations exceeding the MTCA Method A cleanup level on five occasions in 2010 and 2011 in groundwater samples collected from monitoring wells MW-1 and MW-2. With the exception of a single detection of benzene at a concentration less than the MTCA Method A cleanup level in the groundwater sample collected from monitoring well MW-4 in October 2010, GRPH and BTEX were not detected at concentrations exceeding laboratory reporting limits in groundwater samples collected from monitoring wells MW- 3 through MW-5.

On May 30, 2013, a gasoline spill occurred at the Site while the UST on the eastern portion of the Site that supplied fuel to the retail sales card lock fuel island was being filled. The spill was reported to the National Response Center and issued Case No. 1048904. Approximately 200 gallons of gasoline overtopped the UST fill port and spilled onto the soil surrounding the UST (Able 2013). Able responded to the incident on May 31, 2013 and began excavation of the impacted soil. A total of 90.08 tons of petroleum-impacted soil was removed from around the UST. The final excavation exposed the UST and was 21 feet long by 18 feet wide, and extended to a depth of 12 feet bgs (Figure 2a). Confirmation soil samples collected from the final limits of the excavation confirmed removal of petroleum-impacted soil to less than MTCA Method A cleanup levels.

Ecology (2015) issued a No Further Action determination for the Property in a letter dated March 13, 2015. The No Further Action determination was contingent on compliance with the Environmental Covenant recorded on October 6, 2014 with Chelan County that specified restrictions and requirements related to residual concentrations of petroleum hydrocarbons at concentrations exceeding MTCA cleanup levels in soil in the area of Tank Farm A.

### **3.2 2017 Environmental Investigation**

On March 17, 2017, the Wenatchee Fire Department reported the presence of a sheen and petroleum odor on the Columbia River between Thurston and Chehalis Streets in Wenatchee, Washington. On March 18, 2017, the U.S. Environmental Protection Agency (EPA), Ecology, and Chelan County Emergency Management formed a Unified Command to respond to the occurrence of the sheen. The initial spill response activities included deployment of booms and sorbent pads in the area of the observed sheen on the Columbia River.

On behalf of Coleman Oil, a subcontractor conducted a line tightness test on March 24, 2017 on underground pipe lines used to transfer fuel from ASTs at Tank Farm A to the truck loading rack on the Property. Two of the fuel lines would not hold pressure: the R99 Renewable Diesel R99 Renewable Diesel fuel line and the B75 biodiesel fuel line. Coleman Oil closed and locked the B75 biodiesel fuel AST, and closed and locked the isolation valves from the pumps to each of the fuel lines. Review of Coleman Oil inventory records indicated that the release was most likely from the R99 Renewable Diesel R99 Renewable Diesel fuel line.

Able, on Coleman Oil's behalf, assumed management of the booms and curtains placed to contain the sheen on the Columbia River on March 26, 2017. Able conducted hourly inspections of the sorbent pads, curtains, and booms placed where a sheen is observed on the Columbia River until the week of June 6, 2017, at which point Anchor QEA of Wenatchee, Washington took over the boom and curtain management on Coleman Oil's behalf. Additional details on the timeline and spill response actions are provided in *Emergency Spill Response Plan, Coleman Oil Wenatchee [sic] Facility, 3 East Chehalis Street, Wenatchee, Washington* dated April 1, 2017, prepared by Farallon (2017) (ESRP). The scope of work presented in the ESRP was initiated immediately following approval from Ecology and EPA. The scope of work for the ESRP was expanded by Coleman Oil during implementation to expedite the Site characterization process and cleanup.

Farallon collected groundwater samples from monitoring wells MW-1, MW-2, MW-4, and MW-5 on March 23, 2017 to assess whether the release of R99 Renewable Diesel R99 Renewable Diesel had impacted groundwater in the existing Site monitoring wells.

Monitoring wells BH-1 through BH-3 were installed by Ecology consultant Environmental Partners, Inc. of Issaquah, Washington on March 25 and 26, 2017 along South Worthen Street adjacent to the area where the sheen discharge was observed on the Columbia River. On March 26, 2017, Coleman Oil decommissioned the fuel lines that would not hold pressure. All fuel associated with the ASTs in Tank Farm A was subsequently removed from the Property and transported to other Coleman Oil facilities.

Following approval of the ESRP, Coleman Oil initiated additional investigative work at the Site. Review of the test pit data by HydroCon has provided additional clarification on the exploratory test pits and a subsequent remedial excavation. Several exploratory test pits were excavated in early April 2017. The dry well, located in the east-central portion of the Site, was sampled on April 3, 2017. Five samples were collected from the dry well excavation at depths of 3-5 feet. The deepest sample collected at the bottom of the excavation had a concentration of 2,400 mg/Kg DRPH and 2,000 mg/kg ORPH. The Fuel Line area was also sampled on April 3 with four samples ranging in depth from 2 to 6 feet. All samples have concentrations above the CUL - up to 58,000 mg/kg DRPH. Eighteen samples were collected from the North-South and East-West trenches, (Figure 2) on April 4 and 5. Sample

depths were at 5 and 10 feet and all exceedances of the DRPH CUL were at 10 feet bgs. The Filling Station area, immediately south of the Fuel Line was sampled on April 6 and the six samples were collected at 2 to 11 feet bgs. All samples exceeded the CUL for DRPH.

Based on these results, a total of 741.43 tons of contaminated soil was excavated and removed from the Site between April 12, 2017 and June 19, 2017. Coleman Oil also removed the former Storage Building (Sump #5 area) and former Maintenance and Warehouse Building as they performed the trenching and remedial excavations. The actual area of the excavations does not appear to have been documented. Based on information provided by Coleman Oil, the excavation area is shown on Figure 2.

On April 6 and 7, 2017, direct-push borings FB-3 through FB-10 were advanced along South Worthen Street, Chehalis Street, and the northern portion of the Property. Between April 10 and 14, 2017, monitoring wells MW-6 through MW-11, potential LNAPL recovery well RW-1, and boring FB-11 were installed at various locations across the Site. The monitoring wells were constructed using either 3- or 4-inch-diameter well materials so that the wells could be used for LNAPL recovery, if necessary.

Concurrent with the monitoring well installation activities, the truck fuel loading rack and subsurface piping leading to the rack were removed. Following the discovery of red-colored LNAPL on perched groundwater in the area of the truck fuel loading rack, a groundwater recovery sump was fabricated and installed in the excavation at this location. The R99 Renewable Diesel is a red-dyed product very similar in color to traditional diesel fuels dyed for identification for off-road use.

Site-wide groundwater monitoring and sampling of new and existing monitoring wells was conducted on April 20 and 21, 2017.

Test pits were installed on the southern, eastern, and northern sides of the warehouse and office building at the Property to help delineate the extent of LNAPL observed in the truck fuel loading rack area excavation. Recovery sumps #1 through #3 were installed along the eastern side of the warehouse and office building, recovery sump #4 was installed in the excavation south of the warehouse and office building, and recovery sump #6 was installed north of the warehouse and office building. Recovery sump #5 was installed in the northeastern corner of the Property, where the former storage building was located (Figure 2). During the test pit excavations, a substance that appeared to be red LNAPL was observed to flow into the excavations from beneath the warehouse and office building. For several days, water and LNAPL were pumped from the recovery sumps into a 10,000-gallon baffle tank with an oil-water separator. The pumps were turned off on April 26, 2017 to facilitate an assessment of the rate of LNAPL recovery into the sumps. Following the assessment, the depth to groundwater began to drop in elevation to below some of the recovery sumps, and recovery of LNAPL diminished. Periodic pumping of groundwater from the recovery sumps continued in an attempt

to draw LNAPL to the sumps, but LNAPL recovery continued to diminish and LNAPL currently is recovered using sorbent pads placed in the recovery sumps and periodic pumping. As of September 28, 2017, groundwater was only present in recovery sumps #2, #5, and #6.

LNAPL bail-down tests were performed on monitoring wells MW-8, MW-9, and BH-2 on May 1, 2017 to estimate the formation transmissivity for evaluation of the feasibility of hydraulic recovery of LNAPL. The bail-down tests were performed by evacuating LNAPL from the monitoring wells using a peristaltic pump, and monitoring the depth to LNAPL and depth to groundwater during recovery after the pumping was terminated. Farallon (2017b) concluded that the LNAPL bail-down testing results indicated that the estimated transmissivity values exceed the generally accepted lower limit for practicable hydraulic recovery by a factor of greater than 2; therefore, LNAPL recovery via pumping wells can be considered as a viable cleanup alternative.

### 3.3 Soil and Groundwater Analytical Results

Laboratory analytical results for soil samples collected from the trenching excavations and borings completed in April 2017 indicate that total petroleum hydrocarbons (TPH) as diesel-range petroleum hydrocarbons (DRPH) are present at concentrations exceeding MTCA Method A cleanup levels in shallow soil in the area of the truck fuel loading rack and drywell. North of the truck fuel loading rack and drywell, petroleum hydrocarbons at concentrations exceeding MTCA Method A cleanup levels in soil appear to be limited to soil 10 to 15 feet bgs, likely as a result of migration associated with shallow perched groundwater. GRPH and total petroleum hydrocarbons as oil-range petroleum hydrocarbons (ORPH) also were detected in soil samples collected at the Site but were generally noted on the laboratory reports to be the result of overlap from the DRPH results.

Farallon noted in their boring log for FB-11 that a sweet, solvent-like odor, with sheen present and a high PID reading (1,943 ppmv) was present at a depth of 15 feet. However, Farallon failed to collect a sample in this interval for laboratory analysis. In addition, the well log for monitoring well MW-3 indicated that a high PID reading (4,992 ppmv) was observed at a depth of 10 feet bgs in September 2010. No sample was collected from this location either. Both of these borings are located near the north property line. It is HydroCon's opinion that these observations may indicate an offsite volatile organic compound (VOC) source and should be explored further.

At HydroCon's request APEX Laboratory's forensic chemist (Mr. Kurt Johnson) reviewed the chromatograms of these sample results. Mr. Johnson indicated that GRPH, DRPH (other than R99), motor oil, and BTEX are also present in some of the samples. This information indicates that historic releases of other fuel products have occurred at the Site and that there may be potential offsite contributions.

Farallon conducted Site-wide groundwater monitoring and sampling events on April 20 and 21 and September 28 and 29, 2017. Monitoring wells MW-1, MW-2, MW-4, and MW-5 also were sampled on March 23, 2017 prior to the installation of new monitoring wells at the Site in April 2017.

Reconnaissance groundwater samples were collected from push-probe borings FB-9 and FB-10 on April 7, 2017. The groundwater analytical results for the groundwater monitoring events are included in Table 8.

DRPH, ORPH, GRPH, and/or benzene were detected at concentrations exceeding their respective MTCA Method A cleanup levels in monitoring wells BH-1 through BH-3, MW-1, and MW-6 through MW-11 and in recovery well RW-1 during the April and/or September groundwater sampling events. During the April 2017 groundwater monitoring and sampling event, groundwater samples were not collected for laboratory analyses from monitoring wells MW-8 and MW-9 due to the presence of LNAPL at these locations. Groundwater samples were not collected from monitoring wells BH-1 and BH-2 during the September groundwater monitoring and sampling event due to insufficient groundwater in the monitoring wells at these locations. Based on historical groundwater analytical data not exceeding the laboratory practical quantitation limit for DRPH, ORPH, GRPH, and BTEX at monitoring well MW-2, a groundwater sample was not collected at this location during the September 2017 groundwater monitoring and sampling event.

### 3.4 2017 Interim Actions

Interim Action work continued to be conducted at the Site. This work includes pumping water from some or all of the sumps (product recovery and maintaining a reduced head near the point of release), water/product level monitoring at wells MW-8 thru MW-10 (and presumably product recovery), and management of the boom area with product recovery utilizing hydrophobic pads and booms. Water removed from sumps goes through an OWS and activated carbon and is stored in Baker tanks prior to discharge via permit into City of Wenatchee sewer system. A detailed review of product recovery through June 2018 is provided in Section 5.4.

### 3.5 R99 Renewable Diesel Records

In an April 25, 2017 letter to EPA (Coleman 2017), Coleman Oil responded to a request to provide a written report stating the volume of biodiesel that leaked from Coleman Oil's bulk oil plant to the Columbia River. Coleman Oil's response said that R99 Renewable Diesel was first stored at the facility with a purchase on March 22, 2016 to support a single customer. An inventory reading for an October 19, 2016 purchase indicated 55 gallons more in the tank than was on the facility records. On January 5, 2017, an inventory record of R99 indicated a loss of 1,399 gallons. Coleman Oil's review of records showed that from January 2017 forward, actual tank readings of R99 indicated continued loss, totaling 4,543 gallons. Coleman Oil also indicated that record reviews indicated no loss of B75 Biodiesel. The

cause of the leak was determined by line tightness testing, which indicated that 2 lines (R99 and B75) were faulty. These lines were uncovered and two pinholes were found in the R99 line and the B75 line did not have a visible hole.

### 3.6 Potential Offsite Source Evaluation

Adjacent properties include the Chelan County Public Utility District (Chelan County PUD) Transformer station to the north across Chehalis Street, a Burlington Northern – Santa Fe (BNSF) railroad right-of-way to the west, the Shepard's Oil bulk fuel storage facility to the south, and the Columbia River to the east across South Worthen Street.

A review of regulatory databases conducted for an Environmental Site Assessment (ESA, Blue Mountain Environmental Consulting, 2007) resulted in 15 reported sites within ¼ mile of the property at equal or higher elevation. These sites included service stations, auto repair, public utilities, BNSF, and other primarily commercial businesses. The ESA concluded the following:

*These sites are located sufficiently lateral to the property that released contaminants following the hydrological gradient would not intercept the property, and they are located at such distance from the subject property that the probability of environmental impact to the site by released contaminants is negligible.*

No details for the above conclusion were provided in the ESA. Monitoring wells were not installed at the Site until 2010 and groundwater flow directions were not known at the time the ESA was prepared. Additionally, it was not within the scope of the ESA to evaluate potential sources of the sheen discharge area at the Columbia River. The discharge area is approximately 350 feet north of the Coleman Oil Site. A Unocal service station located at 405 South Wenatchee Street and the Burlington Northern Rail Yard located at 409 South Columbia Street are located at similar or shorter distances west of the discharge area. The 2007 Environmental Data Resources report used in the ESA (EDR 2007) documents that the service station and railyard had petroleum products released to soil and groundwater in the late 1990's. Additional research on potential offsite sources was conducted as part of this SRI and is presented in Section 5.11.



## 4.0 DATA GAPS

The data gaps identified in the Work Plan and addressed with this SRI include the following:

**Source Identification.** A release of R99 Renewable Diesel from an underground pipeline has been identified at the Property. Impacted soil and groundwater at the Property and a sheen discharge area on the river at a fairly large distance from the release have been documented. Review of chromatograms indicates that there is GRPH, DRPH (other than R99), motor oil, BTEX, and petroleum byproducts (i.e., polar compounds) in the samples. Other sites that have had historical releases have been preliminarily identified. Additional review of other nearby sites is needed.

**Soil Conditions.** Soils beneath the Site are a mixture of silt, sand, gravel, and cobble flood deposits. Additional soil characterization is needed to better understand the soil structure and potential migration pathways, and in particular, potential migration pathways for LNAPL and dissolved phase contamination to reach the river.

**Groundwater Conditions.** Additional groundwater investigation is needed to evaluate migration pathways, other potential sources, and the receptors that may be affected. In addition, monitoring wells MW-1 through MW-4 are screened below water levels.

**Shoreline Soil and Sediment Conditions.** The nature and extent of sediment and nearshore soil impacts near the sheen discharge area are needed to identify preferential pathways and evaluate remedial alternatives.

**Extent of Groundwater Contamination.** The extent of groundwater contamination has not been constrained to the west, north and east. It should be noted that access to the west (BNSF rail lines) and to the north (Chelan County PUD Transformer Station) is constrained by physical barriers.

**Extent of Soil Contamination.** The extent of soil contamination has not been constrained to the west, north and east, in the vertical dimension in several areas.

**River Stage.** A review of river stage and aquifer elevations is needed to assist in the understanding of product migration.

**Nature of Contamination.** GRPH, DRPH, ORPH, and/or BTEX have been detected in soil and groundwater. Additional laboratory work is needed to better understand the subsurface migration of petroleum hydrocarbons and the potential for additional sources. VOCs may be present at FB-11 and MW-3 (see Section 3.3).

**Aquifer Characteristics.** An initial evaluation of hydraulic conditions is being addressed under Additional Interim Actions (Addendum #1). Additional testing may be needed to evaluate the feasibility of pump and treat remedial alternatives.

**Conceptual Site Model.** Based on the results of the SRI, the conceptual site model will need to be updated.

## 5.0 SUPPLEMENT REMEDIAL INVESTIGATION TASKS

The following sections of this report summarize the objectives and work completed for each phase, the field and analytical methods used, and, a discussion of the ASI results.

### 5.1 Pre-Field Investigation Activities

HydroCon performed the following activities prior to conducting the site investigation:

- Reviewed historic environmental reports performed at Site (Phase 1 ESA in particular),
- Researched geologic papers on local geology,
- Investigated and make inquiries on underground utility locations,
- Researched Columbia River levels/dam operations,
- Conducted a site visit to observe site topography/site layout/neighboring properties,
- Walked the shoreline to observe signs of stressed vegetation/seeps/sheen.
- Observed booms in the river and product recovery/treatment system.
- Marked boring locations with white paint for public utility locate survey, as is required by law.

### 5.2 Permits

The City of Wenatchee has jurisdiction of the public right-of-way along Chehalis Street and South Worthen Street. A right-of-way excavation permit RW-EXCV-18-017 and a revocable long term temporary use of right-of-way RW-TEMP-18-01 were also obtained for activities conducted in the City of Wenatchee right-of-way. A traffic control plan was developed and executed for drilling the right-of-way.

Coleman entered into an agreement with the City of Wenatchee for temporary discharge of treated groundwater to the City's publically owned treatment works (POTW). Under this agreement the maximum discharge to the POTW is 4,000 gallons per day at a maximum rate of 10 gallons per minute.

#### 5.2.1 Health and Safety Plan

HydroCon prepared a Site-specific health and safety plan (HASP) to govern health and safety protocols used during this investigation. Work was performed using Occupational Safety and Health Administration (OSHA) Level D personal protective equipment consisting of hard hats, safety glasses, protective gloves, and protective boots. HydroCon conducted daily tailgate health and safety meetings prior to the start of each day of field work.

## 5.2.2 Underground Utility Locates

Due to potential conflict during drilling activities within the public right-of-way and the potential for these utilities to act as preferential pathways/barriers for contaminant migration, an underground utility survey was completed. The Washington Utility Notification Center was notified (Ticket Number 18104874) who notified the following utilities who identified offsite utilities:

- Chelan County PUD #1
- Charter Communications
- Cascade Natural Gas - Wenatchee
- City of Wenatchee
- Frontier Communications
- Wenatchee Reclamation District

A private locating company, Utilities Plus, was retained to identify the location of onsite subsurface utilities and to clear specific boring locations located near potential utility conflicts. HydroCon instructed the surveyors (Erlandsen, Inc. of Wenatchee, Washington) to measure each offsite and onsite utility line identified by the above, along with other features, to create a scaled base map. The results of these efforts are shown on Figure 2, which illustrates the locations of water, sewer, storm, electrical, fiber optic, and gas lines.

## 5.3 Field Methods

Field methods utilized during the SRI are summarized in the following sections.

### 5.3.1 Soil Borings

Budinger & Associates, Inc, of Spokane, Washington was subcontracted to perform the drilling services. Fifteen borings were drilled at the Site including two temporary borings (HC01 and HC02), twelve new 4-inch diameter monitoring wells (MW12 through MW23), and two shallow wells (MW1S and MW3S) using the sonic drilling method. The borings were advanced at the Property on March 28 through April 13, 2018 in an effort to evaluate the horizontal extent of impacted soil and groundwater identified during previous investigations. Boring locations are shown on Figure 2 and boring logs are provided in Appendix A. Borings were advanced at the following locations (from south to north):

- MW12 was located on the southernmost corner of the property to evaluate potential offsite sources and to aid in understanding groundwater flow directions and gradients.

- Monitoring wells MW-1 and MW-3, located south of the USTs and the near the southwest corner of the Tank Farm A ASTs, were improperly constructed with well screens installed entirely beneath the water table. HydroCon installed new wells next to each of these wells (MW1S and MW3S, respectively) with well screens that straddle the water table.
- MW13 was installed at the former Tank Farm B Fuel and Oil ASTs to evaluate potential offsite sources and to aid in understanding groundwater flow directions and gradients.
- HC01 was drilled near the R99 Biodiesel spill area to get a detailed soil profile and assist in understanding of the migration pathway.
- MW15 was installed on the east side of South Worthen Street to investigate the vertical extent of impacts near existing borehole FB-5.
- MW14 was drilled at the Former Main Office and Warehouse Building to evaluate potential offsite sources and to aid in understanding groundwater flow directions and gradients.
- HC02 was drilled at the former storage building and 120 feet north of HC01 to get a detailed soil profile and assist in understanding of the migration pathway.
- MW18 was installed on the east side of S. Worthen Street to investigate the vertical extent of impacts near existing borehole FB-7.
- MW16 was installed on Chehalis Street to evaluate potential offsite sources and to aid in understanding groundwater flow directions and gradients.
- MW17 was installed on Chehalis Street to evaluate the vertical extent of impacts near existing borehole FB-3.
- MW19 was installed on South Worthen Street north of the Chehalis Street intersection to get a detailed soil profile and assist in understanding of the migration pathway.
- MW20 was installed on South Worthen Street north of MW19 to get a detailed soil profile and assist in understanding of the migration pathway.
- MW21 and MW22 were installed on the east side of South Worthen Street north of existing MW-10 to assess the northern extent of impacts.
- MW23 was drilled near the former dry well.

Each boring was advanced in to a completion depth of 20 to 50 feet bgs using sonic drilling techniques. Sonic drilling is accomplished by advancing a hollow drill rod for the first 10 feet, followed by advancing an override casing over the drill cuttings. A sonic casing is then driven to override the core barrel, resulting in a continuously cased borehole. Soil within the core barrel is then extruded in a new plastic sleeve which is observed by the geologist. This process is repeated to the target depth of the soil boring/monitoring well. Upon completion, the borings were backfilled with bentonite or a monitoring well was installed.

Each sample core was inspected for lithologic composition, presence of water, and field screened for the presence of petroleum hydrocarbons (i.e., staining, hydrocarbon odor and organic vapors). The

total organic vapor concentration of each sample was measured using a PID. A portion of each soil sample was placed in a sealable plastic baggie. The tip of the PID was inserted into the plastic bag in the airspace above the soil sample and the PID measurement was recorded. The PID was calibrated before use at the Site to a test gas standard consisting of 100 parts per million (ppm) isobutylene. Because several factors can affect PID readings (e.g. moisture, temperature, and background conditions), HydroCon determined that a value of 2 ppm or greater may indicate the presence of organic vapors originating from contaminants at the Site.

The selected soil samples were removed from the plastic sleeve using a new pair of disposable gloves and placed directly into labeled laboratory-prepared jars and sealed with Teflon-lined lids. Soil samples were placed into laboratory-supplied containers (utilizing EPA Method 5035A field preservation) and immediately placed in an ice-filled cooler along with chain-of-custody documentation for shipment to Apex Labs in Tigard, Oregon. A total of 55 soil samples from borings were collected for laboratory analysis.

The two temporary borings (HC01 and HC02) were backfilled with bentonite pellets below the water table and then with hydrated chips above the water table.

Boring logs detailing the lithology, field screening results, and sample depths are included as Appendix A. Selected soil samples (a minimum of three per boring) were submitted to the laboratory based on sampling objectives (i.e., depth and soil type) and field screening results.

All drilling and sampling tools were decontaminated between boring locations using a hot water pressure washer. All investigation-derived waste generated during purging and decontamination was placed in a labeled 55-gallon drum and stored onsite pending disposal to a licensed disposal facility.

### 5.3.2 Monitoring Well Installation

Groundwater monitoring wells were installed at soil borings MW1S, MW3S, and MW12 through MW23. The following sections describe methods for installation, development, surveying, and groundwater sampling.

#### 5.3.2.1 Well Installation

Each boring, except HC01 and HC02, was completed as a 4-inch diameter PVC monitoring well. The wells were constructed with variable lengths (10 to 25 feet) of 0.010-inch slotted PVC well screen and a bottom slip cap. Stainless steel centralizers were installed on the well string (one near the sump section, one immediately above the well screen, and then additional centralizers in approximate 10 foot

intervals) so that an even filter pack and seal could be placed around the well. Clean 10-20 graded silica sand was used as a filter pack in the annular space between the PVC casing and the borehole. The wells were surged by the drilling contractor during sand pack installation using a clean surge block. The filter pack was placed at the desired depth interval and then the well was surged. Once no more settlement in the sand pack was observed the drilling contractors placed additional sand in the annulus to the desired depth. Hydrated bentonite was used as a seal. The bentonite was placed from the top of the sand pack to approximately 1 foot below the surface. A traffic grade flush monument was cemented into placed on top of each well. Monitoring well construction details are documented in the boring logs and summarized on Table 1.

#### 5.3.2.2 Well Development

HydroCon developed the monitoring wells by surging and pumping techniques. A clean stainless steel bailer attached to a new length of poly rope was used to surge and bail turbid water from each well. The well was then pumped using new LDPE tubing attached to a clean submersible impeller pump. The process was repeated until no further improvement in water clarity was noted. A minimum of one casing volume was removed from each well. Well development procedures were documented on *Well Development Forms* (Appendix B).

#### 5.3.3 Unused Wells

At Ecology's request, three additional monitoring wells (MW1S, MW3S, and MW23) were added to the SRI to assess groundwater conditions on the southern portion of the Coleman property. Monitoring wells MW-1 through MW-4 were improperly constructed due to improper placement of well screens which prevent accurate monitoring of groundwater. Review of the well logs indicates that the well screens in MW-1 and MW-3 were placed too deep and solid casing is blocking off the uppermost water bearing zone. Due to the proximity of the USTs and the two documented releases of gasoline in the area, Ecology requested that a properly constructed monitoring well be placed next to MW-1. Due to concerns of potential offsite sources of contamination and the measurement of a very high PID measurement at 10 feet bgs (4,992 ppm), Ecology requested that a properly constructed monitoring well be installed next to MW-3. Due to the suspected use of an historic dry well, Ecology requested a monitoring well (MW23) be installed at that location to assess soil and groundwater conditions.

HydroCon petitioned Ecology to abandon the four improperly installed monitoring wells (MW-1 through MW-4) and monitoring well MW-7 (due its close proximity to monitoring well MW23). Ecology responded that they wanted to wait to see the results of the soil and groundwater sampling at these wells before making their decision to approve well abandonment. HydroCon maintains the opinion that monitoring wells MW-1 through MW-4 should be abandoned. The two newly installed shallow wells (MW1S and MW3S) serve as better monitoring points than the deeper wells they are constructed next

to. Monitoring wells MW-2 and MW-4 are not constructed properly and have never had any COC detected in groundwater samples collected from either well. Monitoring wells MW-7 and MW23 have similar construction but are located approximately 15 feet apart. As a long-term cost savings measure for Coleman Oil, HydroCon requests that Ecology consider abandoning one of the two wells.

#### 5.3.4 Surveying

Erlandsen, Inc. of Wenatchee, Washington was contracted to survey the location and elevation of the newly installed wells, product recovery sumps, shoreline sampling locations, sediment sampling locations, and the metal rod installed on the shoreline of the Columbia River used to monitor the relative river stage elevation. The vertical and horizontal coordinates of the wells were surveyed relative to established datums in the area. The horizontal coordinates are relative to the North American Datum, 1983 (NAD83) and the vertical coordinates are relative to the North American Vertical Datum, 1988 (NAVD88).

The reference elevation of each monitoring well (at the inscribed reference mark on top of the PVC casing) is used to calculate the groundwater surface elevation at each respective well (Table 2).

#### 5.3.5 Groundwater Sampling Procedures

HydroCon collected groundwater samples on April 24 through 26, 2018 from monitoring wells BH-1, BH-2, BH-3, MW1S, MW-2, MW3S and MW-4 through MW23, except MW15 and MW18 due to lack of water in the wells. A field duplicate was collected from MW3S for QA/QC purposes. Monitoring wells were purged and sampled in accordance with U.S. Environmental Protection Agency (EPA) guidance for low-flow sampling<sup>2</sup>.

Depth to groundwater was measured in the monitoring wells on April 25 (prior to sample collection) and April 27, 2018 (following sample collection) (Table 2). Prior to well purging and sample collection, the well cap on each well was removed and the water level was allowed to equilibrate prior to measuring the depth to water. The depth to water in each well was measured using a clean electronic water level indicator. Water levels were measured at the scribed reference mark (north side of the top of the polyvinyl chloride casing) at each well.

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<sup>2</sup> *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures (April 1996). EPA/540/S-95/504*



Prior to groundwater sampling, the wells were purged with a low-flow peristaltic pump equipped with a new length of low-density polyethylene tubing attached to a new length of silicone tubing. The tubing intake was placed approximately 2 to 3 feet below the surface of the groundwater or mid-screen in each well. During purging, water quality was monitored using a Quanta multi-parameter water quality meter equipped with a flow-through cell. The water quality parameters monitored and recorded included temperature, pH, specific conductance, dissolved oxygen, turbidity, and oxidation-reduction potential. Each well was purged until all six water quality parameters stabilized or the minimum parameter subset of pH, specific conductance, temperature, and turbidity and/or dissolved oxygen stabilized. Recorded results of water quality monitoring are provided in the *Groundwater Sample Collection Forms* found in Appendix C. Field parameters collected during well sampling are summarized on Table 3.

Following purging, groundwater samples were collected from the pump outlet tubing located upstream of the flow-through cell and placed directly into clean, laboratory-prepared sample containers. Each container was labeled with a unique sample identification number, placed on ice in a cooler, and transported under chain-of-custody to Apex Labs for laboratory analysis.

Purge water generated during the monitoring event was placed in an appropriately labeled 55-gallon steel drum and temporarily stored on the Property pending receipt of analytical data for proper disposal.

### 5.3.6 Soil Sampling from the Shoreline of the Columbia River

HydroCon collected soil samples from five locations along the shoreline of the Columbia River. Reconnaissance of the river bank around the suspected area of discharge (shown on Figure 2) revealed four separate locations near the river shoreline that exhibited hydrocarbon odor and staining. These locations appear to be seeps. Additionally, a stormwater outfall pipe that is connected to a storm drain on Chehalis Street near monitoring well MW09 discharges on the bank of the river. The stormwater outfall pipe is made of 10-inch diameter corrugated galvanized steel and is buried approximately 2-feet below ground surface. Effluent from the outfall travels down the river bank and discharges into the Columbia River.

Soil from the four suspected seeps (SL01 through SL04) were sampled directly from the observed stain at each location. The soil sampled was between boulders and concrete waste material used as rip rap along the river bank. The samples were collected by using a clean rock hammer pick to excavate down to approximately 6 inches below ground surface. Soil was then placed into laboratory prepared sample jars using a new pair of nitrile gloves. The soil was classified as Silty Sand consisting of fine sand and low plastic fines. Each of the four seeps sampled exhibited hydrocarbon sheen and a moderate petroleum odor when disturbed during sample collection. The soil sample SL05 was collected directly downstream of the outfall discharge point within the drainage path of the effluent. Observation of this sediment did not exhibit soil staining or any olfactory indications of petroleum contamination.

### 5.3.7 Sediment Sampling in Columbia River

A total of five sediment samples (SS01 through SS05) were collected in the Columbia River in the area of suspected sheen to assess if petroleum hydrocarbons from the Site have affected shallow sediments near the shoreline. Three near shore surface sediment samples (SS01 through SS03) were placed within close proximity of the four seeps observed along the shoreline (referred to by their sampling identification numbers as SL01 through SL04). These samples were collected in relatively shallow water (approximately 4 feet below the river level). Two surface sediment samples (SS04 and SS05) were collected immediately east of samples SS01 through SS03 at depths ranging from 15.8 to 25 feet below the river level.

Northern Resources Consulting, LLC (NRC) was contracted to perform the sampling. On April 23, 2018, NRC staff performed grab sampling using a 24-liter van veen grab sampler in accordance with the approach, methods, and protocols described in the approved final draft SAP dated March 15, 2018. Field operations were supervised by HydroCon and Mr. Brian Perleberg (Senior Biologist of NRC), who participated in the sampling along with a field technician on NRC's 27-foot custom weld research vessel.

The sampler was deployed from the front of the NRC sampling vessel. The 24 liter van veen grab sampler directly penetrated into the sediment by the weight of the sampler. During the descent to the bottom, the two buckets are held in open position by the means of a hook. When the grab hits the river bottom the tension on the hook is released and the hook is disengaged. Winching the sampler up forces the bucket to close, which digs into and captures the sediment. The sampler was pushed from 11.75 to 14 centimeters into the surface sediment and then retrieved. The sediment from the sampler was placed into labeled laboratory prepared glass jars using a new pair of nitrile gloves. A portion of the sample was placed in a stainless steel tray for lithologic description and field screening. Between samples the stainless steel tray and sampler were washed with Alconox soap. NRC placed a stake at sediment sample locations SS01 through SS03 for field identification.

NRC placed a portion of each sediment sample into a ziplock bag and provided those bags to HydroCon's field representative for observation and field screening. The sediment consisted of fine sand and low plastic fines with trace to 10% black colored organic material. There was no sheen or petroleum odor observed in any of the samples. PID readings ranged from 0.3 to 9.4 ppmv.

At the completion of sediment sampling NRC picked up the surveyors at the boat launch and took them to the sediment sampling locations where they were able to collect survey location coordinates at each of the sediment sample locations. A copy of the *Surface Sediment Field Sample Record* is included in Appendix E.

Once the surveying was completed NRC performed an extensive exploratory exercise to assess if a hydrocarbon sheen could be produced in the surface sediment along the river by agitating it with a steel rod. The rod was approximately 6 feet in length.

This exercise began downstream of the boat launch at Wenatchee Riverfront Park and ended at the Senator George Sellar bridge. The field technician agitated the sediment as the boat slowly floated downstream (controlled by motor) and watched for a sheen to be produced. No sheen was observed in any of the probe locations. It is estimated that over 300 probes were done by NRC during this exercise. Due to the rapid drop off of the channel from the bank to the river channel only the shallow sediment along the shoreline was probed. Since the depth of the channel of the river is greater than 20 feet there wasn't a practical way to perform this test. The speed of the river flow and limited visibility limited the ability to observe a sheen at depth.

### 5.3.8 Management of Investigation Derived Waste

Soil from drill cuttings and shoreline sampling and water generated during drilling, decontamination, well development and groundwater sampling were placed in separate labeled 55-gallon drums. The drums were staged on the Coleman Oil property pending waste profiling. A total of 21 drums of soil were transported to Greater Wenatchee Regional Landfill on April 25, 2018. A copy of the disposal documentation for 4.17 tons of soil is included in Appendix D. Water generated from well development and groundwater sampling were temporarily contained in labeled drums and transported to the water treatment area for disposal. Water generated by the drilling contractor (from pressure washing/decontamination) was temporarily contained in their utility trailer and was emptied on a daily basis during the drilling program. All water was pumped into the site's water treatment system and discharged, under permit, into the City of Wenatchee's sanitary sewer system.

## 5.4 Product Recovery

Ongoing product recovery at the Site monitoring wells, recovery sumps, and along the Columbia River has continued since initial emergency response measures began following the discovery of sheen in the River. Several remedial measures have been performed to recover product including placement of booms and sorbent socks and pads in the Columbia River; installation of recovery sumps near the release point; and product recovery via pumping and/or sorbent socks in the Site monitoring wells. Through June 3, 2018 a total of 404.30 gallons of product has been recovered at the Site.

Figure 3 shows the product recovery locations and volumes collected through June 2018.

Figure 4 shows the total volume recovered, maximum volume of product recovery intervals (typically a day, but up to 100 days) at each location, and the date of that maximum reading.

Figure 5 plots daily recovery and cumulative recovery for selected locations (Columbia River, Sump #1, Sump #5, MW-8, MW-9, and MW-10).

Figure 6 shows total product recovery as of January 2018 and as of June 2018. With the exception of four locations, less than 10 percent of the total product recovery occurred since January 2018. Exceptions include the Columbia River (18%), MW-10 (41%), BH-1 (85%), and the oil/water separator (OWS, 23%). The source of the product in the OWS was from the cumulative pumping the recovery sumps.

Figure 8 plots river levels at the staff gage near the seepage area and product thickness at wells MW-8, MW-9, MW-10, and BH-1.

A discussion of product recovery is provided in detail below. As summary of product recovery by category (pump, socks, booms) is provided on Table 4. A complete record of product recovered at the Site is provided in Appendix F.

#### 5.4.1 Columbia River

Sheen mitigation on the Columbia River is currently being conducted and will continue until no sheen is present on the Columbia River near the Site. Skirts, booms, and sorbent pads have been placed in the Columbia River and are monitored on a daily basis and adjusted and replaced as necessary since March 2017.

Anchor QEA (Anchor) of Wenatchee, Washington assumed management of the booms and curtains containing sheen on the Columbia River on June 1, 2017. Anchor continued that role until April 21, 2018 when EEC assumed the responsibility. EEC is currently conducting daily inspections of the sorbent pads, skirts, and booms and presence of sheen on the Columbia River. Due to the fluctuating river height throughout the year, EEC is required to adjust the height of the booms and locations of sorbent pads so that they are located on the surface of the river. Sorbent pads or booms that exhibit discoloration or staining are removed from the river and replaced with new sorbent pads and booms. Spent sorbent pads and booms are weighed to calculate the amount of recovered product before they are placed into labeled 55 gallon drums for disposal. As of June 3, 2018 a total of 211.5 gallons of product has been recovered from the Columbia River.

#### 5.4.2 Recovery Sumps

As part of emergency spill response operations, six recovery sumps were installed at the Coleman Oil Property in accordance with the Emergency Spill Response Plan (Farallon 2017a). LNAPL has been observed in three recovery sumps (Sumps #2, #3, and #5) constructed near the point of the release (former fuel loading rack). Pumps were placed in these sumps to remove contaminated groundwater and LNAPL and to reduce product migration by creating a cone of depression. Petroleum impacted groundwater and LNAPL from the sumps was pumped to a temporary water treatment system constructed at the Coleman Oil Property. The sump pumps operated on a daily basis when groundwater was present in the recovery sumps. The groundwater that accumulated in the temporary water treatment system holding tank was treated using an OWS and then passing through activated carbon prior to being discharged under permit to the City of Wenatchee sanitary sewer. The pumps were removed from the sumps due to the lack of product recovery on September 5, 2017 (based on the last date noted for pumping from the sumps to the OWS, Appendix F). Sorbent socks were placed in all the sumps. The socks are routinely inspected and replaced, as needed. As of June 3, 2018 the total amount of product recovered from the sumps is 93.784 gallons. A breakdown of the total includes:

- Sump #1 (12.41 gallons)
- Sump #2 (18.66 gallons)
- Sump #3 (3.28 gallons)
- Sump #4 (0.36 gallons)
- Sump #5 (34.14 gallons)
- Sump #6 (13.57 gallons)
- OWS (11.374 gallons) which is the cumulative total of product produced from the recovery sumps.

#### 5.4.3 Monitoring Wells

Product recovery in the Site monitoring wells has been performed either actively (via pumping utilizing a peristaltic pump attached to a new length of sample tubing) or passively utilizing sorbent socks. The socks have been routinely inspected and changed, as necessary. Pumps were installed in MW-9, MW-10, and BH-1 on May 4, 2018 to maintain drawdown (see Section 5.5.2). As of June 3, 2018 the total volume of product recovered in the wells is 107.879 gallons. A breakdown of the total includes:

- MW-6 (0.93 gallons)
- MW-7 (0.02 gallons)
- MW-8 (14.12 gallons)
- MW-9 (41.61 gallons)

- MW-10 (38.39 gallons)
- MW-11 (1.49 gallons)
- BH-1 (1.96 gallons)
- BH-2 (0.52 gallons)
- BH-3 (0.01 gallons)
- RW-1 (0.01 gallons)

#### 5.4.4 Sheen Discharge Mitigation System

Implementation of an Additional Interim Action (AIA, HydroCon 2018) was performed in February 2018 as part of sheen discharge mitigation in the Columbia River (HydroCon 2018b). Pumps were installed at three existing monitoring wells (MW-9, MW-10, and BH-1) prior to the SRI to control water levels and capture LNAPL before discharging into the Columbia River. Design of this system was derived from the results of aquifer testing discussed in further detail in Section 5.5.2 of this report. Pneumatic bottom loading pumps were installed in the three wells to intercept, contain, and/or stop the discharge of LNAPL to the Columbia River on May 4, 2018. The pumps were placed at elevations in the respective wells that mimic summertime levels (MW-9 and BH-1) when sheen is less prevalent in the River or at depths where optimal product recovery was observed during the aquifer testing (MW-10). The discharge line from each well was plumbed into a trench excavated by Anderson Environmental Contracting (AEC) that terminates at the Coleman Oil facility near the vertical tank farm. The effluent from each well is discharged into separate OWSs. A flow meter has been placed on each discharge line. The volume of petroleum impacted water is measured on a daily basis. The volume of recovered product was measured daily until the week of May 20, 2018. Due to a significantly lower rate of product recovery, the measurement of the volume of product recovered has been transitioned to a weekly basis. All recovered product is placed into labeled drums.

The recovered groundwater discharging from the OWS is passed through a filter and activated carbon prior to being discharged under permit into the City of Wenatchee's sewer system. As of June 3, 2018, the total volume of treated water that has been discharged from the Site is 246,690 gallons.

With the exception of minor equipment problems, the wells have been in operation since May 4, 2018, however, they only operate when water is present at the level of the pump. When the pumps are activated, they pump at a rate of approximately 2 gpm as determined by the hydraulic testing (Section 5.5.2). As such, the pumps achieve the goal of maintaining water levels at target depths and thereby reducing migration to the river.

#### 5.4.5 Volume of Product Released to State Waters

In response to an Ecology letter, dated May 10, 2018, regarding a determination of the volume of product spilled to Washington waters at the Coleman Oil facility, HydroCon (2018c) completed calculations to estimate the volume of product which was released to Washington waters. Due to the absence of confirmation soil samples in the excavation areas near the Storage Building and former Maintenance and Warehouse Building (see Section 3.2), HydroCon extrapolated concentrations from available data. Utilizing information provided by Coleman Oil representatives and information detailed in Farallon's reports related to the Site, HydroCon has estimated the volume of product which has and has not contacted Washington waters, been removed from the Site, and is still unaccounted for. During the first 24 to 48 hours after the spill was confirmed, a total of 30 gallons of product were recovered. Since the first 24 to 48 hours, through June 3, 2018, an additional 383.2 gallons of product have been recovered, for a total of 413.2 gallons of product recovered. In addition, as a result of the excavation completed in the immediate vicinity of the spill release, 703 gallons of product were removed from the Site which did not come into contact with Washington waters (recovered from above the water table). The excavations also removed a total of 1,281 gallons of product which did come in contact with Washington waters (recovered from below the water table).

#### 5.5 Hydraulic Testing

Aquifer testing was conducted in February 2018 and indicated that monitoring wells MW-9, MW-10, and BH-1 yield relatively high flow rates in comparison to the other wells tested (BH-2, BH-3, and RW-1), that exhibited rapid dewatering and slow recovery times. HydroCon returned to the Site on May 21, 2018 to perform slug tests to observe relative flow rates of select wells to assess potential contaminant flow pathways at the Site. The following sections describe these testing events.

##### 5.5.1 Hydraulic Testing – February 2018

Aquifer testing was conducted on February 12-15, 2018. Constant-rate or step-drawdown discharge tests were performed on monitoring wells MW-9, MW-10, BH-1 through BH-3 and recovery well RW-1. Water level monitoring during the testing was performed in each of these wells and included MW-8 and MW-11 utilizing transducers to assess if a hydraulic connection was observed.

The purpose of the aquifer testing was to collect data that could support site conceptual model development for product migration and Interim Action design. Specific objectives included the following:

1. Assess whether or not pumping in the existing monitoring wells can result in immediate cessation of the continued seepage to the river, and

2. Assess if the water levels in the target monitoring wells can be maintained at summertime levels using a temporary pumping infrastructure within the existing monitoring well network, then such pumping should be continued and maintained to prevent continued seepage to the river.

Details of the testing are presented in (HydroCon 2018b).

Of the six wells that were subjected to step-drawdown testing, three of the wells (RW-1, BH-2, and BH-3) could not sustain the initial step pumping rate of 0.25 gallons per minute (gpm) and dewatered after pumping approximately the amount of water stored in the well screen and surrounding sand pack. Wells BH-1, MW-9, and MW-10, however, sustained step flow rates of between 2.0 and 2.5 gpm before water levels reached target elevations. Drawdown was not observed in any nearby monitoring wells during the six step-drawdown tests.

One of the objectives of the tests was to determine if there are observable zones of higher transmissivity. The drawdown results from MW-09, MW-10, and BH-1 are plotted in Appendix G. These plots include the data generated during the final portion of the tests with pumping rates at 2 to 2.5 gpm. As can be seen in the results from MW-10, an inflection in the drawdown plot and the presence of product was observed at Oil was observed 620.5 feet (corresponding to a depth of 25.4 feet) appears to document a zone of higher transmissivity. Similar observations were not observed in MW-09 or BH-1.

Analysis of the data produced with the testing indicates that a pumping rate of 1.75 gpm at the three wells should produce approximately 3.5 feet of drawdown in the aquifer adjacent to the pumping well and the cone of influence would extend out to approximately 100 feet as defined by a drawdown of 0.1 feet. This calculation should be considered as a rough estimate given that the calculation necessitates a number of assumptions, including the thickness of the aquifer, the well efficiencies, and the specific yield. Long-term test pumping of each well would be necessary to better define actual sustainable flow rates.

### 5.5.2 Slug Testing - May 2018

Slug testing was performed on May 21, 2018 to observe relative flow rates of select wells on the Coleman oil property in an attempt to better understand contaminate flow across the Site. Wells included in these tests were wells that were not tested in February 2018 and also did not include wells installed upgradient or cross gradient of the release area. Slug testing included MW-7, MW-8, MW-9, MW-11, MW13, MW14, MW16, MW17, MW19, MW20, MW22, and MW23.

A slug test is a controlled field experiment, to estimate the hydraulic properties of aquifers and aquitards, in which the water level in a control well is caused to change suddenly (rise or fall) and the subsequent water-level response (displacement or change from static) is measured through time in the



control well and one or more surrounding observation wells. Slug tests are frequently designated as rising-head or falling-head tests to describe water-level recovery in the control well following initiation of the test.

Falling-head tests were used to determine relative flow characteristics across the Site. A falling-head test is conducted by rapidly raising the water level in the control well and subsequently measuring the falling water level. Slug-in test is another term for falling-head test. The procedure used is as follows.

The slug for used in the test was 3-inches in diameter and 12-inches long and constructed of galvanized steel. Prior to lowering the slug into the well the initial depth to water was recorded using a water level meter. Immediately following placement of the slug the depth to water was measured to record the displacement created by the slug. Water levels were then collected at one, two, five, and ten minutes after the slug was placed in the well to measure the falling-head response in the well. After 10 minutes the slug was removed decontaminated and the procedure was repeated in another well. Flow rates of high (no displacement recorded), medium (medium displacement and medium falling-head response) to low (large displacement and slow falling-head response) were assigned to each well relative to each other. The results of the slug test are included in this report in Table 5.

The results of the slug tests show that:

- MW-6, MW-11, MW17; MW22 had high flow rates;
- MW-8, MW14, MW16, MW20 and MW23 had medium flow rates; and
- MW-7, MW13, MW19, and MW21 had low flow rates.

The relative flow rates are shown on Figure 7.

The six recovery sumps installed in the 2017 remedial investigation were not tested with slug tests. The product recovery in the sumps may be indicative of relative flow. The product recovered from the sumps through September 5, 2017 ranged from 0.36 gallons (Sump #4) to 34.14 gallons (Sump #5) (see Section 5.4.2). It is possible that sumps with higher product recovery could reflect areas of higher groundwater flow. However, other factors, such as proximity of the top of the bedrock formation, backfill materials used in the area of the different sumps, and construction specifics, could also account for the variability seen in sump product recovery.

## 5.6 River and Well Water Levels

Figure 8 plots river levels at the staff gage near the seepage area and measured water levels in wells MW-8, MW-9, MW-10, and BH-1. The date (May 4, 2018) that drawdown pumping at MW-9, MW-10, and BH-1 is also shown on the figure. Up until the drawdown pumping began, river levels are always

lower than water levels in the wells. There are similarities in the trends in river and water levels, e.g., river and wells levels are the highest in January and February 2018 and lowest in March and April 2018. Once the pumps were turned on, the water levels in MW-10 and BH-1 are generally lower than the river level.

## 5.7 Field Investigation Results

This section describes the results of the field investigations.

### 5.7.1 Subsurface Conditions

Portions of the Site and adjacent roadways where drilling was completed are paved with asphalt that is approximately 3-5 inches thick.

The soil beneath the surface is alluvial deposits consisting primarily of sand, silt, sandy gravel, and gravelly sand. Boulders up to 4 feet in diameter were excavated during trenching activities conducted at the Site in 2017. Alluvial deposits were observed from ground surface to a maximum depth of 31.5 feet bgs at MW15. Generally the alluvial deposits increase in thickness in the north to northeasterly direction from MW12 to MW21.

The Chumstick Formation is present beneath the alluvial deposits at depths ranging from 12 to 35 feet. The formation consists of sandstone, shale, siltstone/mudstone, and conglomerate that is medium to coarse-grained, micaceous feldspathic sandstone averaging 35 to 40 percent quartz and 10 to 15 percent lithic clasts. Cross bedded and channeled, interbedded with lesser amounts of thin pebbly sandstone with and green to bluish shale. (Tabor et. al., 1982). A shaley sandstone and shale with thin interbedding of biotite and organic matter was observed in borings and appears to be consistent with the Nahahum Canyon Unit. The top of the Chumstick Formation encountered at the Site was usually a 1 to 8 foot thick layer of mudstone underlain by 1-6 foot thick layers of sandstone, siltstone and mudstone. The upper portions of the Chumstick has been eroded and weathered. The mudstone is commonly friable and the sandstone is soft and weakly cemented. The underlying mudstone and sandstone appears more massive. The sandstone becomes very dense and strongly cemented with depth exhibiting a cored concrete appearance in the sample cores. This material appears to be acting as an aquitard.

Sandstone was encountered at the top of the formation at MW12, MW13, and MW14. Monitoring well MW22 differs from the sequence above in that the upper 35 feet of this boring consisted of loose silt, sand, gravel, and clay with miscellaneous fill debris consisting of brick, glass, and burnt material. The

Chumstick Formation (siltstone/mudstone) was observed in this boring at 35 feet bgs and extended to the maximum depth explored of 40 feet bgs.

Updated cross sections based on soil borings are shown on Figures 9-12. The ground surface is relatively flat in the east-west direction while the top of the Chumstick Formation slopes to the east between MW16 and the river (280 feet) with a drop in elevation of 30 feet. The ground slopes to the north with a 19 foot drop in elevation between MW12 and MW22 (800 feet). The drop in elevation of the Chumstick Formation is 28 feet between these wells. Columbia River water levels shown on the cross sections correspond to groundwater monitoring events and approximate high and low annual water levels.

### 5.7.2 Groundwater Flow Direction and Gradient

Groundwater levels were measured prior to monitoring well sampling on April 25, 2018 and after sampling on April 27, 2018. Water level measurements were collected for all existing and new wells except MW-1 and MW-3 which were replaced with MW1S and MW3S. MW-1 and MW-3 were replaced because the tops of the well screens were placed at an elevation below the water table. Groundwater elevations are shown on Table 2 and groundwater contour maps are shown on Figure 13 and 14.

On April 25, depth to groundwater ranged from 7.25 feet from the top of monitoring well casing (ft TOC) at MW3S to 27.68 feet below TOC at BH-2. Groundwater levels were not measured on April 25 at MW-5, MW15 and MW18 due to lack of recharge in the wells. Groundwater elevations ranged from 620.05 ft amsl in MW22 to 650.90 ft amsl in MW12. Groundwater flow across the Site was generally to the northeast with a more easterly flow in the southern portion of the Site. The groundwater gradient between MW13, near the middle of the property, and MW22 was 0.0528 ft/ft. The gradient in the southern portion of the Site appears to be flatter, but not quantifiable without measurements from MW-5 and MW15.

Depth to groundwater on April 27 ranged from 7.24 feet from the top of monitoring well casing (TOC) at MW3S to 27.53 feet below TOC at BH-2. Groundwater elevations ranged from 620.05 feet amsl in MW18 to 650.96 feet amsl in MW12. Groundwater flow and gradient north of MW13 are virtually the same as that of April 25. Measurements of MW-5, MW15, and MW18 added definition to the flow direction and gradient between the facility and the river. The groundwater flow direction is to the east-northeast and the gradient between MW-7 and MW15 is 0.46 ft/ft.

As discussed above, results of slug and aquifer testing has shown that some wells at the site have a higher yield than others. In general, wells with higher flow also have had higher product recovery rates. This information suggests that there are preferential pathways in which groundwater and product flow. As shown on the cross sections and documented in the boring logs, the subsurface lithology consists of

alluvium underlain by bedrock. The majority of groundwater flow occurs near the base of the alluvium and in the top of the Chumstick Formation. There's no identified lithologic layer within the alluvium or the Chumstick that is acting as a conduit. What's more likely is that remnant channels and/or fractures within the bedrock are acting as preferential pathways.

## 5.8 Field Screening Results

Field soil screening was used to understand the distribution of impacted soil and to guide sample collection during drilling, soil sampling and sediment sampling. During drilling, field screening was used to select soil samples for laboratory analysis and to define the extent of PCS in the subsurface to confirm field observations.

Field screening consisted of recording visual and olfactory observations, placing a soil sample in water and describing any resultant hydrocarbon sheen, and measuring volatiles with a photoionization detector (PID) while logging soil cores. The field screening results are recorded on the attached boring logs and summarized in the table below. The table lists elevated PID readings (i.e. above 2.0 ppm) and/or intervals with hydrocarbon odors.

## Field Screening Results

Boring ID	Hydrocarbon Odor	PID Readings >2 ppmv @ depth (feet)
HC01	Moderate odor @10' --	395 @ 10' 21.3 @ 13'
HC02	-- --	9.0 at 15' 2.2 @21'
MW1S	--	--
MW3S	Faint odor @10-15'	91 @ 15'
MW12	--	--
MW13	Strong odor @ 3.5-8'	5.4 -1,271 @ 3.5-12''
MW14	Slight to moderate odor @ 11.5-14'	8.1-1492 @ 10-17'
MW15	--	--
MW16	--	--
MW17	Moderate to strong odor @ 10-17'	2.1-1261 @ 13-30'
MW18	--	--
MW19	Moderate odor @ 17.5-21' Slight odor @ 25'	2.1-551 @ 15-25'
MW20	-- --	15-77.8 @ 12-15' 63.2-297 @ 23.5-26'
MW21	--	9.1-205 @ 24-28'
MW22	Free product @ 31.5 Moderate odor @ 33-34' Moderate Odor @ 35-40'	94-279@30-40'
MW23	Faint to moderate odor @ 5-14'	5.6-70 @ 8-12'

**Notes:**

-- = PID reading of 2 ppmv or less and/or no hydrocarbon odor recorded

Elevated PID readings were generally observed just above the contact with the Chumstick Formation and generally extended one to three feet vertically into the formation. The elevated PID readings were generally observed along the bedding planes in the mudstone and/or friable zones and diminished when it came into contact with the deeper cemented sandstone. The elevated PID readings also coincided with the occurrence of the groundwater table which also was observed in close proximity to the contact between the alluvium and the Chumstick lithologic units.

## 5.9 Analytical Results

Summary analytical results are provided in Tables 6-8. The laboratory analytical reports and chain-of-custody records are provided in Appendix H. The laboratory results are compared to the MTCA Method A cleanup levels (CUL) for soil and groundwater. The following sections describe the results of the testing.

### 5.9.1 Soil Analytical Results

Borehole soil analytical results for total petroleum hydrocarbons (TPH and BTEX) are reported as milligrams per kilogram (mg/kg) and are summarized in Table 6 and Figure 15. In the following discussion, soil sample IDs are in the form of HCxx-zz and MWxx-zz where xx is the location and zz is the depth, in feet. The sample concentrations are compared to the MTCA Method A cleanup level (CUL) unless otherwise noted.

GRPH was detected in 20 of the 55 samples collected at concentrations above the laboratory method reporting limit (MRL, Table 6). Of these, 15 samples exceeded the CUL of 30 mg/Kg. Detected concentrations ranged from 7.99 mg/Kg to 4,180 mg/Kg (MW22-30).

DRPH was detected in 20 of the 55 samples collected at a concentration above the laboratory MRL (Table 6). Four samples exceeded the CUL of 2,000 (HC-1-12, MW13-10, MW19-18, and MW22-30). Detected concentrations ranged from 26.6 mg/Kg to 45,700 mg/Kg (MW22-30)

ORPH was detected in 11 of the 55 samples collected above the laboratory MRL. Two samples exceeded the CUL of 2,000 mg/Kg (MW13-05 and MW22-30). The concentration at MW22-30 is estimated as the method detection limit exceeds the CUL.

Benzene was detected in 6 of the samples collected at concentrations above the laboratory MRLs (Table 6). Four samples exceeded the CUL of 0.03 mg/kg (MW1S-20, MW13-05, MW12-10, and MW22-30)

CULs for toluene, ethylbenzene, and xylenes were exceeded at MW13-05 and for ethylbenzene and xylenes at MW22-30.

Five soil samples, MW3S-15, MW14-5, MW14-10, MW14-15, and MW14-25, were analyzed for VOCs by EPA Method 5035A/8260C (Appendix H, Laboratory Reports A8D0237 and A8D0237). None of the 66 analytes were detected MW3S-15, MW14-5, or MW14-25. Low concentrations of gasoline related compounds were detected at concentrations below CULs in MW14-10 (sec-butylbenzene and 4-isopropyltoluene) and MW14-15 (n-butylbenzene, sec-butylbenzene, 4-isopropyltoluene, and n-propylbenzene).

### 5.9.2 Shoreline Soil

Shoreline samples were analyzed for GRPH, DRPH, ORPH and BTEX (Table 6 and Figure 16). GRPH, DRPH and ORPH concentrations exceeded CULs in Samples SL01, SL02, SL03, and SL04. GRPH concentrations ranged up to 2,580 mg/Kg and DRPH concentrations ranged up to 39,400 mg/Kg.

### 5.9.3 Sediment Samples

Sediment samples were analyzed for GRPH, DRPH, ORPH, and BTEX (Table 7 and Figure 17). GRPH was not detected, DRPH concentrations ranged up to 842 mg/kg, and ORPH concentrations ranged up to 392 mg/kg. These samples were also run with acid/silica gel cleanup to remove non-petrogenic hydrocarbons which resulted in non-detects below the CUL for ORPH and slightly higher concentrations for samples with diesel detections.

Ecology has published sediment management standards (SCUM II 173-204 WAC). Sediment cleanup objectives (SCO) for diesel and residual range TPH have been established. The SCO for diesel (320 mg/kg) has been exceeded in two sediment samples (SS01-13.97cm and SS02-11.75cm) There are no published SCO's for BTEX or GRPH.

### 5.9.4 Groundwater Monitoring Well Analytical Results

Twenty-five existing and new wells were sampled April 24 through 26, 2018. Wells MW-1 and MW-3 were replaced with MW1S and MW3S and not sampled. Wells MW15 and MW18 were not sampled due the lack of sufficient water in the wells.

Groundwater analytical results from monitoring wells for TPH, VOCs, lead, and PAHs are reported as micrograms per liter ( $\mu\text{g/L}$ ) and are summarized in Tables 8 and 9 and Figure 18.

GRPH was detected in 16 of the 25 samples collected at concentrations above the laboratory method reporting limit (MRL, Table 8). Of these, 15 samples exceeded the CUL of 800  $\mu\text{g/L}$ . Detected concentrations ranged from 172  $\mu\text{g/L}$  to 40,900  $\mu\text{g/L}$  (MW13). Monitoring MW13 is located in the

footprint of Tank Farm B and immediately north of the Control Valve Building (Figure 2a). The product line piping has been removed from the Control Valve Building but the pumps remain. Petroleum staining and sorbent pads are present inside the Building. Further investigation is required to characterize the nature and extent of GRPH at MW13.

DRPH was detected in 18 wells above laboratory MRLs. Fifteen samples exceeded the CUL of 500 µg/L. Detected concentrations ranged from 330 µg/L to 9,360 µg/L (BH-2). Concentrations above 2,000 µg/L were present at BH-2, MW-9, and MW22.

ORPH was not detected in any of the samples above the MRL.

Benzene, toluene, ethylbenzene, and xylenes were analyzed for each sample. Benzene exceeded the CUL at MW13, MW14, and MW20. Toluene and xylenes exceeded the CUL at MW13.

Naphthalene, MTBE, EDB, and EDC was analyzed for in three samples and there were no CUL exceedances (Table 8).

Total lead was analyzed in five samples and there were no exceedances of the CUL.

Polynuclear aromatic hydrocarbons (PAHs) were analyzed in samples from MW21 and MW22. MTCA Method A cleanup levels are only available for naphthalene and benzo[a]anthracene. The naphthalene concentration 692 µg/L exceeded the 160 µg/L CUL at MW22 and this was the highest concentration of any PAH. When establishing and determining compliance with cleanup levels and remediation levels for mixtures of carcinogenic PAHs (cPAHs) under MTCA Cleanup Regulation (WAC 173-340-708(8)(e)), the mixture is considered a single hazardous substance. The Toxicity Equivalency Factor (TEF) was calculated for the two samples per Ecology's Focus Sheet<sup>3</sup>. One-half the detection limit used for non-detected concentrations. The TEFs are shown on Table 9. Neither sample exceeds the benzo(a)pyrene reference cleanup level of 0.1 µg/L.

Three groundwater samples, MW3S, MW14, and MW17, were analyzed for VOCs by EPA Method 5035A/8260C (Appendix H, Laboratory Report A8D0907). None of the 66 analytes were detected in MW3S. In MW14, benzene, sec-butylbenzene, ethylbenzene, isopropylbenzene, 4-isopropyltoluene, naphthalene, and n-propylbenzene were detected; benzene exceeded the CUL. In MW17, benzene, n-

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<sup>3</sup> <https://fortress.wa.gov/ecy/clarc/FocusSheets/tef.pdf>



butylbenzene, sec-butylbenzene, ethylbenzene, isopropylbenzene, naphthalene, n-propylbenzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, m,p-xylene, and o-xylene were detected; no detections exceeded CULs.

## 5.10 Data Quality Review

Laboratory testing of soil and groundwater resulted in six laboratory reports including Apex Labs Work Orders A8D0007, A8D0237, A8D0535, A8D538 (borehole soil), A8D0907 (monitoring well groundwater), and A8D0914 (shoreline soil). The data review reports are included in Appendix I. The review of the analytical results included the following:

- Holding Times & Sample Receipt
- Surrogate Compounds
- Associated Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- Associated Laboratory Duplicate
- Laboratory Control Sample/ Laboratory Control Sample Duplicates (LCS/LCSD)
- Method Blank
- Field Duplicates
- Target Analyte List
- Reporting Limits (MDL and MRL)
- Reported Results

The full *Data Validation Reports* are included in Appendix I and are summarized in the following paragraphs.

### A8D0007 – Borehole Soil

Data were qualified due to matrix interference, compound identification issues, and/or LCS/CCV recoveries. No data were rejected and completeness was 100 percent. All results are usable for their intended purpose.

### A8D0237– Borehole Soil

Data were qualified due to matrix interference, compound identification issues, and/or LCS/CCV recoveries. No data were rejected and completeness was 100 percent. All results are usable for their intended purpose.

### A8D0535– Shoreline Soil

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Data were qualified due to surrogate recoveries, and/or compound identification issues. No data were rejected and completeness was 100 percent. All results are usable for their intended purpose.

#### A8D0538 – Borehole Soil

Data were qualified due to surrogate recoveries and/or laboratory duplicate RPDs. No data were rejected and completeness was 100 percent. All results are usable for their intended purpose.

#### A8D0907 – Monitoring Well Groundwater

Data were qualified due to matrix interference, compound identification issues, and/or LCS/CCV recoveries. No data were rejected and completeness was 100 percent. All results are usable for their intended purpose.

#### A8D0914 – Shoreline Sediment

Data were qualified due to matrix interference, compound identification issues, and/or LCS/CCV recoveries. No data were rejected and completeness was 100 percent. All results are usable for their intended purpose.

Appendix I identifies all data qualifies and the reasons for qualification. Aside from the data quality issues identified above and the Appendix, the data quality review identified no concerns with respect of the quality of usability of the data presented herein.

### 5.11 Adjacent Properties

HydroCon conducted additional review of neighboring properties using regulatory database information provided by EDR<sup>4</sup>, a contract information services company. The purpose of the records review was to identify recognized environmental concerns (RECs) in connection with the Site and the surrounding area. Information in this section is subject to the accuracy of the data provided by the information services company and the date at which the information is updated, and the scope herein did not include confirmation of facilities listed as "unmappable" by regulatory databases. In addition, to the

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<sup>4</sup> EDR Inquiry Number 5228549.2s, March 21, 2018

EDR data base review, Sanborn maps, historic air photos, historic city directories, historic topo maps, review of the of Ecology databases, and a records request with the Ecology regarding the Burlington Northern railroad site and a former Unocal service station were reviewed.

The following summarizes facilities reviewed near the Site and additional details are provided in *Offsite Facility Reviews* in Appendix J. Locations of the facilities are shown on Figure 19.

### Listed Facilities

Facility Name And Location	Estimated Distance/Direction/Gradient	Database Listings
Wenatchee Substation 514 Worthen St	Approximately 405' / North / Down-gradient	FINDS, ALLSITES, RCRA NONGEN/NLR, ECHO
Hamptons Auto Repair 601 S Wenatchee Ave	Approximately 659' / West / Cross-gradient	EDR HIST AUTO
Goodyear Tire Wenatchee 703 S Wenatchee Ave	Approximately 707' / Southwest / Up-gradient	ALLSITES, UST
Beryl A Comm 610 Wenatchee Ave	Approximately 739' / West / Cross to up- gradient	ALLSITES, UST, SWRCY
Dwight Cash Inc 600 S Wenatchee Ave	Approximately 753' / West / Cross-gradient	FINDS, ALLSITES, INACTIVE, DRYCLEANERS, RCRA NONGEN/NLR, ECHO
Jerrys Auto Parts 604 S Wenatchee Ave	Approximately 756' / West / Cross-gradient	ICR, FINDS, ALLSITES, UST, CSCSL, NFA
Dick's/Wolfe Service Inc. 730 S Wenatchee Ave	Approximately 975' / Southwest / Up-gradient	FINDS, ALLSITES, CSCSL, UST, NFA, IRC
Chuck's Auto Repair 500 S Wenatchee Ave	Approximately 995' / Northwest / Cross to down-gradient	FINDS, ALLSITES, UST, CSCSL, NFA, IRC
BNSF Wenatchee Rail yard 409 S Columbia Street	Approximately 1110' / Northwest / Down to cross-gradient	FINDS, ALLSITES, CSCSL, LUST, SPILLS, HSL, NPDES, UST, IRC
Chevron 94484 759 S Wenatchee Ave	Approximately 1156' / Southwest / Up-gradient	ALLSITES, UST
UNOCAL Service Station 4942 405 S Wenatchee Ave	Approximately 1322' / Northwest / down to cross-gradient	FINDS, ALLSITES, VCP, UST, CSCSL, NFA

Of the above facilities, the Wenatchee Substation and BNSF Wenatchee Rail Yard have the potential to be RECs for the Coleman property. The Wenatchee Substation has continually operated as an electrical substation from at least the early 1900s to the present. A search of Ecology website and databases did not return any data for this site. However review of the Sanborn maps from 1921, 1928, 1947, and 1949 indicate an above ground storage tank labeled as "Gas Holder" and boilers powered by oil and coal fuel. The 1949 and 1958 Sanborn maps also show a gas tank and associated pump. The

historic burning of coal oil and other fuel oils at this facility may be the source of the heavy oil found in MW22.

The BNSF Wenatchee Rail Yard is located 1,100 feet northwest of the Coleman property. Ecology cleanup site details sheet states that a diesel release has been confirmed to soil and groundwater. Groundwater continues to be monitored at the site. Kennedy/Jenks (2017) shows the diesel groundwater plume to be under the rail track immediately west of the Wenatchee Substation and the Watten Fresh facility immediately to the north. Abandoned diesel USTs are shown south of the plume. Groundwater elevation contours for May and September 2017 show groundwater flowing north-northeast, perpendicular to the orientation of the rail tracks. Concentrations of diesel and/or heavy oil exceeded Method A CULs in two of the seven wells monitored in 2017. Groundwater monitoring includes analysis of DRPH with acid/silica gel clean-up methods (Kennedy/Jenks 2017). Ecology generally does not approve of the acid/silica gel clean-up procedure (Ecology 2016) and the use of this procedure at BNSF may be masking the effects of polar compounds that may be migrating onto the Site.

The soil samples at MW22 differed from the typical sequence observed in all other borings. The upper 35 feet of this boring consisted of loose silt, sand, gravel, and clay with miscellaneous fill debris consisting of brick, glass, and burnt material and free product resembling black oil at 31.5 feet bgs. These materials and contamination do not appear to be related to the Coleman Oil Property or operations.

A sample of the product collected from MW22 was assessed by Apex Laboratory's forensic chemist (Mr. Kurt Johnson) and a write up is included in Appendix K. Results of the evaluation indicates that the product is derived from coal tar and it does not contain R99 Renewable Diesel. Therefore, it appears that the plume emanating from the Coleman Oil Site terminates south of MW22 and the product observed in MW22 is not from Coleman Oil.

In an effort to identify potential offsite sources and further refine the lateral extent of contamination, HydroCon drilled five borings (MW12, MW3-S, MW13, MW14, and MW16) along the west property line. There was no detection of GRPH, DRPH, ORPH, or BTEX (Site COCs) in the samples collected from MW12 and MW16 above their respective MRLs.

Boring MW3S is located next to MW-3, which had an elevated PID reading (4,992 ppmv) at 10' bgs. HydroCon observed a faint petroleum odor and elevated PID readings (91 ppmv) at 15 feet bgs and a sample (MW3S-15) was collected. This sample was analyzed for the Site COCs as well as the full list of VOCs. GRPH was detected at a concentration of 83 mg/kg. There were no VOCs detected in the sample above their respective MRL.

Elevated PID readings, gasoline odors, and exceedances of gasoline CULs in soil and groundwater were observed in borings MW13 and MW14. MW13 is located within the footprint of former Tank Farm B and near (north) of the Valve Control Building. MW14 is located in between MW13 and MW16. Since MW13 was drilled near potential sources on the Site HydroCon submitted four samples from MW14 for additional VOC analysis (MW14-5, MW14-10, MW14-15, and MW-25). Low concentrations of gasoline related compounds were detected in MW14-10 (sec-butylbenzene and 4-isopropyltoluene) and MW14-15 (n-butylbenzene, sec-butylbenzene, 4-isopropyltoluene, and n-propylbenzene). Additional investigation is required to evaluate the source and extent of gasoline in this area.

### 5.12 Ecology Well Logs and Local Water Supply

Chelan County PUD's primary water supply is a wellfield located in the Rocky Reach Aquifer just north of Rocky Reach Dam on the east side of the Columbia River (City of Wenatchee, 2012). Rocky Reach Dam is located 8 miles north of the City of Wenatchee. The wellfield is pumped by four wells over 200 feet deep. This source has excellent water quality and quantity. It serves Chelan PUD, City of Wenatchee, and East Wenatchee Water District customers through a regional pipeline. Chlorine is added for disinfection at the well site, located east of Rocky Reach Dam).

A review of well logs maintained by Ecology (2016) indicates 139 wells in the area on the west side of the Columbia River in the area indicted on Figure 20. Ecology uses three classifications for wells in the database: Water Supply Wells, Resource Protections Wells, and Abandoned Wells. All but two of the wells are identified as Resource Protection Wells. The other two are registered as Water Supply Wells and these well logs are included in *Offsite Well Logs* in Appendix L. The wells logs indicate that neither of the wells are water supply wells; one of the wells (MASCO Corp, 1998) located at 5400 Worthen Street is a monitoring well (Resource Protection Well), and the other (Howard, Leonard, 2013) located 1434 Sunset Hwy was abandoned ("Casing pulled and well decommissioned").

The water supply for the City of Wenatchee and lack of water supply wells in the immediate area of the Site strongly indicate that there are no groundwater users in close proximity of the Site.

### 5.13 Terrestrial Ecological Evaluation

A Terrestrial Ecological Evaluation (TEE) must be completed any time contaminants could harm plants, soil biota, and wildlife (known as ecological receptors) that live in the environment (WAC §173-340-7490). The Site does not qualify for an exclusion using Ecology criteria (contaminants are located above the 6 foot depth conditional point of compliance; all contaminants not covered by buildings, streets or other physical barriers; there is more than 1.5 acres affected; and contaminant concentrations exceed background levels). A Simplified TEE was conducted for the site by Loowit Consulting Group, LLC (Appendix M). Using the scoring system of MTCA Table 749-1, the TEE can be

ended and no further evaluation is required. As such, the applicable CULs for all portions of the site are the MTCA Method A CULs.

## 6.0 CONCEPTUAL SITE MODEL

This section presents a conceptual understanding of the Site and identifies potential or suspected sources of hazardous substances, types and concentrations of hazardous substances, potentially contaminated media, and actual and potential exposure pathways and receptors.

### 6.1 Sources

The primary source investigated with this SRI is the R99 Renewable Diesel release discovered as a sheen in the Columbia River on March 17, 2017. Investigation results also indicate a gasoline release in the central eastern portion of the property with the highest concentrations observed at MW13. The source of this release has not been determined. Historical releases of gasoline have been documented near Tank Farm A in 2010 and at UST in 2013. Ecology issued a No Further Action determination for these two releases in 2015 (see Section 3.1). The distribution of the fuels in soil and groundwater and sediments at the Site are discussed in the following section. A dry well located in the central portion of the site was excavated and sampled (Farallon 2017). Confirmation samples resulted in GRPH detections exceeding CULs in the excavation side walls and bottom (Section 3.2). MW23 was drilled in this approximate location, also with GRPH concentrations exceeding CULs at depths of 8 and 12 feet. Groundwater concentrations at MW23 did not exceed CULs. Unexcavated soil may be a source of contamination in this area.

### 6.2 Areal and Vertical Extent of Soil, Groundwater and Sediment Impacts

This section reviews the areal contaminant distribution and subsurface migration pathways.

#### 6.2.1 Areal Contaminant Distribution

Diesel and gasoline range hydrocarbons exceeding MTCA Method A cleanup levels are present in subsurface soil, groundwater, shoreline soils, and shoreline sediments. R99 Renewable diesel in groundwater extends from the release area to the north-northeast to approximately MW22, a distance of 550 feet. Soil is impacted by diesel transported by groundwater. Shoreline soil and shoreline sediments are impacted by groundwater discharging to the Columbia River approximately 400 feet north of the release area. Gasoline range hydrocarbons extend to the area of impact south of the release area (MW13 and MW01S) and are likely due to historic releases not associated with the R99 Renewable diesel release. Monitoring well MW13 is located within the footprint of former Tank Farm B and next to (north) of the Control Valve Building. Both of these site features had historic handling of gasoline and other petroleum products. Gasoline range hydrocarbons are also present in soil and groundwater downgradient of the R99 Renewable diesel release area. The current extent of

subsurface soil, groundwater, and shoreline soils impacted for diesel and gasoline range hydrocarbons is shown on Figure 21.

Gasoline and diesel impacts to soil and groundwater at MW22, the northernmost monitoring well, are interpreted to be due to a source not associated with the operations at Coleman Oil Company.

## 6.2.2 Contamination Sources

Sources of contamination at the site can be placed into 4 separate categories (known releases, suspected releases, historic releases, offsite sources). Details of known contamination and potential offsite sources have been discussed above. A discussion of each category is provided below.

### Known Releases

- In June 2010, 180 gallons of unleaded gasoline was released from a leaking valve control box on the southern portion of Tank Farm A.
- In May 2013, 200 gallons of gasoline was released while the UST on the eastern portion of the Site that supplied fuel to the retail sales card lock fuel island was being filled. Ecology issued an NFA determination in March 13, 2015 for the site. It should be noted that improper monitoring well construction in two of the wells installed to monitor the gasoline releases (MW-1 and MW-3) may have provided groundwater data that wasn't representative of actual groundwater conditions. This instigated the installation of monitoring wells MW1-S and MW3-S. It's possible that a mass of gasoline impacted soil remains at the site near the 2010 and 2013 releases and may require further remediation.
- On March 17, 2017, the Wenatchee Fire Department reported the presence of a sheen and petroleum odor on the Columbia River near the site. Results of investigation and line tightness testing indicated that an estimated 4,543 gallons of R99 biodiesel was released from a broken fuel line. Ongoing characterization and product recovery measures are being implemented at the site for this release.

### Suspected Releases

A high concentration of GRPH and benzene has been observed in soil and groundwater samples collected at monitoring well MW13. This well is located within the footprint of former Tank Farm B and adjacent to (north) and downgradient of the Control Valve Building that housed pumps used to load fuel into the storage tanks. Further investigation in this area is warranted to assess the nature and extent of GRPH impacts to the subsurface.



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## Historic Releases

The site has operated as a bulk fuel facility since 1921. Little is known about historic operations. However, it is likely that handling, storage, and distribution of fuel resulted in spills, leaks, and accidents over the operational history of bulk fuel facilities. This is supported by forensic review of chromatograms that identified several petroleum fuels types in the subsurface other than R99 Renewable diesel including degraded diesel, gasoline, bunker C, and oil.

## Offsite Sources

Two adjacent properties that have had known releases and/or handled petroleum products near the subject site include the Wenatchee Substation 514 and the BNSF railroad.

## Former Dry Well

The dry well, located in the east-central portion of the site, was sampled on April 3, 2017. Five samples were collected at depths of 3-5 feet. The deepest sample collected at the bottom of the excavation had a concentration of 2,400 mg/Kg DRPH and 2,000 mg/kg ORPH. HydroCon installed monitoring well MW23 at the presumed location of the dry well based on Farallon figures.

### 6.2.3 Contaminant Migration within the Subsurface

The quality of the borehole core and sample recovery has greatly improved the understanding of contaminant migration in the subsurface at the Site. HydroCon has developed several graphics to illustrate subsurface conditions with this data.

Alluvial deposits are underlain by the Chumstick Formation bedrock. The thickness of the alluvial deposits ranges from 6 to 31.5 feet. Boring logs and drilling observations indicate that a more massive, well cemented sandstone layer is beneath thin layers of mudstone, shale and sandstone and the sandstone appears to be acting as an aquitard in this area. Cross sections are included as Figures 9 through 12 and show the contact between the alluvial deposits and the underlying Chumstick Formation, groundwater levels in April 2018, and the distribution of contamination based on field observations (PID, odor, sheen). These figures demonstrate that the groundwater level is within a few feet of the top of the Chumstick Formation and always above the sandstone layer. An exception is at MW22 where the groundwater is approximately 15 feet above the top of the Chumstick Formation. This area has been disturbed by previous excavation and has been backfilled with construction and other debris.

Six recovery sumps were installed prior to backfilling the remedial excavations during April to June 2017. The remedial excavation was reportedly advanced to bedrock and then backfilled although there's no report documenting the remedial action or installation of the sumps. As shown on the attached logs, the total depth of the sumps ranges from 13 to 20 feet bgs. Pumps were installed in the sumps to recover R99 Diesel Product and maintain a cone of depression in groundwater near the point of release. Initially, the highest recovery of product was at Sump #1 and Sump #2 which are both downgradient and nearest the point of release. Both of these sumps are 13 feet deep. As the water level dropped by pumping (and seasonally) product recovery became more prevalent in the deeper sumps (Sump #2, Sump #5 and Sump #6). The sumps with the most consistent recovery of product was Sump #5 and Sump #6, both of which are located the furthest downgradient from the point of release and are the deepest (20 and 18 feet, respectively). The observation and recovery of product in the sumps follows a similar pattern as what is seen in the downgradient wells with product following the top of the bedrock (Chumstick Formation).

Groundwater flow is generally parallel with the Chumstick Formation as illustrated on Figure 22 which plots the top of the sandstone layer and the April 27 groundwater surface. The groundwater flow direction and the dip of the sandstone surface are both to the north, northeast except in the region between the Property and the Columbia River where both are more to the east. Groundwater levels are approximately 10 feet above the Sandstone. The depth of the top of the sandstone estimated in the easternmost wells (MW15 and MW18) as the boreholes did come in contact with the top of the formation, but not the underlying the sandstone.

Using the survey information of the wells, HydroCon created a plot of the top of the Chumstick Formation, the total amount of product recovered from the wells, and the relative flow rates of the wells obtained from the hydraulic testing at the Site (Figure 23). A correlation can be made between the contours of the bedrock and the presence of LNAPL in individual wells downgradient (north) of the loading rack (point of the release). As shown on the figure, wells with higher flow rates have generally had the most product recovered. A similar relationship between flow rate and product recovery may be present at the recovery sumps as discussed in Section 5.5.2.

Contaminant transport and groundwater flow appears to follow the surface of the Chumstick Formation and field observations paired with analytical data suggest that the petroleum contamination penetrates a few feet into the formation and travels laterally within the shaley sandstone and shale/siltstone/mudstone of the Chumstick Formation. Beginning at the point of release, product migrated downward via gravity until it reached groundwater. Downgradient migration appears to be controlled by geology (bedrock) along preferential pathways within the subsurface that are likely fractured and/or channelized areas within the Chumstick Formation and areas of different porosity in the overlying alluvium. These pathways appear to be complex and localized based on the intermittent

presence of LNAPL in monitoring wells installed near the Columbia River near the observed sheen discharge area and where the four seeps are located. A conceptual model of the flow is shown on Figure 24. This is reinforced by the aquifer testing performed in February 2018 that demonstrated that none of the wells tested are hydraulically connected. However, over 200 gallons of R99 (based on product recovery totals) has made its way into the Columbia River with the apparent discharge points being west of monitoring wells BH-2 (south) to MW-10 (north).

### 6.3 Chemicals and Media of Concern and Cleanup Levels

The COCs for the Site are those compounds that were detected at concentrations exceeding their respective CULs. The COCs and the media where the COCs were detected above the respective CULs are listed below:

- GRPH, DRPH, and BTEX in soil
- GRPH, DRPH, ORPH, benzene, toluene, and xylenes in groundwater
- DRPH and ORPH in sediments

The selected cleanup alternative must comply with the MTCA cleanup regulations specified in WAC §173-340 and with applicable state and federal laws. The CULs selected for the Site and Property are equivalent and consistent with the RAOs, which state that the ultimate RAO is to reduce risks to human health and the environment to levels suitable for Ecology to make a determination of NFA for the Site. Achieving the interim RAO will enable Ecology to issue a Property-Specific NFA. The associated media-specific CULs for the identified COCs are summarized in the following sections.

The proposed CULs for soil and groundwater beneath the Site are generally the MTCA Method A CULs for Industrial Land Use (see Section 2.1) for COCs that have a Method A cleanup level. If there is no promulgated Method A cleanup level for a given chemical or medium, the proposed cleanup level is the MTCA Method B Standard Formula Value for carcinogenic or noncarcinogenic compounds, depending on the carcinogenic properties of the compound.

The CULs for the media and COCs include those that have been detected in soil (Table 6), groundwater (Tables 7 and 8) and sediment (Table 6) above the CULs. The soil and groundwater CULs are summarized in the tables below, including the source of the cleanup level.

### Proposed CULs for Soil

Chemicals of Concern	Cleanup Level (mg/kg)	Source
GRPH <sup>1</sup>	30	MTCA Method A, Industrial; WAC §173-340-745(3)(b)(i)
DRPH	2,000	
Benzene	0.03	
Toluene	7	
Ethylbenzene	6	
Xylenes <sup>2</sup>	9	

<sup>1</sup>For all gasoline mixtures with benzene included

<sup>2</sup>For total xylenes: ortho-, meta-, and para-isomers

### Proposed CULs for Groundwater

Chemicals of Concern	Cleanup Level (µg/L)	Source
GRPH <sup>1</sup>	800	MTCA Method A; §173-340-720(3)(b)(i)
DRPH	500	
ORPH	500	
Benzene	5	
Toluene	1,000	
Ethylbenzene	700	
Xylenes <sup>2</sup>	1,000	
Naphthalenes <sup>3</sup>	160	

<sup>1</sup>When benzene is present in groundwater

<sup>2</sup>For total xylenes: ortho-, meta-, and para-isomers

<sup>3</sup>Value is for total of naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene

DRPH and ORPH were detected in sediment samples (Table 6). The Freshwater Sediment Cleanup Objectives and Cleanup Screening Levels for protection of the benthic community for Diesel are 340 mg/kg and 510 mg/kg, respectively (WAC §173-204-563 - Table VI).

#### 6.4 Site Definition

Based on the findings from the investigations conducted by HydroCon and others, the Site is defined as petroleum-contaminated soil and groundwater exceeding the MTCA Method A Industrial CULs and as shown in Figure 20, titled “Site Boundary Definition”. In addition, Columbia River sediments are impacted 400 feet north of the release area.

#### 6.5 Preliminary Exposure Assessment

The following is a review of exposure pathways and receptors identified for the Site based on currently available data.

### 6.5.1 Soil-to-Groundwater Pathway

Analytical testing of groundwater samples indicates that contamination of groundwater via the soil leaching pathway and is considered to be complete.

### 6.5.2 Direct Contact Pathway

Direct contact with soil and groundwater exhibiting concentrations of petroleum hydrocarbons in excess of the CULs is limited to human receptors who come into close contact with the media via direct exposure, including dermal contact or ingestion of excavated soil or groundwater. The standard point of compliance for soil contamination beneath a Site is approximately 15 feet bgs, which represents a reasonable estimate of the depth that could be accessed during normal Site redevelopment activities (WAC §173-340-740[6][d]). Most of the impacted soil at the Site is at a depth of 15 feet or more. Boring locations where soil concentration exceeded MTCA Method A CULs include MW-6 (10.3 and 12 ft), MW-11 (13.2 ft), MW13 (5 and 10 ft), and MW14 (10 ft). Surface soil in the area of MW13 may be impacted. Each of these locations are within the Coleman Oil property, which is secured with fencing. Until such time as the contaminated soil and groundwater are removed or remediated, or an institutional control limiting direct contact is implemented, the direct contact pathway is a potentially viable exposure pathway.

### 6.5.3 Vapor Pathway

Volatile COCs have been identified in soil, however no soil gas samples have been collected. There are no current structures on the Coleman Oil property, except the valve control building, but structures could be built in the future. The vapor intrusion exposure pathway is considered to be potentially complete at the Site.

A telephone conversation with the PUD on September 3, 2018 revealed that a portion of one of the buildings has a basement used for equipment storage. With product observed in MW-9 at a depth of 21.5 feet bgs, the bottom of the basement is likely less than 15 feet (EPA screening guidance adopted by Ecology) above the product level. As such, this building may be subject to vapor intrusion.

### 6.5.4 Surface Water/Sediment Pathway

Migration of contaminants to the Columbia River via groundwater discharge has been demonstrated at the Site. In addition, concentrations in two sediment samples exceeded the Freshwater Sediment Cleanup Objectives and Cleanup Screening Levels for protection of the benthic community for Diesel. Therefore, this pathway is considered complete.

### 6.5.5 Groundwater/Drinking Water Pathway

Groundwater in the vicinity of the Site is not developed as a drinking water resource and is not likely to be developed in the future due to a well-established municipal water supply system. HydroCon reviewed registered water wells on the Ecology website, which revealed that there are no water supply wells in the vicinity of the Site. While adverse impacts to shallow groundwater in the immediate vicinity of the Site have been confirmed, there is no potential for adverse impacts to the municipal water supply or private wells from contaminants migrating from the Property. However, there is a potential for future potable water supply since it cannot be eliminated by criteria of salinity or yield as specified under MTCA.

### 6.6 Potential Data Gaps

The nature and extent of contamination and contaminate migration has been sufficiently determined for the purposes evaluating feasibility level remedies. Additional work described below will help refine remedial alternatives

Additional work needs to be done in areas where the 15-foot compliance point is present (diesel release and gasoline area), particularly the gasoline impacted area near MW13. Further investigation is needed in this area to determine the lateral and vertical extent of impacts. A sampling plan for this area is included in the Additional Interim Action #3 Work Plan included in Appendix N.

Additional exploration in Chehalis Street between MW-16 and MW-17 would assess the magnitude of migration in this area and may eliminate the flow vector west of MW-17 toward MW-10 shown on Figure 23. This work is currently in progress.

More exploration on Worthen Street between MW22 and BH-2 is necessary to further evaluate the migration pathway to the river in this area. This work is currently in progress.

Additional sampling of shoreline soil and sediment is needed to define the extent of impacts. A sediment sampling plan is included in the Additional Interim Action #3 Work Plan included in Appendix N.

A groundwater monitoring program with location for monitoring, schedule, and analytical parameters is being prepared under separate cover.

More testing is needed to evaluate groundwater pumping and treatment options/design.

## 7.0 REFERENCES

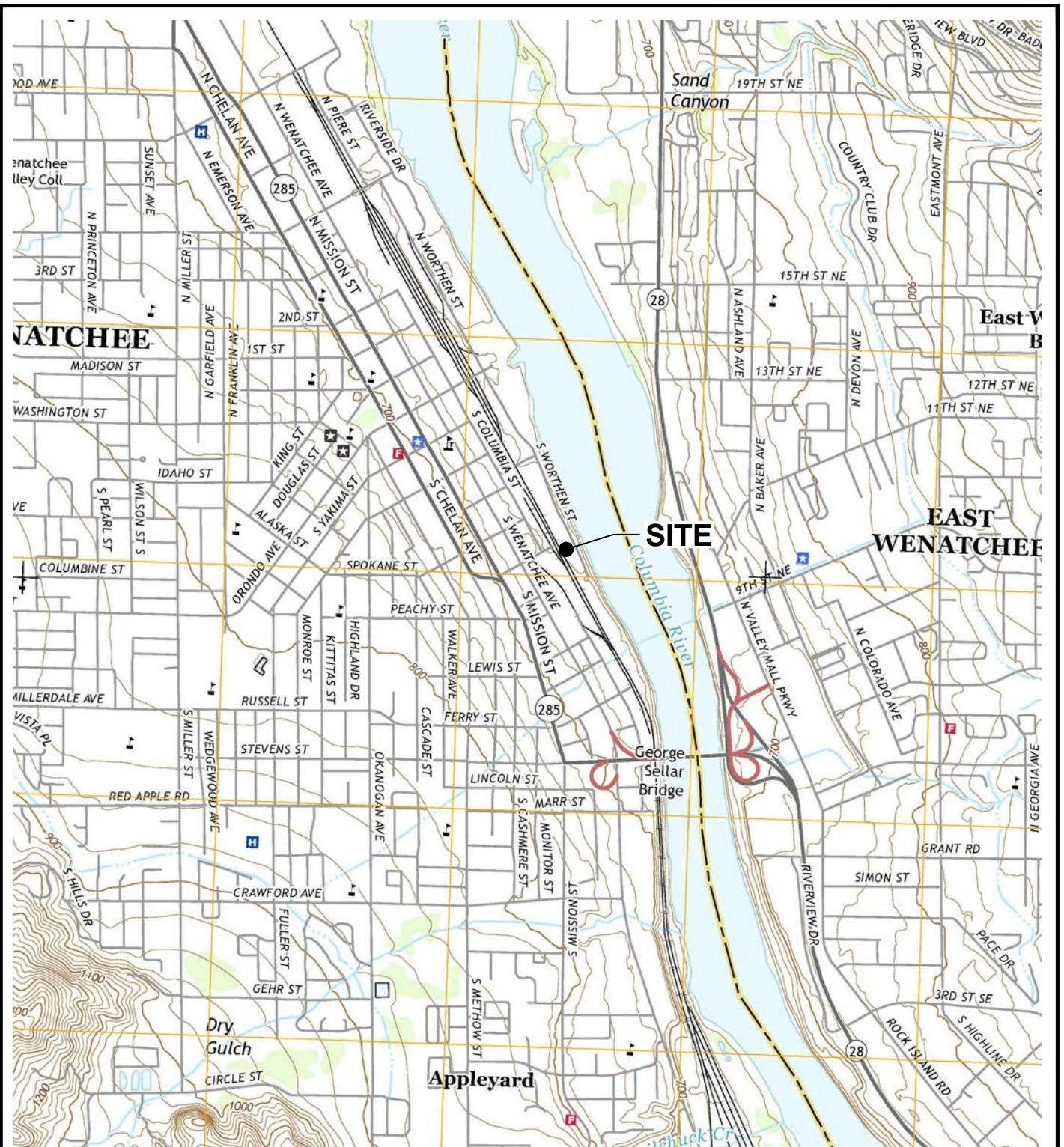
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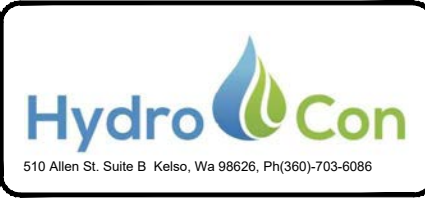
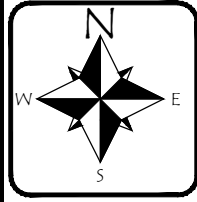
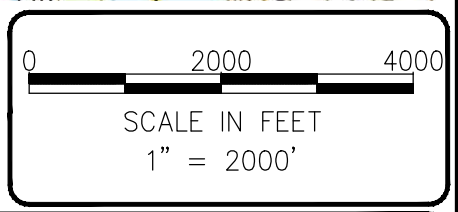


## FIGURES

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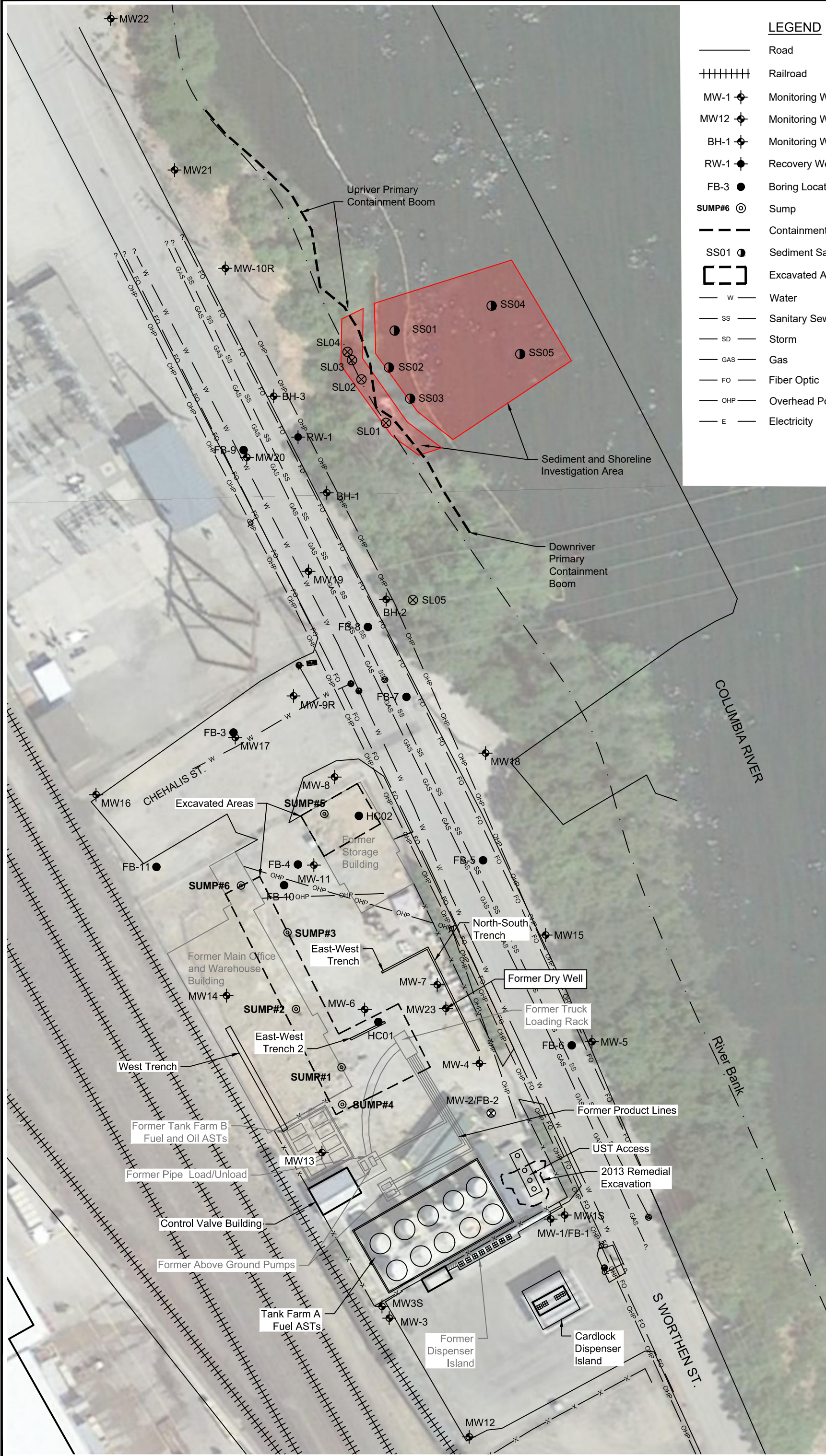


**NOTE(S):**  
 USGS, WENATCHEE QUADRANGLE  
 WASHINGTON  
 7.5 MINUTE SERIES (TOPOGRAPHIC)



DATE: 9-5-18  
 DWN: JJT  
 CHK: RH  
 APPROVED: RH  
 PRJ. MGR: CH  
 PROJECT NO:  
 2017-074

**FIGURE 1**  
 SITE LOCATION MAP  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

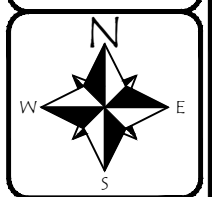
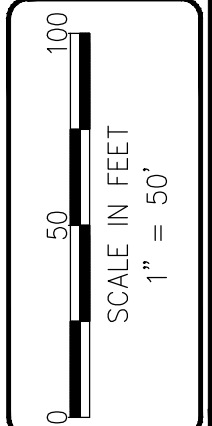


**LEGEND**

- Road
- +++++ Railroad
- MW-1 Monitoring Well (FARALLON)
- MW-12 Monitoring Well (HydroCon)
- BH-1 Monitoring Well (EPI, 2017)
- RW-1 Recovery Well (FARALLON)
- FB-3 Boring Locations
- SUMP#6 Sump
- Containment Booms
- SS01 Sediment Sample Locations
- [ ] Excavated Area
- W Water
- SS Sanitary Sewer
- SD Storm
- GAS Gas
- FO Fiber Optic
- OHP Overhead Power
- E Electricity

**FIGURE 2**  
 SITE FEATURES, SAMPLING LOCATIONS  
 AND UTILITY LAYOUT  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

DATE: 9-25-18  
 DWN: JJT  
 CHK: CH  
 APPROVED: CH  
 PRJ MGR: CH  
 PROJECT NO:  
 2017-074



**LEGEND**

- Road
- +++++ Railroad
- MW-1 ⊕ Monitoring Well (FARALLON)
- MW12 ⊕ Monitoring Well (HydroCon)
- MW-2 ⊗ Decommissioned Wells
- FB-3 ● Boring Locations
- SUMP#6 ⊙ Sump
- ⊙ Documented Historic Gasoline Release Locations

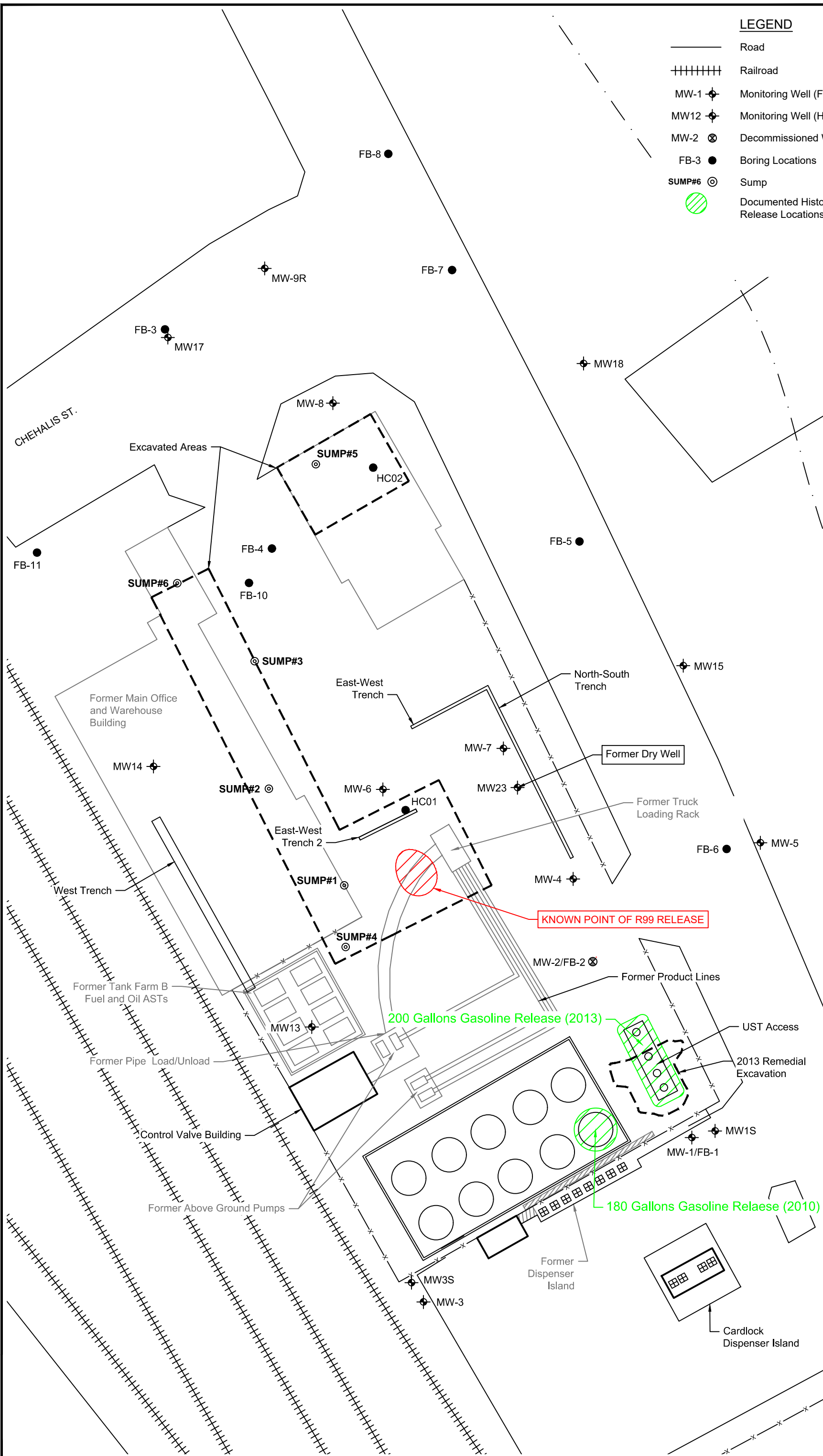
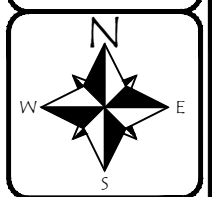
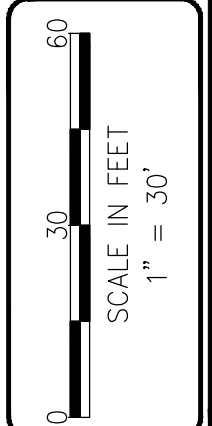
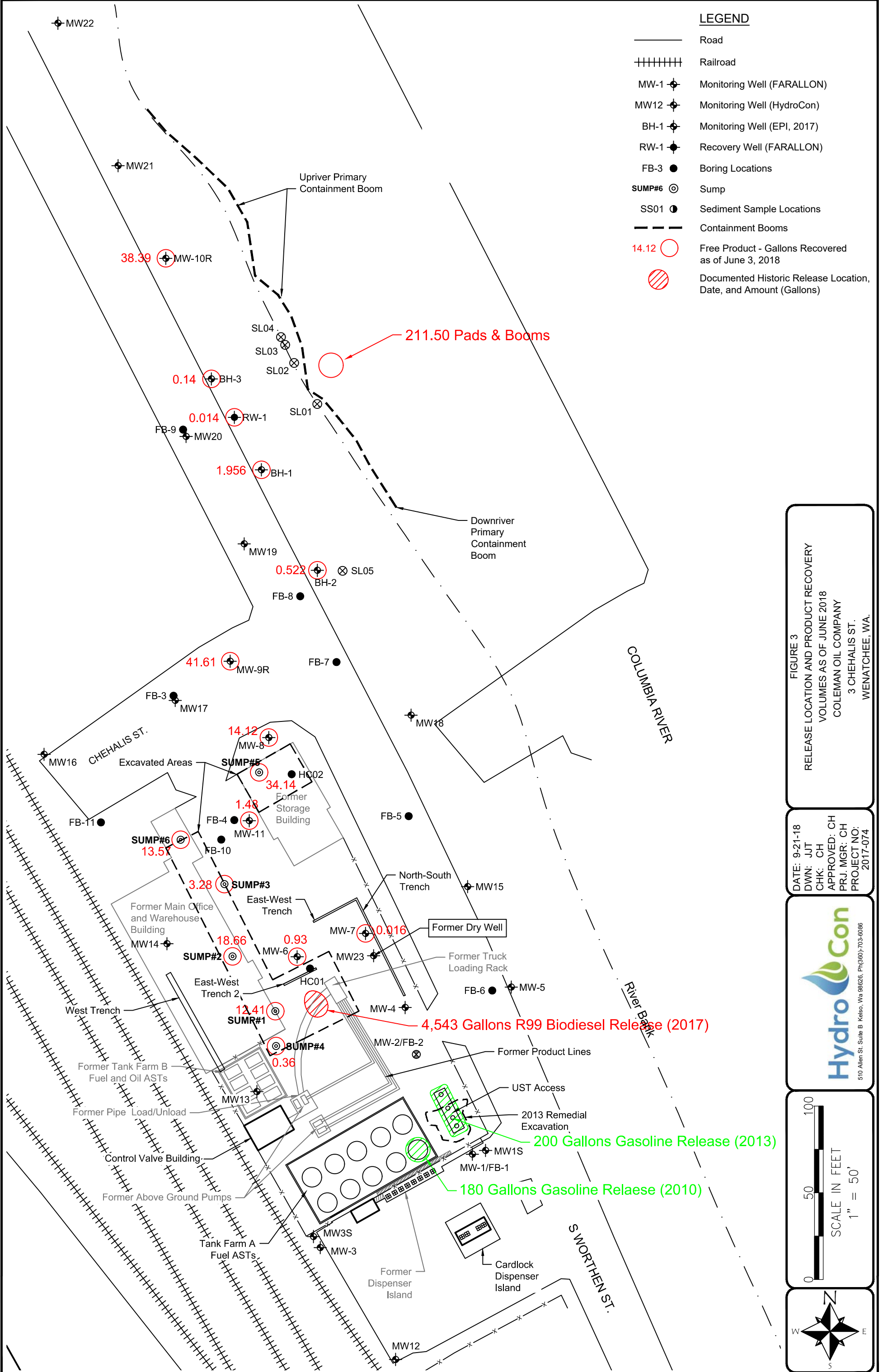


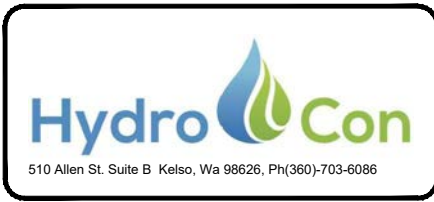
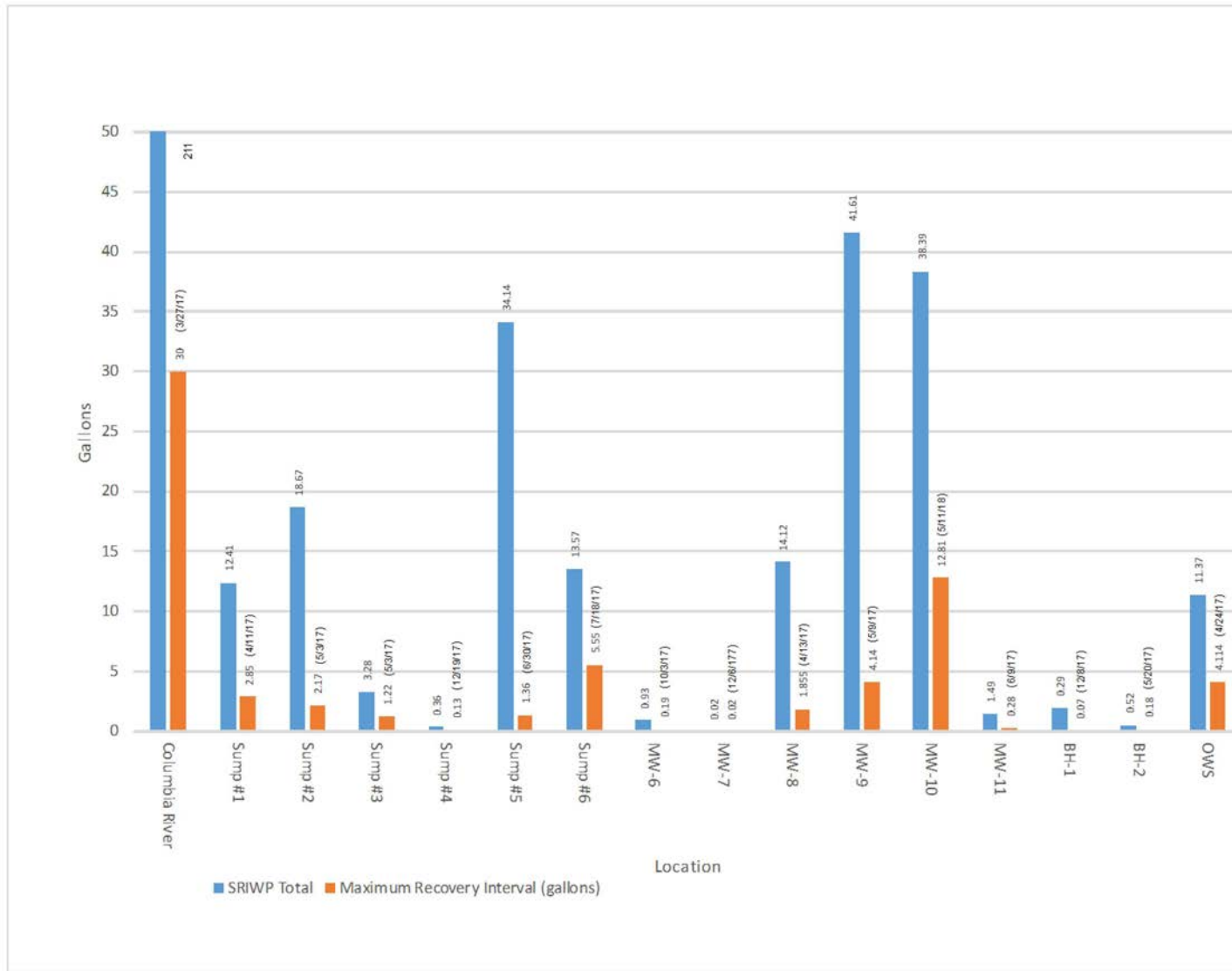
FIGURE 2A  
 KNOWN RELEASE LOCATIONS  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

DATE: 9-25-18  
 DWN: JJT  
 CHK: CH  
 APPROVED: CH  
 PRJ MGR: CH  
 PROJECT NO:  
 2017-074



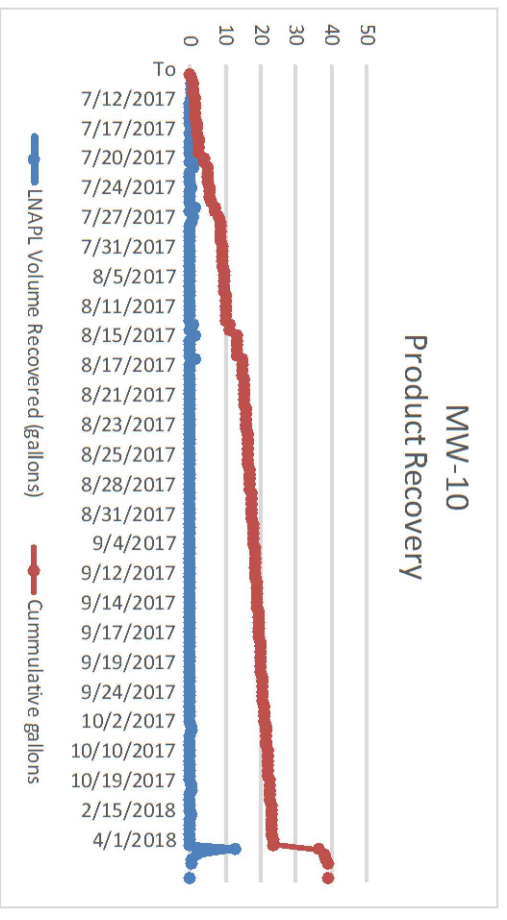
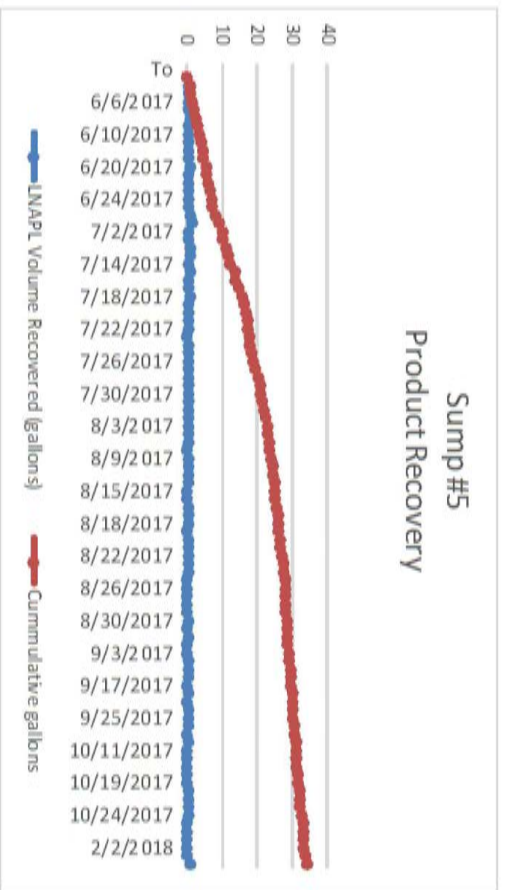
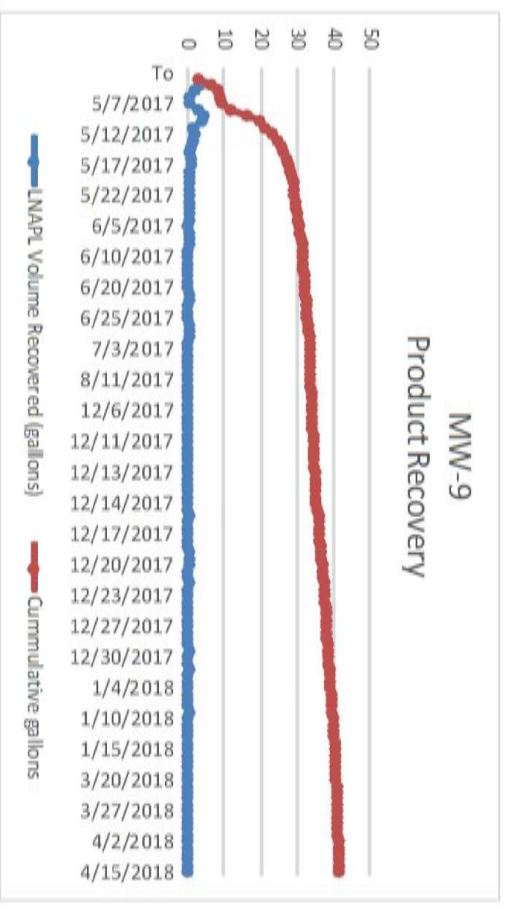
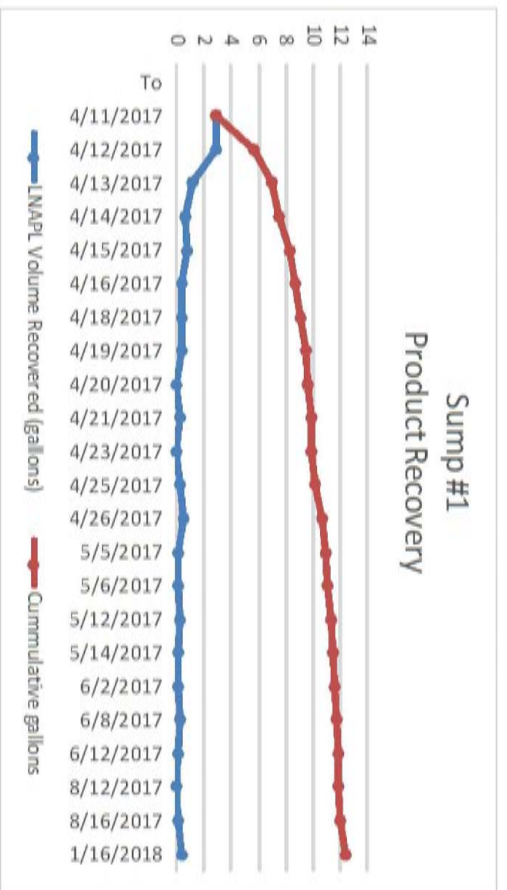
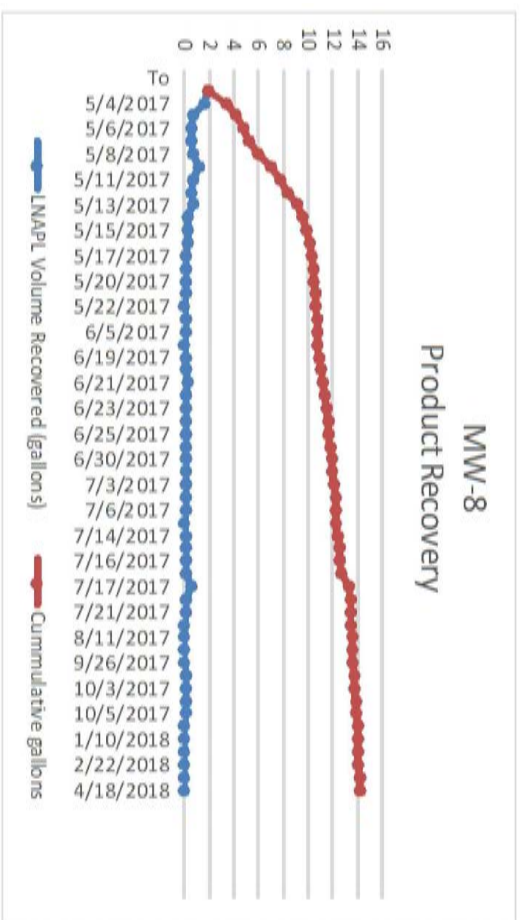
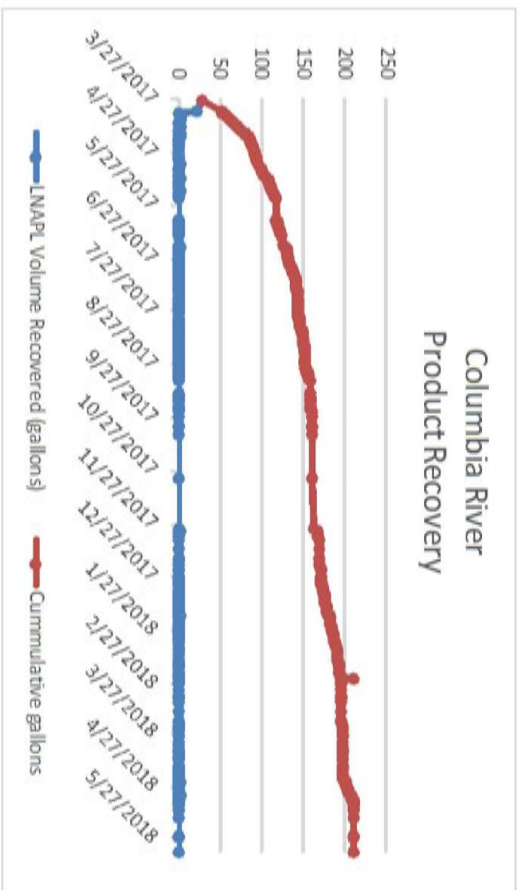


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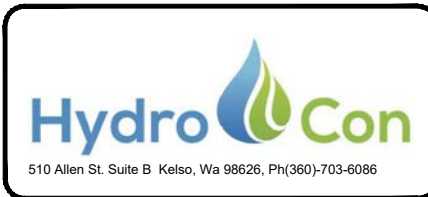
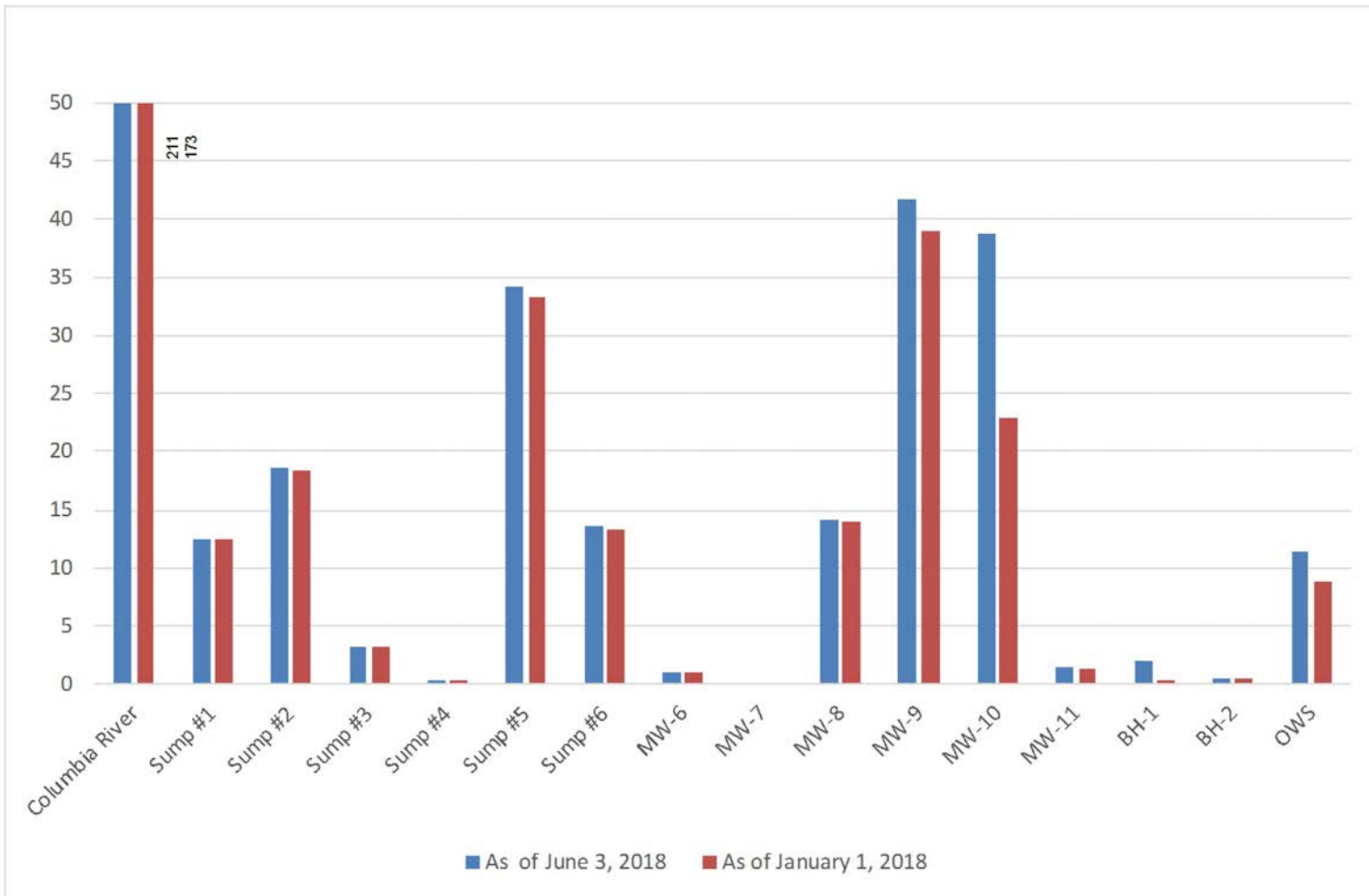
DATE: 9-21-18  
DWN: JJT  
CHK: NV  
APPROVED: NV  
PRJ. MGR: CH  
PROJECT NO:  
2017-074

**FIGURE 4**  
**TOTAL PRODUCT RECOVERY, MAXIMUM INTERVAL RECOVERY,**  
**(AND DATE OF MAXIMUM INTERVAL)**  
**COLEMAN OIL COMPANY**  
**3 CHEHALIS ST.**  
**WENATCHEE, WA.**



DATE: 9-21-18  
 DWN: JJT  
 CHK: NV  
 APPROVED: NV  
 PRJ. MGR: CH  
 PROJECT NO: 2017-074

FIGURE 5  
 DAILY PRODUCT RECOVERY AND  
 CUMMULATIVE PRODUCT RECOVERY  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.



DATE: 9-21-18  
 DWN: JJT  
 CHK: NV  
 APPROVED: NV  
 PRJ. MGR: CH  
 PROJECT NO:  
 2017-074

FIGURE 6  
 TOTAL PRODUCT RECOVERY AS OF  
 JANUARY VERSUS JUNE 2018  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.



Slug Test 2017-074		MW06	MW07	MW08	MW11	MW13	MW14	MW16	MW17	MW19	MW20	MW21	MW22	MW23
Observation Well														
Static DTW		10.42	10.98	15.61	13.94	7.55	7.95	9.78	14.31	25.65	19.79	16.29	14.96	10.65
Date	Time													
05/21/18	Initial W/ Slug	10.47	10.8	15.39	13.94	7.13	7.68	9.4	14.15	25.35	19.45	16.03	14.96	10.4
	Plus 1 Minute	10.42	10.85	15.48	13.94	7.19	7.76	9.5	14.25	25.4	19.5	16.19	14.96	10.51
	Plus 2 Minutes	10.42	10.89	15.52	13.94	7.19	7.8	9.53	14.29	25.43	19.52	16.29	14.96	10.55
	Plus 5 Minutes	10.47	10.97	15.61	13.94	7.22	7.89	6.64	14.31	25.48	19.63	16.29	14.96	10.67
	Plus 10 Minutes	10.42	10.95	15.61	13.94	7.26	7.91	9.78	14.31	25.5	19.55	16.19	14.96	10.65
	Initial DTW Change	0	0.18	0.22	0	0.42	0.27	0.38	0.16	0.3	0.34	0.26	0	0.26
	Final DTW Change	0	0.03	0	0	0.29	0.04	0	0	0.15	0.14	0.1	0	0.01
	Recharge over 10 Minutes	No	0.15	0.22	No	Response	0.13	0.23	0.38	0.16	0.15	0.2	0.16	Response
	Relative Flow	Very High	Low	High	Very High	Low	High	High	Very High	Low	High	Low	Very High	High

**LEGEND**

- Road
- +++++ Railroad
- MW-1 Monitoring Well (FARALLON)
- MW12 Monitoring Well (HydroCon)
- BH-1 Monitoring Well (EPI, 2017)
- RW-1 Recovery Well (FARALLON)
- FB-3 Boring Locations
- SUMP#6 Sump
- SS01 Sediment Sample Locations
- - - Containment Booms
- High Flow
- Medium Flow
- Low Flow
- Documented Historic Gasoline Release Locations

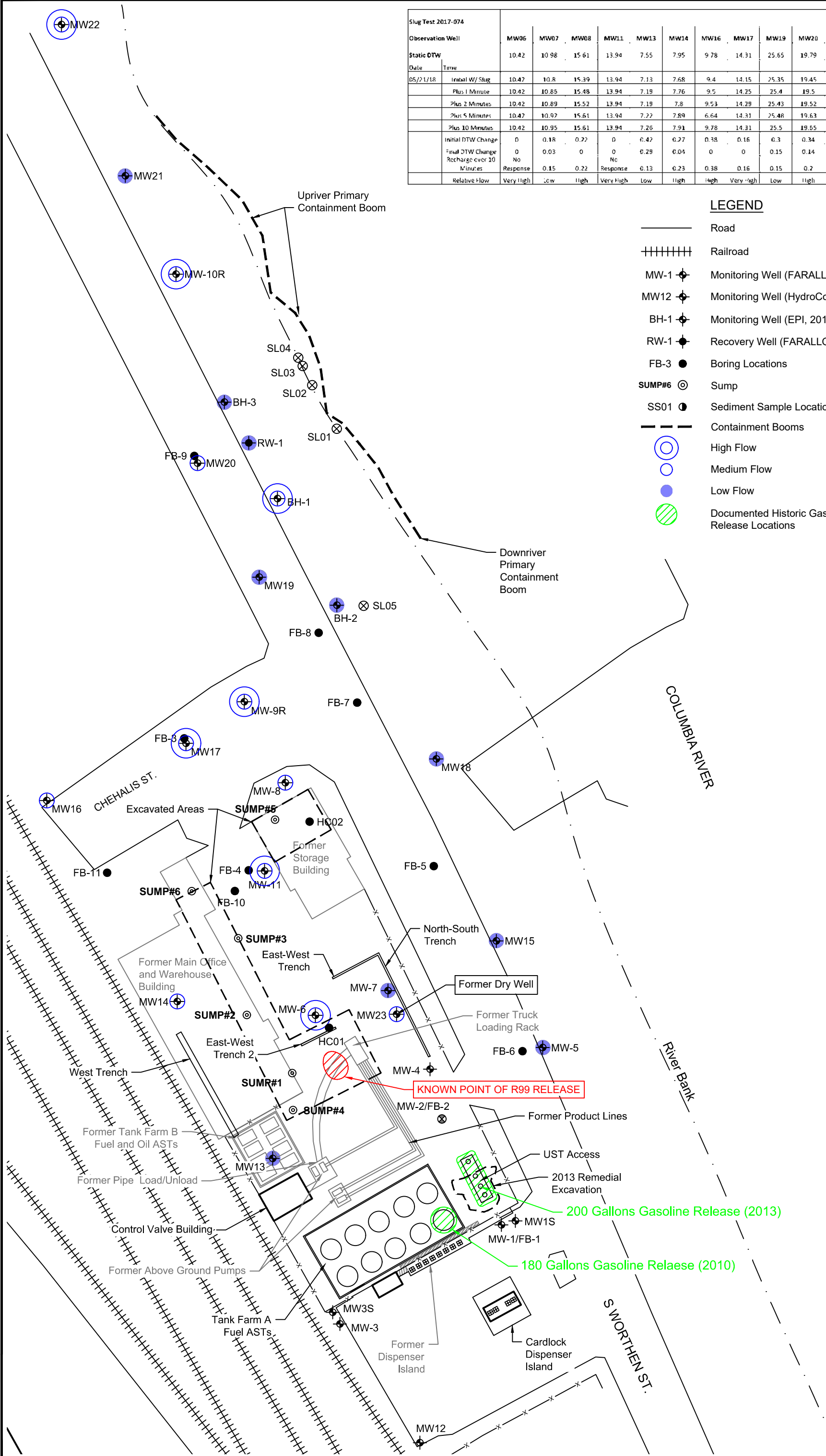
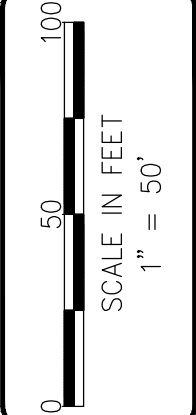
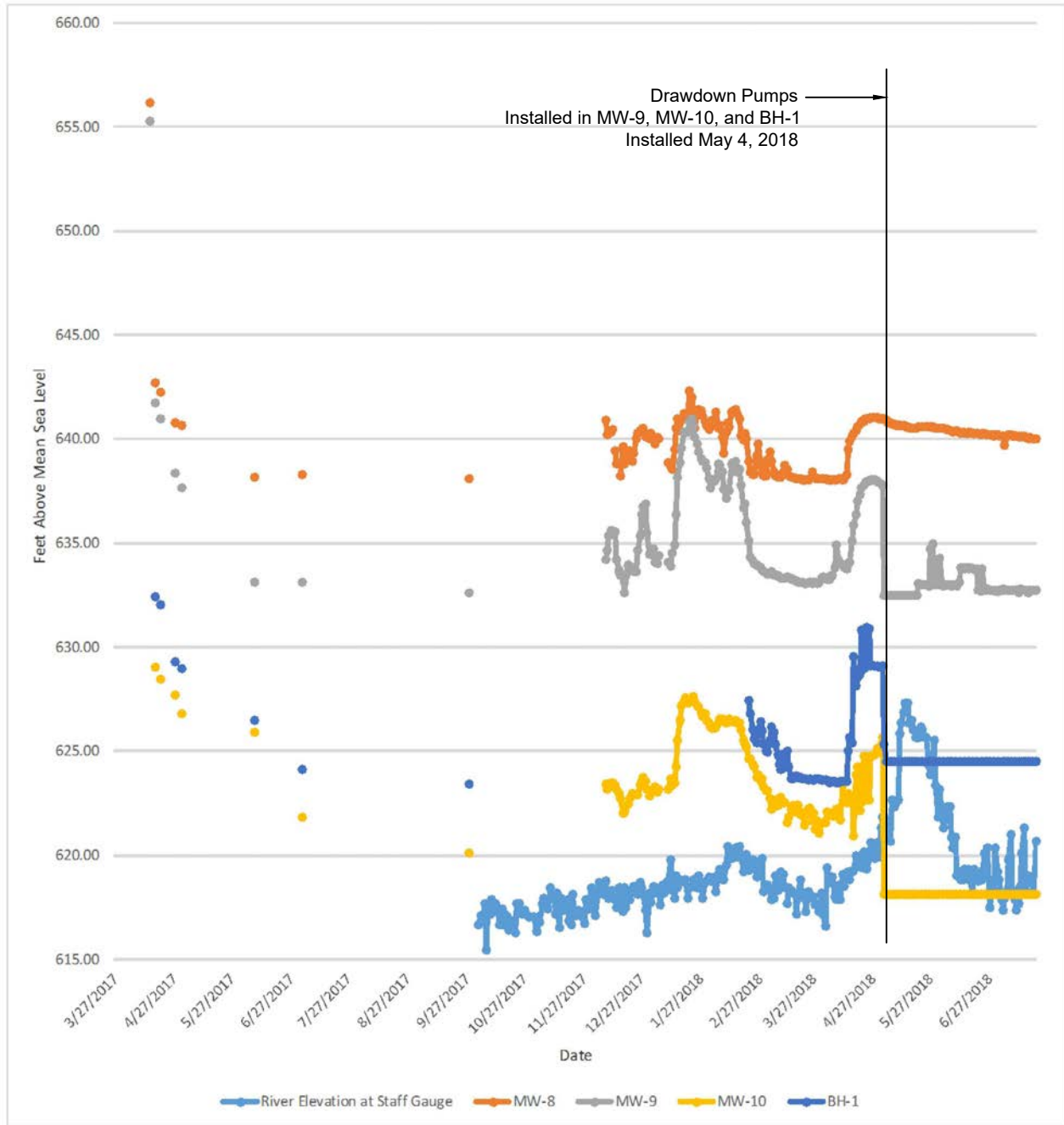


FIGURE 7  
RELATIVE FLOW RATES  
IN MONITORING WELLS  
COLEMAN OIL COMPANY  
3 CHEHALIS ST.  
WENATCHEE, WA.

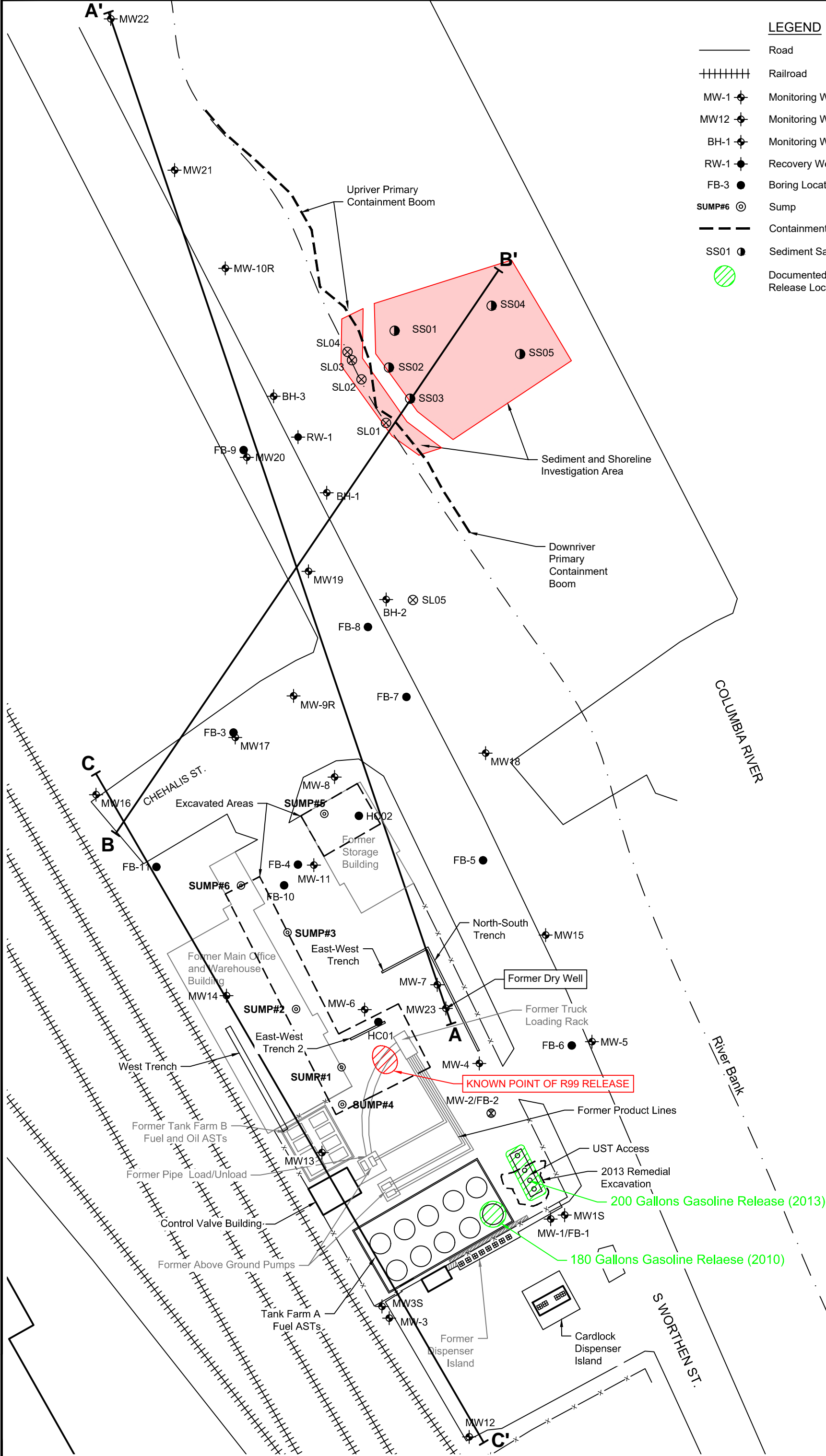
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CHK: CH  
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PRJ MGR: CH  
PROJECT NO:  
2017-074





DATE: 9-24-18  
DWN: JJT  
CHK: NV  
APPROVED: NV  
PRJ. MGR: CH  
PROJECT NO:  
2017-074

FIGURE 8  
RIVER & WELL WATER LEVELS  
  
COLEMAN OIL COMPANY  
3 CHEHALIS ST.  
WENATCHEE, WA.

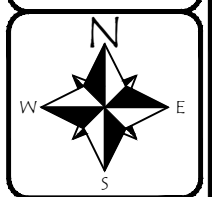
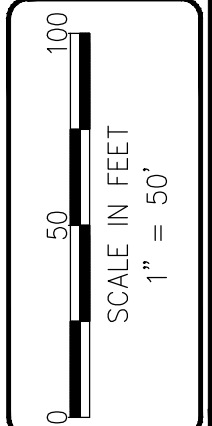


**LEGEND**

—	Road
+++++	Railroad
MW-1	Monitoring Well (FARALLON)
MW12	Monitoring Well (HydroCon)
BH-1	Monitoring Well (EPI, 2017)
RW-1	Recovery Well (FARALLON)
FB-3	Boring Locations
SUMP#6	Sump
- - -	Containment Booms
SS01	Sediment Sample Locations
(Green circle with diagonal lines)	Documented Historic Gasoline Release Locations

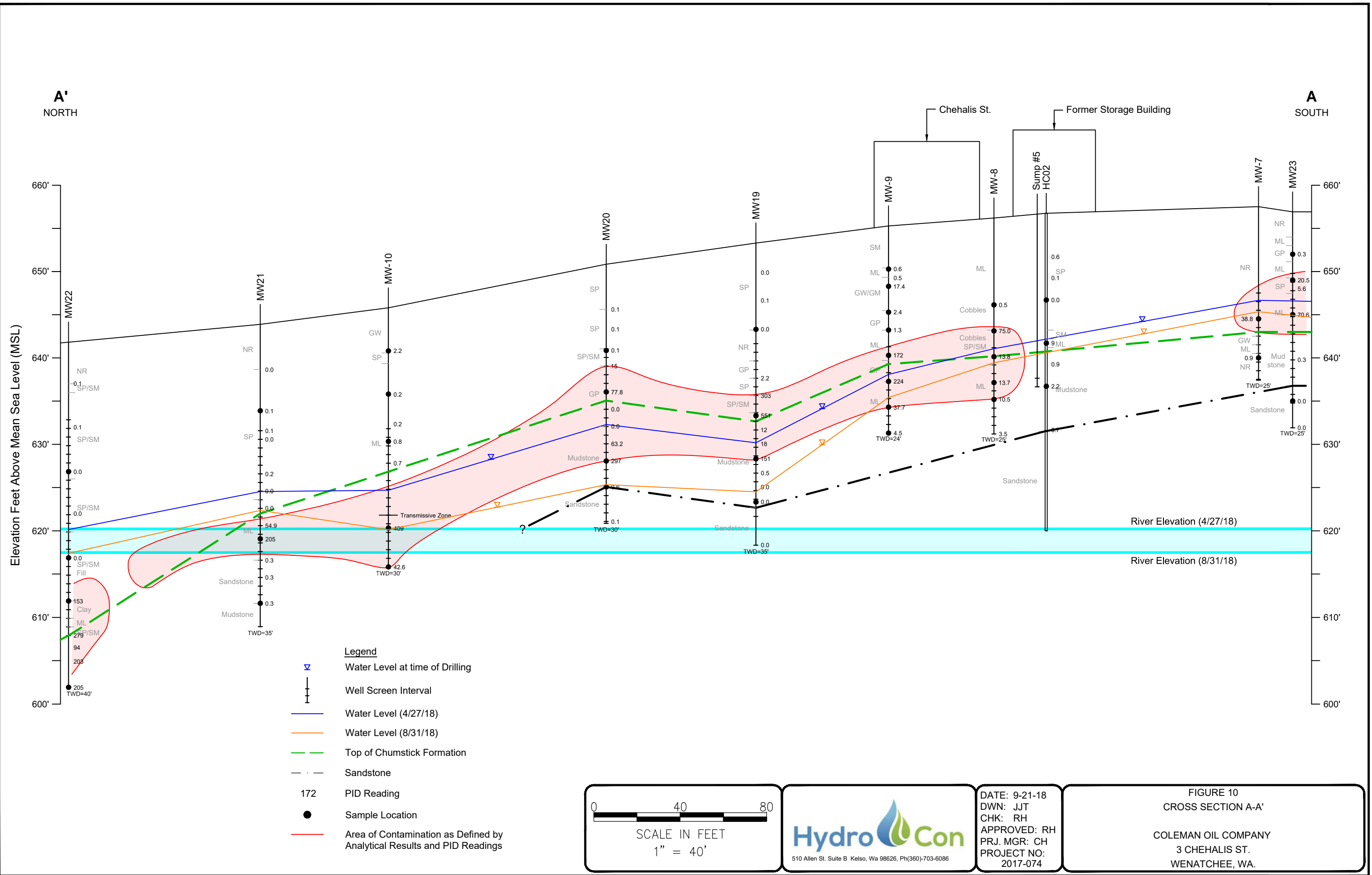
FIGURE 9  
 CROSS SECTION LOCATIONS  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

DATE: 9-24-18  
 DWN: JJT  
 CHK: CH  
 APPROVED: CH  
 PRJ MGR: CH  
 PROJECT NO:  
 2017-074

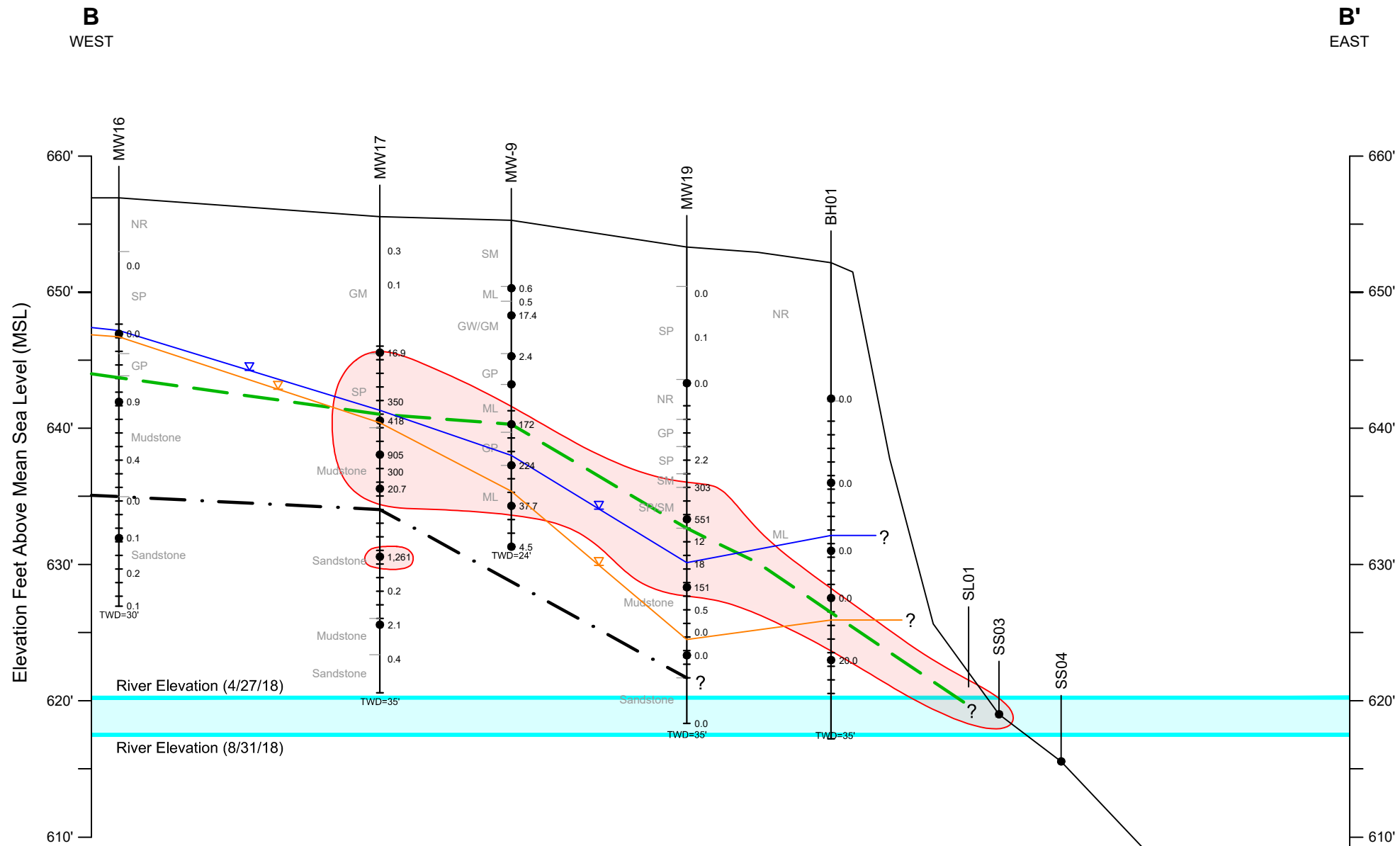


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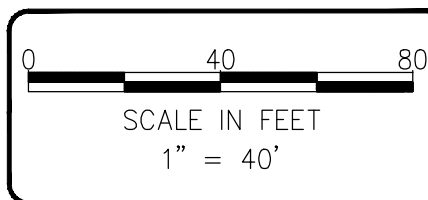
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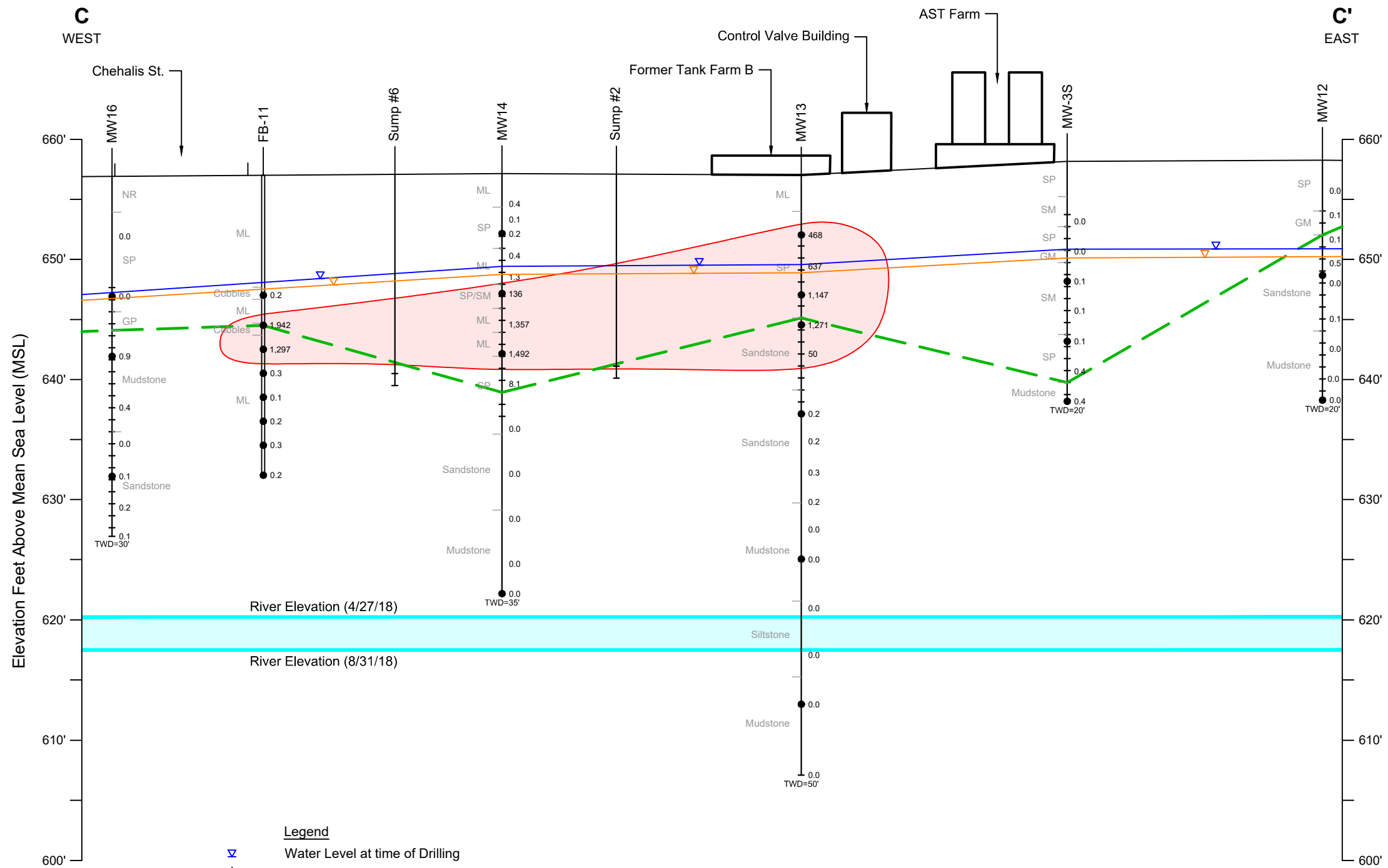
- Legend**
- Water Level at time of Drilling
  - Well Screen Interval
  - Water Level (4/27/18)
  - Water Level (8/31/18)
  - Top of Chumstick Formation
  - Sandstone
  - PID Reading
  - Sample Location
  - Area of Contamination as Defined by Analytical Results and PID Readings



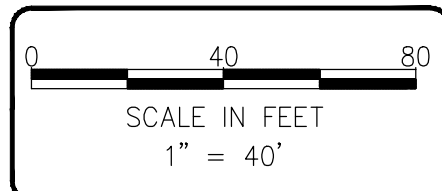
DATE: 9-21-18  
 DWN: JJT  
 CHK: RH  
 APPROVED: RH  
 PRJ. MGR: CH  
 PROJECT NO:  
 2017-074

FIGURE 11  
 CROSS SECTION B-B'  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

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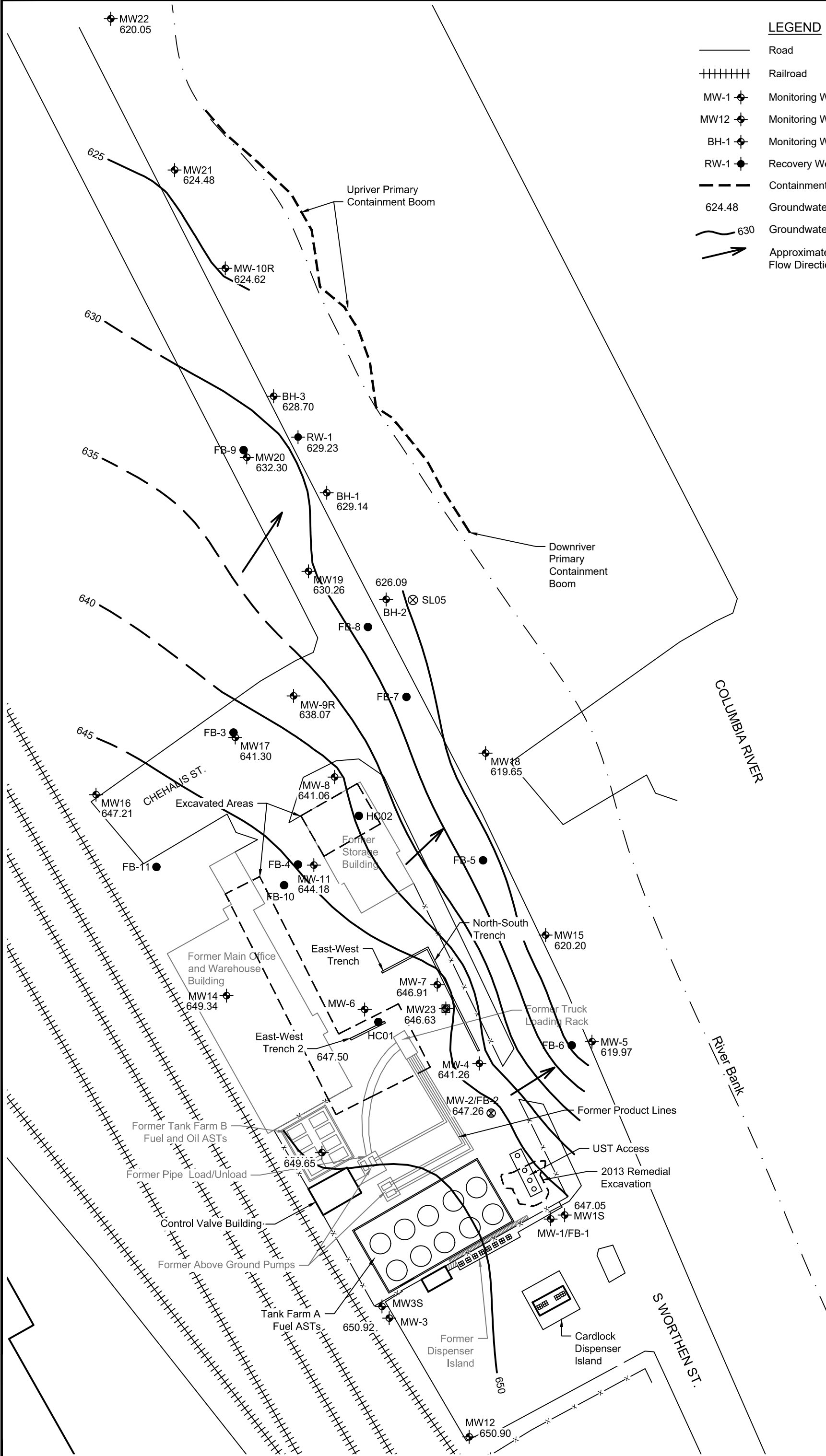


- Legend**
- Water Level at time of Drilling
  - Well Screen Interval
  - Water Level (4/27/18)
  - Water Level (8/31/18)
  - Top of Chumstick Formation
  - PID Reading
  - Sample Location
  - Area of Contamination as Defined by Analytical Results and PID Readings



DATE: 9-21-18  
 DWN: JJT  
 CHK: RH  
 APPROVED: RH  
 PRJ. MGR: CH  
 PROJECT NO:  
 2017-074

FIGURE 12  
 CROSS SECTION C-C'  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

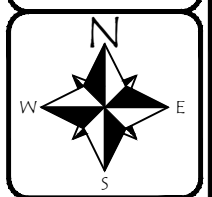
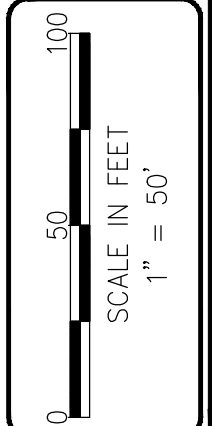


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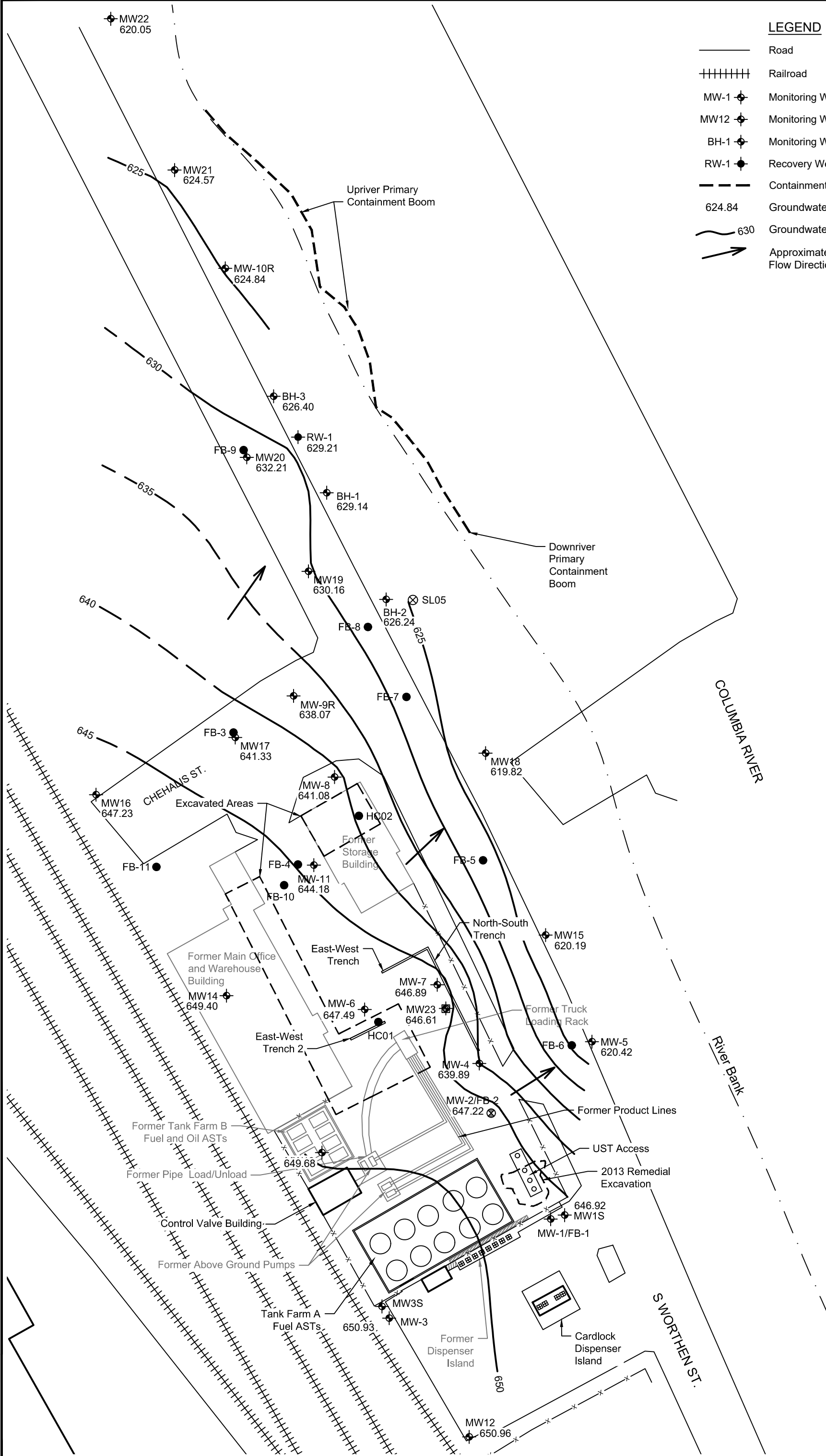
	Road
	Railroad
	Monitoring Well (FARALLON)
	Monitoring Well (HydroCon)
	Monitoring Well (EPI, 2017)
	Recovery Well (FARALLON)
	Containment Booms
624.48	Groundwater Surface Elevation
	Groundwater Elevation Contour
	Approximate Groundwater Flow Direction

FIGURE 13  
 GROUNDWATER ELEVATION CONTOURS  
 FOR APRIL 25, 2018  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

DATE: 9-25-18  
 DWN: JJT  
 CHK: CH  
 APPROVED: CH  
 PRJ MGR: CH  
 PROJECT NO:  
 2017-074



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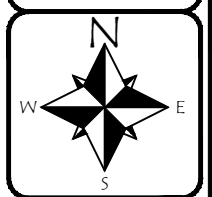
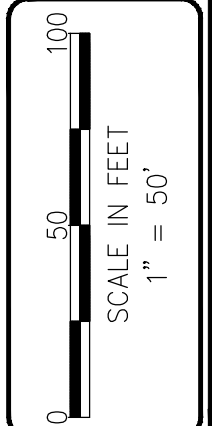


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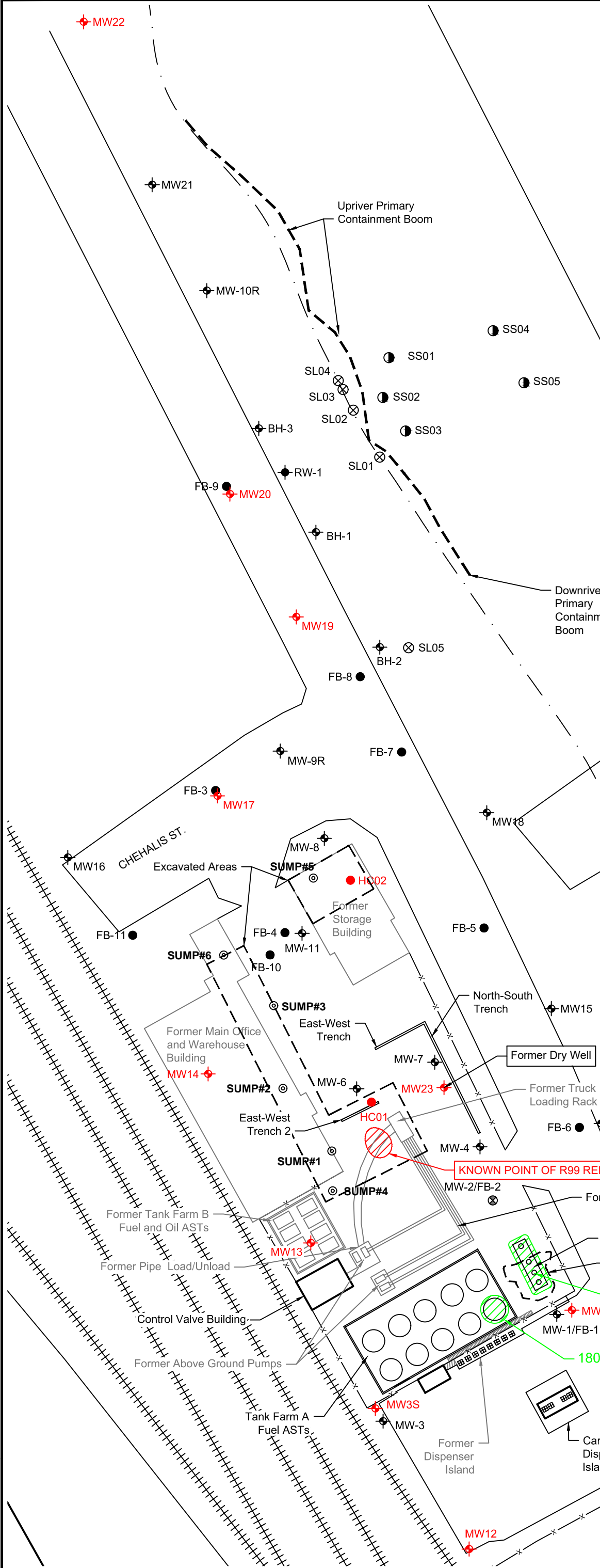
—	Road
+++++	Railroad
MW-1	Monitoring Well (FARALLON)
MW12	Monitoring Well (HydroCon)
BH-1	Monitoring Well (EPI, 2017)
RW-1	Recovery Well (FARALLON)
- - -	Containment Booms
624.84	Groundwater Surface Elevation
630	Groundwater Elevation Contour
→	Approximate Groundwater Flow Direction

FIGURE 14  
 GROUNDWATER ELEVATION CONTOURS  
 FOR APRIL 27, 2018  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

DATE: 9-25-18  
 DWN: JJT  
 CHK: CH  
 APPROVED: CH  
 PRJ MGR: CH  
 PROJECT NO:  
 2017-074







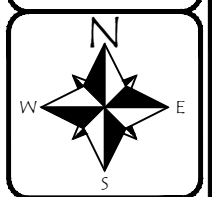
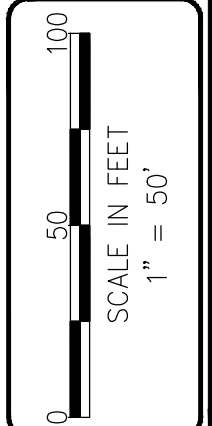
Field ID	Date	Soil Analytical Results (mg/kg)							Total Xylenes
		GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Xylenes	
WA MTCA Method A Cleanup Level		30/100	2,000	2,000	0.3	7	6	9	
Benzene (Non Detect)		100							
Benzene (Detect)		30							
HC01-4.5	3/28/2018	<5.7	<25	<50	<0.0114	<0.0570	<0.0285	<0.0855	
HC01-10	3/28/2018	671	4,680	<433	<0.104	<0.518	<0.259	<0.0855	
HC01-15	3/28/2018	<4.25	<25	<50	<0.0114	<0.0570	<0.0285	<0.0776	
HC01-22	3/28/2018	7.99	104	80.3	<0.00850	<0.0425	<0.0212	<0.0637	
HC01-34	3/28/2018	<5.53	38.6	<50	<0.0111	<0.0553	<0.0277	<0.0830	
HC02-10	3/28/2018	<7.66	<25	<50	<0.0153	<0.0766	<0.0383	<0.115	
HC02-15	3/28/2018	37.7	<25	<50	<0.0103	<0.0513	<0.0257	<0.0770	
HC02-22	3/28/2018	9.26	26.6	<50	<0.00984	<0.0492	<0.0246	<0.0738	
MW15-10	4/3/2018	<5.26	<25	<50	<0.0132	<0.0658	<0.0329	<0.0987	
MW15-20	4/3/2018	<4.88	<25	<50	0.318	<0.0488	<0.0244	<0.0731	
MW35-15	4/3/2018	83.8	<25	<50	<0.00910	<0.0455	<0.0227	<0.0682	
MW35-20	4/3/2018	<4.88	<25	<50	<0.0132	<0.0658	<0.0329	<0.0987	
MW12-10	4/2/2018	<5.10	<25	<50	<0.0102	<0.0510	<0.0255	<0.0766	
MW12-20	4/2/2018	<4.79	42.5	66.7	<0.00958	<0.0479	<0.0239	<0.0718	
MW13-05	3/29/2018	5.80	1,700	5,310	0.701	25.5	6.27	29.3	
MW13-10	3/29/2018	3,360	2,290	<50	1.51	<1.07	<0.533	5.2	
MW13-12	3/29/2018	12.1	<25	<50	<0.0102	<0.0512	<0.0256	0.0774	
MW13-21	3/29/2018	22.5	90.9	209	<0.00998	<0.0499	<0.0250	<0.0749	
MW13-35	3/29/2018	<5.16	<25	<50	<0.0103	<0.0516	<0.0258	<0.0773	
MW13-45	3/30/2018	<7.12	<25	<50	<0.0142	<0.0712	<0.0356	<0.107	
MW14-05	3/30/2018	<4.74	<25	<50	<0.00948	<0.0474	<0.0237	<0.0711	
MW14-10	3/30/2018	171	50.2	<50	<0.00971	<0.0486	<0.0243	<0.0729	
MW14-15	3/30/2018	465	447	<50	<0.0142	<0.0712	<0.0356	<0.107	
MW14-25	4/2/2018	<3.97	<25	<50	<0.00974	<0.0486	<0.0243	<0.0729	
MW15-10	4/12/2018	<5.17	<25	75.8	<0.0103	<0.0517	<0.0258	<0.0775	
MW15-20	4/12/2018	<5.74	<25	<50	<0.0115	<0.0574	<0.0287	<0.0862	
MW15-30	4/12/2018	<5.73	<25	<50	<0.0115	<0.0573	<0.0286	<0.0859	
MW16-10	4/5/2018	<4.78	<25	<50	<0.00955	<0.0478	<0.0239	<0.0717	
MW16-14	4/5/2018	<5.09	<25	<50	<0.0102	<0.0509	<0.0255	<0.0764	
MW16-25	4/6/2018	<2.38	<25	<50	<0.00476	<0.0238	<0.0119	<0.0357	
MW17-10	4/4/2018	<4.71	<25	<50	<0.00943	<0.0471	<0.0236	<0.0707	
MW17-17	4/4/2018	1,900	1,650	740	<0.0360	<0.180	<0.0900	<0.270	
MW17-25	4/4/2018	83.6	<25	<50	0.0109	<0.0508	0.0631	0.0799	
MW17-30	4/4/2018	<4.86	<25	<50	<0.00973	<0.0486	<0.0243	<0.0730	
MW18-10	4/11/2018	<6.01	<25	102	<0.0120	<0.0601	<0.0301	<0.0902	
MW18-15	4/11/2018	<5.45	<25	<50	<0.0109	<0.0545	<0.0273	<0.0818	
MW18-25	4/11/2018	<4.66	<25	<50	<0.00932	<0.0466	<0.0233	<0.0699	
MW19-10	4/5/2018	<5.34	<25	<50	<0.0107	<0.0534	<0.0267	<0.0801	
MW19-18	4/5/2018	386	2,010	<50	<0.0104	<0.0518	<0.0259	<0.0776	
MW19-30	4/5/2018	<5.48	167	284	<0.0110	<0.0548	<0.0274	<0.0822	
MW20-10	4/10/2018	<5.02	<25	<50	<0.0100	<0.0502	<0.0251	<0.0753	
MW20-15	4/10/2018	60.3	72.9	<50	<0.0102	<0.0508	<0.0254	<0.0762	
MW20-23.5	4/10/2018	<6.84	<25	<50	<0.0137	<0.0684	<0.0342	<0.103	
MW20-26	4/10/2018	<5.05	<25	<50	<0.0101	<0.0505	<0.0253	<0.0758	
MW21-10	4/9/2018	<5.32	<25	<50	<0.0106	<0.0532	<0.0266	<0.0797	
MW21-25	4/9/2018	9.65	47.2	<50	<0.0114	<0.0570	<0.0285	<0.0854	
MW21-32	4/9/2018	<5.69	<25	<50	<0.0114	<0.0569	<0.0285	<0.0854	
MW22-15	4/13/2018	<5.15	<25	<50	<0.0103	<0.0515	<0.0258	<0.0773	
MW22-25	4/13/2018	<13.4	<25.9	<51.8	<0.0268	<0.134	<0.0670	<0.201	
MW22-30	4/13/2018	4,180	45,700	<8,160 ec	10.7	<5.87	23.1	43.8	
MW22-40	4/13/2018	248	52.5	<50	0.0854	0.085	0.156	0.696	
MW23-05	3/29/2018	<4.63	29.7	65.2	<0.00926	<0.0463	<0.0231	<0.0694	
MW23-08	3/29/2018	116	586	112	<0.0101	<0.0504	<0.0252	<0.0756	
MW23-12	3/29/2018	127	63.3	<50	<0.0115	<0.0577	<0.0289	<0.0866	
MW23-22	3/29/2018	<6.69	<25	<50	<0.0134	<0.0669	<0.0335	<0.100	

**Notes**  
 Red denotes concentration in excess of MTCA Method Cleanup Level for Soil.  
 GRPH (gasoline range petroleum hydrocarbons) analyzed by Method NWTPH-Gx.  
 DRPH (diesel range petroleum hydrocarbons) and ORPH (oil range petroleum hydrocarbons) analyzed by Method NWTPH-Dx.  
 Volatiles analyzed by EPA Method 5035A/8260C.  
 Total Lead by EPA Method 6020  
 MTCA Method A Cleanup Levels, WAC 173-340-720 through 173-340-760, revised Nov., 2007  
 < = less than method reporting limit shown  
 --- = not analyzed  
 ec = Method reporting limit exceeds Clean Up Level shown.

- LEGEND**
- Road
  - +++++ Railroad
  - MW-1 Monitoring Well (FARALLON)
  - MW12 Monitoring Well (HydroCon)
  - BH-1 Monitoring Well (EPI, 2017)
  - RW-1 Recovery Well (FARALLON)
  - FB-3 Boring Locations
  - SUMP#6 Sump
  - SS01 Sediment Sample Locations
  - Containment Booms
  - ⊗ Documented Historic Gasoline Release Locations

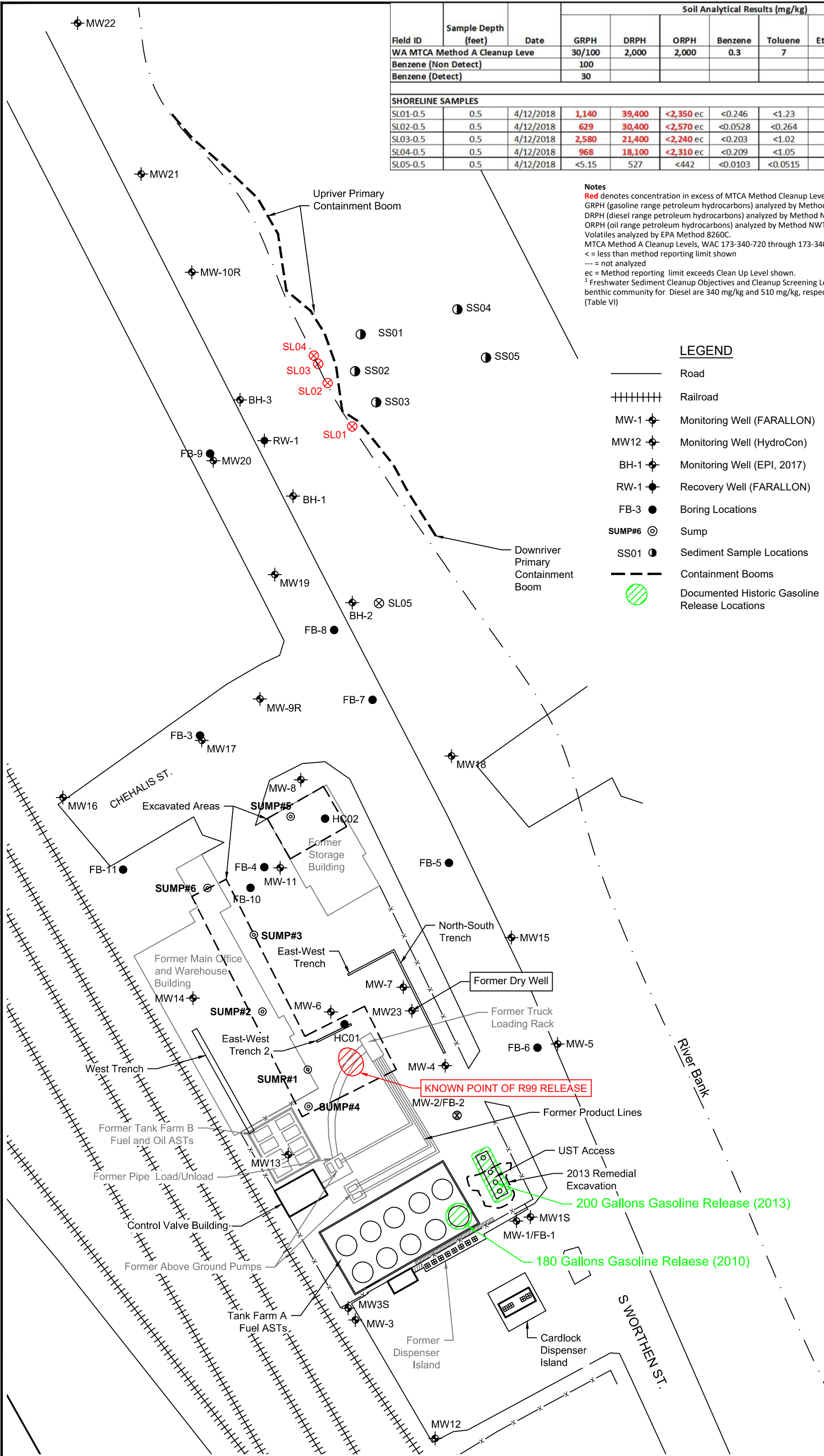
**FIGURE 15**  
 SOIL ANALYTICAL RESULTS  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

DATE: 9-24-18  
 DWN: JJT  
 CHK: NV  
 APPROVED: NV  
 PRJ MGR: CH  
 PROJECT NO: 2017-074



Field ID	Sample Depth (feet)	Date	Soil Analytical Results (mg/kg)						
			GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
WA MTCA Method A Cleanup Level			30/100	2,000	2,000	0.3	7	6	9
Benzene (Non Detect)			100						
Benzene (Detect)			30						
SHORELINE SAMPLES									
SL01-0.5	0.5	4/12/2018	1,140	39,400	<2,350 ec	<0.246	<1.23	<0.614	<1.84
SL02-0.5	0.5	4/12/2018	629	30,400	<2,570 ec	<0.0528	<0.264	<0.132	<0.396
SL03-0.5	0.5	4/12/2018	2,580	21,400	<2,240 ec	<0.203	<1.02	<0.508	1.6
SL04-0.5	0.5	4/12/2018	968	18,100	<2,310 ec	<0.209	<1.05	<0.523	<1.57
SL05-0.5	0.5	4/12/2018	<5.15	527	<442	<0.0103	<0.0515	<0.0258	<0.0773

**Notes**  
 Red denotes concentration in excess of MTCA Method Cleanup Level for Soil.  
 GRPH (gasoline range petroleum hydrocarbons) analyzed by Method NWTPH-Gx.  
 DRPH (diesel range petroleum hydrocarbons) analyzed by Method NWTPH-Dx.  
 ORPH (oil range petroleum hydrocarbons) analyzed by Method NWTPH-Dx.  
 Volatiles analyzed by EPA Method 8260C.  
 MTCA Method A Cleanup Levels, WAC 173-340-720 through 173-340-760, revised Nov., 2007  
 < = less than method reporting limit shown  
 --- = not analyzed  
 ec = Method reporting limit exceeds Clean Up Level shown.  
 † Freshwater Sediment Cleanup Objectives and Cleanup Screening Levels for protection of the benthic community for Diesel are 340 mg/kg and 510 mg/kg, respectively. WAC 173-204-563 (Table VI)

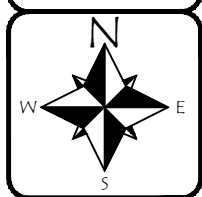
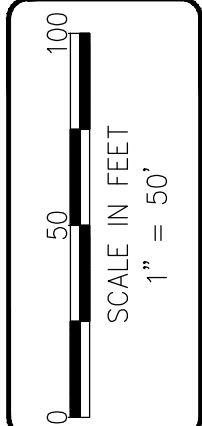


**LEGEND**

- Road
- +++++ Railroad
- MW-1 ◊ Monitoring Well (FARALLON)
- MW12 ◊ Monitoring Well (HydroCon)
- BH-1 ◊ Monitoring Well (EPI, 2017)
- RW-1 ◊ Recovery Well (FARALLON)
- FB-3 ● Boring Locations
- SUMP#6 ⊙ Sump
- SS01 ● Sediment Sample Locations
- - - Containment Booms
- ⊗ Documented Historic Gasoline Release Locations

FIGURE 16  
 SHORELINE SOIL RESULTS  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

DATE: 9-24-18  
 DWN: JJT  
 CHK: NV  
 APPROVED: NV  
 PRJ MGR: CH  
 PROJECT NO:  
 2017-074



Field ID	Depth	Date	Sediment Analytical Results (mg/kg)						
			GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
<b>SCUM II Sediment Management Standards (SMS) for Freshwater</b>				<b>340</b>	<b>3,600</b>				
<b>Sediments<sup>1</sup></b>									
<b>SEDIMENT SAMPLES</b>									
SS01-13.97cm	0.46	4/23/2018	<25.2	<b>842</b>	392	<0.0503	0.395	<0.126	<0.378
SS02-11.75cm	0.38	4/23/2018	<13.7	<b>473</b>	175	<0.0274	0.182	<0.0684	<0.205
SS03-13.97cm	0.46	4/23/2018	<16.2	207	147	<0.325	<0.0162	<0.0811	<0.243
SS04-11.82 cm	0.39	4/23/2018	<16.6	<45.1	90.6	<0.0333	<0.166	<0.0832	<0.0250
SS05-13.97	0.46	4/23/2018	<13.8	<38.1	87.2	<0.0276	<0.138	<0.0690	<0.207
<b>SEDIMENT SAMPLES WITH ACID/SILICA GEL CLEANUP</b>									
SS01-13.97cm	0.46	4/23/2018	--	<b>947</b>	<105	--	--	--	--
SS02-11.75cm	0.38	4/23/2018	--	<b>526</b>	<73.4	--	--	--	--
SS03-13.97cm	0.46	4/23/2018	--	238	<78.4	--	--	--	--
SS04-11.82 cm	0.39	4/23/2018	--	<45.1	<90.3	--	--	--	--
SS05-13.97	0.46	4/23/2018	--	<38.1	<76.1	--	--	--	--

**Notes**  
**Red** denotes concentration in excess of Sediment Management Standard (SMS) for Freshwater Sediment.  
 GRPH (gasoline range petroleum hydrocarbons) analyzed by Method NWTPH-Gx.  
 DRPH (diesel range petroleum hydrocarbons) and ORPH (oil range petroleum hydrocarbons) analyzed by Method NWTPH-Dx.  
 BTEX analyzed by EPA Method 8260C.  
<sup>1</sup>SCUMII 173-204 WAC - Sediment Management Standards for Freshwater Sediments  
 SCO = Sediment Cleanup Objective  
 < = less than method reporting limit shown  
 --- = not analyzed

**LEGEND**

- Road
- +++++ Railroad
- MW-1 Monitoring Well (FARALLON)
- MW12 Monitoring Well (HydroCon)
- BH-1 Monitoring Well (EPI, 2017)
- RW-1 Recovery Well (FARALLON)
- FB-3 Boring Locations
- SUMP#6 Sump
- SS01 Sediment Sample Locations
- - - Containment Booms
- ⊗ Documented Historic Gasoline Release Locations

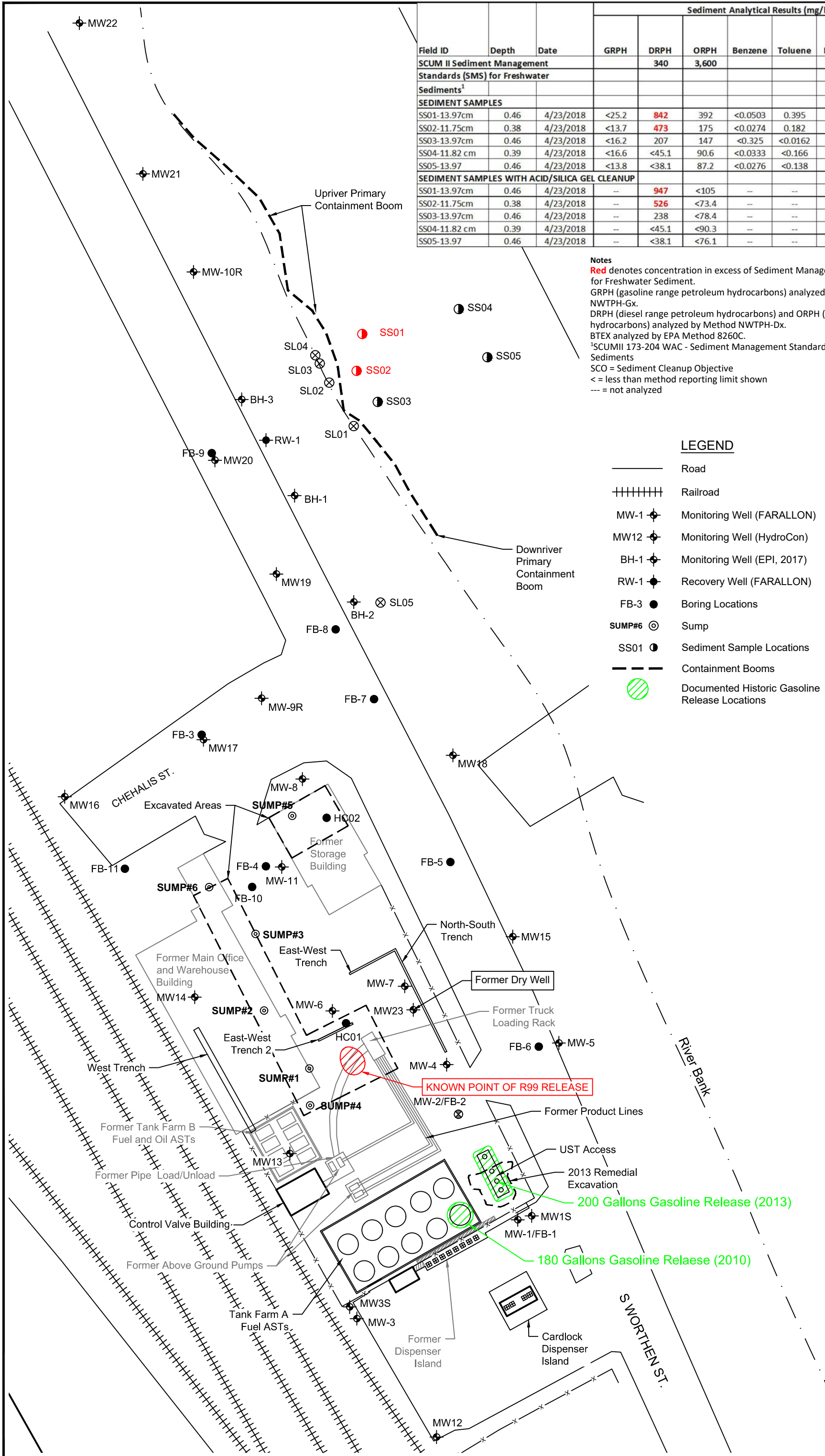
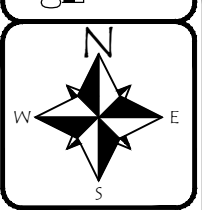
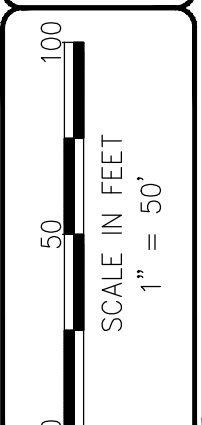
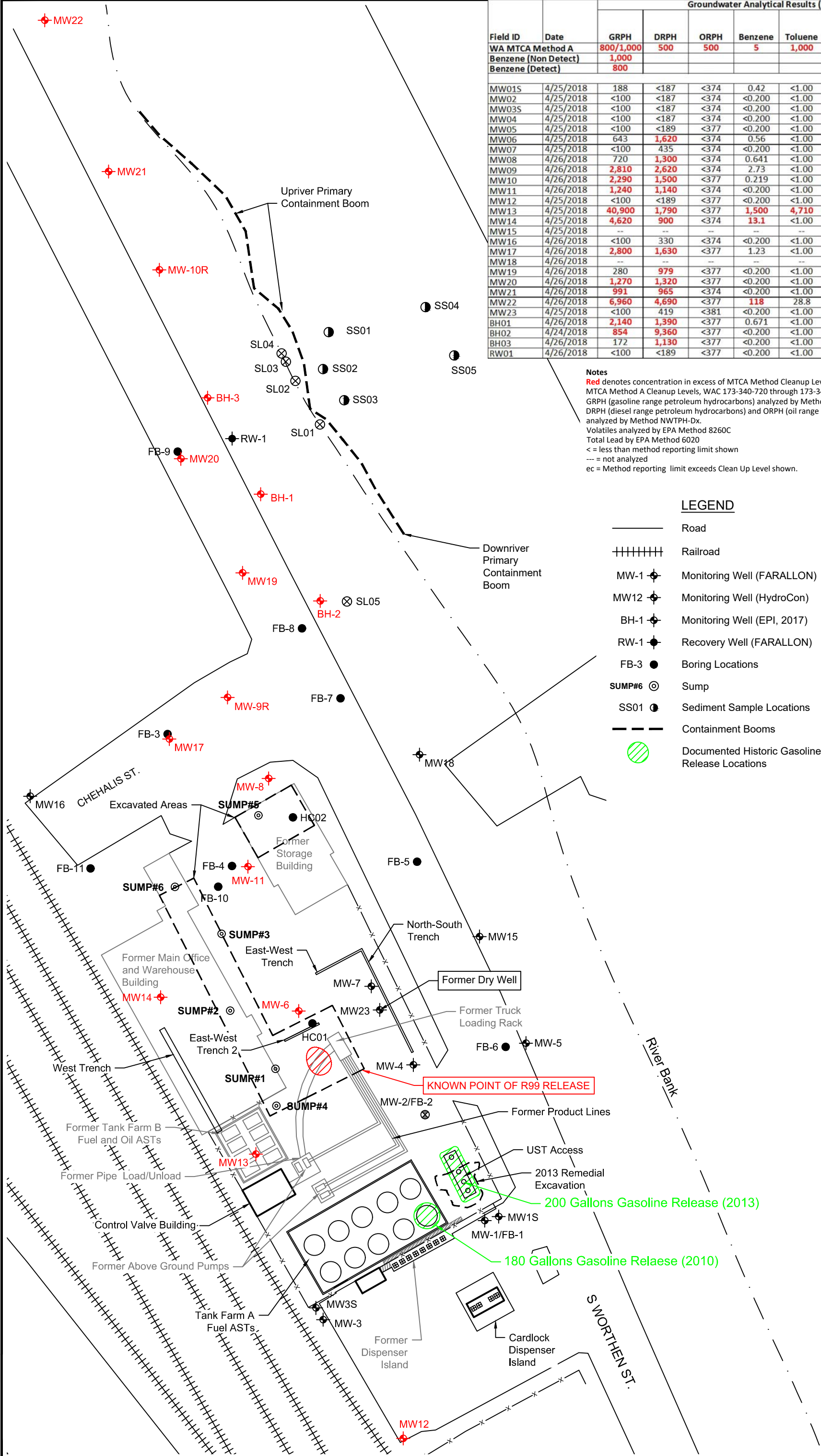


FIGURE 17  
 SEDIMENT SAMPLE RESULTS  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

DATE: 9-24-18  
 DWN: JJT  
 CHK: NV  
 APPROVED: NV  
 PRJ MGR: CH  
 PROJECT NO:  
 2017-074





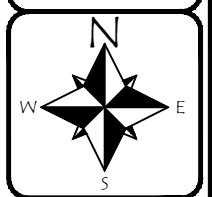
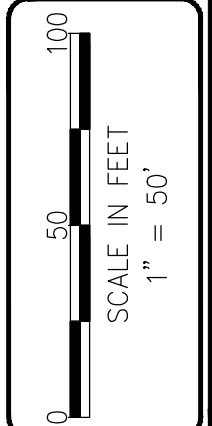
		Groundwater Analytical Results (ug/L)						
Field ID	Date	GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
WA MTCA Method A		800/1,000	500	500	5	1,000	700	1,000
Benzene (Non Detect)		1,000						
Benzene (Detect)		800						
MW01S	4/25/2018	188	<187	<374	0.42	<1.00	5.8	9.48
MW02	4/25/2018	<100	<187	<374	<0.200	<1.00	<0.500	<1.50
MW03S	4/25/2018	<100	<187	<374	<0.200	<1.00	<0.500	<1.50
MW04	4/25/2018	<100	<187	<374	<0.200	<1.00	<0.500	<1.50
MW05	4/25/2018	<100	<189	<377	<0.200	<1.00	<0.500	<1.50
MW06	4/25/2018	643	1,620	<374	0.56	<1.00	<0.500	2.19
MW07	4/25/2018	<100	435	<374	<0.200	<1.00	<0.500	<1.50
MW08	4/26/2018	720	1,300	<374	0.641	<1.00	<0.500	4.67
MW09	4/26/2018	2,810	2,620	<374	2.73	<1.00	9.95	20.4
MW10	4/26/2018	2,290	1,500	<377	0.219	<1.00	3.52	5.95
MW11	4/26/2018	1,240	1,140	<374	<0.200	<1.00	0.56	2.27
MW12	4/25/2018	<100	<189	<377	<0.200	<1.00	<0.500	<1.50
MW13	4/25/2018	40,900	1,790	<377	1,500	4,710	627	3,780
MW14	4/25/2018	4,620	900	<374	13.1	<1.00	16.1	<1.50
MW15	4/25/2018	--	--	--	--	--	--	--
MW16	4/26/2018	<100	330	<374	<0.200	<1.00	<0.500	<1.50
MW17	4/26/2018	2,800	1,630	<377	1.23	<1.00	1.62	7.66
MW18	4/26/2018	--	--	--	--	--	--	--
MW19	4/26/2018	280	979	<377	<0.200	<1.00	<0.500	<1.50
MW20	4/26/2018	1,270	1,320	<377	<0.200	<1.00	1.56	5.44
MW21	4/26/2018	991	965	<374	<0.200	<1.00	0.835	1.82
MW22	4/26/2018	6,960	4,690	<377	118	28.8	102	196
MW23	4/25/2018	<100	419	<381	<0.200	<1.00	<0.500	<1.50
BH01	4/26/2018	2,140	1,390	<377	0.671	<1.00	5.55	12.5
BH02	4/24/2018	854	9,360	<377	<0.200	<1.00	<0.500	<1.50
BH03	4/26/2018	172	1,130	<377	<0.200	<1.00	<0.500	<1.50
RW01	4/26/2018	<100	<189	<377	<0.200	<1.00	<0.500	<1.50

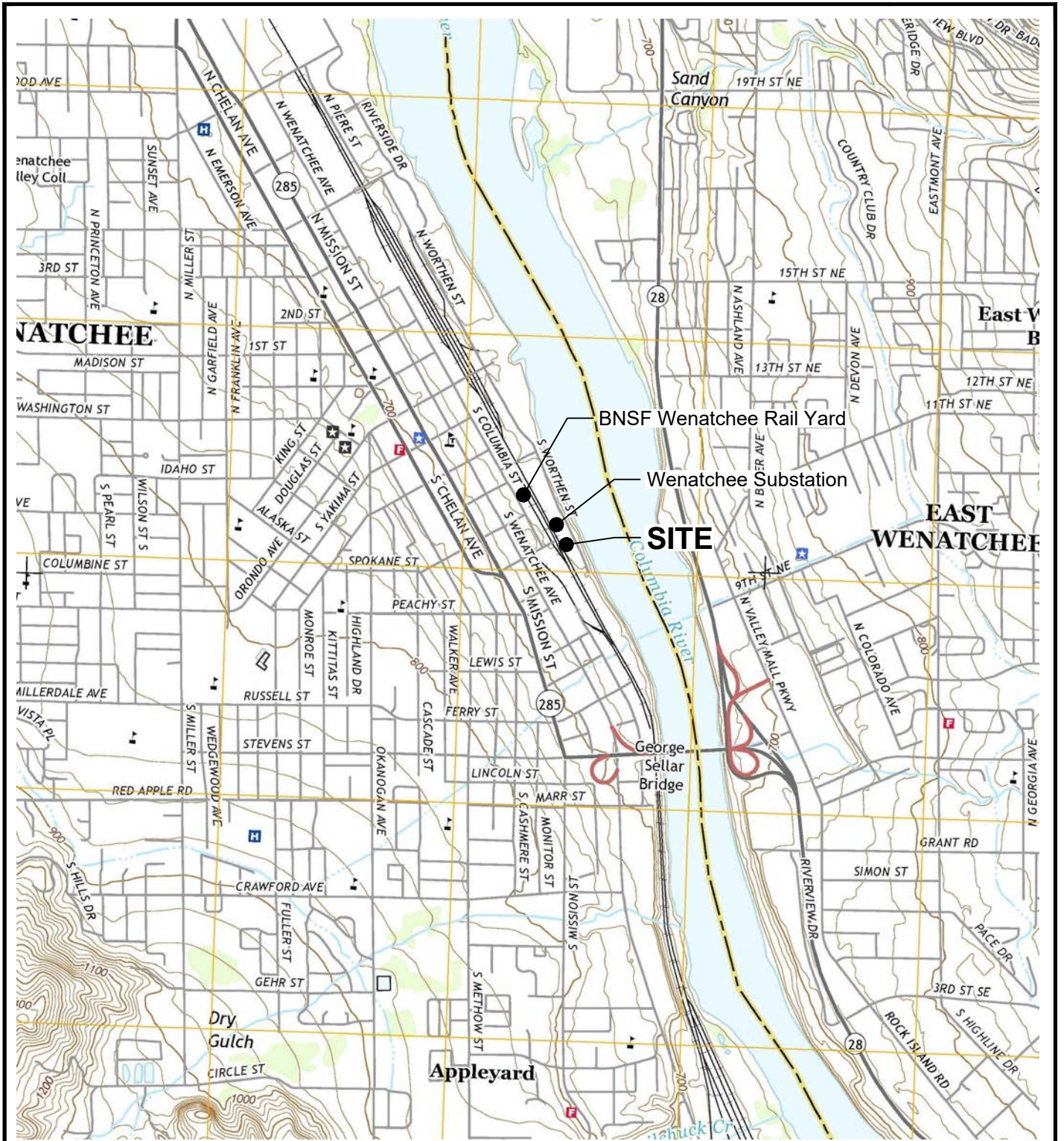
**Notes**  
 Red denotes concentration in excess of MTCA Method Cleanup Level for Groundwater. MTCA Method A Cleanup Levels, WAC 173-340-720 through 173-340-760, revised Nov., 2007  
 GRPH (gasoline range petroleum hydrocarbons) analyzed by Method NWTPH-Gx.  
 DRPH (diesel range petroleum hydrocarbons) analyzed by Method NWTPH-Dx.  
 Volatiles analyzed by EPA Method 8260C  
 Total Lead by EPA Method 6020  
 < = less than method reporting limit shown  
 -- = not analyzed  
 ec = Method reporting limit exceeds Clean Up Level shown.

- LEGEND**
- Road
  - +++++ Railroad
  - MW-1 Monitoring Well (FARALLON)
  - MW12 Monitoring Well (HydroCon)
  - BH-1 Monitoring Well (EPI, 2017)
  - RW-1 Recovery Well (FARALLON)
  - FB-3 Boring Locations
  - SUMP#6 Sump
  - SS01 Sediment Sample Locations
  - - - Containment Booms
  - ⊗ Documented Historic Gasoline Release Locations

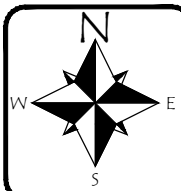
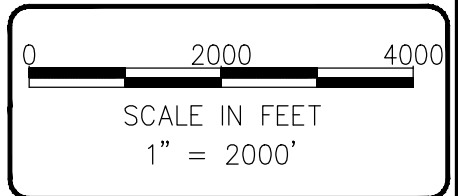
FIGURE 18  
 GROUNDWATER ANALYTICAL RESULTS  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

DATE: 9-24-18  
 DWN: JJT  
 CHK: NV  
 APPROVED: NV  
 PRJ MGR: CH  
 PROJECT NO: 2017-074



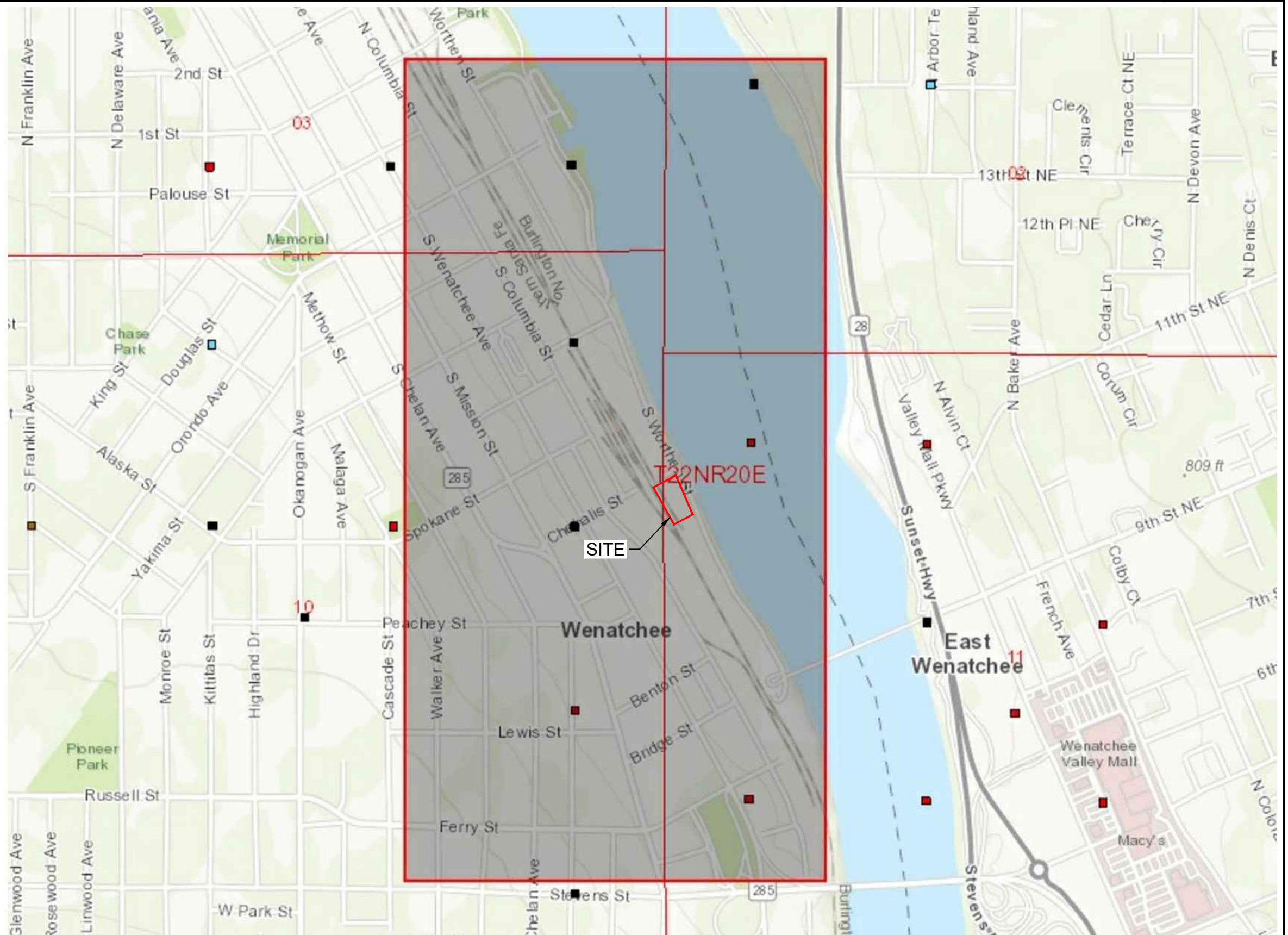


**NOTE(S):**  
 USGS, WENATCHEE QUADRANGLE  
 WASHINGTON  
 7.5 MINUTE SERIES (TOPOGRAPHIC)



DATE: 9-24-18  
 DWN: JJT  
 CHK: NV  
 APPROVED: NV  
 PRJ. MGR: CH  
 PROJECT NO:  
 2017-074

FIGURE 19  
 OFFSITE FACILITIES  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.



**WELL TYPE LEGEND**

- Water Wells
- Resource Protection Wells
- Decommissioned Wells
- Multiple Well Types

SECTION 10, TOWNSHIP 22 NORTH, RANGE 20 EAST

NOT TO SCALE



DATE: 9-24-18  
 DWN: JJT  
 CHK: NV  
 APPROVED: NV  
 PRJ. MGR: CH  
 PROJECT NO:  
 2017-074

FIGURE 20  
 AREA OF WELL SEARCH ON ECOLOGY'S  
 WELL REPORT VIEWER - JUNE 10, 2018  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

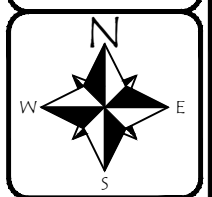
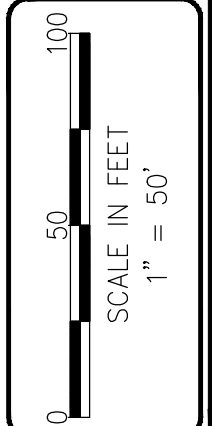


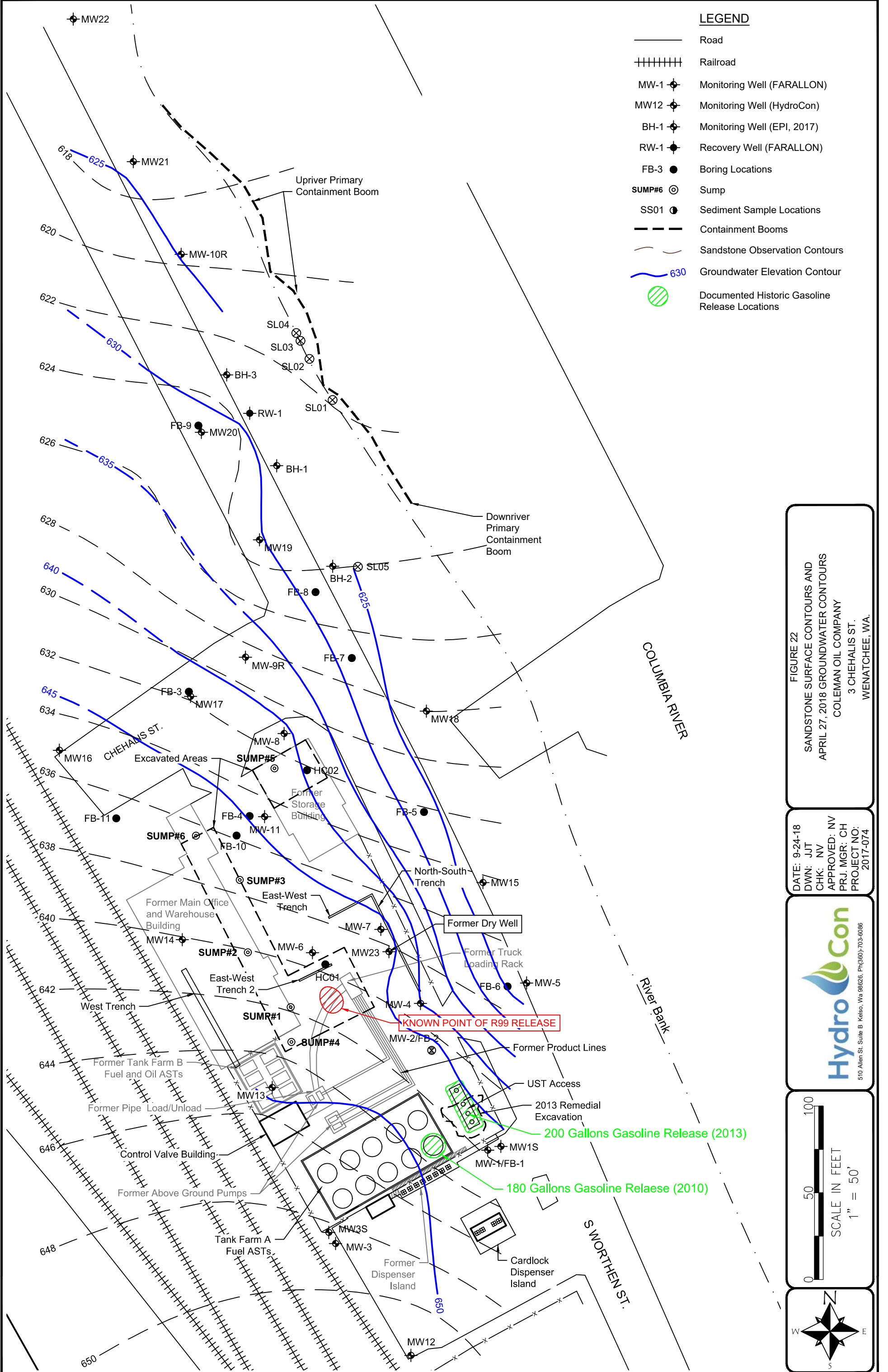
**LEGEND**

- Road
- + + + + + Railroad
- MW-1 Monitoring Well (FARALLON)
- MW12 Monitoring Well (HydroCon)
- BH-1 Monitoring Well (EPI, 2017)
- RW-1 Recovery Well (FARALLON)
- FB-3 Boring Locations
- SUMP#6 Sump
- SS01 Sediment Sample Locations
- - - Containment Booms
- Current Extent of Contamination above Cleanup Levels
- Documented Historic Gasoline Release Locations

FIGURE 21  
 CURRENT EXTENT OF CONTAMINATION ABOVE CLEANUP LEVELS  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

DATE: 9-24-18  
 DWN: JJT  
 CHK: NV  
 APPROVED: NV  
 PRJ MGR: CH  
 PROJECT NO: 2017-074



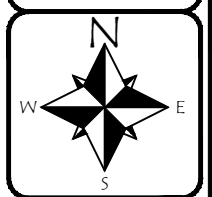
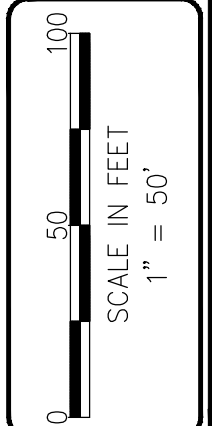


**LEGEND**

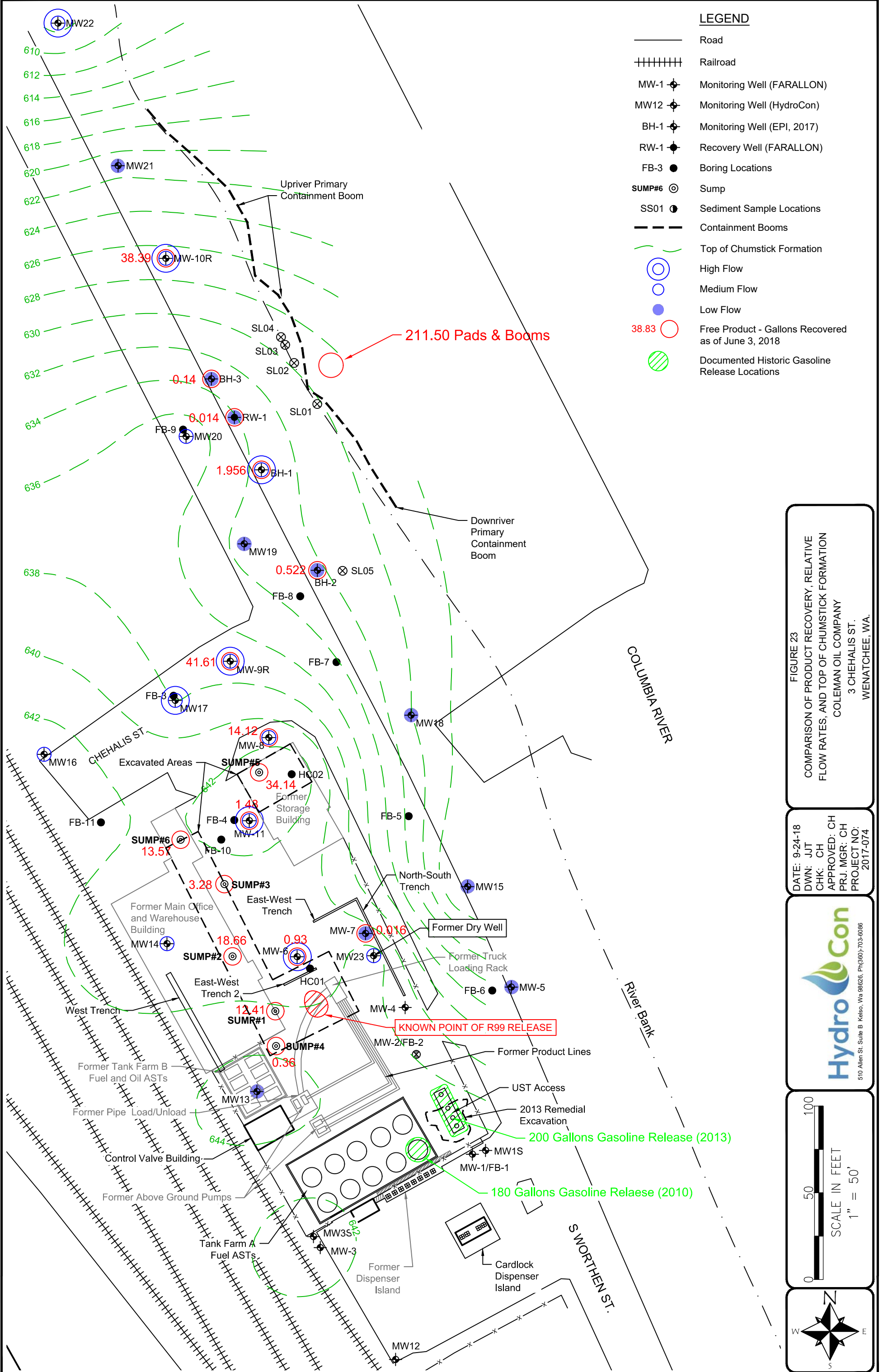
- Road
- +++++ Railroad
- MW-1 Monitoring Well (FARALLON)
- MW-12 Monitoring Well (HydroCon)
- BH-1 Monitoring Well (EPI, 2017)
- RW-1 Recovery Well (FARALLON)
- FB-3 Boring Locations
- SUMP#6 Sump
- SS01 Sediment Sample Locations
- - - Containment Booms
- - - Sandstone Observation Contours
- 630 Groundwater Elevation Contour
- Documented Historic Gasoline Release Locations

FIGURE 22  
 SANDSTONE SURFACE CONTOURS AND  
 GROUNDWATER CONTOURS  
 APRIL 27, 2018  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

DATE: 9-24-18  
 DWN: JJT  
 CHK: NV  
 APPROVED: NV  
 PRJ MGR: CH  
 PROJECT NO:  
 2017-074





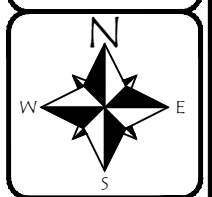
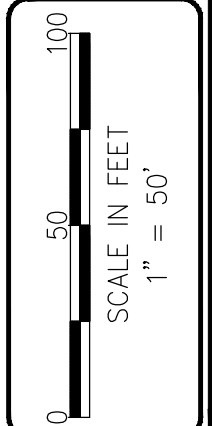


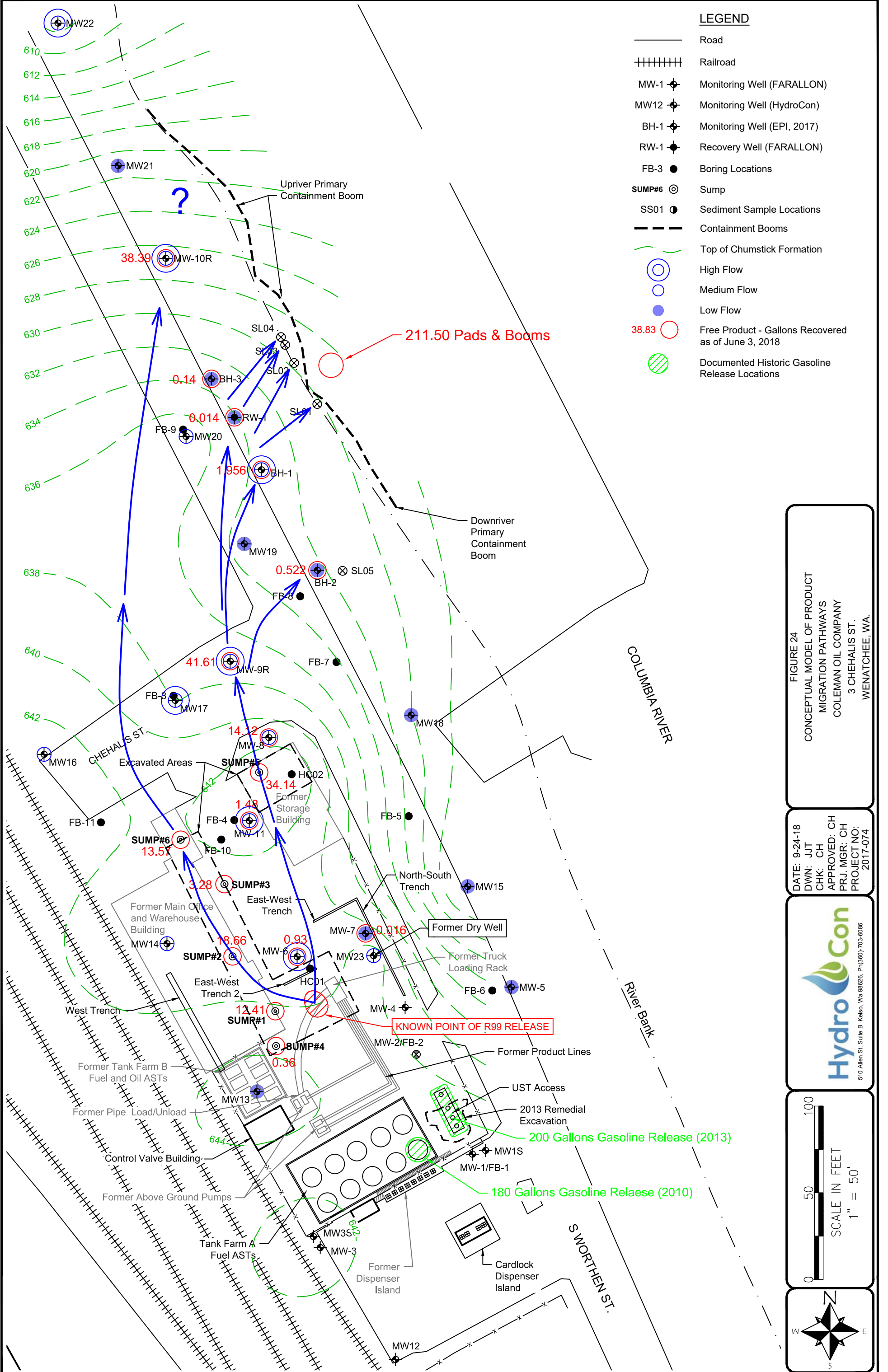
**LEGEND**

- Road
- +++++ Railroad
- MW-1 Monitoring Well (FARALLON)
- MW12 Monitoring Well (HydroCon)
- BH-1 Monitoring Well (EPI, 2017)
- RW-1 Recovery Well (FARALLON)
- FB-3 Boring Locations
- SUMP#6 Sump
- SS01 Sediment Sample Locations
- - - Containment Booms
- - - Top of Chumstick Formation
- High Flow
- Medium Flow
- Low Flow
- 38.83 Free Product - Gallons Recovered as of June 3, 2018
- Documented Historic Gasoline Release Locations

FIGURE 23  
 COMPARISON OF PRODUCT RECOVERY, RELATIVE  
 FLOW RATES, AND TOP OF CHUMSTICK FORMATION  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

DATE: 9-24-18  
 DWN: JJT  
 CHK: CH  
 APPROVED: CH  
 PRJ MGR: CH  
 PROJECT NO:  
 2017-074



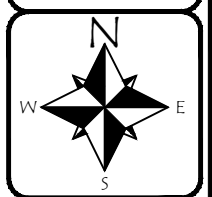
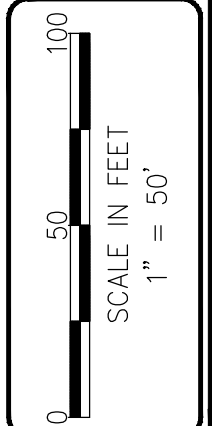


**LEGEND**

- Road
- +++++ Railroad
- MW-1 Monitoring Well (FARALLON)
- MW12 Monitoring Well (HydroCon)
- BH-1 Monitoring Well (EPI, 2017)
- RW-1 Recovery Well (FARALLON)
- FB-3 Boring Locations
- SUMP#6 Sump
- SS01 Sediment Sample Locations
- - - Containment Booms
- - - Top of Chumstick Formation
- High Flow
- Medium Flow
- Low Flow
- 38.83 Free Product - Gallons Recovered as of June 3, 2018
- Documented Historic Gasoline Release Locations

FIGURE 24  
 CONCEPTUAL MODEL OF PRODUCT  
 MIGRATION PATHWAYS  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

DATE: 9-24-18  
 DWN: JJT  
 CHK: CH  
 APPROVED: CH  
 PRJ MGR: CH  
 PROJECT NO:  
 2017-074



## **TABLES**



**Table 1**  
**Well Construction Details**  
 Coleman Oil Company  
 Wenatchee, Washington

Well ID	Date Installed	Installed By	Drilling Method	Total Boring Depth (feet bgs)	Total Well Depth (feet bgs)	Well Diameter (inch)	Well Construction Material	Screen Slot Size (inch)	Length of Screen (feet)	Length of Bottom Cap (feet)	Screened Interval (feet bgs)	Well Casing Elevation (feet <sup>1</sup> )
MW-1	7/7/2010	Farallon	Air Rotary	35.50	35.00	2	PVC	0.01	15	-	20-35	658.01
MW01S	3/4/2018	HydroCon	Sonic	20.00	19.99	4	PVC	0.01	15	0.23	5.37 - 20.37	657.54
MW-2	7/8/2010	Farallon	Air Rotary	40.00	40.00	2	PVC	0.01	15	-	25-40	657.76
MW-3	9/7/2010	Farallon	Air Rotary	35.30	35.00	2	PVC	0.01	10	-	25-35	658.26
MW03S	4/3/2018	HydroCon	Sonic	20.00	19.30	4	PVC	0.01	15	0.23	4.43 - 19.43	658.17
MW-4	9/8/2010	Farallon	Air Rotary	40.10	37.00	2	PVC	0.01	10	-	27-37	657.48
MW-5	9/9/2010	Farallon	Air Rotary	45.40	45.00	2	PVC	0.01	15	-	30-45	656.00
MW-6	4/12/2017	Farallon	Air Rotary	18.40	18.00	4	PVC	0.02	10	-	8-18	657.70
MW-7	4/11/2017	Farallon	Air Rotary	20.10	20.00	4	PVC	0.02	10	-	10-20	657.52
MW-8	4/11/2017	Farallon	Air Rotary	25.20	25.00	4	PVC	0.02	10	-	15-25	656.20
MW-9	4/12/2017	Farallon	Air Rotary	24.50	24.00	4	PVC	0.02	10	-	14-24	655.29
MW-10	4/14/2017	Farallon	Air Rotary	30.20	30.00	2	PVC	0.02	16	-	14-30	645.80
MW-11	4/14/2017	Farallon	Air Rotary	22.30	22.00	4	PVC	0.02	10	-	12-22	658.00
MW12	4/2/2018	HydroCon	Sonic	20.00	19.52	4	PVC	0.01	15	0.23	4.63 - 19.63	658.27
MW13	3/29/2018	HydroCon	Sonic	50.00	19.80	4	PVC	0.01	15	0.23	4.91 - 19.91	657.04
MW14	3/30/2018	HydroCon	Sonic	35.00	20.02	4	PVC	0.01	15	0.23	5.23 - 20.23	657.15
MW15	4/12/2018	HydroCon	Sonic	35.10	35.10	4	PVC	0.01	25	0.23	10.33 - 35.33	654.99
MW16	4/5/2018	HydroCon	Sonic	30.00	29.15	4	PVC	0.01	20	0.23	9.28 - 29.28	656.93
MW17	4/4/2018	HydroCon	Sonic	35.00	29.41	4	PVC	0.01	20	0.23	9.52 - 29.52	655.55
MW18	4/11/2018	HydroCon	Sonic	35.00	34.65	4	PVC	0.01	20	0.23	15.86 - 35.86	654.51
MW19	4/5/2018	HydroCon	Sonic	35.00	31.48	4	PVC	0.01	20	0.23	11.66 - 31.66	653.31
MW20	4/10/2018	HydroCon	Sonic	30.00	29.50	4	PVC	0.01	20	0.23	9.79 - 29.79	650.85
MW21	4/9/2018	HydroCon	Sonic	35.00	32.10	4	PVC	0.01	20	0.23	12.30 - 32.30	643.88
MW22	4/13/2018	HydroCon	Sonic	40.00	39.10	4	PVC	0.01	25	0.23	9.19 - 34.19	641.85
MW23	3/29/2018	HydroCon	Sonic	25.00	22.04	4	PVC	0.01	15	0.23	7.13 - 22.13	656.91
BH-1	3/25/2017	EPI	Air Rotary	30.00	30.00	2	PVC	0.01	10	-	20-30	652.17
BH-2	3/25/2017	EPI	Air Rotary	35.00	35.00	2	PVC	0.01	15	-	20-35	653.77
BH-3	3/26/2017	EPI	Air Rotary	30.00	30.00	2	PVC	0.01	15	-	15-30	648.76
RW-1	4/10/2017	Farallon	Air Rotary	30.00	30.00	3	PVC	0.02	15	-	15-30	650.42

**NOTES:**

feet<sup>1</sup> = Elevation is relative to NGVD88

bgs = below ground surface

PVC = polyvinyl chloride

**Table 2**  
**Groundwater Elevation Data**  
 Coleman Oil  
 Wenatchee, Washington

Well Identification	Monitoring Date	Monitoring Well Screened Interval (feet bgs)	Elevation Top of Casing <sup>1</sup> (feet)	Depth to Water (feet below top of casing)	Depth to NAPL (feet below top of casing)	NAPL Thickness (feet)	Groundwater Elevation (feet)
MW-1	4/17/2017	20-35	658.01	9.47	---	---	648.54
	4/20/2017			9.63	---	---	648.38
	4/27/2017			10.14	---	---	647.87
	5/1/2017			10.31	---	---	647.70
	6/8/2017			11.20	---	---	646.81
	7/3/2017			NM	---	---	---
	9/28/2017			12.36	---	---	645.65
MW-1S	4/25/2018	5.37 - 20.37	657.54	10.49	---	---	647.05
	4/27/2018			10.62	---	---	646.92
MW-2	4/17/2017	25-40	657.76	9.58	---	---	648.18
	4/20/2017			9.61	---	---	648.15
	4/27/2017			10.19	---	---	647.57
	5/1/2017			10.36	---	---	647.40
	6/8/2017			11.33	---	---	646.43
	7/3/2017			11.96	---	---	645.80
	9/28/2017			12.65	---	---	645.11
	4/25/2018			10.5	---	---	647.26
4/27/2018	10.54	---	---	647.22			
MW-3	4/17/2017	25-35	658.26	7.12	---	---	651.14
	4/20/2017			7.15	---	---	651.11
	4/27/2017			11.44	---	---	646.82
	5/1/2017			7.90	---	---	650.36
	6/8/2017			7.33	---	---	650.93
	7/3/2017			7.46	---	---	650.80
9/28/2017	7.74	---	---	650.52			
MW-3S	4/25/2018	4.43 - 19.43	658.17	7.25	---	---	650.92
	4/27/2018			7.24	---	---	650.93
MW-4	4/17/2017	27-37	657.48	15.29	---	---	642.19
	4/20/2017			15.40	---	---	642.08
	4/27/2017			15.74	---	---	641.74
	5/1/2017			15.71	---	---	641.77
	6/8/2017			16.23	---	---	641.25
	7/3/2017			16.93	---	---	640.55
	9/28/2017			18.18	---	---	639.30
	4/25/2018			16.22	---	---	641.26
	4/27/2018			17.59	---	---	639.89
MW-5	4/17/2017	30-45	656.00	33.98	---	---	622.02
	4/20/2017			35.67	---	---	620.33
	4/27/2017			34.98	---	---	621.02
	5/1/2017			35.92	---	---	620.08
	6/8/2017			32.06	---	---	623.94
	7/3/2017			36.75	---	---	619.25
	9/28/2017			38.67	---	---	617.33
	4/25/2018			NM	---	---	---
	4/27/2018			35.58	---	---	620.42
MW-6	4/17/2017	8-18	657.70	9.57	---	---	648.13
	4/20/2017			9.40	---	---	648.3
	4/27/2017			9.89	---	---	647.81
	5/1/2017			9.95	---	---	647.75
	6/8/2017			10.60	10.55	0.05	647.14
	7/3/2017			11.10	---	---	646.60
	9/28/2017			11.51	---	---	646.19
	4/25/2018			10.20	---	---	647.50
	4/27/2018			10.21	---	---	647.49
MW-7	4/17/2017	10-20	657.52	9.64	---	---	647.88
	4/20/2017			9.71	---	---	647.81
	4/27/2017			10.26	---	---	647.26
	5/1/2017			10.35	---	---	647.17
	6/8/2017			11.44	---	---	646.08
	7/3/2017			11.91	---	---	645.61
	9/28/2017			12.46	---	---	645.06
	4/25/2018			10.61	---	---	646.91
	4/27/2018			10.63	---	---	646.89
MW-8	4/13/2017	15-25	656.20	16.71	14.50	2.21	641.21
	4/17/2017			13.47	---	---	642.73
	4/20/2017			13.96	13.95	0.01	642.25
	4/27/2017			17.25	14.91	2.34	640.78
	5/1/2017			17.47	14.94	2.53	640.70
	6/8/2017			18.02	---	---	638.18
	7/3/2017			17.97	17.91	0.07	638.28
	9/28/2017			18.1	---	---	638.10
	4/25/2018			15.14	---	---	641.06
	4/27/2018			15.12	---	---	641.08
	MW-9			4/17/2017	14-24	655.29	13.56
4/20/2017		14.31	---	---			640.98
4/27/2017		17.45	16.75	0.7			638.39
5/1/2017		18.60	17.33	1.27			637.68
6/8/2017		22.14	---	---			633.15
7/3/2017		22.16	---	---			633.13
9/28/2017		22.69	---	---			632.6
4/25/2018		17.22	---	---			638.07
4/27/2018		17.22	---	---			638.07



**Table 2**  
**Groundwater Elevation Data**  
 Coleman Oil  
 Wenatchee, Washington

Well Identification	Monitoring Date	Monitoring Well Screened Interval (feet bgs)	Elevation Top of Casing <sup>1</sup> (feet)	Depth to Water (feet below top of casing)	Depth to NAPL (feet below top of casing)	LNAPL Thickness (feet)	Groundwater Elevation (feet)
MW-10	4/17/2017	14-30	645.80	16.72	---	---	629.08
	4/20/2017			17.31	---	---	628.49
	4/27/2017			18.11	---	---	627.69
	5/1/2017			18.99	---	---	626.81
	6/8/2017			19.88	---	---	625.92
	7/3/2017			25.06	23.62	1.44	621.86
	9/28/2017			25.7	---	---	620.10
	4/25/2018			21.18	---	---	624.62
	4/27/2018			20.96	---	---	624.84
MW-11	4/17/2017	12-22	658.00	13.45	---	---	644.55
	4/20/2017			13.45	---	---	644.55
	4/27/2017			13.76	---	---	644.24
	5/1/2017			13.77	---	---	644.23
	6/8/2017			14.32	14.05	0.27	643.89
	7/3/2017			14.30	---	---	643.70
	9/28/2017			14.65	---	---	643.35
	4/25/2018			13.82	---	---	644.18
	4/27/2018			13.82	---	---	644.18
MW-12	4/25/2018	4.63 - 19.63	658.27	7.37	---	---	650.90
	4/27/2018			7.31	---	---	650.96
MW-13	4/25/2018	4.91 - 19.91	657.04	7.39	---	---	649.65
	4/27/2018			7.36	---	---	649.68
MW-14	4/25/2018	5.23 - 20.23	657.15	7.81	---	---	649.34
	4/27/2018			7.75	---	---	649.40
MW-15	4/25/2018	10.33 - 35.33	654.99	NM	---	---	---
	4/27/2018			34.8	---	---	620.19
MW-16	4/25/2018	9.28 - 29.28	656.93	9.72	---	---	647.21
	4/27/2018			9.7	---	---	647.23
MW-17	4/25/2018	9.52 - 29.52	655.55	14.25	---	---	641.3
	4/27/2018			14.22	---	---	641.33
MW-18	4/25/2018	15.86 - 35.86	654.51	NM	---	---	---
	4/27/2018			34.69	---	---	619.82
MW-19	4/25/2018	11.66 - 31.66	653.31	23.05	---	---	630.26
	4/27/2018			23.15	---	---	630.16
MW-20	4/25/2018	9.79 - 29.79	650.85	18.55	---	---	632.3
	4/27/2018			18.64	---	---	632.21
MW-21	4/25/2018	12.30 - 32.30	643.88	19.4	---	---	624.48
	4/27/2018			19.31	---	---	624.57
MW-22	4/25/2018	9.19 - 34.19	641.85	21.802	---	---	620.05
	4/27/2018			21.8	---	---	620.05
MW-23	4/25/2018	7.13 - 22.13	656.91	10.28	---	---	646.63
	4/27/2018			10.3	---	---	646.61
BH-1	4/17/2017	20-30	652.17	19.71	---	---	632.46
	4/20/2017			20.13	---	---	632.04
	4/27/2017			22.88	---	---	629.29
	5/1/2017			23.16	---	---	629.01
	6/8/2017			25.64	---	---	626.53
	7/3/2017			28.46	27.91	0.55	624.14
	9/28/2017			28.73	---	---	623.44
	4/25/2018			23.03	---	---	629.14
	4/27/2018			20.03	---	---	632.14
BH-2	4/17/2017	20-35	653.77	26.16	---	---	627.61
	4/20/2017			26.30	---	---	627.47
	4/27/2017			26.56	26.48	0.08	627.27
	5/1/2017			26.68	26.58	0.1	627.17
	6/8/2017			26.73	---	---	627.04
	7/3/2017			28.86	---	---	624.91
	9/28/2017			31.25	---	---	622.52
	4/25/2018			27.68	---	---	626.09
	4/28/2017			27.53	---	---	626.24
BH-3	4/17/2017	15-30	648.76	17.47	---	---	631.29
	4/20/2017			17.88	---	---	630.88
	4/27/2017			18.70	---	---	630.06
	5/1/2017			19.06	---	---	629.70
	6/8/2017			21.19	---	---	627.57
	7/3/2017			21.70	---	---	627.06
	9/28/2017			23.04	---	---	625.72
	4/25/2018			20.06	---	---	628.70
	4/27/2018			22.36	---	---	626.40
RW-1	4/17/2017	15-30	650.42	16.15	---	---	634.27
	4/20/2017			16.34	---	---	634.08
	4/27/2017			17.35	---	---	633.07
	5/1/2017			18.55	---	---	631.87
	6/8/2017			22.67	---	---	627.75
	7/3/2017			24.19	---	---	626.23
	9/28/2017			26.74	---	---	623.68
	4/25/2018			21.19	---	---	629.23
	4/27/2018			21.21	---	---	629.21

**NOTES:**

--- denotes no LNAPL present

<sup>1</sup>Elevation in feet above mean sea level. Elevations based on NAVD88 vertical datum. Well survey conducted by Munson Engineers, Inc. of Wenatchee, Washington in July 2010 and April 2017. Groundwater elevations in wells with LNAPL corrected for

bgs = below ground surface

LNAPL = light nonaqueous-phase liquid

NAPL = nonaqueous-phase liquid

A specific gravity of 0.78 was used for LNAPL



**Table 3**  
**Field Parameters in Groundwater**  
 Coleman Oil Property  
 Wenatchee, Washington

Well Identification	Monitoring Date	Temperature (°C)	Specific Conductivity (mS/Cm)	Dissolved Oxygen (%)	pH (SU)	ORP (mV)	Turbidity (NTU)
MW-1	4/24/2018	14.4	0.604	0.60	6.73	-120.8	1.75
MW-1S	4/24/2018	---	---	---	---	---	---
MW-2	4/25/2018	14.4	0.81	2.64	7.21	79.8	0.26
MW-3	4/25/2018	---	---	---	---	---	---
MW-3S	4/25/2018	12.3	0.365	0.53	6.98	-25.4	1.21
MW-4	4/25/2018	15.3	1.16	3.14	7.23	126.4	0.71
MW-5	4/24/2018	14.4	0.84	7.00	7.09	54.1	22.5
MW-6	4/25/2018	13.4	0.565	0.62	6.40	-127.2	2.31
MW-7	4/25/2018	13.4	0.68	0.85	6.46	-38.7	4.01
MW-8	4/26/2017	14.4	0.99	0.43	6.50	-138.2	1.53
MW-9	4/26/2017	15.1	6.34	0.32	6.52	-84.2	3.78
MW-10	4/26/2017	15.4	1.16	0.57	6.51	-66.8	1.23
MW-11	4/26/2017	13.4	0.87	0.60	6.73	-120.8	1.75
MW-12	4/25/2018	12.5	0.336	3.19	7.04	23.6	1.55
MW-13	4/25/2018	11.5	0.632	0.87	6.72	-183.0	2.04
MW-14	4/25/2018	13.1	0.73	0.67	6.70	-70.7	1.51
MW-15	4/25/2018	---	---	---	---	---	---
MW-16	4/26/2017	13.3	0.26	15.28	7.03	-24.8	1.17
MW-17	4/26/2017	15.1	1.04	0.32	6.55	-132.2	2.44
MW-18	4/26/2017	---	---	---	---	---	---
MW-19	4/26/2017	15.8	1.35	1.43	6.55	61.0	1.01
MW-20	4/26/2017	13.7	1.12	0.86	6.46	-53.9	12.2
MW-21	4/26/2017	15.2	1.11	0.33	6.50	-64.1	0.63
MW-22	4/26/2017	14.1	0.94	0.98	6.68	-70.5	2.75
MW-23	4/25/2018	13.0	0.69	0.91	6.47	52.2	2.25
BH-1	4/26/2017	16.1	1.04	0.25	6.5	-107.2	1.47
BH-2	4/24/2017	17.3	0.77	0.84	6.53	-72.6	164
BH-3	4/26/2017	14.7	1.21	0.38	6.54	-94.1	4.01
RW-1	4/26/2017	15.3	1.13	0.84	6.74	30.3	1.13



**Table 4**  
**Light Nonaqueous-Phase Liquid**  
**Recovery Categories**  
 Coleman Oil  
 Wenatchee, Washington

Recovery Location	Volume (gallons)			
	Pads	Booms	Sock	Pump
<b>Columbia River</b>	148.56	58.68	0.04	0.00
<b>Sump #1</b>	11.26	1.15	0	0
<b>Sump #2</b>	18.66	0	0	0
<b>Sump #3</b>	3.28	0	0	0
<b>Sump #4</b>	0.36	0	0	0
<b>Sump #5</b>	34.14	0	0	0
<b>Sump #6</b>	8.02	0	0	5.55
<b>MW-6</b>	0	0	0.93	0
<b>MW-8</b>	0	0	2.81	11.025
<b>MW-9</b>	0.33	0	9.87	31.41
<b>MW-10</b>	0.32	0	11.56	26.51
<b>BH-1</b>	0	0	1.556	0.4
<b>BH-2</b>	0	0	0.23	0
<b>Oil-Water Separator</b>	4.29	0	0.02	7.06





**Table 5**  
**Simplified Slug Tests - May 2018**  
 Coleman Oil Site  
 Wenatchee, Washington

Observation Well		MW-6	MW-7	MW-8	MW-11	MW13	MW14	MW16	MW17	MW19	MW20	MW21	MW22	MW23
Date	Time													
05/21/18	Static DTW	10.42	10.98	15.61	13.94	7.55	7.95	9.78	14.31	25.65	19.79	16.29	14.96	10.66
	Initial W/ Slug	10.42	10.80	15.39	13.94	7.13	7.68	9.40	14.15	25.35	19.45	16.03	14.96	10.40
	Plus 1 Minute	10.42	10.86	15.48	13.94	7.19	7.76	9.50	14.25	25.4	19.5	16.19	14.96	10.51
	Plus 2 Minutes	10.42	10.89	15.52	13.94	7.19	7.80	9.53	14.29	25.43	19.52	16.29	14.96	10.56
	Plus 5 Minutes	10.42	10.92	15.61	13.94	7.22	7.89	6.64	14.31	25.48	19.63	16.29	14.96	10.62
	Plus 10 Minutes	10.42	10.95	15.61	13.94	7.26	7.91	9.78	14.31	25.5	19.65	16.19	14.96	10.65
	Initial DTW Change	0	0.18	0.22	0	0.42	0.27	0.38	0.16	0.3	0.34	0.26	0	0.26
	Final DTW Change	0	0.03	0	0	0.29	0.04	0	0	0.15	0.14	0.10	0	0.01
	Recharge over 10 Minutes	No Response	0.15	0.22	No Response	0.13	0.23	0.38	0.16	0.15	0.20	0.16	No Response	0.25
	Relative Flow	High	Low	Medum	High	Low	Medium	Medium	High	Low	Medium	Low	High	Medium

**Notes:**

DTW = Depth to Water

**Table 6**  
**Soil Analytical Results - Fuels and BTEX**  
 Coleman Oil Site  
 Wenatchee, Washington

	Fuels			BTEX					
	GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Total Xylenes		
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
<b>WA MTCA Method A Cleanup Level for Soil</b>			<b>30/100</b>	<b>2,000</b>	<b>2,000</b>	<b>0.3</b>	<b>7</b>	<b>6</b>	<b>9</b>
Benzene (Non Detect)			100						
Benzene (Detect)			30						
Field ID	Sample Depth (feet)	Date							
<b>Dry Well and Concrete Box Excavation</b>									
CMTB-3.0	3.0	4/3/2017	< 7.5	370	150	< 0.020	< 0.075	< 0.075	< 0.150
DRY WELL-B-5.0	5.0	4/3/2017	---	2,400	2,000	---	---	---	---
DRY WELL-E-4.0	4.0	4/3/2017	---	2,000	540	---	---	---	---
DRY WELL-N-4.0	4.0	4/3/2017	---	4,400	1,800	---	---	---	---
DRY WELL-S-4.0	4.0	4/3/2017	---	580	< 55	---	---	---	---
DRY WELL-W-4.0	4.0	4/3/2017	---	1,800	300	---	---	---	---
<b>Fuel Line Excavation</b>									
FUEL LINE-EX-B-6.0	6.0	4/3/2017	---	14,000	< 3,300 ec	---	---	---	---
FUEL LINE-EX-E-2.0	2.0	4/3/2017	---	58,000	< 6,000 ec	---	---	---	---
FUEL LINE-EX-E-3.0	3.0	4/3/2017	---	3,400	< 230	---	---	---	---
FUEL LINE-EX-N-3.0	3.0	4/3/2017	---	3,400	< 280	---	---	---	---
<b>North-South Trench Excavation</b>									
NS-TRENCH-1-5.0	5.0	4/4/2017	---	< 28	< 56	---	---	---	---
NS-TRENCH-2-10.0	10.0	4/4/2017	---	49	< 55	---	---	---	---
NS-TRENCH-3-10.0	10.0	4/4/2017	---	< 28	< 55	---	---	---	---
NS-TRENCH-4-5.0	5.0	4/4/2017	---	< 28	61	---	---	---	---
NS-TRENCH-5-10.0	10.0	4/4/2017	---	< 28	< 56	---	---	---	---
NS-TRENCH-6-10.0	10.0	4/4/2017	---	< 28	< 55	---	---	---	---
NS-TRENCH-7-10.0	10.0	4/4/2017	---	6,400	< 550	---	---	---	---
NS-TRENCH-8-5.0	5.0	4/4/2017	---	94 N	600	---	---	---	---
NS-TRENCH-9-10.0	10.0	4/4/2017	---	5,600	< 600	---	---	---	---
NS-TRENCH-9-10.0-1	10.0	4/4/2017	---	6,400	< 570	---	---	---	---
<b>East-West Trench Excavation</b>									
EW-TRENCH-1-5.0	5.0	4/4/2017	---	< 27	< 54	---	---	---	---
EW-TRENCH-10.0	10.0	4/4/2017	---	< 28	< 56	---	---	---	---
EW-TRENCH-3-5.0	5.0	4/5/2017	---	< 28	< 57	---	---	---	---
EW-TRENCH-4-10.0	10.0	4/5/2017	---	7,700	< 550	---	---	---	---
EW-TRENCH2-5-5.0	5.0	4/5/2017	---	< 28	< 55	---	---	---	---
EW-TRENCH2-6-9.0	9.0	4/5/2017	---	< 28	< 55	---	---	---	---
EW-TRENCH2-7-5.0	5.0	4/5/2017	---	< 27	< 54	---	---	---	---
EW-TRENCH2-8-6.0	6.0	4/5/2017	---	< 27	< 55	---	---	---	---
<b>Filling Station Excavation</b>									
FS-EX-1-6.0	6.0	4/6/2017	540 F	8,700	< 550	0.089	0.74	2.4	7.1
FS-EX-2-4.0	4.0	4/6/2017	---	42,000	2,200 N1	---	---	---	---
FS-EX-2-4.0-1	4.0	4/6/2017	---	45,000	2,500 N1	---	---	---	---
FS-EX-3-2.0	2.0	4/6/2017	---	69,000	5,600 N1	---	---	---	---
FS-EX-4-8.0	8.0	4/6/2017	1,300 F	12,000	< 660	0.050	0.071	3.9	12.7
FS-EX-5-11.0	11.0	4/6/2017	---	24,000	< 730	---	---	---	---
<b>Reconnaissance Borings</b>									
FB-3-9.0-040617	9.0	4/6/2017	< 5.4	< 27	< 55	< 0.020	< 0.054	< 0.054	< 0.108
FB-3-12.5-040617	12.5	4/6/2017	420 F	4,000	< 110	< 0.020	< 0.049	0.68	0.59
FB-3-13.5-040617	13.5	4/6/2017	940 F	14,000	< 610	0.046	< 0.042	2.5	4.03
FB-3-15.0-040617	15.0	4/6/2017	380 F	2,300	150 N1	0.028	< 0.044	1.2	0.98
FB-5-13.5-040617	13.5	4/6/2017	< 4.2	< 26	< 51	< 0.020	< 0.042	< 0.042	< 0.084
FB-5-15.0-040617	15.0	4/6/2017	< 4.4	< 26	< 52	< 0.020	< 0.044	< 0.044	< 0.088
FB-5-17.0-040617	17.0	4/6/2017	< 4.8	< 27	< 53	< 0.020	< 0.048	< 0.048	< 0.096
FB-6-12.0-040617	12.0	4/6/2017	< 4.7	< 120	1,100	< 0.020	< 0.047	< 0.047	< 0.094
FB-7-13.0-040617	13.0	4/6/2017	< 4.9	< 27	< 53	< 0.020	< 0.049	< 0.049	< 0.098
FB-7-23.0-040617	23.0	4/6/2017	< 4.7	40 N	440	< 0.020	< 0.047	< 0.047	< 0.094
FB-8-14.0-040717	14.0	4/7/2017	< 5.0	< 27	< 55	< 0.020	< 0.050	< 0.050	< 0.100
FB-9-6.9-040717	6.9	4/7/2017	< 4.7	1,100	350	< 0.020	< 0.047	< 0.047	< 0.094
FB-9-10.0-040717	10.0	4/7/2017	< 5.0	60	< 53	< 0.020	< 0.050	< 0.050	< 0.100
FB-9-14.0-040717	14.0	4/7/2017	330 F	440	180	< 0.020	< 0.050	0.63	0.48
FB-10-12.8-040717	12.8	4/7/2017	880 F	4,300	< 610	< 0.020	< 0.044	0.59	0.99
FB-10-14.0-040717	14.0	4/7/2017	860 F	5,900	1,800 N1	0.080	< 0.055	0.52	2.1
FB-10-17.1-040717	17.1	4/7/2017	910 F	1,300	270	0.086	< 0.25	0.58	3.0
FB-10-17.3-040717	17.3	4/7/2017	530 F	8,200	< 580	0.13	< 0.27	1.3	2.2
FB-11-12.6	12.6	4/13/2017	< 5.5	< 27	< 54	0.020	< 0.055	< 0.055	< 0.110
FB-11-23.4	23.4	4/13/2017	< 5.9	140	390	< 0.020	< 0.059	< 0.059	< 0.118
HC01-4.5	4.5	3/28/2018	< 5.7	< 25	< 50	< 0.0114	< 0.0570	< 0.0285	< 0.0855
HC01-10	10	3/28/2018	671	4,680	< 433	< 0.104	< 0.518	< 0.259	< 0.0855
HC01-15	15	3/28/2018	< 4.25	< 25	< 50	< 0.0114	< 0.0570	< 0.0285	< 0.0776
HC01-22	22	3/28/2018	7.99	104	80.3	< 0.00850	< 0.0425	< 0.0212	< 0.0637
HC01-34	34	3/28/2018	< 5.53	38.6	< 50	< 0.0111	< 0.0553	< 0.0277	< 0.0830
HC02-10	10	3/28/2018	< 7.66	< 25	< 50	< 0.0153	< 0.0766	< 0.0383	< 0.115
HC02-15	15	3/28/2018	37.7	< 25	< 50	< 0.0103	< 0.0513	< 0.0257	< 0.0770
HC02-22	22	3/28/2018	9.26	26.6	< 50	< 0.00984	< 0.0492	< 0.0246	< 0.0738



**Table 6**  
**Soil Analytical Results - Fuels and BTEX**  
 Coleman Oil Site  
 Wenatchee, Washington

	Fuels			BTEX					
	GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Total Xylenes		
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
<b>WA MTCA Method A Cleanup Level for Soil</b>			<b>30/100</b>	<b>2,000</b>	<b>2,000</b>	<b>0.3</b>	<b>7</b>	<b>6</b>	<b>9</b>
<b>Benzene (Non Detect)</b>			<b>100</b>						
<b>Benzene (Detect)</b>			<b>30</b>						
Field ID	Sample Depth (feet)	Date							
<b>Well Installations</b>									
RW-1-17.5	17.5	4/10/2017	< 6.9	< 32	< 63	< 0.020	< 0.069	< 0.069	< 0.138
MW15-10	10	4/3/2018	<5.26	<25	<50	<0.0132	<0.0658	<0.0329	<0.0987
MW15-20	20	4/3/2018	<4.88	<25	<50	<b>0.318</b>	<0.0488	<0.0244	<0.0731
MW35-15	15	4/3/2018	<b>83.8</b>	<25	<50	<0.00910	<0.0455	<0.0227	<0.0682
MW35-20	20	4/3/2018	<4.88	<25	<50	<0.0132	<0.0658	<0.0329	<0.0987
MW-6-10.3	10.3	4/12/2017	<b>280 F</b>	<b>10,000</b>	< 570	<b>0.068</b>	< 0.065	2.2	0.96
MW-6-12.8	12.8	4/12/2017	<b>1,400 F</b>	<b>3,900</b>	< 310	<b>0.066</b>	< 0.29	0.34	0.76
MW-7-13.0	13.0	4/11/2017	< 5.8	160	< 56	< 0.020	< 0.058	< 0.058	< 0.116
MW-7-17.3	17.3	4/11/2017	< 6.1	< 29	< 58	< 0.020	< 0.061	< 0.061	< 0.122
MW-8-12.8	12.8	4/11/2017	< 6.0	1,400	< 55	< 0.020	< 0.060	< 0.060	< 0.120
MW-8-15.0	15.0	4/11/2017	< 4.3	100	< 51	< 0.020	< 0.043	< 0.043	< 0.086
MW-8-17.5	17.5	4/11/2017	< 5.5	230	< 56	< 0.020	< 0.055	< 0.055	< 0.110
MW-9-12.8	12.8	4/12/2017	< 6.2	< 28	< 55	< 0.020	< 0.062	< 0.062	< 0.124
MW-9-15.6	15.6	4/12/2017	<b>1,800 F</b>	<b>15,000</b>	< 580	< 0.062	< 0.31	0.64	2.7
MW-9-24.5	24.5	4/13/2017	<b>31 F</b>	280	330	< 0.020	< 0.076	< 0.076	0.094
MW-10-15.7	15.7	4/14/2017	< 6.1	< 30	< 59	< 0.020	< 0.061	< 0.061	< 0.122
MW-10-25.1	25.1	4/14/2017	<b>1,300 F</b>	1,300	< 55	<b>0.13</b>	< 0.46	4.5	5.14
MW-11-5.8	5.8	4/14/2017	< 5.0	< 28	< 55	< 0.020	< 0.050	< 0.050	< 0.100
MW-11-13.2	13.2	4/14/2017	<b>570 F</b>	600	< 59	< 0.024	< 0.12	1.0	0.97
MW-11-17.8	17.8	4/14/2017	12	58	< 56	< 0.020	< 0.060	< 0.060	< 0.120
MW-12-10	10	4/2/2018	<5.10	<25	<50	<0.0102	<0.0510	<0.0255	<0.0766
MW-12-20	20	4/2/2018	<4.79	42.5	66.7	<0.00958	<0.0479	<0.0239	<0.0718
MW-13-05	5	3/29/2018	<b>580</b>	1,700	<b>5,310</b>	<b>0.701</b>	<b>25.5</b>	<b>6.27</b>	<b>29.3</b>
MW-13-10	10	3/29/2018	<b>3,360</b>	<b>2,290</b>	<50	<b>1.51</b>	<1.07	<0.533	5.2
MW-13-12	12	3/29/2018	12.1	<25	<50	<0.0102	<0.0512	<0.0256	0.0774
MW-13-21	21	3/29/2018	22.5	90.9	209	<0.00998	<0.0499	<0.0250	<0.0749
MW-13-35	35	3/29/2018	<5.16	<25	<50	<0.0103	<0.0516	<0.0258	<0.0773
MW-13-45	45	3/30/2018	<7.12	<25	<50	<0.0142	<0.0712	<0.0356	<0.107
MW-14-05	5	3/30/2018	<4.74	<25	<50	<0.00948	<0.0474	<0.0237	<0.0711
MW-14-10	10	3/30/2018	<b>171</b>	50.2	<50	<0.00971	<0.0486	<0.0243	<0.0729
MW-14-15	15	3/30/2018	<b>465</b>	447	<50	<0.0142	<0.0712	<0.0356	<0.107
MW-14-25	25	4/2/2018	<3.97	<25	<50	<0.0794	<0.0397	<0.0198	<0.0595
MW-15-10	10	4/12/2018	<5.17	<25	75.8	<0.0103	<0.0517	<0.0258	<0.0775
MW-15-20	20	4/12/2018	<5.74	<25	<50	<0.0115	<0.0574	<0.0287	<0.0862
MW-15-30	30	4/12/2018	<5.73	<25	<50	<0.0115	<0.0573	<0.0286	<0.0859
MW-16-10	10	4/5/2018	<4.78	<25	<50	<0.00955	<0.0478	<0.0239	<0.0717
MW-16-14	14	4/5/2018	<5.09	<25	<50	<0.0102	<0.0509	<0.0255	<0.0764
MW-16-25	25	4/6/2018	<2.38	<25	<50	<0.00476	<0.0238	<0.0119	<0.0357
MW-17-10	10	4/4/2018	<4.71	<25	<50	<0.00943	<0.0471	<0.0236	<0.0707
MW-17-17	17	4/4/2018	<b>1,900</b>	1,650	740	<0.0360	<0.180	<0.0900	<0.270
MW-17-25	25	4/4/2018	<b>83.6</b>	<25	<50	0.0109	<0.0508	0.0631	0.0799
MW-17-30	30	4/4/2018	<4.86	<25	<50	<0.00973	<0.0486	<0.0243	<0.0730
MW-18-10	10	4/11/2018	<6.01	<25	102	<0.0120	<0.0601	<0.0301	<0.0902
MW-18-15	15	4/11/2018	<5.45	<25	<50	<0.0109	<0.0545	<0.0273	<0.0818
MW-18-25	25	4/11/2018	<4.66	<25	<50	<0.00932	<0.0466	<0.0233	<0.0699
MW-19-10	10	4/5/2018	<5.34	<25	<50	<0.0107	<0.0534	<0.0267	<0.0801
MW-19-18	18	4/5/2018	<b>386</b>	<b>2,010</b>	<50	<0.0104	<0.0518	<0.0259	<0.0776
MW-19-30	30	4/5/2018	<5.48	167	284	<0.0110	<0.0548	<0.0274	<0.0822
MW-20-10	10	4/10/2018	<5.02	<25	<50	<0.0100	<0.0502	<0.0251	<0.0753
MW-20-15	15	4/10/2018	<b>60.3</b>	72.9	<50	<0.0102	<0.0508	<0.0254	<0.0762
MW-20-23.5	23.5	4/10/2018	<6.84	<25	<50	<0.0137	<0.0684	<0.0342	<0.103
MW-20-26	26	4/10/2018	<5.05	<25	<50	<0.0101	<0.0505	<0.0253	<0.0758
MW-21-10	10	4/9/2018	<5.32	<25	<50	<0.0106	<0.0532	<0.0266	<0.0797
MW-21-25	25	4/9/2018	9.65	47.2	<50	<0.0114	<0.0570	<0.0285	<0.0854
MW-21-32	32	4/9/2018	<5.69	<25	<50	<0.0114	<0.0569	<0.0285	<0.0854
MW-22-15	15	4/13/2018	<5.15	<25	<50	<0.0103	<0.0515	<0.0258	<0.0773
MW-22-25	25	4/13/2018	<13.4	<25.9	<51.8	<0.0268	<0.134	<0.0670	<0.201
MW-22-30	30	4/13/2018	<b>4,180</b>	<b>45,700</b>	<b>&lt;8,160 ec</b>	<b>10.7</b>	<5.87	<b>23.1</b>	<b>43.8</b>
MW-22-40	40	4/13/2018	<b>248</b>	52.5	<50	0.0854	0.085	0.156	0.696
MW-23-05	5	3/29/2018	<4.63	29.7	65.2	<0.00926	<0.0463	<0.0231	<0.0694
MW-23-08	8	3/29/2018	<b>116</b>	586	112	<0.0101	<0.0504	<0.0252	<0.0756
MW-23-12	12	3/29/2018	<b>127</b>	63.3	<50	<0.0115	<0.0577	<0.0289	<0.0866
MW-23-22	22	3/29/2018	<6.69	<25	<50	<0.0134	<0.0669	<0.0335	<0.100
<b>SHORELINE SAMPLES</b>									
SL01-0.5	0.5	4/12/2018	<b>1,140</b>	<b>39,400</b>	<b>&lt;2,350 ec</b>	<0.246	<1.23	<0.614	<1.84
SL02-0.5	0.5	4/12/2018	<b>629</b>	<b>30,400</b>	<b>&lt;2,570 ec</b>	<0.0528	<0.264	<0.132	<0.396
SL03-0.5	0.5	4/12/2018	<b>2,580</b>	<b>21,400</b>	<b>&lt;2,240 ec</b>	<0.203	<1.02	<0.508	1.6
SL04-0.5	0.5	4/12/2018	<b>968</b>	<b>18,100</b>	<b>&lt;2,310 ec</b>	<0.209	<1.05	<0.523	<1.57
SL05-0.5	0.5	4/12/2018	<5.15	527	<442	<0.0103	<0.0515	<0.0258	<0.0773

**Notes**  
 Red denotes concentration in excess of MTCA Method Cleanup Level for Soil.  
 GRPH (gasoline range petroleum hydrocarbons) analyzed by Method NWTPH-Gx.  
 DRPH (diesel range petroleum hydrocarbons) analyzed by Method NWTPH-Dx.  
 ORPH (oil range petroleum hydrocarbons) analyzed by Method NWTPH-Dx.  
 Volatiles analyzed by EPA Method 8260C.  
 MTCA Method A Cleanup Levels, WAC 173-340-720 through 173-340-760, revised Nov., 2007  
 < = less than method reporting limit shown  
 --- = not analyzed  
 ec = Method reporting limit exceeds Clean Up Level shown.  
 F = hydrocarbons indicative of heavier fuels are present in sample and impacting the gasoline result (Farallon 2017b).  
 N = hydrocarbons in the oil-range are impacting the diesel result (Farallon 2017b).  
 N1 = hydrocarbons in the diesel-range are impacting the oil result (Farallon 2017b).



**Table 7**  
**Sediment Sample Results - Fuels and BTEX**  
 Coleman Oil Site  
 Wenatchee, Washington

			Fuels			BTEX			
			GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>SCUM II Sediment Management SCO Standards (SMS) for Freshwater Sediments<sup>1</sup></b>				<b>340</b>	<b>3,600</b>				
Field ID	Sample Depth	Date							
SEDIMENT SAMPLES									
SS01-13.97cm	0.46	4/23/2018	<25.2	<b>842</b>	392	<0.0503	0.395	<0.126	<0.378
SS02-11.75cm	0.38	4/23/2018	<13.7	<b>473</b>	175	<0.0274	0.182	<0.0684	<0.205
SS03-13.97cm	0.46	4/23/2018	<16.2	207	147	<0.325	<0.0162	<0.0811	<0.243
SS04-11.82 cm	0.39	4/23/2018	<16.6	<45.1	90.6	<0.0333	<0.166	<0.0832	<0.0250
SS05-13.97	0.46	4/23/2018	<13.8	<38.1	87.2	<0.0276	<0.138	<0.0690	<0.207
SEDIMENT SAMPLES WITH ACID/SILICA GEL CLEANUP									
SS01-13.97cm	0.46	4/23/2018	--	<b>947</b>	<105	--	--	--	--
SS02-11.75cm	0.38	4/23/2018	--	<b>526</b>	<73.4	--	--	--	--
SS03-13.97cm	0.46	4/23/2018	--	238	<78.4	--	--	--	--
SS04-11.82 cm	0.39	4/23/2018	--	<45.1	<90.3	--	--	--	--
SS05-13.97	0.46	4/23/2018	--	<38.1	<76.1	--	--	--	--

**Notes**

**Red** denotes concentration in excess of Sediment Management Standard (SMS) for Freshwater Sediment.

GRPH (gasoline range petroleum hydrocarbons) analyzed by Method NWTPH-Gx.

DRPH (diesel range petroleum hydrocarbons) and ORPH (oil range petroleum hydrocarbons) analyzed by Method NWTPH-Dx.

BTEX analyzed by EPA Method 8260C.

<sup>1</sup>SCUMII 173-204 WAC - Sediment Management Standards for Freshwater Sediments

SCO = Sediment Cleanup Objective

< = less than method reporting limit shown

--- = not analyzed



**Table 8**  
**Groundwater Analytical Results - Fuels and BTEX**  
 Coleman Oil Site  
 Wenatchee, Washington

	Fuels			Volatiles							Metals	
	GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Xylene, Total	Naphthalene	MTBE	EDB	EDC	Total Lead
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
WA MTCA Method A Cleanup for Ground Benzene (Non Detect)	800/1000	500	500	5	1,000	700	1,000	160	20	0.01	5	15
Benzene (Detect)	1,000											
	800											

Field ID	Date	GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Xylene, Total	Naphthalene	MTBE	EDB	EDC	Total Lead
FB-9	4/7/2017	1,200 F	2,900	1,200	2.4	<1.0	3.7	1.7					
FB-10	4/7/2017	2,000 F	57,000	<4,100	71	13	7.1	64					
BH-1	4/21/2017	820 F	1,900	970 N1	15	2.8	8.3	18.5					
BH-1	4/26/2018	2,140	1,390	<377	0.671	<1.00	5.55	12.5	--	--	--	--	--
BH-2	4/24/2018	854	9,360	<377	<0.200	<1.00	<0.500	<1.50	--	--	--	--	--
BH-2	4/10/2017	1,900 F	100,000	10,000	<4.0	<4.0	13	39					
BH-2	4/21/2017	1,500 F	2,600	630 N1	4.2	3.3	12	39					
BH-3	4/21/2017	1,800 F	2,400	660	1.8	<1.0	5.4	8.2					
BH-3	4/26/2018	172	1,130	<377	<0.200	<1.00	<0.500	<1.50	--	--	--	--	--
BH-3	9/29/2017	150 O	1,200	550 N1	<1.0	<1.0	<1.0	<2.0					
RW-1	4/21/2017	<100	840	540 N1	<1.0	<1.0	<1.0	<2.0					
RW-1	9/29/2017	<100	360	440	<1.0	<1.0	<1.0	<2.0					
RW-1	4/26/2018	<100	<189	<377	<0.200	<1.00	<0.500	<1.50	--	--	--	--	--
MW-1	3/23/2017	--	520	480	--	--	--	--					
MW-1	4/21/2017	210 F	730	510	<1.0	<1.0	<1.0	<2.0					
MW-1	9/29/2017	200	410	<410	<1.0	<1.0	<1.0	<2.0					
MW-1S	4/24/2018	188	<187	<374	0.42	<1.00	5.8	9.48	--	--	--	--	<0.200
MW-2	3/23/2017	--	<260	<410	--	--	--	--					
MW-2	4/20/2017	<100	<260	<410	<1.0	<1.0	<1.0	<2.0					
MW-2	4/25/2018	<100	<187	<374	<0.200	<1.00	<0.500	<1.50	--	--	--	--	--
MW-3	4/20/2017	<100	<260	<410	<1.0	<1.0	<1.0	<2.0					
MW-3	9/28/2017	<100	<260	<410	<1.0	<1.0	<1.0	<2.0					
MW-3S	4/25/2018	<100	<187	<374	<0.200	<1.00	<0.500	<1.50	<2.00	<1.00	<0.500	<0.400	--
MW-4	3/23/2017	--	<260	<410	--	--	--	--					
MW-4	4/20/2017	<100	<260	<410	<1.0	<1.0	<1.0	<2.0					
MW-4	9/28/2017	<100	<260	<410	<1.0	<1.0	<1.0	<2.0					
MW-4	4/25/2018	<100	<187	<374	<0.200	<1.00	<0.500	<1.50	--	--	--	--	--
MW-5	3/23/2017	--	<260	<410	--	--	--	--					
MW-5	4/20/2017	<100	<260	<410	<1.0	<1.0	<1.0	<2.0					
MW-5	9/28/2017	<100	<260	<410	<1.0	<1.0	<1.0	<2.0					
MW-5	4/25/2018	<100	<189	<377	<0.200	<1.00	<0.500	<1.50	--	--	--	--	--
MW-6	4/20/2017	880 F	1,800	480 N1	5.0	<4.0	6.2	37					
MW-6	9/28/2017	530 O	760	430 N1	<1.0	<1.0	<1.0	4.3					
MW-6	4/25/2018	643	1,620	<374	0.56	<1.00	<0.500	2.19	--	--	--	--	0.375
MW-7	4/20/2017	1,100 F	1,300	420 N1	3.2	<1.0	15	11.4					
MW-7	9/28/2017	<100	520	<470 U1	<1.0	<1.0	<1.0	<2.0					
MW-7	4/25/2018	<100	435	<374	<0.200	<1.00	<0.500	<1.50	--	--	--	--	--
MW-8	9/29/2017	1,300 O	2,100	690 N1	<1.0	<1.0	4.1	27.2					
MW-8	4/26/2018	720	1,300	<374	0.641	<1.00	<0.500	4.67	--	--	--	--	--
MW-9	9/29/2017	500 O	1,200	670 N1	<1.0	<1.0	<1.0	1.5					
MW-9	4/26/2018	2,810	2,620	<374	2.73	<1.00	9.95	20.4	--	--	--	--	--
MW-10	4/21/2017	1,900 F	3,800	730	3.4	<1.0	11	12.5					
MW-10	9/29/2017	1,900 O	16,000	1,300 N1	<1.0	<1.0	13	26.7					
MW-10	4/26/2018	2,290	1,500	<377	0.219	<1.00	3.52	5.95	--	--	--	--	--
MW-11	4/21/2017	1,400 F	1,700	1,000 N1	28	4.1	8.2	26.1					
MW-11	9/29/2017	1,000 O	3,100	720 N1	<1.0	<1.0	1.9	12.5					
MW-11	4/26/2018	1,240	1,140	<374	<0.200	<1.00	0.56	2.27	--	--	--	--	--
MW-12	4/25/2018	<100	<189	<377	<0.200	<1.00	<0.500	<1.50	--	--	--	--	--
MW-13	4/25/2018	40,900	1,790	<377	1,500	4,710	627	3,780	--	--	--	--	0.446
MW-14	4/25/2018	4,620	900	<374	13.1	<1.00	16.1	<1.50	3.21	<1.00	<0.500	<0.400	--
MW-15	4/25/2018	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	4/26/2018	<100	330	<374	<0.200	<1.00	<0.500	<1.50	--	--	--	--	--
MW-17	4/26/2018	2,800	1,630	<377	1.23	<1.00	1.62	7.66	4.72	<1.00	<0.500	<0.400	--
MW-18	4/26/2018	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	4/26/2018	280	979	<377	<0.200	<1.00	<0.500	<1.50	--	--	--	--	--
MW-20	4/26/2018	1,270	1,320	<377	<0.200	<1.00	1.56	5.44	--	--	--	--	--
MW-21	4/26/2018	991	965	<374	<0.200	<1.00	0.835	1.82	--	--	--	--	--
MW-22	4/26/2018	6,960	4,690	<377	118	28.8	102	196	--	--	--	--	<0.200
MW-23	4/25/2018	<100	419	<381	<0.200	<1.00	<0.500	<1.50	--	--	--	--	<0.200

**Notes**  
 Red denotes concentration in excess of MTCA Method Cleanup Level for Groundwater.  
 MTCA Method A Cleanup Levels, WAC 173-340-720 through 173-340-760, revised Nov., 2007  
 GRPH (gasoline range petroleum hydrocarbons) analyzed by Method NWTPH-Gx.  
 DRPH (diesel range petroleum hydrocarbons) and ORPH (oil range petroleum hydrocarbons) analyzed by Method NWTPH-Dx.  
 Volatiles analyzed by EPA Method 8260C  
 Total Lead by EPA Method 6020  
 < = less than method reporting limit shown  
 -- = not analyzed. MW15 and MW18 not sampled due to lack of water in the well.  
 ec = Method reporting limit exceeds Clean Up Level shown.  
 F and O = hydrocarbons indicative of heavier fuels are present in sample and impacting the gasoline result (Farallon 2017b)  
 N1 = hydrocarbons in the diesel-range are impacting the oil result (Farallon 2017b)  
 U1 = the practical quantitation limit is elevated due to interferences present in the sample (Farallon 2017b)



**Table 9**  
**Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons**  
 Coleman Oil Site  
 Wenatchee, Washington

	Acenaphthene	Acenaphthylene	Anthracene	Benz [a] anthracene	Benzo [a] pyrene	Benzo [b] fluoranthene	Benzo [k] fluoranthene	Benzo (g,h,i) perylene	Chrysene	Dibenz [a,h] anthracene
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
<b>WA MTCA Method A Cleanup Level for Groundwater</b>					0.1					
<b>Field ID</b>	<b>Date</b>									
MW21	4/26/2018	0.193	<0.0935	0.145	<0.0935	<0.0935	<0.0935	<0.0935	<0.0935	<0.0935
MW22	4/26/2018	113	<0.0943	8.48	0.284	<0.0943	<0.0943	<0.0943	<0.0943	0.243

	Dibenzofuran	Fluoranthene	Fluorene	Indeno [1,2,3-]	2-Methyl-	Naphthalene	Phenanthrene	Pyrene	1- Methyl-	TEF
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
<b>WA MTCA Method A Cleanup Level for Groundwater</b>						160				0.1
<b>Field ID</b>	<b>Date</b>									
MW21	4/26/2018	0.103	<0.0935	0.144	<0.0935	0.494	1.16	<0.0935	<0.0935	1.48
MW22	4/26/2018	8.55	3.2	36.7	<0.0943	298	692	36.6	4.3	298

**Notes**

**Red** denotes concentration in excess of MTCA Method Cleanup Level for Soil.  
 MTCA Method A Cleanup Levels, WAC 173-340-720 through 173-340-760, revised Nov., 2007  
 < = less than method reporting limit shown  
 mg/kg = milligrams per kilogram (parts per million)  
 PAHs by EPA Method 8270D SIM  
 ec = Method reporting limit exceeds Clean Up Level shown.  
 TEF = Toxicity Equivalency Factor per Ecology Focus Sheet. One-half the detection limit used for non-detected concentrations.

## **APPENDICIES**

**Appendix A**  
**Soil Boring Logs**



# GUIDE TO BOREHOLE LOGS\*\*

MAJOR DIVISIONS		SYMBOLS	TYPICAL NAMES	
<b>COARSE GRAINED SOILS</b> <small>(more than 1/2 of soil &gt;No. 200 sieve size)</small>	<b>GRAVELS</b> <small>more than 50% coarse fraction &gt; no.4 sieve</small>	GW	Well-graded gravels or gravel-sand mixtures, little to no fines.	
		GP	Poorly-graded gravels or gravel-sand mixtures, little to no fines.	
		GM	Silty gravels, gravel-sand-silt mixtures.	
		GC	Clayey gravels or gravel-sand-clay mixtures	
	<b>SANDS</b> <small>less than 50% coarse fraction &gt; no.4 sieve</small>	SW	Well-sorted sands or gravelly sands, little to no fines.	
		SP	Poorly-sorted sands or gravelly sands, little to no fines.	
		SM	Silty sands, sand-silt mixtures.	
		SC	Clayey sands, sand-clay mixtures.	
	<b>FINED GRAINED SOILS</b> <small>(more than 1/2 of soil &lt; No. 200 sieve size)</small>	<b>SILTS &amp; CLAYS</b> <small>Liquid Limit* less than 50%</small>	ML	Inorganic silts and very fine sands, silty or clayey fine sands or clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy or silty clays, lean clays.
OL			Organic silts and organic silty clays of low plasticity.	
<b>SILTS &amp; CLAYS</b> <small>Liquid Limit* greater than 50%</small>		MH	Inorganic silts, micaceous or diatomaceous fine sand or silty soils, elastic silts.	
		CH	Inorganic clays of high plasticity, fat clays.	
		OH	Organic clays of medium to high plasticity, organic silty clay, organic silts.	
<b>HIGHLY ORGANIC SOILS</b>		Pt	Peat or other highly organic soils.	
		Conc	Concrete	
		Asph	Asphalt	
		Mud	Mudstone	
		SiltS	Siltstone	
		SandS	Sandstone	

\* Liquid Limit represents the moisture content (in percent) of a soil at which point the soil no longer behaves like a plastic and starts to behave like a liquid.

## BORING LOG SYMBOLS

### SHEEN TYPES:

NS - No Sheen observed  
 SS - Slight Sheen observed (Spotty coverage of sheen pan, no iridescence)  
 MS - Moderate Sheen (full coverage of sheen pan, no iridescence) pan, iridescent  
 HS - Heavy Sheen (full coverage of sheen)

### PERCENTAGES:

Trace - Particles are present but estimated to be less than 5% Few - 5 to 10%  
 Little - 15 to 25%  
 Some - 30 to 45%  
 Mostly - 50 to 100%

### SAMPLE MOISTURE:

Dry - No moisture, dry to touch  
 Moist - Damp but no visible moisture  
 Wet - Visible free water

### SAMPLE PLASTICITY (FINE-GRAINED SOILS):

Nonplastic - Cannot be rolled at any moisture content  
 Low - Barely rolled, lump cannot be formed when drier than plastic limit  
 Medium - Easily rolled, lump crumbles when drier than plastic limit  
 High - Easily rolled yet takes considerable time to reach the plastic limit, molded shape can be formed without crumbling when drier than the plastic limit

### PARTICLE SIZE RANGE (COARSE-GRAINED SOILS):

Gravel - Fine, Coarse  
 Sand - Fine, Medium, Coarse



SAMPLE LOCATION



SAMPLE INTERVAL



SAMPLE RECOVERY



GROUNDWATER, FIRST OBSERVED

### SAMPLE TYPES:

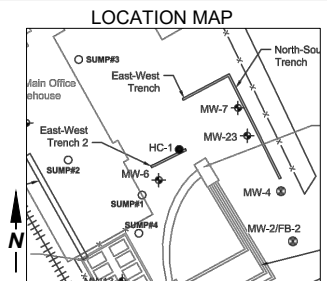
SS - Split Spoon  
 G - Grab  
 ST - Shelby Tube  
 GS - Geoprobe Sampler



Phone: 360-703-6079

WELL/BORING NUMBER **HC01**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 03-28-18



DESCRIPTION <small>(USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)</small>	DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
<p><b>SAND (SP) with gravel</b>, yellowish brown (10yr 7/4), fine grained, 5-15% low plastic fines, up to 15% sub-rounded gravels up to 2.5", no odor/sheen, dry.</p> <p>NOTE: Poor recovery from 5-10' bgs. Cobble stuck in shoe, similar to material seen at surface to 5' bgs.</p>	0							<p><b>WELL CONSTRUCTION</b>            Depths (feet bgs)</p> <p>Borehole: 50            Sump:            Screen:            Casing:            Backfill:            Sand Pack:            Bentonite: 0 - 50            Concrete:            Stabilizers:</p>
<p><b>GRAVELLY SAND (SP)</b>, gray (7.5B 5/1), fine grained, 20% sub-rounded gravels up to 3", &lt;5% low plastic fines, moderate petroleum odor with sheen, damp.</p>	5			HC01-4.5	0.3			
<p><b>SILT (ML) with sand</b>, brown (7.5Y 7/2), low-moderate plasticity, &lt;20% fine sand, trace amounts of gravels &lt;1/4", no odor/sheen, hard and dense, dry.</p>	10			HC01-10	395			
<p>No recovery from 15-17' bgs; <b>Chumstick formation at 17' bgs.</b></p>	15			HC01-15	5.0			
<p><b>SILTSTONE</b>, light brown (10Y 6/3), soft, 15-20% fine sand in matrix, planar fracture, scattered organic laminations and muscovite.</p>	20				0.3			
<p><b>MUDSTONE</b>, softer blackish brown (10PB 4/1), laminated, no odor/sheen, dry.</p>	25				0.2			
<p><b>SILTSTONE</b>, light brown (10Y 6/3), soft, 15-20% fine sand in matrix, planar fracture, scattered organic laminations and muscovite.</p>	30			HC01-22	0.1			
<p><b>SANDSTONE</b>, light gray (10PB 6/1), weakly cemented, massive, medium grained sandstone with predominately feldspar and quartz grains.</p>	35				0.1			
<p><b>SILTSTONE</b>, light brown (10Y 6/3), soft, 15-20% fine sand in matrix, planar fracture, scattered organic laminations and muscovite.</p>	40				0.1			
<p><b>SANDSTONE</b>, light gray (10PB 6/1), weakly cemented, massive, medium grained with predominately feldspar and quartz grains.</p>	45				0.3			
<p><b>SILTSTONE</b>, light brown (10Y 6/3), soft, 15-20% fine sand in matrix, planar fracture, scattered organic laminations and muscovite.</p>	50			0.1				
<p><b>SANDSTONE</b>, light gray (2.5Y, 7/1), fine grained ashy matrix.</p>	55		HC01-34	1.9				

**LEGEND:**

- FILTER PACK
- BENTONITE
- CEMENT GROUT
- CUTTINGS/BACKFILL
- WATER LEVEL DURING DRILLING

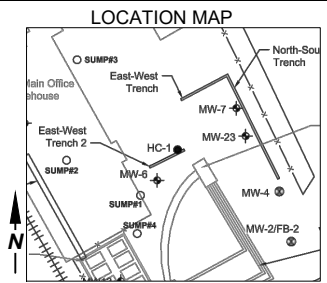
DRILLING CONTRACTOR: Budinger DRILLING METHOD: Sonic BOREHOLE DIAMETER: 6" SAMPLING METHOD: Continuous START CARD NUMBER:	CASING ELEVATION: GROUND SURFACE ELEVATION: COORDINATES: 153118.1557 COORDINATES: 1771783.523
---	--



Phone: 360-703-6079

WELL/BORING NUMBER **HC01**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 03-28-18



DESCRIPTION <small>(USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)</small>	DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
<b>SANDSTONE</b> , light gray (2.5Y, 7/1), fine grained sand in ashy matrix.	35							<b>WELL CONSTRUCTION</b> Depths (feet bgs) Borehole: 50 Sump: Screen: Casing: Backfill: Sand Pack: Bentonite: 0 - 50 Concrete: Stabilizers:
<b>MUDSTONE</b> , blackish brown (10PB 4/1), soft, waxy score, clay rich matrix with, very fine sand grain inclusions, weak to moderate cementation, commonly exhibits planer fractures, laminated, no odor/sheen, dry.	40				0.0			
<b>SANDSTONE</b> , gray (10PB, 5/1), slightly hard, irregular fracture, medium grained sand, sub-angular, no odor/sheen.  NOTE: Dark brown mudstone interbedding between 46-50' bgs.	45				0.3			
BOTTOM OF BORING AT 50' B.G.S.	50				0.2			
Boring backfilled with hydrated bentonite upon completion.	55				0.7			
	60				0.3			
	65							
	70							

- LEGEND:**
- FILTER PACK
  - BENTONITE
  - CEMENT GROUT
  - CUTTINGS/BACKFILL
  - WATER LEVEL DURING DRILLING

DRILLING CONTRACTOR: Budinger  
 DRILLING METHOD: Sonic  
 BOREHOLE DIAMETER: 6"  
 SAMPLING METHOD: Continuous  
 START CARD NUMBER:

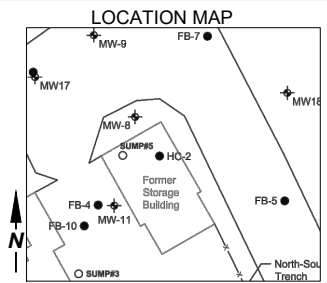
CASING ELEVATION:  
 GROUND SURFACE ELEVATION:  
 COORDINATES: 153118.1557  
 COORDINATES: 1771783.523



Phone: 360-703-6079

WELL/BORING NUMBER **HC02**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 03-28-18



DESCRIPTION (USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)	DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
<b>No recovery 0-2' bgs.</b>	0							<b>WELL CONSTRUCTION</b> Depths (feet bgs) Borehole: 35 Sump: Screen: Casing: Backfill: Sand Pack: Bentonite: 0 - 35 Concrete: Stabilizers:
<b>SAND (SP) with gravel</b> , yellowish brown (7.5YR 5/2), fine, 10-15% low plastic fines, 5-15% subrounded gravels up to 1.5" in diameter, no odor/sheen, dry.  NOTE: Large boulder at 5' bgs.	5			HC02-10	0.6 0.1			
<b>SILTY SAND (SM)</b> , brown, 30% low plastic fines, 10% subrounded gravels up to 2.5" in diameter, no odor/sheen, damp.	10				0.0			
<b>SILT (ML) with gravel</b> , brown (7.5Y 6/2), low-moderate plasticity, 15% subangular gravels <3/4" in diameter, no odor/sheen.	12.5			HC02-15	9.0			
<b>MUDSTONE</b> , blackish brown (10PB 4/1), laminated, no odor/sheen, dry. <b>Chumstick Formation at 12.5' bgs.</b>	15				0.9 1.0 2.2			
NOTE: Color change at 23' bgs from brown to gray (10PB 6/1) becomes slightly harder less crumbly <b>SANDSTONE</b> , gray (10PB, 5/1), well cemented, medium grained, sub-angular, no odor/sheen.	23			HC02-22	0.7			
<b>BOTTOM OF BORING AT 35' B.G.S.</b>  Boring backfilled with hydrated bentonite upon completion.	35							

- LEGEND:**
- FILTER PACK
  - BENTONITE
  - CEMENT GROUT
  - CUTTINGS/BACKFILL
  - WATER LEVEL DURING DRILLING

DRILLING CONTRACTOR: Budinger  
 DRILLING METHOD: Sonic  
 BOREHOLE DIAMETER: 6"  
 SAMPLING METHOD: Continuous  
 START CARD NUMBER:

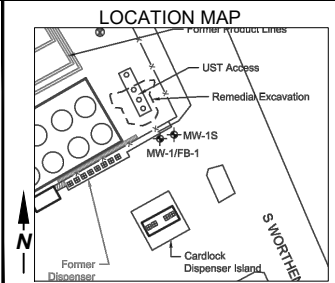
CASING ELEVATION:  
 GROUND SURFACE ELEVATION:  
 COORDINATES: 153060.1732  
 COORDINATES: 1771815.796



Phone: 360-703-6079

WELL/BORING NUMBER **MW01S**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 04-03-18



DESCRIPTION (USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)	DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
<b>SAND (SP)</b> , brown, fine, 5% low plastic fines, 15% subrounded gravels up to 1/2" in diameter, no odor/sheen, damp.	0	[Symbol]						<b>WELL CONSTRUCTION</b> Depths (feet bgs) Borehole: 20.60 Sump: 20.37 - 20.60 Screen: 5.37 - 20.37 Casing: 0 - 5.37 Backfill: Sand Pack: 4 - 20.60 Bentonite: 1 - 4 Concrete: 0 - 1 Stabilizers: Yes  <b>MATERIALS USED</b> Casing: 4" PVC Well Screen: 15', 0.010" slotting End Cap: Flat sump Sand Pack: 9 50lbs bag Bentonite: 2 50lbs bag Concrete: 1 50lbs bag Monument: Flush Well Cap: Locking J-plug Other:
<b>SILT (ML) with gravel</b> , dark brown, low plasticity, 25% rounded gravels up to 2" in diameter, 10% fine sand, no odor/sheen.		[Symbol]			0.0			
<b>SILTY SAND (SM) with gravel</b> , brown, 20% low plastic fines, 30% rounded gravels up to 2" in diameter, no odor/sheen, dry.	5	[Symbol]			0.0			
<b>SAND (SP) with gravel</b> , brown, fine, 5% low plastic fines, 15% rounded gravels up to 2" in diameter, no odor/sheen, moist.		[Symbol]			0.1			
NOTE: Locally increased silt and gravel at 11.5' bgs, with brown color.	10	[Symbol]		MW1S-10	0.0	▼		
NOTE: <b>Chumstick Formation at 13.5' bgs.</b>		[Symbol]			0.1			
<b>MUDSTONE</b> , dark brown, soft, waxy, friable, no odor/sheen.	15	[Symbol]			0.2			
<b>SANDSTONE</b> , gray, soft to hard, predominately medium grained sand, quartz and feldspar with muscovite, gritty, clean with <10% fines, no odor/sheen.		[Symbol]			0.2			
BOTTOM OF BORING AT 20' B.G.S.	20	[Symbol]		MW1S-20	0.1			
	25	[Symbol]						
	30	[Symbol]						
	35	[Symbol]						

- LEGEND:**
- [Symbol] FILTER PACK
  - [Symbol] BENTONITE
  - [Symbol] CEMENT GROUT
  - [Symbol] CUTTINGS/BACKFILL
  - [Symbol] WATER LEVEL DURING DRILLING

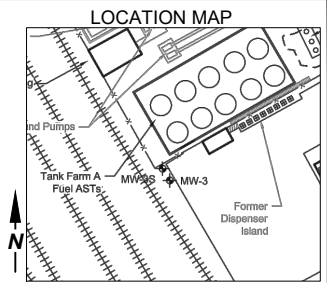
DRILLING CONTRACTOR: Budinger DRILLING METHOD: Sonic BOREHOLE DIAMETER: 6" SAMPLING METHOD: Continuous START CARD NUMBER: BIU613	CASING ELEVATION: 657.54 GROUND SURFACE ELEVATION: 658.15 COORDINATES: 152725.8422 COORDINATES: 1771912.691
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Phone: 360-703-6079

WELL/BORING NUMBER **MW03S**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 04-03-18



DESCRIPTION (USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)	DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
<b>GRAVELLY SAND (SP)</b> , brown (10YR 4/4), fine, 10% low plastic fines, 40% subrounded gravels up to 3" in diameter, no odor/sheen, damp.	0	[Symbol]	[Well Detail]					<b>WELL CONSTRUCTION</b> Depths (feet bgs) Borehole: 19.66 Sump: 19.43 - 19.66 Screen: 4.43 - 19.43 Casing: 0 - 4.43 Backfill: Sand Pack: 3 - 19.66 Bentonite: 1 - 3 Concrete: 0 - 1 Stabilizers: Yes  <b>MATERIALS USED</b> Casing: 4" PVC Well Screen: 15', 0.010" slotting End Cap: Flat sump Sand Pack: 9 50lbs bag Bentonite: 2 50lbs bag Concrete: 1 50lbs bag Monument: Flush Well Cap: Locking J-plug Other:
<b>SILTY SAND (SM)</b> , reddish brown, fine grained sand, 20% low plastic fines, no odor/sheen, dry.	5	[Symbol]	[Well Detail]					
<b>SAND (SP) with gravel</b> , brown, fine, 5% low plastic fines, 30% rounded gravels up to 2" in diameter, no odor/sheen, dry.		[Symbol]	[Well Detail]					
<b>SILTY GRAVEL (GM)</b> , brown (10YR 4/4), rounded gravels up to 2" in diameter, 20% low plastic fines, 15% fine grained sand, no odor/sheen, damp.	10	[Symbol]	[Well Detail]	MW3S-10	0.1			
<b>SILTY SAND (SM)</b> , brown/gray (10YR 6/2), 30% low plastic fines, trace gravels, faint petroleum odor, damp.		[Symbol]	[Well Detail]					
<b>SAND (SP) with silt</b> , brown/gray (10YR 6/2), fine grained sand, 10% low plastic fines, trace gravels up to 1/2" in diameter, no odor/sheen, damp.	15	[Symbol]	[Well Detail]	MW3S-15	91			
<b>MUDSTONE</b> , dark brown (10YR 3/1), soft, waxy, friable, no odor/sheen. <b>Chumstick Formation at 18' bgs.</b>	20	[Symbol]	[Well Detail]	MW3S-20	0.4			
BOTTOM OF BORING AT 20' B.G.S.								
	25							
	30							
	35							

- LEGEND:**
- [Symbol] FILTER PACK
  - [Symbol] BENTONITE
  - [Symbol] CEMENT GROUT
  - [Symbol] CUTTINGS/BACKFILL
  - [Symbol] WATER LEVEL DURING DRILLING

DRILLING CONTRACTOR: Budinger  
 DRILLING METHOD: Sonic  
 BOREHOLE DIAMETER: 6"  
 SAMPLING METHOD: Continuous  
 START CARD NUMBER: BIU612

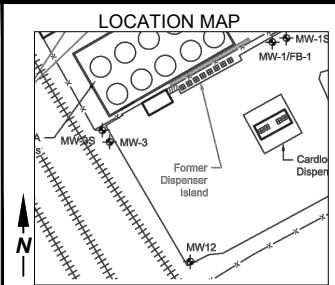
CASING ELEVATION: 658.17  
 GROUND SURFACE ELEVATION: 658.53  
 COORDINATES: 152676.185  
 COORDINATES: 1771813.525



Phone: 360-703-6079

WELL/BORING NUMBER **MW12**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 04-02-18



DESCRIPTION <small>(USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)</small>	DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
<b>GRAVELLY SAND (SP)</b> , brown (10YR 6/2), fine, 5% low plastic fines, 40% subrounded to subangular gravels and cobbles up to 4" in diameter, no odor/sheen, dry.	0				0.0			<b>WELL CONSTRUCTION</b> Depths (feet bgs) Borehole: 19.52 Sump: 19.29 - 19.52 Screen: 4.29 - 19.29 Casing: 0 - 4.29 Backfill: Sand Pack: 3.5 - 19.52 Bentonite: 1 - 3.5 Concrete: 0 - 1 Stabilizers: Yes
<b>SILTY GRAVEL (GM)</b> , brown (10YR 4/4), rounded gravels up to 2" in diameter, 25% low plastic fines, 25% fine grained sand, no odor/sheen, damp.	5				0.1			
<b>SANDSTONE</b> , light brownish gray, soft, breaks on laminate planes, fine sand matrix, cemented, no odor/sheen. <b>Chumstick Formation at 6.5' bgs.</b>  NOTE: Weakly cemented from 11-13' bgs, abundant organic material and moscovite present in lenses.	10			MW12-10	0.0	▼		
<b>MUDSTONE</b> , soft, waxy score, clay rich matrix with very fine sand grain inclusions, weak to moderate cementation, commonly exhibits planer fractures, laminated, no odor/sheen, dry.  NOTE: Very dense from 19-20' bgs.	15				0.0			
BOTTOM OF BORING AT 20' B.G.S.	20			MW12-20	0.0			
DRILLING CONTRACTOR: Budinger DRILLING METHOD: Sonic BOREHOLE DIAMETER: 6" SAMPLING METHOD: Continuous START CARD NUMBER: BIU611	<b>MATERIALS USED</b> Casing: 4" PVC Well Screen: 15', 0.010" slotting End Cap: Flat sump Sand Pack: 9 50lbs bag Bentonite: 3 50lbs bag Concrete: 1 50lbs bag Monument: Flush Well Cap: Locking J-plug Other:							

- LEGEND:**
- FILTER PACK
  - BENTONITE
  - CEMENT GROUT
  - CUTTINGS/BACKFILL
  - WATER LEVEL DURING DRILLING

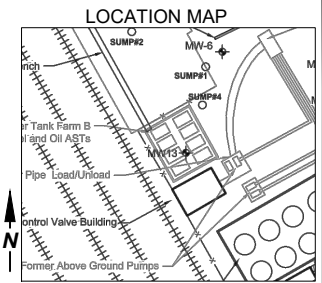
CASING ELEVATION: 658.27  
 GROUND SURFACE ELEVATION: 658.61  
 COORDINATES: 152605.3461  
 COORDINATES: 1771860.885



Phone: 360-703-6079

WELL/BORING NUMBER **MW13**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 03-29-18



DESCRIPTION (USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)	DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
<b>SILT (ML)</b> , brown, low plasticity, 10% rounded gravels up to 2/3" in diameter, 5% fine sand, decaying organic odor, no sheen, damp.	0							<b>WELL CONSTRUCTION</b> Depths (feet bgs) Borehole: 19.86 Sump: 19.63 - 19.86 Screen: 4.63 - 19.63 Casing: 0 - 4.63 Backfill: Sand Pack: 4 - 19.86 Bentonite: 1 - 4 Concrete: 0 - 1 Stabilizers: Yes
<b>GRAVELLY SAND (SP)</b> , gray, fine, 15% low plastic fines, 30% rounded gravels and cobbles up to 3.5", strong petroleum odor at 3.5', damp.	5			MW13-5	468			
NOTE: Very strong odor and very slight sheen at 8' bgs, increasing silt content to 20%, decreasing gravel/cobble content to 25%, up to 6" in size.					627			
NOTE: Increasing silt content to 25%, decreasing gravel content to 10% at 10' bgs, bedrock encountered at 12' bgs. <b>Chumstick Formation at 12' bgs.</b>	10			MW13-10	1,271			
<b>SANDSTONE</b> , light brownish gray, medium grained, quartz, mica, hard and competent.	15			MW13-12	50			
<b>SANDSTONE</b> , yellowish brown, soft, friable, medium grained.	20				0.2			
<b>MUDSTONE</b> , blackish brown, soft, friable, no odor/sheen.	25				0.2			
NOTE: Color change to brownish gray at 21.5' bgs. Broken clasts in silt matrix.				MW13-21	0.2			
NOTE: Dark gray and friable between 26-27' bgs.	30				0.3			
<b>SANDSTONE</b> , hard, competent at 28.5' bgs.	35				0.2			
<b>MUDSTONE</b> , ashy matrix, fine between 29-30' bgs.					0.0			
NOTE: Light gray, soft, predominately silt with fine sand interbeds, waxy, occasionally blackish brown and friable, no odor/sheen.				MW13-35	0.0			

- LEGEND:**
- FILTER PACK
  - BENTONITE
  - CEMENT GROUT
  - CUTTINGS/BACKFILL
  - WATER LEVEL DURING DRILLING

DRILLING CONTRACTOR: Budinger DRILLING METHOD: Sonic BOREHOLE DIAMETER: 6" SAMPLING METHOD: Continuous START CARD NUMBER: BIU609	CASING ELEVATION: 657.04 GROUND SURFACE ELEVATION: 657.38 COORDINATES: 152759.753 COORDINATES: 1771780.939
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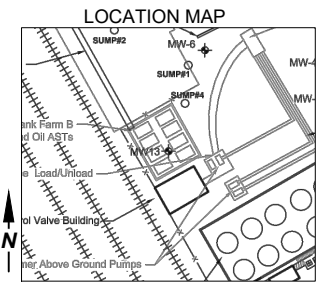




Phone: 360-703-6079

WELL/BORING NUMBER **MW13**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 03-29-18



**DESCRIPTION**

(USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)

DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
35			MW13-45	0.0			<b>WELL CONSTRUCTION</b> Depths (feet bgs) Borehole: 19.86 Sump: 19.63 - 19.86 Screen: 4.63 - 19.63 Casing: 0 - 4.63 Backfill: Sand Pack: 4 - 19.86 Bentonite: 1 - 4 Concrete: 0 - 1 Stabilizers: Yes
40				0.0			
45				0.0			
50				0.0			<b>MATERIALS USED</b> Casing: 4" PVC Well Screen: 15', 0.010" slotting End Cap: Flat sump Sand Pack: 10 50lbs bag Bentonite: 11 50lbs bag Concrete: 1 50lbs bag Monument: Flush Well Cap: Locking J-plug Other:
55							
60							
65							
70							

**SILTSTONE**, light gray, soft, predominately silt with fine sand interbeds, waxy, occasionally blackish brown and friable, no odor/sheen.

NOTE: Siltstone gradually becomes harder and more competent, no odor/sheen.

**MUDSTONE**, blackish brown (10PB 4/1), soft, waxy score, clay rich matrix with, very fine sand grain inclusions, weak to moderate cementation, commonly exhibits planer fractures, laminated, no odor/sheen, dry.

BOTTOM OF BORING AT 50' B.G.S.

- LEGEND:**
- FILTER PACK
  - BENTONITE
  - CEMENT GROUT
  - CUTTINGS/BACKFILL
  - WATER LEVEL DURING DRILLING

DRILLING CONTRACTOR: Budinger  
 DRILLING METHOD: Sonic  
 BOREHOLE DIAMETER: 6"  
 SAMPLING METHOD: Continuous  
 START CARD NUMBER: BIU609

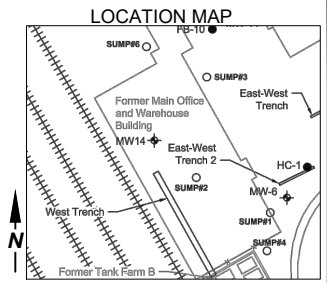
CASING ELEVATION: 657.3822  
 GROUND SURFACE ELEVATION:  
 COORDINATES: 152759.753  
 COORDINATES: 1771780.939



Phone: 360-703-6079

WELL/BORING NUMBER **MW14**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 03-30-18



DESCRIPTION (USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)	DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
<b>SILT (ML) with gravel</b> , brown, low plasticity, 5% sand, 20% gravels up to 1" in diameter, no odor/sheen, damp.	0				0.4			<b>WELL CONSTRUCTION</b> Depths (feet bgs) Borehole: 20.46 Sump: 20.23 - 20.46 Screen: 5.23 - 20.23 Casing: 0 - 5.23 Backfill: Sand Pack: 4 - 20.46 Bentonite: 1 - 4 Concrete: 0 - 1 Stabilizers: Yes
<b>SAND (SP) with gravel</b> , brown, fine to medium grained sand, 5% low plastic fines, 15% gravels up to 1" in diameter, no odor/sheen, damp.				MW14-05	0.1			
					0.2			
	5				0.4			
<b>SILT (ML) with gravel</b> , brown/gray, low plasticity, 5% sand, 20% gravels up to 1" in diameter, no odor/sheen, dry.				MW14-10	136	▼		
NOTE: Becomes slightly cemented with interbedded sand at 10' bgs.	10							
<b>SAND (SP/SM) with silt</b> , brown/gray, medium grained sand, 10% low plastic fines, trace gravels up to 1/2" in diameter, slight to moderate odor/sheen, damp.				MW14-15	1,357			
<b>SILT (ML)</b> , brown/gray, low plasticity, 5% sand, 20% gravels up to 1" in diameter, slight to moderate odor/sheen, damp.	15				1,492		<b>MATERIALS USED</b> Casing: 4" PVC Well Screen: 15', 0.010" slotting End Cap: Flat sump Sand Pack: 10 50lbs bag Bentonite: 3 50lbs bag Concrete: 1 50lbs bag Monument: Flush Well Cap: Locking J-plug Other:	
<b>SAND (SP)</b> , brown/gray (10YR 7/1), medium grained sand, 10% low plastic fines, trace gravels up to 1/2" in diameter, slight to moderate odor/sheen, damp.					8.1			
<b>SILT (ML)</b> , brown/gray, low plasticity, 15% sand, 10% gravels up to 1" in diameter, no odor/sheen, damp.	20				0.0			
<b>SAND (SP)</b> , medium grained sands, poorly to well cemented, interbedded with silt, sandy interbeds locally impacted with moderate petroleum odor.								
<b>SANDSTONE</b> , light gray, hard, clean, medium grained (subangular to angular). <b>Chumstick Formation at 17.5' bgs.</b>	25				0.0			
<b>MUDSTONE</b> , blackish brown (10YR 3/1), soft, friable, fine sand inclusions, no odor/sheen.					0.0			
NOTE: Volcanic ash observed between 27-28' bgs.	30				0.0			
NOTE: Volcanic ash observed 30' bgs. Lighter gray mudstone with fine sands, occasional poorly cemented sandy interbedding.					0.0			
	35			MW14-35				
BOTTOM OF BORING AT 35' B.G.S.								

DRILLING CONTRACTOR: Budinger DRILLING METHOD: Sonic BOREHOLE DIAMETER: 6" SAMPLING METHOD: Continuous START CARD NUMBER: BIU610	CASING ELEVATION: 657.15 GROUND SURFACE ELEVATION: 657.59 COORDINATES: 152844.9561 COORDINATES: 1771729.149
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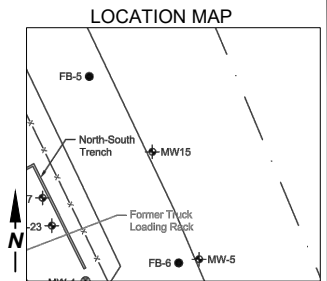
- LEGEND:**
- FILTER PACK
  - BENTONITE
  - ▣ CEMENT GROUT
  - ▤ CUTTINGS/BACKFILL
  - ▼ WATER LEVEL DURING DRILLING



Phone: 360-703-6079

WELL/BORING NUMBER **MW15**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 04-12-18



DESCRIPTION (USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)	DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
<p><b>GRAVELLY SAND (SP)</b>, brown, fine to medium grained sand, 5% low plastic fines, 15% gravels up to 1" in diameter, no odor/sheen, damp.</p> <p>NOTE: Soft sands with possible cobbles blocking shoe. Larger cobbles at 8.5' bgs, up to 4" in diameter.</p> <p>NOTE: Poor recovery between 10-20' bgs.</p> <p>NOTE: Driller stated formation increased in hardness at 18' bgs.</p> <p><b>GRAVELLY SAND (SP)</b>, brown, fine to medium grained sand, 5% low plastic fines, 15% gravels up to 1" in diameter, no odor/sheen, damp.</p>	0 5 10 15 20 25 30		    	MW15-10	0.0 0.5			<p><b>WELL CONSTRUCTION</b>            Depths (feet bgs)            Borehole: 35.56            Sump: 35.33 - 35.56            Screen: 10.33 - 35.33            Casing: 0 - 10.33            Backfill:            Sand Pack: 9 - 35.56            Bentonite: 1 - 9            Concrete: 0 - 1            Stabilizers: Yes</p> <p><b>MATERIALS USED</b>            Casing: 4" PVC            Well Screen: 25', 0.010" slotting            End Cap: Flat sump            Sand Pack: 30 50lbs bag            Bentonite: 4 50lbs bag            Concrete: 1 50lbs bag            Monument: Flush            Well Cap: Locking J-plug            Other:</p>
<p><b>MUDSTONE</b>, yellow gray, medium hard, no odor/sheen. <b>Chumstick Formation at 31.5' bgs.</b></p>	31.5							
BOTTOM OF BORING AT 35' B.G.S.	35							

- LEGEND:**
- FILTER PACK
  - BENTONITE
  - CEMENT GROUT
  - CUTTINGS/BACKFILL
  - WATER LEVEL DURING DRILLING

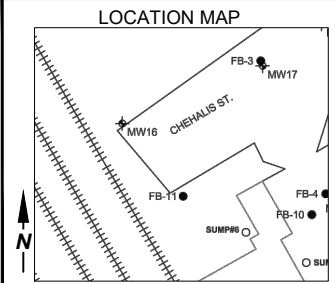
DRILLING CONTRACTOR: Budinger DRILLING METHOD: Sonic BOREHOLE DIAMETER: 6" SAMPLING METHOD: Continuous START CARD NUMBER: BIU620	CASING ELEVATION: 654.99 GROUND SURFACE ELEVATION: 655.41 COORDINATES: 152877.9008 COORDINATES: 1771902.362
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Phone: 360-703-6079

WELL/BORING NUMBER **MW16**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 04-05-18



DESCRIPTION (USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)	DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
Rock stuck in sampler core.	0							<b>WELL CONSTRUCTION</b> Depths (feet bgs) Borehole: 29.51 Sump: 29.28 - 29.51 Screen: 9.28 - 29.28 Casing: 0 - 9.28 Backfill: Sand Pack: 8 - 29.51 Bentonite: 1 - 8 Concrete: 0 - 1 Stabilizers: Yes
<b>GRAVELLY SAND (SP)</b> , brown (10YR 5/2), fine to medium grained sand, 5% low plastic fines, 25% gravels and cobbles up to 4" in diameter, no odor/sheen, dry.	5							
NOTE: Poor recovery from 10-13' bgs.	10			MW16-10	0.0	▼		<b>MATERIALS USED</b> Casing: 4" PVC Well Screen: 20', 0.010" slotting End Cap: Flat sump Sand Pack: 14 50lbs bag Bentonite: 4 50lbs bag Concrete: 1 50lbs bag Monument: Flush Well Cap: Locking J-plug Other:
<b>SANDY GRAVEL (GP)</b> , gray, rounded gravels and cobbles up to 6" in diameter, 40% fine to medium sand, no odor/sheen, moist.	15			MW16-14	0.9			
<b>MUDSTONE</b> , dark brown (2.5YR 4/2), dense, high clay content, waxy irregular fractures, common fine sand interbeds, no odor/sheen. <b>Chumstick Formation at 14' bgs.</b>	20				0.4			
NOTE: Sandy layer between 21-22' bgs.	25				0.0			
<b>SANDSTONE</b> , Dark bluish gray (10BG 5/1), fine grained sand, increased hardness, well cemented, gritty, no odor/sheen.	30			MW16-25	0.1			
BOTTOM OF BORING AT 30' B.G.S.	35				0.2			
					0.1			

DRILLING CONTRACTOR: Budinger  
 DRILLING METHOD: Sonic  
 BOREHOLE DIAMETER: 6"  
 SAMPLING METHOD: Continuous  
 START CARD NUMBER: BIU616

CASING ELEVATION: 656.93  
 GROUND SURFACE ELEVATION: 657.29  
 COORDINATES: 152954.1511  
 COORDINATES: 1771658.334

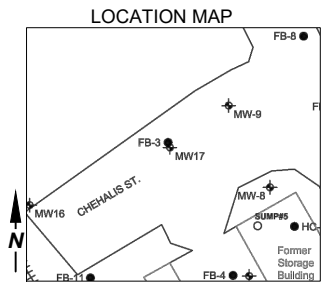
- LEGEND:**
- FILTER PACK
  - BENTONITE
  - ▨ CEMENT GROUT
  - ▩ CUTTINGS/BACKFILL
  - ▼ WATER LEVEL DURING DRILLING



Phone: 360-703-6079

WELL/BORING NUMBER **MW17**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 04-04-18



DESCRIPTION <small>(USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)</small>	DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
<p><b>SAND (SP/SM) with silt</b>, brown, fine grained sand, 10% low plastic fines, 10% gravels, no odor/sheen, damp.</p> <p><b>SANDY GRAVEL (GP)</b>, gray (10YR 5/3), rounded gravels and cobbles up to 4" in diameter, 30% fine to medium sand, 5% low plastic fines, no odor/sheen, moist.</p> <p>NOTE: Boulder encountered between 5-7' bgs.</p> <p>NOTE: Cobble size reduces to up to 3" in diameter at 7' bgs.</p>	0							<p><b>WELL CONSTRUCTION</b>            Depths (feet bgs)            Borehole: 29.75            Sump: 29.52 - 29.75            Screen: 9.52 - 29.52            Casing: 0 - 9.52            Backfill:            Sand Pack: 8 - 29.75            Bentonite: 1 - 8            Concrete: 0 - 1            Stabilizers: Yes</p>
<p><b>GRAVELLY SAND (SP)</b>, gray (SPB 5/1), medium to coarse grained sand, 5% low plastic fines, 40% gravels up to 1" in diameter, moderate to strong sweet petroleum odor, heavy sheen, moist.</p>	5			MW17-10	0.1			
<p><b>MUDSTONE</b>, dark brown, soft to hard, common sandy consolidated interbedding, no odor/sheen, moist. <b>Chumstick Formation at 18' bgs.</b></p>	10				16.9			<p><b>MATERIALS USED</b>            Casing: 4" PVC            Well Screen: 20', 0.010" slotting            End Cap: Flat sump            Sand Pack: 14 50lbs bag            Bentonite: 4 50lbs bag            Concrete: 1 50lbs bag            Monument: Flush            Well Cap: Locking J-plug            Other:</p>
<p><b>SANDSTONE</b>, gray, fine grained sand with silty matrix, medium hardness, massive, stepped fracture, petroleum staining with faint odor observed on fracture surfaces, no contamination away from fractures.</p>	15			MW17-15	412			
<p><b>MUDSTONE</b>, dark brown, soft to hard, common sandy consolidated interbedding, no odor/sheen, moist.</p>	20			MW17-17	905			
<p><b>SANDSTONE</b>, gray, fine grained sand with silty matrix, medium hardness, massive, stepped fracture, no indications of contamination.</p>	25			MW17-20	300			
<p><b>MUDSTONE</b>, dark brown, soft to hard, common sandy consolidated interbedding, no odor/sheen, moist.</p>	30			MW17-25	1,261			
<p><b>SANDSTONE</b>, gray, fine grained sand with silty matrix, medium hardness, massive, stepped fracture, no indications of contamination.</p>	35			MW17-30	2.1			
<p><b>BOTTOM OF BORING AT 35' B.G.S.</b></p>	35				0.4			

- LEGEND:**
- FILTER PACK
  - BENTONITE
  - CEMENT GROUT
  - CUTTINGS/BACKFILL
  - WATER LEVEL DURING DRILLING

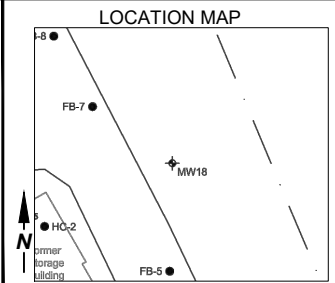
DRILLING CONTRACTOR: Budinger DRILLING METHOD: Sonic BOREHOLE DIAMETER: 6" SAMPLING METHOD: Continuous START CARD NUMBER: BIU614	CASING ELEVATION: 655.55 GROUND SURFACE ELEVATION: 655.89 COORDINATES: 152985.2129 COORDINATES: 1771733.869
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Phone: 360-703-6079

WELL/BORING NUMBER **MW18**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 04-11-18



DESCRIPTION <small>(USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)</small>	DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
<p><b>SILT (ML)</b>, brown, low to moderate plasticity, 5% sand, 5% rounded gravels up to 2.5" in diameter, no odor/sheen, damp.</p> <p>NOTE: Gravel content increases to 15% between 4.5-8.5' bgs, becoming Gravelly Silt.</p>	0				0.0			<p><b>WELL CONSTRUCTION</b>            Depths (feet bgs)</p> <p>Borehole: 36.09            Sump: 35.86 - 36.09            Screen: 15.86 - 35.86            Casing: 0 - 15.86            Backfill:            Sand Pack: 13 - 36.09            Bentonite: 1 - 13            Concrete: 0 - 1            Stabilizers: Yes</p>
<p><b>SAND (SP/SM) with silt</b>, brown, fine grained sand, 10% subrounded to subangular gravels and cobbles up to 3" in diameter, 10% low plastic fines, no odor/sheen, dry.</p> <p>NOTE: Cobbles at 10' bgs.</p> <p>NOTE: Increased gravel and cobbles, locally at 18' bgs.</p>	10			MW18-10	0.0			<p><b>MATERIALS USED</b></p> <p>Casing: 4" PVC            Well Screen: 20', 0.010" slotting            End Cap: Flat sump            Sand Pack: 14 50lbs bag            Bentonite: 4 50lbs bag            Concrete: 1 50lbs bag            Monument: Flush            Well Cap: Locking J-plug            Other:</p>
<p><b>MUDSTONE</b>, light yellow gray with interbeds of dark brown, soft sandy mudstone, <b>Chumstick Formation at 26' bgs.</b></p>	25			MW18-25	0.1			
<p><b>SANDSTONE</b>, light yellow gray, friable, medium to coarse grained sand, well sorted, no odor/sheen.</p>	30				0.0			
<p><b>MUDSTONE</b>, dark brown, soft to hard, common sandy consolidated interbedding, no odor/sheen, moist.</p>	35			MW18-35	0.1			<p><b>LEGEND:</b></p> <ul style="list-style-type: none"> <li>☐ FILTER PACK</li> <li>■ BENTONITE</li> <li>▣ CEMENT GROUT</li> <li>▤ CUTTINGS/BACKFILL</li> <li>∇ WATER LEVEL DURING DRILLING</li> </ul>
<p>BOTTOM OF BORING AT 35' B.G.S.</p>	35			MW18-35	0.1	∇		

DRILLING CONTRACTOR: Budinger  
 DRILLING METHOD: Sonic  
 BOREHOLE DIAMETER: 6"  
 SAMPLING METHOD: Continuous  
 START CARD NUMBER: BIU619

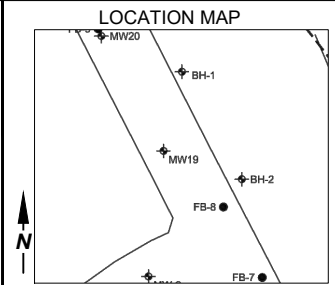
CASING ELEVATION: 654.51  
 GROUND SURFACE ELEVATION: 655.95  
 COORDINATES: 153060.82  
 COORDINATES: 1771816.04



Phone: 360-703-6079

WELL/BORING NUMBER **MW19**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 04-05-18



DESCRIPTION <small>(USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)</small>	DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
NOTE: No recovery from 0-3' bgs.	0							<b>WELL CONSTRUCTION</b> Depths (feet bgs) Borehole: 31.89 Sump: 31.66 - 31.89 Screen: 11.66 - 31.66 Casing: 0 - 11.66 Backfill: Sand Pack: 10 - 31.89 Bentonite: 1 - 10 Concrete: 0 - 1 Stabilizers: Yes
<b>GRAVELLY SAND (SP)</b> , brown (10YR 5/2), fine grained sand, 5% low plastic fines, 10% gravels and cobbles up to 4" in diameter, no odor/sheen, dry.	5							
NOTE: No recovery from 10-13' bgs.	10			MW19-10	0.0			
<b>SANDY GRAVEL (GP)</b> , gray, rounded to subrounded gravels and cobbles up to 6", 15% coarse sand, no odor/sheen, damp.	15				2.2			
<b>SAND (SP)</b> , brown (10YR 6/6), fine grained sand, 10% low plastic fines, strong odor, moderate sheen, medium grained sand, with trace fines lens from 16-16.5' bgs.	15			MW19-18	551			
<b>SILTY SAND (SM)</b> , brown (10YR 7/4), fine grained sand, 40% low plastic fines, moderate petroleum odor, damp.	20				512			
<b>SAND (SP/SM) with silt</b> , brown (10YR 6/6), fine grained sand, 10% low plastic fines, moderate petroleum odor, moderate sheen, clean sand lens from 18-18.5' bgs.	20				12			
<b>SILTY SAND (SM)</b> , brown (10YR 7/4), fine grained sand, 40% low plastic fines, moderate petroleum odor, damp.	20				18	▼		
<b>MUDSTONE</b> , soft, competent, high clay content, common organic binding, rare sandy interbedding, waxy, <b>Chumstick Formation at 20.5' bgs.</b> NOTE: 3" sandy seam with slight petroleum odor at 25' bgs.	25			MW19-25	151			
NOTE: No recovery from 30-31' bgs.	30			MW19-30	0.0			
<b>SANDSTONE</b> , light gray, hard, gritty, medium grained sand, rare organic banding.	30							
NOTE: Shale interbed between 33.5-34.5' bgs.	30							
BOTTOM OF BORING AT 35' B.G.S.	35				0.0			

- LEGEND:**
- FILTER PACK
  - BENTONITE
  - ▣ CEMENT GROUT
  - ▤ CUTTINGS/BACKFILL
  - ▼ WATER LEVEL DURING DRILLING

DRILLING CONTRACTOR: Budinger DRILLING METHOD: Sonic BOREHOLE DIAMETER: 6" SAMPLING METHOD: Continuous START CARD NUMBER: BIU615	CASING ELEVATION: 653.31 GROUND SURFACE ELEVATION: 653.72 COORDINATES: 153075.4649 COORDINATES: 1771773.624
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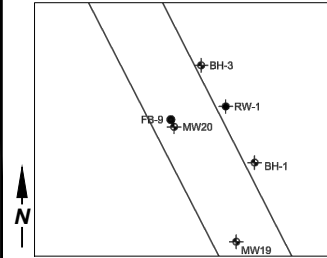


Phone: 360-703-6079

WELL/BORING NUMBER **MW20**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 04-10-18

LOCATION MAP



**DESCRIPTION**

(USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)

DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS
0						
5				0.1		
10			MW20-10	0.1		
15			MW20-15	77.8		
20				0.0		
25			MW20-23.5	297		
30			MW20-26	0.6		
35				0.1		

**WELL CONSTRUCTION**

Depths (feet bgs)

- Borehole: 30.02
- Sump: 29.79 - 30.02
- Screen: 9.79 - 29.79
- Casing: 0 - 9.79
- Backfill:
- Sand Pack: 8 - 30.02
- Bentonite: 1 - 8
- Concrete: 0 - 1
- Stabilizers: Yes

**MATERIALS USED**

- Casing: 4" PVC
- Well Screen: 20', 0.010" slotting
- End Cap: Flat sump
- Sand Pack: 13 50lbs bag
- Bentonite: 4 50lbs bag
- Concrete: 1 50lbs bag
- Monument: Flush
- Well Cap: Locking J-plug
- Other:

**LEGEND:**

- FILTER PACK
- BENTONITE
- CEMENT GROUT
- CUTTINGS/BACKFILL
- WATER LEVEL DURING DRILLING

DRILLING CONTRACTOR: Budinger  
 DRILLING METHOD: Sonic  
 BOREHOLE DIAMETER: 6"  
 SAMPLING METHOD: Continuous  
 START CARD NUMBER: BIU618

CASING ELEVATION: 650.85  
 GROUND SURFACE ELEVATION: 651.37  
 COORDINATES: 153137.3464  
 COORDINATES: 1771740.168



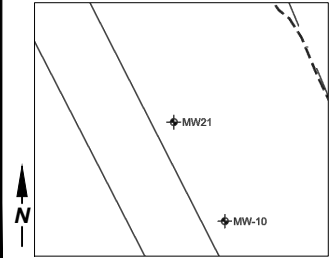


Phone: 360-703-6079

WELL/BORING NUMBER **MW21**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 04-09-18

LOCATION MAP



**DESCRIPTION**

(USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)

DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS
0						
5						
10			MW21-10	0.1		
15				0.1		
20				0.0		
25			MW21-25	205		
30				9.1		
35			MW21-32	0.3		
35				0.0		

**WELL CONSTRUCTION**

Depths (feet bgs)

Borehole: 32.53  
 Sump: 32.30 - 32.53  
 Screen: 12.30 - 32.30  
 Casing: 0 - 12.30  
 Backfill:  
 Sand Pack: 11 - 32.53  
 Bentonite: 1 - 11  
 Concrete: 0 - 1  
 Stabilizers: Yes

**MATERIALS USED**

Casing: 4" PVC  
 Well Screen: 20', 0.010" slotting  
 End Cap: Flat sump  
 Sand Pack: 14 50lbs bag  
 Bentonite: 5 50lbs bag  
 Concrete: 1 50lbs bag  
 Monument: Flush  
 Well Cap: Locking J-plug  
 Other:

**LEGEND:**

- FILTER PACK
- BENTONITE
- CEMENT GROUT
- CUTTINGS/BACKFILL
- WATER LEVEL DURING DRILLING

DRILLING CONTRACTOR: Budinger  
 DRILLING METHOD: Sonic  
 BOREHOLE DIAMETER: 6"  
 SAMPLING METHOD: Continuous  
 START CARD NUMBER: BIU617

CASING ELEVATION: 643.88  
 GROUND SURFACE ELEVATION: 644.31  
 COORDINATES: 153293.4187  
 COORDINATES: 1771701.03

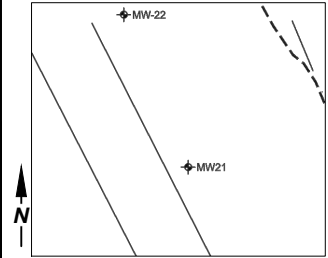


Phone: 360-703-6079

WELL/BORING NUMBER **MW22**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 04-13-18

LOCATION MAP



**DESCRIPTION**

(USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)

DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
0							<b>WELL CONSTRUCTION</b> Depths (feet bgs) Borehole: 34.42 Sump: 34.19 - 34.42 Screen: 9.19 - 34.19 Casing: 0 - 9.19 Backfill: Sand Pack: 13 - 34.42 Bentonite: 1 - 13 Concrete: 0 - 1 Stabilizers: Yes  <b>MATERIALS USED</b> Casing: 4" PVC Well Screen: 25', 0.010" slotting End Cap: Flat sump Sand Pack: 14 50lbs bag Bentonite: 4 50lbs bag Concrete: 1 50lbs bag Monument: Flush Well Cap: Locking J-plug Other:
0 - 4.5							
4.5 - 13.5				0.1			
13.5 - 15.0			MW22-15	0.0			
15.0 - 19.5				0.1			
19.5 - 25.0			MW22-25	0.0			
25.0 - 30.0				0.0			
30.0 - 31.5			MW22-30	153			
31.5 - 34.42				279			
34.42 - 35.0							

Rock stuck in core barrel, no recovery.

**GRAVELLY SAND (SP/SM) with silt**, brown, fine grained sand, 10% low plastic fines, 10% rounded gravels less than 1", no odor/sheen, dry.

Rock stuck in core barrel, poor recovery.

**GRAVELLY SAND (SP/SM) with silt**, brown/gray, fine to medium grained sand, 10% low plastic fines, 35% rounded gravels and cobbles up to 6" in diameter, no odor/sheen, moist.

NOTE: Possible burn debris between 19.5-25' bgs, reddish brick debris, very light weight, black burned debris with wood and building material fill.

NOTE: Free product, resembling black oil in sampler at 31.5' bgs.

**CLAY** (possible bentonite), light bluish gray, gummy, sticky, fill material.

**SILT (ML)**, brown, low to moderate plastic, 5% sand, 5% rounded gravels up to 2.5" in diameter, moderate petroleum odor, no sheen, damp, fill material.

**GRAVELLY SAND (SP/SM) with silt**, brown/gray, fine to medium grained sand, 10% low plastic fines, 35% rounded gravels and cobbles up to 6" in diameter, no odor/sheen, moist.

**LEGEND:**

- FILTER PACK
- BENTONITE
- CEMENT GROUT
- CUTTINGS/BACKFILL
- WATER LEVEL DURING DRILLING

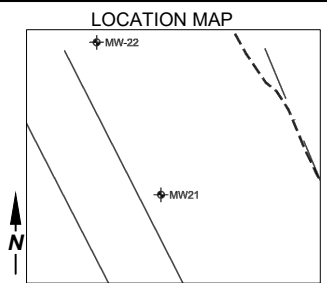
DRILLING CONTRACTOR: Budinger  
 DRILLING METHOD: Sonic  
 BOREHOLE DIAMETER: 6"  
 SAMPLING METHOD: Continuous  
 START CARD NUMBER: BIU621

CASING ELEVATION: 641.85  
 GROUND SURFACE ELEVATION: 642.17  
 COORDINATES: 153375.5679  
 COORDINATES: 1771666.283



WELL/BORING NUMBER **MW22**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 04-12-18

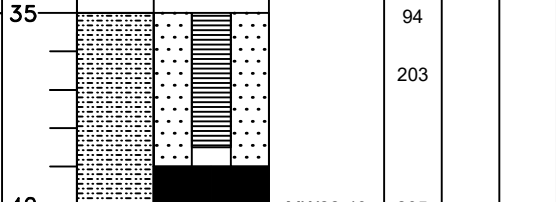


**DESCRIPTION**  
 (USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)

DEPTH (F.T.) SYMBOL WELL DETAILS SAMPLE ID PID FIRST WATER BLOW COUNTS

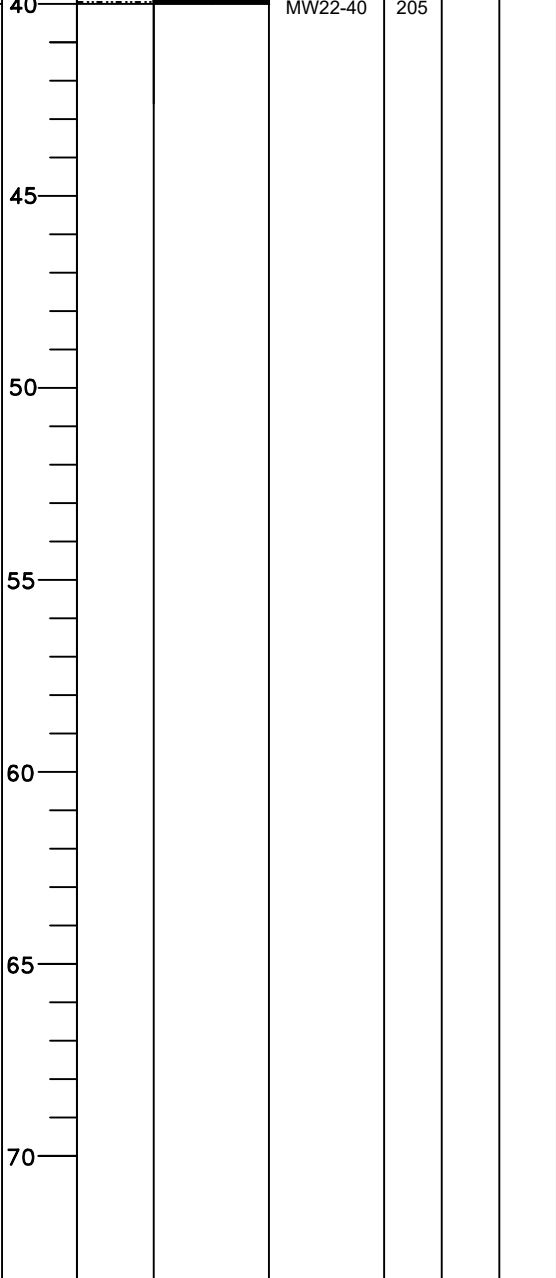
BOREHOLE/WELL CONSTRUCTION DETAILS

**MUDSTONE**, dark blackish brown, soft, friable, planar fracturing, waxy, clay rich, moderate odor, no sheen, **Chumstick Formation at 35' bgs.**



**WELL CONSTRUCTION**  
 Depths (feet bgs)  
 Borehole: 34.42  
 Sump: 34.19 - 34.42  
 Screen: 9.19 - 34.19  
 Casing: 0 - 9.19  
 Backfill:  
 Sand Pack: 13 - 34.42  
 Bentonite: 1 - 13  
 Concrete: 0 - 1  
 Stabilizers: Yes

BOTTOM OF BORING AT 40' B.G.S.



**MATERIALS USED**  
 Casing: 4" PVC  
 Well Screen: 25', 0.010" slotting  
 End Cap: Flat sump  
 Sand Pack: 14 50lbs bag  
 Bentonite: 4 50lbs bag  
 Concrete: 1 50lbs bag  
 Monument: Flush  
 Well Cap: Locking J-plug  
 Other:

- LEGEND:**
- FILTER PACK
  - BENTONITE
  - CEMENT GROUT
  - CUTTINGS/BACKFILL
  - WATER LEVEL DURING DRILLING

DRILLING CONTRACTOR: Budinger  
 DRILLING METHOD: Sonic  
 BOREHOLE DIAMETER: 6"  
 SAMPLING METHOD: Continuous  
 START CARD NUMBER: BIU621

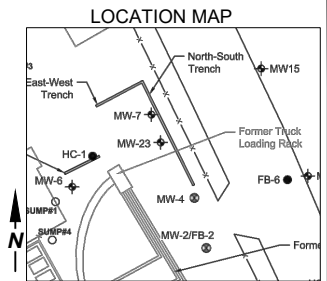
CASING ELEVATION: 641.85  
 GROUND SURFACE ELEVATION: 642.17  
 COORDINATES: 153375.5679  
 COORDINATES: 1771666.283



Phone: 360-703-6079

WELL/BORING NUMBER **MW23**

PROJECT NAME: Coleman Oil - Wenatchee  
 PROJECT NUMBER: 2017-074  
 PROJECT LOCATION: Wenatchee, WA  
 LOGGED BY: C. Daschel  
 REVIEWED BY: C. Hultgren  
 DATE: 03-29-18



DESCRIPTION (USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)	DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
Rock stuck in core barrel, no recovery.	0							<b>WELL CONSTRUCTION</b> Depths (feet bgs) Borehole: 22.36 Sump: 22.13 - 22.36 Screen: 7.13 - 22.13 Casing: 0 - 7.13 Backfill: Sand Pack: 6 - 22.36 Bentonite: 1 - 6 Concrete: 0 - 1 Stabilizers: Yes  <b>MATERIALS USED</b> Casing: 4" PVC Well Screen: 15', 0.010" slotting End Cap: Flat sump Sand Pack: 10 50lbs bag Bentonite: 4 50lbs bag Concrete: 1 50lbs bag Monument: Flush Well Cap: Locking J-plug Other:
<b>GRAVELLY SILT (ML)</b> , brown (7.5YR 5/2), low plasticity, 25% subrounded gravels up to 2", 10% fine sand, very faint petroleum odor, no sheen, damp.	5			MW23-05	0.3			
<b>GRAVEL (GP)</b> , gray, broken granitic cobbles with 10% silty matrix occupying space between cobbles, faint odor, moist.				MW23-08	20.5			
<b>GRAVELLY SILT (ML)</b> , brown (7.5YR 5/2), low plasticity, 25% subrounded gravels up to 2" in diameter, 10% fine sand, very faint odor, no sheen, damp.	10				5.6	▼		
<b>GRAVELLY SAND (SP)</b> , grayish green (7.5G 5/2), 25% rounded gravels less than 1" in diameter, faint petroleum odor, moist.				MW23-12	70.6			
<b>SILT (ML)</b> , grayish green (7.5G 5/2), low plasticity, 35% fine sand, trace rounded gravels up to 3/4", sandy interbeds with locally stronger petroleum odor, damp. NOTE: Light gray soil staining, faint, degraded petroleum odor at 12' bgs. <b>Chumstick Formation at 14' bgs.</b>	15				0.3			
<b>MUDSTONE</b> , dark gray (7.5YR, 6/4), moderately cemented, slightly planar fracture, trace fine sand interbeds, no odor/sheen, dry.	20				0.0			
<b>SANDSTONE</b> , gray (10YR 5/3), medium grained sand, weakly cemented, friable, abundant muscovite, local thin silty interbeds.				MW23-22	0.0			
BOTTOM OF BORING AT 25' B.G.S.	25							
	30							
	35							

- LEGEND:**
- FILTER PACK
  - BENTONITE
  - ▣ CEMENT GROUT
  - ▤ CUTTINGS/BACKFILL
  - ▼ WATER LEVEL DURING DRILLING

DRILLING CONTRACTOR: Budinger DRILLING METHOD: Sonic BOREHOLE DIAMETER: 6" SAMPLING METHOD: Continuous START CARD NUMBER: BIU608	CASING ELEVATION: 655.91 GROUND SURFACE ELEVATION: 657.23 COORDINATES: 152838.0396 COORDINATES: 1771848.193
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**Appendix B**  
**Well Development Forms**



## WELL DEVELOPMENT

Well ID #: MW15 Project name: Coleman Oil Wenatchee  
Date: 09 April 2018 Project #: 2017-074  
Time: 1130 Engineer: CD/RH

### WELL INFORMATION

Monument condition  Good  Needs repair \_\_\_\_\_  
Well cap condition  Good  Locked  Replaced  Needs replacement  
Headspace reading  Not measured \_\_\_\_\_ ppm  
Elevation mark  Yes  Added  Other \_\_\_\_\_  
Well diameter  1.5-inch  2-inch  4-inch  Other \_\_\_\_\_  
 Odor Faint petroleum  Comments \_\_\_\_\_

### WELL MEASUREMENTS

Total well depth 19.99 ft  Clean bottom  Muddy bottom  Not measured  
Depth to product - ft  
Depth to water 11.05 ft  
Casing volume 8.94 ft (H<sub>2</sub>O) X 0.65 gpf = 5.81  
Casing volumes 1"=0.04 gpf 1.5"=0.09 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

### PURGING INFORMATION

Pump type  Peristaltic  Submersible  Centrifugal  Other \_\_\_\_\_  
Purge tubing  New LDPE  New HDPE  New Teflon  Other \_\_\_\_\_  
Bailer type  Disposable  Stainless  PVC  Other 4" surge block  
Bailer cord used  Monofilament  Other 2" PVC pipe  
Purge start time 1148 Purge stop time 1226 Purge Rate (GPM) ~ 2  
Total Volume Purged (gallons) 60

### FIELD PARAMETERS

Meters used  FlowThru Cell  Hach  Hanna  Other \_\_\_\_\_  
Gallons 60 pH 6.2 Temp. 15.3°C Conductivity - Turbidity 75 NTU Dissolved Oxygen - ORP -4

### NOTES/COMMENTS

Purge 20 gallons 1148-1159; 1' recharge in 2 minutes; Purge 40 gallons 1205-1226; Well water clear  
NOTE: Well did not draw down below 14'

Engineer's Signature CD Date 4/9/18



# WELL DEVELOPMENT

Well ID #: MW3S Project name: Coleman Oil Wenchree  
 Date: 04 April 2018 Project #: 2017-074  
 Time: 1410 Engineer: CD/RH

### WELL INFORMATION

Monument condition  Good  Needs repair \_\_\_\_\_  
 Well cap condition  Good  Locked  Replaced  Needs replacement  
 Headspace reading  Not measured \_\_\_\_\_ ppm  
 Elevation mark  Yes  Added  Other \_\_\_\_\_  
 Well diameter  1.5-inch  2-inch  4-inch  Other \_\_\_\_\_  
 Odor None  Comments \_\_\_\_\_

### WELL MEASUREMENTS

Total well depth 19.30 ft  Clean bottom  Muddy bottom  Not measured  
 Depth to product - ft  
 Depth to water 7.50 ft  
 Casing volume 11.80 ft (H<sub>2</sub>O) X 0.65 gpf = 7.67  
 Casing volumes 1"=0.04 gpf 1.5"=0.09 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

### PURGING INFORMATION

Pump type  Peristaltic  Submersible  Centrifugal  Other \_\_\_\_\_  
 Purge tubing  New LDPE  New HDPE  New Teflon  Other \_\_\_\_\_  
 Bailer type  Disposable  Stainless  PVC  Other 4" surge block  
 Bailer cord used  Monofilament  Other 2" PVC pipe  
 Purge start time 1416 Purge stop time 1625 Purge Rate (GPM) 0.62  
**Total Volume Purged (gallons)** 80

### FIELD PARAMETERS

Meters used  FlowThru Cell  Hach  Hanna  Other \_\_\_\_\_  

Gallons	pH	Temp.	Conductivity	Turbidity	Dissolved Oxygen	ORP
<u>80</u>	<u>6.7</u>	<u>14.5°C</u>	<u>N/A</u>	<u>231 NTU</u>	<u>-</u>	<u>70</u>

### NOTES/COMMENTS

Purge 20 gallons 1416-1430; 45 sec For 0.56' recharge; Purge 7 gals 1440-1445; Recharge  
from 19' to 13' @ 1503; Purge 13 gallons 1505-1512; Purge 13 gallons 1531-1538;  
Purge 7 gals 1544-1551; Purge 7 gals 1601-1606; Purge 13 gals 1612-1625

Engineer's Signature [Signature] Date 4/4/18



# WELL DEVELOPMENT

Well ID #: MW12 Project name: Coleman Oil Wenatchee  
 Date: 04 April 2018 Project #: 2017-074  
 Time: 1320 Engineer: CD/RH

### WELL INFORMATION

Monument condition  Good  Needs repair \_\_\_\_\_  
 Well cap condition  Good  Locked  Replaced  Needs replacement  
 Headspace reading  Not measured \_\_\_\_\_ ppm  
 Elevation mark  Yes  Added  Other \_\_\_\_\_  
 Well diameter  1.5-inch  2-inch  4-inch  Other \_\_\_\_\_  
 Odor None  Comments \_\_\_\_\_

### WELL MEASUREMENTS

Total well depth 19.52 ft  Clean bottom  Muddy bottom  Not measured  
 Depth to product - ft  
 Depth to water 7.55 ft  
 Casing volume 11.97 ft (H<sub>2</sub>O) X 0.65 gpf = 7.78  
 Casing volumes 1"=0.04 gpf 1.5"=0.09 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

### PURGING INFORMATION

Pump type  Peristaltic  Submersible  Centrifugal  Other \_\_\_\_\_  
 Purge tubing  New LDPE  New HDPE  New Teflon  Other \_\_\_\_\_  
 Bailer type  Disposable  Stainless  PVC  Other 4" surge block  
 Bailer cord used  Monofilament  Other 2" PVC pipe  
 Purge start time 4/4/18 Purge stop time 4/9/18 Purge Rate (GPM) -  
**Total Volume Purged** (gallons) 77

### FIELD PARAMETERS

Meters used  FlowThru Cell  Hach  Hanna  Other \_\_\_\_\_  

Gallons	pH	Temp.	Conductivity	Turbidity	Dissolved Oxygen	ORP
<u>77</u>	<u>6.9</u>	<u>15.6°C</u>	<u>-</u>	<u>2.02</u>	<u>-</u>	<u>58</u>

### NOTES/COMMENTS

Purge 14 gals 1325-1334, well dry, Purge 14 gals 1358-1407 on 4/5/18; Purge 14 gals 0916-0922 on 4/6/18, 1' recharge 0926-0938; Return 4/9, RTW 7.95, Purge 15 gals 1055-1103, Recharge 1' 1106-1115, 14 mins for additional 1'; Recharged to 10.9' @1320, Purge 10 gals 1323-1329; Purge 10 gals 1420-1425, well clear

Engineer's Signature  Date 4/9/18





# WELL DEVELOPMENT

Well ID #: MW13 Project name: Coleman Oil Wenatchee  
 Date: 03 April 2018 Project #: 2017-074  
 Time: 1545 Engineer: OD/RH

### WELL INFORMATION

Monument condition  Good  Needs repair \_\_\_\_\_  
 Well cap condition  Good  Locked  Replaced  Needs replacement  
 Headspace reading  Not measured \_\_\_\_\_ ppm  
 Elevation mark  Yes  Added  Other \_\_\_\_\_  
 Well diameter  1.5-inch  2-inch  4-inch  Other \_\_\_\_\_  
 Odor moderate musty, degraded petro  Comments \_\_\_\_\_

### WELL MEASUREMENTS

Total well depth 19.80 ft  Clean bottom  Muddy bottom  Not measured  
 Depth to product - ft  
 Depth to water 7.82 ft  
 Casing volume 11.98 ft (H<sub>2</sub>O) X 0.65 gpf = 7.78  
 Casing volumes 1"=0.04 gpf 1.5"=0.09 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

### PURGING INFORMATION

Pump type  Peristaltic  Submersible  Centrifugal  Other \_\_\_\_\_  
 Purge tubing  New LDPE  New HDPE  New Teflon  Other \_\_\_\_\_  
 Bailer type  Disposable  Stainless  PVC  Other 4" surge block  
 Bailer cord used  Monofilament  Other 2" PVC pipe  
 Purge start time 4/3/18 Purge stop time 4/5/18 Purge Rate (GPM) -  
 Total Volume Purged (gallons) 53

### FIELD PARAMETERS

Meters used  FlowThru Cell  Hach  Hanna  Other \_\_\_\_\_  

Gallons	pH	Temp.	Conductivity	Turbidity	Dissolved Oxygen	ORP
<u>53</u>	<u>6.2</u>	<u>15.6°C</u>	<u>-</u>	<u>187 NTU</u>	<u>-</u>	<u>-55</u>

### NOTES/COMMENTS

Purge 14 gals @ 2 gpm, well dry @ 1553, recharge to 13.5' @ 1657; Purge 6 gals 1658-1702, well dry; Recharge +14.4' @ 1915, Purge 5 gals 1715-1717; Well sits overnight; DTW 8.67 @ 1230 4/4/18; Purge 12 gallons 1231-1238; Purge 11 gallons 1140-1150 4/5/18; 1' recharge 1153-1207, additional 1' 1207-1241; additional 1' 1241-1325; Purge 5 gals 1335-1337, well clear

Engineer's Signature [Signature] Date 4/5/18



# WELL DEVELOPMENT

Well ID #: MW14 Project name: Coleman Oil Wenatchee  
 Date: 03 April 2018 Project #: 2017-074  
 Time: 1200 Engineer: CD/RH

### WELL INFORMATION

Monument condition  Good  Needs repair \_\_\_\_\_  
 Well cap condition  Good  Locked  Replaced  Needs replacement  
 Headspace reading  Not measured \_\_\_\_\_ ppm  
 Elevation mark  Yes  Added  Other \_\_\_\_\_  
 Well diameter  1.5-inch  2-inch  4-inch  Other \_\_\_\_\_  
 Odor light petro  Comments \_\_\_\_\_

### WELL MEASUREMENTS

Total well depth 20.02 ft  Clean bottom  Muddy bottom  Not measured  
 Depth to product - ft  
 Depth to water 8.23 ft  
 Casing volume 11.79 ft (H<sub>2</sub>O) X 0.65 gpf = 7.66  
 Casing volumes 1"=0.04 gpf 1.5"=0.09 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

### PURGING INFORMATION

Pump type  Peristaltic  Submersible  Centrifugal  Other \_\_\_\_\_  
 Purge tubing  New LDPE  New HDPE  New Teflon  Other \_\_\_\_\_  
 Bailer type  Disposable  Stainless  PVC  Other 4" surge block  
 Bailer cord used  Monofilament  Other 2" PVC pipe  
 Purge start time 1205 Purge stop time 1529 Purge Rate (GPM) ~1.5  
**Total Volume Purged** (gallons) 75

### FIELD PARAMETERS

Meters used  FlowThru Cell  Hach  Hanna  Other \_\_\_\_\_  

Gallons	pH	Temp.	Conductivity	Turbidity	Dissolved Oxygen	ORP
<u>75</u>	<u>6.4</u>	<u>14.3°C</u>	<u>-</u>	<u>386 NTU</u>	<u>-</u>	<u>-35</u>

### NOTES/COMMENTS

Purge 20 gals, well dry @ 1221, recharge +/14' @ 1230; Purge 7 gals 1231-1236, well dry, Purge 7 gals 1250-1258, Purge 6 gals 1307-1312; Purge 10 gals 1415-1427; Purge 10 gals 1445-1457; Purge 10 gals 1508-1518; Purge 5 gals 1523-1525; Well clear

Engineer's Signature [Signature] Date 4/3/18



# WELL DEVELOPMENT

Well ID #: MW15  
 Date: 13 April 2018  
 Time: 0830

Project name: Coleman Oil Wenchelhoe  
 Project #: 2017-074  
 Engineer: CD/1214

### WELL INFORMATION

Monument condition  Good       Needs repair \_\_\_\_\_  
 Well cap condition  Good       Locked       Replaced       Needs replacement  
 Headspace reading  Not measured      \_\_\_\_\_ ppm  
 Elevation mark       Yes       Added       Other \_\_\_\_\_  
 Well diameter       1.5-inch       2-inch       4-inch       Other \_\_\_\_\_  
 o Odor -      o Comments \_\_\_\_\_

### WELL MEASUREMENTS

Total well depth 35.10 ft       Clean bottom  Muddy bottom       Not measured  
 Depth to product - ft  
 Depth to water 30.35 ft  
 Casing volume 4.75 ft (H<sub>2</sub>O) X 0.65 gpf = 3.08  
 Casing volumes    1"=0.04 gpf    1.5"=0.09 gpf    2"=0.16 gpf    4"=0.65 gpf    6"= 1.47 gpf

### PURGING INFORMATION

Pump type       Peristaltic       Submersible       Centrifugal       Other \_\_\_\_\_  
 Purge tubing       New LDPE       New HDPE       New Teflon       Other \_\_\_\_\_  
 Bailer type       Disposable       Stainless       PVC       Other 4" surge block  
 Bailer cord used       Monofilament       Other 2" PVC pipe  
 Purge start time 0840      Purge stop time 0845      Purge Rate (GPM) 1  
**Total Volume Purged** (gallons)      5

### FIELD PARAMETERS

Meters used       FlowThru Cell       Hach       Hanna       Other \_\_\_\_\_  
 Gallons      pH      Temp.      Conductivity      Turbidity      Dissolved Oxygen      ORP  
N/A  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### NOTES/COMMENTS

High sediment load; Well pumped dry after 5 gallons; 0.25' of recharge in 40 mins. Well called due to lack of recharge.  
 \_\_\_\_\_  
 \_\_\_\_\_

Engineer's Signature       Date 4/13/18



# WELL DEVELOPMENT

Well ID #: MW16 Project name: Coleman Oil Wenchoc  
 Date: 10 April 2018 Project #: 2017-074  
 Time: 1410 Engineer: CD / RH

### WELL INFORMATION

Monument condition  Good  Needs repair \_\_\_\_\_  
 Well cap condition  Good  Locked  Replaced  Needs replacement  
 Headspace reading  Not measured \_\_\_\_\_ ppm  
 Elevation mark  Yes  Added  Other \_\_\_\_\_  
 Well diameter  1.5-inch  2-inch  4-inch  Other \_\_\_\_\_  
 Odor \_\_\_\_\_  Comments \_\_\_\_\_

### WELL MEASUREMENTS

Total well depth 29.15 ft  Clean bottom  Muddy bottom  Not measured  
 Depth to product - ft  
 Depth to water 9.78 ft  
 Casing volume 19.37 ft (H<sub>2</sub>O) X 0.65 gpf = 12.6  
 Casing volumes 1"=0.04 gpf 1.5"=0.09 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

### PURGING INFORMATION

Pump type  Peristaltic  Submersible  Centrifugal  Other \_\_\_\_\_  
 Purge tubing  New LDPE  New HDPE  New Teflon  Other \_\_\_\_\_  
 Bailer type  Disposable  Stainless  PVC  Other 4" surge block  
 Bailer cord used  Monofilament  Other 2" PVC pipe  
 Purge start time 1415 Purge stop time 1200; 4/11/18 Purge Rate (GPM) -  
**Total Volume Purged (gallons)** 65

### FIELD PARAMETERS

Meters used  FlowThru Cell  Hach  Hanna  Other \_\_\_\_\_  

Gallons	pH	Temp.	Conductivity	Turbidity	Dissolved Oxygen	ORP
<u>65</u>	<u>7.1</u>	<u>16.3°C</u>	<u>-</u>	<u>266 NTU</u>	<u>-</u>	<u>73</u>

### NOTES/COMMENTS

Purge 30 gallons 1415-1436, drawdown to 22.4 @ 1427; well dry @ 1436; 1 ft recharge in 12 mins  
Recharge 4/25.5' @ 1525; purge 1525-1529; Purge 3 gals 1600-1604; Resume 4/11, Purge 27 gallons  
1 foot recharge in 11 minutes; 2nd 1 foot in 15 mins; Purge additional 4 gals; Well clear

Engineer's Signature [Signature] Date 4/11/18

1048-1106



# WELL DEVELOPMENT

Well ID #: MW17 Project name: Coleman Oil Wematchee  
 Date: 10 April 2018 Project #: 2017-074  
 Time: 1155 Engineer: CD/RH

### WELL INFORMATION

Monument condition  Good  Needs repair \_\_\_\_\_  
 Well cap condition  Good  Locked  Replaced  Needs replacement  
 Headspace reading  Not measured \_\_\_\_\_ ppm  
 Elevation mark  Yes  Added  Other \_\_\_\_\_  
 Well diameter  1.5-inch  2-inch  4-inch  Other \_\_\_\_\_  
 Odor faint diesel  Comments \_\_\_\_\_

### WELL MEASUREMENTS

Total well depth 29.41 ft  Clean bottom  Muddy bottom  Not measured  
 Depth to product - ft  
 Depth to water 14.60 ft  
 Casing volume 14.81 ft (H<sub>2</sub>O) X 0.65 gpf = 9.62  
 Casing volumes 1"=0.04 gpf 1.5"=0.09 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

### PURGING INFORMATION

Pump type  Peristaltic  Submersible  Centrifugal  Other \_\_\_\_\_  
 Purge tubing  New LDPE  New HDPE  New Teflon  Other \_\_\_\_\_  
 Bailer type  Disposable  Stainless  PVC  Other 4" surge block  
 Bailer cord used  Monofilament  Other 2" PVC pipe  
 Purge start time 1159 Purge stop time 1402 Purge Rate (GPM) 0.77  
**Total Volume Purged** (gallons) 95

### FIELD PARAMETERS

Meters used  FlowThru Cell  Hach  Hanna  Other \_\_\_\_\_  

Gallons	pH	Temp.	Conductivity	Turbidity	Dissolved Oxygen	ORP
<u>95</u>	<u>6.1</u>	<u>16.6°C</u>	<u>-</u>	<u>423 NTU</u>	<u>-</u>	<u>-16</u>

### NOTES/COMMENTS

Purge 50 gals 1159-1248. Drawdown +24' @ 1216; 1.5' recharge in 1.5 mins;  
Recharge to 19.4' @ 1303; Purge 55 gals 1303-1402; Well clear

Engineer's Signature [Signature] Date 4/10/18



# WELL DEVELOPMENT

Well ID #: MW13 Project name: Coleman Oil Wenchbee  
 Date: 12 April 2018 Project #: 2017-074  
 Time: 0800 Engineer: CD/RH

### WELL INFORMATION

Monument condition  Good  Needs repair \_\_\_\_\_  
 Well cap condition  Good  Locked  Replaced  Needs replacement  
 Headspace reading  Not measured \_\_\_\_\_ ppm  
 Elevation mark  Yes  Added  Other \_\_\_\_\_  
 Well diameter  1.5-inch  2-inch  4-inch  Other \_\_\_\_\_  
 Odor None  Comments \_\_\_\_\_

### WELL MEASUREMENTS

Total well depth 34.65 ft  Clean bottom  Muddy bottom  Not measured  
 Depth to product - ft  
 Depth to water 26.83 ft  
 Casing volume 7.82 ft (H<sub>2</sub>O) X 0.65 gpf = 5.08  
 Casing volumes 1"=0.04 gpf 1.5"=0.09 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

### PURGING INFORMATION

Pump type  Peristaltic  Submersible  Centrifugal  Other \_\_\_\_\_  
 Purge tubing  New LDPE  New HDPE  New Teflon  Other \_\_\_\_\_  
 Bailer type  Disposable  Stainless  PVC  Other 4" surge block  
 Bailer cord used  Monofilament  Other 2" PVC pipe  
 Purge start time 1143 Purge stop time 1150 Purge Rate (GPM) -2  
 Total Volume Purged (gallons) 13

### FIELD PARAMETERS

Meters used  FlowThru Cell  Hach  Hanna  Other \_\_\_\_\_  
Gallons pH Temp. Conductivity Turbidity Dissolved Oxygen ORP  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### NOTES/COMMENTS

Purge 12 gallons 1143-1150, well dry, Recharge f/34.4' to 33.56 in  
145 minutes; Purge 1 gallon, well dry; Recharge overnight; DTW 34.25  
on 4/13/18, no recharge; Well dry

Engineer's Signature [Signature] Date 4/13/18



# WELL DEVELOPMENT

Well ID #: MW 19 Project name: Coleman Oil Wenatchee  
 Date: 10 April 2018 Project #: 2017-074  
 Time: 0820 Engineer: CD/RH

### WELL INFORMATION

Monument condition  Good  Needs repair \_\_\_\_\_  
 Well cap condition  Good  Locked  Replaced  Needs replacement  
 Headspace reading  Not measured \_\_\_\_\_ ppm  
 Elevation mark  Yes  Added  Other \_\_\_\_\_  
 Well diameter  1.5-inch  2-inch  4-inch  Other \_\_\_\_\_  
 Odor light diesel  Comments \_\_\_\_\_

### WELL MEASUREMENTS

Total well depth 31.48 ft  Clean bottom  Muddy bottom  Not measured  
 Depth to product - ft  
 Depth to water 26.80 ft  
 Casing volume 4.68 ft (H<sub>2</sub>O) X 0.65 gpf = 3.04  
 Casing volumes 1"=0.04 gpf 1.5"=0.09 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

### PURGING INFORMATION

Pump type  Peristaltic  Submersible  Centrifugal  Other \_\_\_\_\_  
 Purge tubing  New LDPE  New HDPE  New Teflon  Other \_\_\_\_\_  
 Bailer type  Disposable  Stainless  PVC  Other 4" surge block  
 Bailer cord used  Monofilament  Other 2" PVC pipe  
 Purge start time 4/10/18 Purge stop time 4/11/18 Purge Rate (GPM) -  
**Total Volume Purged** (gallons) 15

### FIELD PARAMETERS

Meters used  FlowThru Cell  Hach  Hanna  Other \_\_\_\_\_  
 Gallons pH N/A Temp. N/A Conductivity N/A Turbidity N/A Dissolved Oxygen N/A ORP N/A  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### NOTES/COMMENTS

Purge 2 gals 0832-0835; Recharge 0.26' 0837-1130; Heavy sediment load in purge water; Purge 4 gals, well dry; Resume 4/11, DTW 28.49; Purge 3 gals from well w/ reduced sediment load; Call well due to limited water; Well did not fully recharge over 24 hr period

Engineer's Signature [Signature] Date 4/11/18



# WELL DEVELOPMENT

Well ID #: MW20 Project name: Coleman Oil Wenchuck  
 Date: 11 April 2018 Project #: 2017-074  
 Time: 1250 Engineer: CD / RH

**WELL INFORMATION**

Monument condition  Good  Needs repair \_\_\_\_\_  
 Well cap condition  Good  Locked  Replaced  Needs replacement  
 Headspace reading  Not measured \_\_\_\_\_ ppm  
 Elevation mark  Yes  Added  Other: \_\_\_\_\_  
 Well diameter  1.5-inch  2-inch  4-inch  Other \_\_\_\_\_  
 Odor Faint diesel  Comments \_\_\_\_\_

**WELL MEASUREMENTS**

Total well depth 29.50 ft  Clean bottom  Muddy bottom  Not measured  
 Depth to product \_\_\_\_\_ ft  
 Depth to water 18.85 ft  
 Casing volume 10.65 ft (H<sub>2</sub>O) X 0.65 gpf = 6.9  
 Casing volumes 1"=0.04 gpf 1.5"=0.09 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

**PURGING INFORMATION**

Pump type  Peristaltic  Submersible  Centrifugal  Other \_\_\_\_\_  
 Purge tubing  New LDPE  New HDPE  New Teflon  Other \_\_\_\_\_  
 Bailer type  Disposable  Stainless  PVC  Other 4" surge block  
 Bailer cord used  Monofilament  Other 2" PVC pipe  
 Purge start time 1252 Purge stop time 1605 Purge Rate (GPM) 0.4  
**Total Volume Purged** (gallons) 70

**FIELD PARAMETERS**

Meters used  FlowThru Cell  Hach  Hanna  Other \_\_\_\_\_

Gallons	pH	Temp.	Conductivity	Turbidity	Dissolved Oxygen	ORP
<u>70</u>	<u>6.2</u>	<u>14.4°C</u>	<u>-</u>	<u>263 NTU</u>	<u>-</u>	<u>5</u>

**NOTES/COMMENTS**

Purge 21 gals, well dry, 1' recharge in 1 min; Purge 3 gals, well dry; Recharge  
+1 20' 1316-1414'; Purge 20 gals, well dry, Recharge +1 21' @ purge 20  
additional gals, well clear  
NOTE: Heavy reddish brown sediment load @ beginning of development

Engineer's Signature [Signature] Date 4/11/18





# WELL DEVELOPMENT

Well ID #: MW 21  
 Date: 13 April 2018  
 Time: 1115

Project name: Coleman Oil Wenatchee  
 Project #: 2017-074  
 Engineer: CD / RH

### WELL INFORMATION

Monument condition  Good       Needs repair \_\_\_\_\_  
 Well cap condition  Good       Locked       Replaced       Needs replacement  
 Headspace reading  Not measured \_\_\_\_\_ ppm  
 Elevation mark       Yes       Added       Other \_\_\_\_\_  
 Well diameter       1.5-inch       2-inch       4-inch       Other \_\_\_\_\_  
 Odor very faint       Comments \_\_\_\_\_

### WELL MEASUREMENTS

Total well depth 32.10 ft       Clean bottom       Muddy bottom       Not measured  
 Depth to product \_\_\_\_\_ ft  
 Depth to water 19.44 ft  
 Casing volume 12.66 ft (H<sub>2</sub>O) X 0.65 gpf = 8.23  
 Casing volumes    1"=0.04 gpf    1.5"=0.09 gpf    2"=0.16 gpf    4"=0.65 gpf    6"= 1.47 gpf

### PURGING INFORMATION

Pump type       Peristaltic       Submersible       Centrifugal       Other \_\_\_\_\_  
 Purge tubing       New LDPE       New HDPE       New Teflon       Other \_\_\_\_\_  
 Bailer type       Disposable       Stainless       PVC       Other 4" surge block  
 Bailer cord used       Monofilament       Other 2" PVC pipe  
 Purge start time 1124      Purge stop time 1325      Purge Rate (GPM) 0.68  
**Total Volume Purged (gallons)** \_\_\_\_\_

### FIELD PARAMETERS

Meters used       FlowThru Cell       Hach       Hanna       Other \_\_\_\_\_  

Gallons	pH	Temp.	Conductivity	Turbidity	Dissolved Oxygen	ORP
<u>30</u>	<u>6.2</u>	<u>15.7°C</u>	<u>-</u>	<u>420 NTU</u>	<u>-</u>	<u>89</u>

### NOTES/COMMENTS

Purge 25 gals 1124-1143; Recharge 31.3 to 30.3 in 1.5 mins, additional 1 foot recharge in 1.5 mins; Purge 57 gals 1205-1325; Well clear

Engineer's Signature [Signature] Date 4/13/18



# WELL DEVELOPMENT

Well ID #: MW22 Project name: Coleman Oil Wenatchee  
 Date: 23 April 2018 Project #: 2017-074  
 Time: 0945 Engineer: CD

### WELL INFORMATION

Monument condition  Good  Needs repair \_\_\_\_\_  
 Well cap condition  Good  Locked  Replaced  Needs replacement  
 Headspace reading  Not measured \_\_\_\_\_ ppm  
 Elevation mark  Yes  Added  Other \_\_\_\_\_  
 Well diameter  1.5-inch  2-inch  4-inch  Other \_\_\_\_\_  
 Odor \_\_\_\_\_  Comments \_\_\_\_\_

### WELL MEASUREMENTS

Total well depth 39.10 ft  Clean bottom  Muddy bottom  Not measured  
 Depth to product - ft  
 Depth to water 22.29 ft  
 Casing volume 16.21 ft (H<sub>2</sub>O) X 0.65 gpf = 10.9  
 Casing volumes 1"=0.04 gpf 1.5"=0.09 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

### PURGING INFORMATION

Pump type  Peristaltic  Submersible  Centrifugal  Other \_\_\_\_\_  
 Purge tubing  New LDPE  New HDPE  New Teflon  Other \_\_\_\_\_  
 Bailer type  Disposable  Stainless  PVC  Other 4" surge block  
 Bailer cord used  Monofilament  Other 2" PVC pipe  
 Purge start time 1005 Purge stop time 1122 Purge Rate (GPM) ~ 2.1  
**Total Volume Purged (gallons)** 110

### FIELD PARAMETERS

Meters used  FlowThru Cell  Hach  Hanna  Other \_\_\_\_\_  

Gallons	pH	Temp.	Conductivity	Turbidity	Dissolved Oxygen	ORP
<u>110</u>	<u>6.91</u>	<u>15.2°C</u>	<u>0.542</u>	<u>7.78</u>	<u>3.25 mg/L</u>	<u>-37.5</u>

### NOTES/COMMENTS

Purge 20 gallons 1005-1015; drawdown to 22.73 after 20 gallons; Thin viscous oil layer on top of initial sediment rich purge water; Purge 90 gallons 1040-1122; water clear w/ no oil product

Engineer's Signature [Signature] Date 4/23/18



## WELL DEVELOPMENT

Well ID #: MW 23 Project name: Coleman Oil Wenchtee  
Date: 03 April 2018 Project #: 2017-074  
Time: 1030 Engineer: CD/RH

### WELL INFORMATION

Monument condition  Good  Needs repair \_\_\_\_\_  
Well cap condition  Good  Locked  Replaced  Needs replacement  
Headspace reading  Not measured \_\_\_\_\_ ppm  
Elevation mark  Yes  Added  Other \_\_\_\_\_  
Well diameter  1.5-inch  2-inch  4-inch  Other \_\_\_\_\_  
 Odor very faint  Comments petro

### WELL MEASUREMENTS

Total well depth 22.04 ft  Clean bottom  Muddy bottom  Not measured  
Depth to product - ft  
Depth to water 11.30 ft  
Casing volume 10.74 ft (H<sub>2</sub>O) X 0.65 gpf = 6.98  
Casing volumes 1"=0.04 gpf 1.5"=0.09 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

### PURGING INFORMATION

Pump type  Peristaltic  Submersible  Centrifugal  Other \_\_\_\_\_  
Purge tubing  New LDPE  New HDPE  New Teflon  Other \_\_\_\_\_  
Bailer type  Disposable  Stainless  PVC  Other 4" surge block  
Bailer cord used  Monofilament  Other 2" PVC pipe  
Purge start time 1035 Purge stop time 1145 Purge Rate (GPM) 1.0  
Total Volume Purged (gallons) 70

### FIELD PARAMETERS

Meters used  FlowThru Cell  Hach  Hanna  Other \_\_\_\_\_  

Gallons	pH	Temp.	Conductivity	Turbidity	Dissolved Oxygen	ORP
<u>70</u>	<u>6.2</u>	<u>13.2°C</u>	<u>-</u>	<u>51 NTU</u>	<u>-</u>	<u>-2</u>

### NOTES/COMMENTS

70 gallons purged w/o well going dry; Well clear

Engineer's Signature [Signature] Date 4/3/18

**Appendix C**  
**Groundwater Sample Collection Forms**



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MWISProject Name: Coleman Oil Wemutloss  
Hydrocon Project #: 2017-074  
Date: 4/24/18Sample I.D. MWIS-W0418 Time: 1705  
Field Duplicate I.D. - Time: -  
Personnel: CD

### WELL INFORMATION

Monument condition:  Good  Needs repair  Water in Monument  
Well cap condition:  Good  Replaced  Needs replacement  Surface Water in Well  
Headspace reading:  Not measured \_\_\_\_\_ ppm  Odor \_\_\_\_\_  
Well diameter:  2-inch  4-inch  6-inch  Other \_\_\_\_\_  
Comments: New well

### PURGING INFORMATION

Total well depth 19.99 ft Bottom:  Hard  Soft  Not measured Screen Interval(s): 4.76 - 19.76  
Depth to product \_\_\_\_\_ ft  
Depth to water 10.57 ft Intake Depth (BTOC) 15' Begin Purging Well: 1644  
Casing volume 9.42 ft (H<sub>2</sub>O) X 0.65 gal/ft = 6.12 gal. X 3 = 18.36 gal.  
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic  Centrifugal  Dedicated Bladder  Non-Dedicated Bladder Other \_\_\_\_\_  
Bailer type: \_\_\_\_\_ Water Disposal:  Drummed  Remediation System  Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: Musty odor

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1648	10.62		15.1	0.64	4.82	6.94	-67.2	16.4
1651	10.63		14.4	0.607	2.53	6.77	-100.8	2.93
1654	10.63	0.165	14.3	0.604	1.68	6.75	-104.3	0.83
1657	10.64		14.3	0.605	0.84	6.74	-116.5	2.28
1700	10.64		14.4	0.601	0.73	6.73	-118.1	1.95
1703	10.65		14.4	0.604	0.60	6.73	-120.8	1.75
Sample @ 1705								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 ml VOA	3	HCl	No 0.45 0.10	
500 ml amber	1	HCl	No 0.45 0.10	
250 ml poly	1	HNO <sub>3</sub>	No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW02

Project Name: Coleman Oil Wenchue Sample I.D. MW02-W0418 Time: 1400  
 Hydrocon Project #: 2017-074 Field Duplicate I.D. - Time: -  
 Date 4/25/18 Personnel: CD

### WELL INFORMATION

Monument condition:  Good  Needs repair  Water in Monument  
 Well cap condition:  Good  Replaced  Needs replacement  Surface Water in Well  
 Headspace reading:  Not measured \_\_\_\_\_ ppm  Odor \_\_\_\_\_  
 Well diameter:  2-inch  4-inch  6-inch  Other \_\_\_\_\_  
 Comments \_\_\_\_\_

### PURGING INFORMATION

Total well depth 40 ft Bottom:  Hard  Soft  Not measured Screen Interval(s): 25-40'  
 Depth to product \_\_\_\_\_ ft  
 Depth to water 10.47 ft Intake Depth (BTOC) 25' Begin Purging Well: 1336  
 Casing volume 29.53 ft (H<sub>2</sub>O) X 0.16 gal/ft = 4.72 gal. X 3 = 14.16 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic  Centrifugal  Dedicated Bladder  Non-Dedicated Bladder Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_ Water Disposal:  Drummed  Remediation System  Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1338	10.85		14.6	0.82	4.01	7.20	72.6	0.52
1341	10.89		14.4	0.81	3.10	7.17	76.7	0.28
1344	10.92	0.145	14.3	0.81	2.98	7.19	79.5	0.26
1347	10.93		14.4	0.81	2.74	7.20	80.7	0.38
1350	10.93		14.4	0.81	2.80	7.20	80.6	0.28
1353	10.92		14.4	0.81	2.64	7.21	79.8	0.26
Sample @ 1400								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40ml VOA	3	HCl	No 0.45 0.10	
1 L amber	1	HCl	No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW35

Project Name: Coleman Oil Wapatchee      Sample I.D. MW35-W043      Time: 0900  
 Hydrocon Project #: 2017-074      Field Duplicate I.D. -      Time: -  
 Date 4/25/13      Personnel: CD

### WELL INFORMATION

Monument condition:  Good     Needs repair     Water in Monument  
 Well cap condition:  Good     Replaced     Needs replacement     Surface Water in Well  
 Headspace reading:  Not measured    \_\_\_\_\_ ppm     Odor \_\_\_\_\_  
 Well diameter:     2-inch     4-inch     6-inch     Other \_\_\_\_\_  
 Comments New well

### PURGING INFORMATION

Total well depth 19.30 ft    Bottom:  Hard     Soft     Not measured    Screen Interval(s): 4.07 - 19.07  
 Depth to product \_\_\_\_\_ ft  
 Depth to water 7.23 ft    Intake Depth (BTOC) 11'    Begin Purging Well: 0838  
 Casing volume 12.07 ft (H<sub>2</sub>O) X 0.65 gal/ft = 7.85 gal. X 3 = 23.55 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft    1"=0.04 gal/ft    2"=0.16 gal/ft    4"=0.65 gal/ft    6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic     Centrifugal     Dedicated Bladder     Non-Dedicated Bladder    Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_    Water Disposal:  Drummed     Remediation System     Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (+3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
0840	7.41		12.2	0.375	4.37	7.66	67.8	2.88
0843	7.50		12.1	0.368	0.99	7.03	-3.7	5.12
0846	7.54	0.22	12.2	0.367	0.81	6.99	-16.7	1.25
0849	7.57		12.2	0.366	0.62	6.98	-21.6	1.41
0852	7.59		12.2	0.365	0.56	6.97	-23.9	1.21
0855			12.3	0.365	0.53	6.98	-25.9	1.21
Sample @ 0400								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40ml VOA	3	HCl	(No) 0.45 0.10	
1 L amber	1	HCl	(No) 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW04Project Name: Coleman Oil Wastech  
Hydrocon Project #: 2017-074  
Date: 4/25/13Sample I.D. MW04-W0418 Time: 1440  
Field Duplicate I.D. - Time: -  
Personnel: CD

### WELL INFORMATION

Monument condition:  Good  Needs repair  Water in Monument  
Well cap condition:  Good  Replaced  Needs replacement  Surface Water in Well  
Headspace reading:  Not measured \_\_\_\_\_ ppm  Odor \_\_\_\_\_  
Well diameter:  2-inch  4-inch  6-inch  Other \_\_\_\_\_  
Comments \_\_\_\_\_

### PURGING INFORMATION

Total well depth 37 ft Bottom:  Hard  Soft  Not measured Screen Interval(s): 27-37  
Depth to product - ft  
Depth to water 16.31 ft Intake Depth (BTOC) 23' Begin Purging Well: 1415  
Casing volume 20.69 ft (H<sub>2</sub>O) X 0.16 gal/ft = 3.31 gal. X 3 = 9.93 gal.  
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic  Centrifugal  Dedicated Bladder  Non-Dedicated Bladder Other \_\_\_\_\_  
Bailer type: \_\_\_\_\_ Water Disposal:  Drummed  Remediation System  Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1420	16.85		15.8	1.17	7.49	7.31	133.1	0.78
1423	17.37		15.5	1.16	2.95	7.23	131.1	1.74
1426	17.80	0.135	15.4	1.16	3.08	7.23	129.6	1.82
1429	18.35		15.4	1.16	2.83	7.25	128.2	1.25
1432	18.82		15.4	1.16	3.72	7.25	127.2	0.85
1435	19.25		15.3	1.16	3.14	7.23	126.4	0.71
Sample @ 1440								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40ml VOA	3	HCl	(No) 0.45 0.10	
1 L amber	1	HCl	(No) 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_





# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW05

Project Name: Coleman Oil Wenatchee Sample I.D. MW05-W0418 Time: 1340  
 Hydrocon Project #: 2017-074 Field Duplicate I.D. - Time: -  
 Date: 4/24/18 Personnel: CD

### WELL INFORMATION

Monument condition:  Good  Needs repair  Water in Monument  
 Well cap condition:  Good  Replaced  Needs replacement  Surface Water in Well  
 Headspace reading:  Not measured \_\_\_\_\_ ppm  Odor \_\_\_\_\_  
 Well diameter:  2-inch  4-inch  6-inch  Other \_\_\_\_\_  
 Comments \_\_\_\_\_

### PURGING INFORMATION

Total well depth 44.30 ft Bottom:  Hard  Soft  Not measured Screen Interval(s): 30-45'  
 Depth to product - ft  
 Depth to water 35.76 ft Intake Depth (BTOC) 39 Begin Purging Well: 1317  
 Casing volume 8.54 ft (H<sub>2</sub>O) X 0.16 gal/ft = 1.36 gal. X 3 = 4.08 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic  Centrifugal  Dedicated Bladder  Non-Dedicated Bladder Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_ Water Disposal:  Drummed  Remediation System  Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1320	36.22		14.6	0.85	7.67	7.03	133.4	68.9
1323	36.22	0.15	14.7	0.85	7.42	7.05	69.4	65.5
1326	36.22		14.4	0.85	7.00	7.06	45.0	52.8
1329	36.23		14.5	0.84	6.74	7.07	48.1	44.6
1332	36.23		14.5	0.84	6.82	7.08	54.3	30.0
1335	36.23		14.4	0.84	7.00	7.09	59.1	22.5
Sample @ 1340								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40ml VOA	3	HCl	(No) 0.45 0.10	
1 L amber	1	HCl	(No) 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW06

Project Name: Coleman Oil Wastewater  
 Hydrocon Project #: 2017-074  
 Date: 4/25/18

Sample I.D. MW06-W0418 Time: 1655  
 Field Duplicate I.D. - Time: -  
 Personnel: CD

### WELL INFORMATION

Monument condition:  Good  Needs repair  Water in Monument  
 Well cap condition:  Good  Replaced  Needs replacement  Surface Water in Well  
 Headspace reading:  Not measured \_\_\_\_\_ ppm  Odor \_\_\_\_\_  
 Well diameter:  2-inch  4-inch  6-inch  Other \_\_\_\_\_  
 Comments \_\_\_\_\_

### PURGING INFORMATION

Total well depth 18 ft Bottom:  Hard  Soft  Not measured Screen Interval(s): 8-18  
 Depth to product \_\_\_\_\_ ft  
 Depth to water 10.19 ft Intake Depth (BTOC) 15' Begin Purging Well: 1634  
 Casing volume 7.81 ft (H<sub>2</sub>O) X 0.65 gal/ft = 5.08 gal. X 3 = 15.24 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic  Centrifugal  Dedicated Bladder  Non-Dedicated Bladder Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_ Water Disposal:  Drummed  Remediation System  Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: moderate gas odor, no sheen

Time	Water Level (BTOC)	Purge Rate (L./min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1637	10.20		14.7	536	5.67	6.44	-35.8	8.82
1640	10.20		13.6	566	1.31	6.40	-106.8	3.56
1643	10.20	0.18	13.4	565	0.90	6.40	-114.5	3.98
1646	10.20		13.5	565	0.70	6.40	-120.9	4.23
1649	10.20		13.4	566	0.63	6.40	-124.3	3.24
1652	10.20		13.4	565	0.62	6.40	-127.2	2.31
Sample @ 1655								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40ml VOA	3	HCl	<input checked="" type="checkbox"/> No 0.45 0.10	
1 Lamber	1	HCl	<input checked="" type="checkbox"/> No 0.45 0.10	
250 ml poly	1	HNO <sub>3</sub>	<input checked="" type="checkbox"/> No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW07

Project Name: Coleman Oil Wenchee      Sample I.D. MW07-W0418      Time: 1520  
 Hydrocon Project #: 2017-074      Field Duplicate I.D. -      Time: -  
 Date 4/25/18      Personnel: CD

### WELL INFORMATION

Monument condition:  Good     Needs repair     Water in Monument  
 Well cap condition:  Good     Replaced     Needs replacement     Surface Water in Well  
 Headspace reading:  Not measured    \_\_\_\_\_ ppm     Odor \_\_\_\_\_  
 Well diameter:     2-inch     4-inch     6-inch     Other \_\_\_\_\_  
 Comments \_\_\_\_\_

### PURGING INFORMATION

Total well depth 20 ft    Bottom:  Hard     Soft     Not measured    Screen Interval(s): 10-20  
 Depth to product \_\_\_\_\_ ft  
 Depth to water 10.64 ft    Intake Depth (BTOC) 15'    Begin Purging Well: 1459  
 Casing volume 9.36 ft (H<sub>2</sub>O) X 0.65 gal/ft = 6.08 gal. X 3 = 18.24 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft    1"=0.04 gal/ft    2"=0.16 gal/ft    4"=0.65 gal/ft    6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic     Centrifugal     Dedicated Bladder     Non-Dedicated Bladder    Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_    Water Disposal:  Drummed     Remediation System     Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: Very faint diesel odor

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1502	10.68		14.5	0.72	4.10	6.51	-12.2	24.4
1505	10.71		13.5	0.68	1.98	6.44	-20.1	26.7
1508	10.74	0.15	13.5	0.68	1.15	6.47	-22.2	9.20
1511	10.76		13.5	0.68	0.96	6.45	-26.5	4.17
1514	10.77		13.4	0.68	0.90	6.46	-31.6	3.59
1517	10.78		13.4	0.68	0.85	6.46	-33.7	4.01
Sample @ 1520								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40ml VOA	3	HCl	(No) 0.45 0.10	
1 L amber	1	HCl	(No) 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW08

Project Name: Coleman Oil Wastewater      Sample I.D. MW08-W0418      Time: 1205  
 Hydrocon Project #: 2017-074      Field Duplicate I.D. -      Time: -  
 Date 4/26/18      Personnel: CD

### WELL INFORMATION

Monument condition:  Good     Needs repair     Water in Monument  
 Well cap condition:  Good     Replaced     Needs replacement     Surface Water in Well  
 Headspace reading:  Not measured    \_\_\_\_\_ ppm     Odor \_\_\_\_\_  
 Well diameter:     2-inch     4-inch     6-inch     Other \_\_\_\_\_  
 Comments \_\_\_\_\_

### PURGING INFORMATION

Total well depth 25 ft    Bottom:  Hard     Soft     Not measured    Screen Interval(s): 15-25  
 Depth to product - ft  
 Depth to water 15.21 ft    Intake Depth (BTOC) 19'    Begin Purging Well: 1140  
 Casing volume 9.79 ft (H<sub>2</sub>O) X 0.65 gal/ft = 6.36 gal. X 3 = 19.08 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft    1"=0.04 gal/ft    2"=0.16 gal/ft    4"=0.65 gal/ft    6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic     Centrifugal     Dedicated Bladder     Non-Dedicated Bladder    Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_    Water Disposal:  Drummed     Remediation System     Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: Faint musty petro odor; light sheen

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1144	15.18		15.5	1.18	1.78	6.48	-128.0	2.29
1147	15.20	0.195	14.6	1.03	0.94	6.46	-133.6	1.55
1150	15.21		14.5	1.00	0.63	6.47	-135.3	1.69
1153	15.22		14.4	1.00	0.53	6.48	-136.6	1.56
1156	15.23		14.4	1.00	0.49	6.50	-137.6	1.35
1159	15.24		14.4	0.99	0.43	6.50	-138.2	1.53
Sample @ 1205								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40ml VOA	3	HCl	No 0.45 0.10	
1 L amber	1	HCl	No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW09

Project Name: Coleman 0.7 Wendtsee      Sample I.D. MW09-W0418      Time: 1845  
 Hydrocon Project #: 2017-074      Field Duplicate I.D. -      Time: -  
 Date: 4/26/18      Personnel: CD

### WELL INFORMATION

Monument condition:  Good     Needs repair     Water in Monument  
 Well cap condition:  Good     Replaced     Needs replacement     Surface Water in Well  
 Headspace reading:  Not measured    \_\_\_\_\_ ppm     Odor \_\_\_\_\_  
 Well diameter:     2-inch     4-inch     6-inch     Other \_\_\_\_\_  
 Comments: New vault installed on well

### PURGING INFORMATION

Total well depth 24 ft    Bottom:  Hard     Soft     Not measured    Screen Interval(s): 14-24  
 Depth to product \_\_\_\_\_ ft  
 Depth to water 17.34 ft    Intake Depth (BTOC) 21'    Begin Purging Well: 1822  
 Casing volume 6.66 ft (H<sub>2</sub>O) X 0.65 gal/ft = 4.33 gal. X 3 = 12.99 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft    1"=0.04 gal/ft    2"=0.16 gal/ft    4"=0.65 gal/ft    6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic     Centrifugal     Dedicated Bladder     Non-Dedicated Bladder    Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_    Water Disposal:  Drummed     Remediation System     Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: moderate petro odor

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1824	17.25		16.3	1.38	2.02	6.55	-80.6	4.24
1827	17.27		15.3	1.35	0.62	6.52	-82.0	3.81
1830	17.27	0.150	15.2	1.35	0.48	6.51	-82.8	3.51
1833	17.27		15.1	1.34	0.39	6.52	-83.6	3.74
1836	17.28		15.2	1.35	0.35	6.52	-84.0	3.31
1839	17.28		15.1	1.34	0.32	6.52	-84.2	3.78
Sample @ 1845								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40ml VOA	3	HCl	No 0.45 0.10	
1 L amber	1	HCl	No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW10

Project Name: Coleman Oil Wenchtee      Sample I.D. MW10-W0418      Time: 1615  
 Hydrocon Project #: 2017-074      Field Duplicate I.D. -      Time: -  
 Date: 4/26/18      Personnel: CD

### WELL INFORMATION

Monument condition:  Good     Needs repair     Water in Monument  
 Well cap condition:  Good     Replaced     Needs replacement     Surface Water in Well  
 Headspace reading:  Not measured \_\_\_\_\_ ppm     Odor \_\_\_\_\_  
 Well diameter:  2-inch     4-inch     6-inch     Other \_\_\_\_\_  
 Comments: New vault installed around well

### PURGING INFORMATION

Total well depth 30 ft    Bottom:  Hard     Soft     Not measured    Screen Interval(s): 14-30  
 Depth to product \_\_\_\_\_ ft  
 Depth to water 20.93 ft    Intake Depth (BTOC) 24'    Begin Purging Well: 1550  
 Casing volume 9.07 ft (H<sub>2</sub>O) X 0.16 gal/ft = 1.45 gal. X 3 = 4.35 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft    1"=0.04 gal/ft    2"=0.16 gal/ft    4"=0.65 gal/ft    6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic     Centrifugal     Dedicated Bladder     Non-Dedicated Bladder    Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_    Water Disposal:  Drummed     Remediation System     Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: faint petro odor; very slight sheen

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1552	21.01		16.3	1.03	3.11	6.78	-1.6	6.22
1555	21.02		15.5	1.05	1.62	6.72	2.5	5.69
1558	21.03	0.14	15.3	1.05	1.43	6.68	-13.0	5.67
1601	21.03		15.3	1.09	1.17	6.58	-46.5	3.05
1604	21.03		15.4	1.15	0.71	6.52	-62.2	1.56
1607	21.03		15.4	1.16	0.57	6.51	-66.8	1.23
1610	21.04		15.3	1.16	0.52	6.52	-62.5	1.20

Sample @ 1615

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: Stronger diesel odor developed at the end of purging the well

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
<u>40ml VOA</u>	<u>3</u>	<u>HCl</u>	<u>No</u> 0.45 0.10	
<u>1 L amber</u>	<u>1</u>	<u>HCl</u>	<u>No</u> 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW11

Project Name: Coleman Oil Wenatchee Sample I.D. MW11-W0418 Time: 1020  
 Hydrocon Project #: 2017-074 Field Duplicate I.D. - Time: -  
 Date 4/26/18 Personnel: CD

**WELL INFORMATION**

Monument condition:  Good  Needs repair  Water in Monument  
 Well cap condition:  Good  Replaced  Needs replacement  Surface Water in Well  
 Headspace reading:  Not measured \_\_\_\_\_ ppm  Odor \_\_\_\_\_  
 Well diameter:  2-inch  4-inch  6-inch  Other \_\_\_\_\_  
 Comments \_\_\_\_\_

**PURGING INFORMATION**

Total well depth 22 ft Bottom:  Hard  Soft  Not measured Screen Interval(s): 12-22  
 Depth to product - ft  
 Depth to water 13.31 ft Intake Depth (BTOC) 17' Begin Purging Well: 0759  
 Casing volume 8.91 ft (H<sub>2</sub>O) X 0.65 gal/ft = 5.32 gal. X 3 = 15.96 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

**PURGING/DISPOSAL METHOD**

Pump type  Peristaltic  Centrifugal  Dedicated Bladder  Non-Dedicated Bladder Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_ Water Disposal:  Drummed  Remediation System  Other \_\_\_\_\_

**FIELD PARAMETERS**Odor and/or Sheen: faint musty odor

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1001	13.82		13.6	0.88	1.44	6.60	-143.4	1.06
1004	13.83	0.165	13.5	0.87	0.86	6.55	-159.1	0.83
1007	13.83		13.4	0.87	0.82	6.55	-163.7	0.76
1010	13.84		13.4	0.87	0.54	6.55	-165.8	0.75
1013	13.84		13.5	0.87	0.42	6.55	-167.3	0.94
1016	13.84		13.4	0.87	0.36	6.55	-168.2	0.91
Sample @ 1020								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

**SAMPLE INFORMATION**

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40ml VOA	3	HCl	(No) 0.45 0.10	
1L amber	1	HCl	(No) 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW12Project Name: Coleman Oil Wenchuck  
Hydrocon Project #: 2017-074  
Date: 4/25/18Sample I.D. MW12-W0418 Time: 0955  
Field Duplicate I.D. - Time: -  
Personnel: CD**WELL INFORMATION**Monument condition:  Good  Needs repair  Water in Monument  
Well cap condition:  Good  Replaced  Needs replacement  Surface Water in Well  
Headspace reading:  Not measured \_\_\_\_\_ ppm  Odor \_\_\_\_\_  
Well diameter:  2-inch  4-inch  6-inch  Other \_\_\_\_\_  
Comments: New well**PURGING INFORMATION**Total well depth 19.52 ft Bottom:  Hard  Soft  Not measured Screen Interval(s): 4.24 - 19.24  
Depth to product \_\_\_\_\_ ft  
Depth to water 7.26 ft Intake Depth (BTOC) 11' Begin Purging Well: 0935  
Casing volume 1226 ft (H<sub>2</sub>O) X 0.65 gal/ft = 797 gal. X 3 = 2391 gal.  
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft**PURGING/DISPOSAL METHOD**Pump type  Peristaltic  Centrifugal  Dedicated Bladder  Non-Dedicated Bladder Other \_\_\_\_\_  
Bailer type: \_\_\_\_\_ Water Disposal:  Drummed  Remediation System  Other \_\_\_\_\_**FIELD PARAMETERS**Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
0936	7.40		12.8	0.350	8.04	7.14	144.5	2.81
0939	7.49	0.15	12.5	0.337	4.10	7.04	80.1	1.65
0942	7.58		12.5	0.337	3.70	7.03	65.3	1.64
0945	7.67		12.5	0.336	3.39	7.03	49.3	1.50
0948	7.77		12.5	0.336	3.37	7.03	35.2	1.56
0951	7.85		12.5	0.336	3.19	7.04	21.6	1.55
Sample @ 0955								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

**SAMPLE INFORMATION**

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 ml VOA	3	HCl	No 0.45 0.10	
1 L amber	3	HCl	No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_





# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW13

Project Name: <u>Coleman 051 Wenatchee</u>	Sample I.D. <u>MW13-W0418</u>	Time: <u>1050</u>
Hydrocon Project #: <u>2017-074</u>	Field Duplicate I.D. <u>-</u>	Time: <u>-</u>
Date: <u>7/25/13</u>	Personnel: <u>CD</u>	

### WELL INFORMATION

Monument condition:  Good     Needs repair     Water in Monument  
 Well cap condition:  Good     Replaced     Needs replacement     Surface Water in Well  
 Headspace reading:  Not measured \_\_\_\_\_ ppm     Odor \_\_\_\_\_  
 Well diameter:     2-inch     4-inch     6-inch     Other \_\_\_\_\_  
 Comments: New well

### PURGING INFORMATION

Total well depth 19.80 ft    Bottom:  Hard     Soft     Not measured    Screen Interval(s): 4.57 - 19.57  
 Depth to product \_\_\_\_\_ ft  
 Depth to water 7.41 ft    Intake Depth (BTOC) 12'    Begin Purging Well: 1031  
 Casing volume 12.39 ft (H<sub>2</sub>O) X 0.65 gal/ft = 8.05 gal. X 3 = 24.15 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft    1"=0.04 gal/ft    2"=0.16 gal/ft    4"=0.65 gal/ft    6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic     Centrifugal     Dedicated Bladder     Non-Dedicated Bladder    Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_    Water Disposal:  Drummed     Remediation System     Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: Strong odor, no sheen

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1033	7.61		11.9	0.634	3.62	6.75	-110.8	1.76
1036	7.70		11.6	0.632	2.49	6.71	-141.7	1.64
1039	7.87		11.6	0.632	1.32	6.71	-160.8	1.89
1042	7.96	0.190	11.5	0.632	1.10	6.71	-171.0	1.68
1045	8.10		11.5	0.632	1.00	6.71	-177.9	2.62
1048	8.22		11.5	0.632	0.87	6.72	-183.0	2.04

Sample @ 1050

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 ml VOA	3	HCl	<u>No</u> 0.45 0.10	
1 L amber	1	HCl	<u>No</u> 0.45 0.10	
250 ml poly	1	HNO <sub>3</sub>	<u>No</u> 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW14

Project Name: <u>Coleman Oil Wenchuck</u>	Sample I.D. <u>MW14-W0418</u> Time: <u>1205</u>
Hydrocon Project #: <u>2017-074</u>	Field Duplicate I.D. <u>-</u> Time: <u>-</u>
Date: <u>4/25/18</u>	Personnel: <u>CD</u>

### WELL INFORMATION

Monument condition:  Good  Needs repair  Water in Monument  
 Well cap condition:  Good  Replaced  Needs replacement  Surface Water in Well  
 Headspace reading:  Not measured \_\_\_\_\_ ppm  Odor \_\_\_\_\_  
 Well diameter:  2-inch  4-inch  6-inch  Other \_\_\_\_\_  
 Comments: New Well

### PURGING INFORMATION

Total well depth 20.02 ft Bottom:  Hard  Soft  Not measured Screen Interval(s): 4.79 - 19.79  
 Depth to product \_\_\_\_\_ ft  
 Depth to water 7.82 ft Intake Depth (BTOC) 12' Begin Purging Well: 1143  
 Casing volume 12.20 ft (H<sub>2</sub>O) X 0.65 gal/ft = 7.93 gal. X 3 = 23.79 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic  Centrifugal  Dedicated Bladder  Non-Dedicated Bladder Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_ Water Disposal:  Drummed  Remediation System  Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: light odor, no sheen

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1145	7.90		13.1	0.73	2.17	6.77	-61.6	3.05
1148	7.96		13.1	0.73	1.69	6.77	-62.9	2.36
1151	8.07	0.165	13.0	0.73	1.02	6.73	-66.1	1.73
1154	8.10		13.0	0.73	0.90	6.72	-67.2	3.64
1157	8.14		13.1	0.73	0.80	6.70	-68.8	1.74
1200	8.18		13.1	0.73	0.67	6.70	-70.7	1.51
Sample @ 1205								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
<u>40ml VOA</u>	<u>3</u>	<u>HCl</u>	<u>No</u> 0.45 0.10	
<u>1 L amber</u>	<u>1</u>	<u>HCl</u>	<u>No</u> 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW16

Project Name: Columbus Oil Wastewater  
 Hydrocon Project #: 2017-074  
 Date: 4/26/18

Sample I.D. MW16-W0418 Time: 0920  
 Field Duplicate I.D. - Time: -  
 Personnel: CD

### WELL INFORMATION

Monument condition:  Good  Needs repair  Water in Monument  
 Well cap condition:  Good  Replaced  Needs replacement  Surface Water in Well  
 Headspace reading:  Not measured \_\_\_\_\_ ppm  Odor \_\_\_\_\_  
 Well diameter:  2-inch  4-inch  6-inch  Other \_\_\_\_\_  
 Comments: New Well

### PURGING INFORMATION

Total well depth 29.15 ft Bottom:  Hard  Soft  Not measured Screen Interval(s): 8.92-28.92  
 Depth to product \_\_\_\_\_ ft  
 Depth to water 9.72 ft Intake Depth (BTOC) 15' Begin Purging Well: 0854  
 Casing volume 19.43 ft (H<sub>2</sub>O) X 0.65 gal/ft = 12.63 gal. X 3 = 37.89 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"=1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic  Centrifugal  Dedicated Bladder  Non-Dedicated Bladder Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_ Water Disposal:  Drummed  Remediation System  Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
0901	9.32	0.18	13.4	0.82	14.98	7.00	31.3	2.54
0904	9.37		13.4	0.86	15.35	7.03	-2.1	1.66
0907	9.94		13.4	0.86	15.38	7.02	-17.4	1.61
0910	10.04		13.4	0.86	15.37	7.03	-21.9	1.09
0913	10.11		13.4	0.86	15.32	7.03	-23.6	1.27
0916	10.18		13.3	0.86	15.28	7.03	-24.8	1.17

Sample @ 0920

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40ml VOA	3	HCl	No 0.45 0.10	
1 L amber	1	HCl	No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW17

Project Name: Coleman Oil Wenchette      Sample I.D. MW17-W0418      Time: 1105  
 Hydrocon Project #: 2017-074      Field Duplicate I.D. MW12-W0418      Time: 1100  
 Date 4/26/18      Personnel: CD

**WELL INFORMATION**

Monument condition:  Good     Needs repair     Water in Monument  
 Well cap condition:  Good     Replaced     Needs replacement     Surface Water in Well  
 Headspace reading:  Not measured \_\_\_\_\_ ppm     Odor \_\_\_\_\_  
 Well diameter:     2-inch     4-inch     6-inch     Other \_\_\_\_\_  
 Comments New Well

**PURGING INFORMATION**

Total well depth 29.41 ft    Bottom:  Hard     Soft     Not measured    Screen Interval(s): 9.18 - 29.13  
 Depth to product \_\_\_\_\_ ft  
 Depth to water 14.25 ft    Intake Depth (BTOC) 18'    Begin Purging Well: 1045  
 Casing volume 15.16 ft (H<sub>2</sub>O) X 0.65 gal/ft = 9.85 gal. X 3 = 29.55 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft    1"=0.04 gal/ft    2"=0.16 gal/ft    4"=0.65 gal/ft    6"= 1.47 gal/ft

**PURGING/DISPOSAL METHOD**

Pump type  Peristaltic     Centrifugal     Dedicated Bladder     Non-Dedicated Bladder    Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_    Water Disposal:  Drummed     Remediation System     Other \_\_\_\_\_

**FIELD PARAMETERS**

Odor and/or Sheen: moderate petro odor; mod sheen

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1047	14.23		15.3	1.02	1.96	6.57	-115.7	3.49
1050	14.24	0.165	15.2	1.02	0.67	6.55	-123.7	2.40
1053	14.29		15.1	1.03	0.55	6.55	-127.0	2.91
1056	14.30		15.2	1.03	0.44	6.56	-129.7	3.17
1059	14.30		15.1	1.04	0.36	6.56	-131.6	2.82
1102			15.1	1.04	0.32	6.55	-132.2	2.44
Sample @ 1105								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

**SAMPLE INFORMATION**

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40ml VOA	3	HCl	No 0.45 0.10	
1 L amber	1	HCl	No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW19

Project Name: Coleman Oil Wenchowee Sample I.D. MW19-W0418 Time: 1300  
 Hydrocon Project #: 2017-074 Field Duplicate I.D. - Time: -  
 Date 4/26/18 Personnel: CD

### WELL INFORMATION

Monument condition:  Good  Needs repair  Water in Monument  
 Well cap condition:  Good  Replaced  Needs replacement  Surface Water in Well  
 Headspace reading:  Not measured \_\_\_\_\_ ppm  Odor \_\_\_\_\_  
 Well diameter:  2-inch  4-inch  6-inch  Other \_\_\_\_\_  
 Comments New well

### PURGING INFORMATION

Total well depth 31.48 ft Bottom:  Hard  Soft  Not measured Screen Interval(s): 11.25 - 31.25  
 Depth to product - ft  
 Depth to water 22.98 ft Intake Depth (BTOC) 26' Begin Purging Well: 1238  
 Casing volume 8.50 ft (H<sub>2</sub>O) X 0.65 gal/ft = 5.525 gal. X 3 = 16.575 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic  Centrifugal  Dedicated Bladder  Non-Dedicated Bladder Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_ Water Disposal:  Drummed  Remediation System  Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: None detected

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (+3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1242	23.01		16.2	1.26	5.04	6.52	44.9	1.80
1245	23.10		16.0	1.25	1.91	6.53	52.3	1.15
1248	23.22	0.15	15.9	1.25	1.63	6.53	56.3	0.97
1251	23.30		15.8	1.25	1.48	6.54	53.8	1.02
1254	23.37		15.8	1.25	1.45	6.55	59.7	1.23
1257	23.43		15.8	1.25	1.43	6.55	61.0	1.01
<u>Sample @ 1300</u>								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
<u>40 ml VOA</u>	<u>3</u>	<u>HCl</u>	<u>No</u> 0.45 0.10	
<u>1 L amber</u>	<u>1</u>	<u>HCl</u>	<u>No</u> 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW20

Project Name: Coleman Oil Interceptor      Sample I.D. MW20-W0418      Time: 1755  
 Hydrocon Project #: 2017-074      Field Duplicate I.D. -      Time: -  
 Date 4/26/18      Personnel: CD

### WELL INFORMATION

Monument condition:  Good     Needs repair     Water in Monument  
 Well cap condition:  Good     Replaced     Needs replacement     Surface Water in Well  
 Headspace reading:  Not measured    \_\_\_\_\_ ppm     Odor \_\_\_\_\_  
 Well diameter:     2-inch     4-inch     6-inch     Other \_\_\_\_\_  
 Comments New Well

### PURGING INFORMATION

Total well depth 29.50 ft    Bottom:  Hard     Soft     Not measured    Screen Interval(s): 9.27-29.27  
 Depth to product \_\_\_\_\_ ft  
 Depth to water 18.77 ft    Intake Depth (BTOC) 23'    Begin Purging Well: 1731  
 Casing volume 10.73 ft (H<sub>2</sub>O) X 0.65 gal/ft = 6.97 gal. X 3 = 20.91 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft    1"=0.04 gal/ft    2"=0.16 gal/ft    4"=0.65 gal/ft    6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic     Centrifugal     Dedicated Bladder     Non-Dedicated Bladder    Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_    Water Disposal:  Drummed     Remediation System     Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: Very faint diesel odor

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1734	18.73		14.3	1.13	1.37	6.46	-71.5	33.1
1737	18.82		14.0	1.12	1.03	6.45	-67.5	27.5
1740	18.90	0.165	13.8	1.12	0.90	6.45	-63.5	20.8
1743	18.96		13.8	1.12	0.90	6.46	-59.3	16.8
1746	18.99		14.0	1.11	0.85	6.45	-56.3	12.1
1749	19.02		13.7	1.12	0.86	6.46	-53.9	12.2
Sample @ 1755								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: orange algae in purge water

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
<u>40ml VOA</u>	<u>3</u>	<u>HCl</u>	<u>No</u> 0.45 0.10	
<u>1L amber</u>	<u>1</u>	<u>HCl</u>	<u>No</u> 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW21Project Name: Coleman Oil Wenchel  
Hydrocon Project #: 2017-074  
Date: 4/26/18Sample I.D.: MW21-W0418 Time: 1705  
Field Duplicate I.D.: - Time: -  
Personnel: CD

### WELL INFORMATION

Monument condition:  Good  Needs repair  Water in Monument  
Well cap condition:  Good  Replaced  Needs replacement  Surface Water in Well  
Headspace reading:  Not measured \_\_\_\_\_ ppm  Odor \_\_\_\_\_  
Well diameter:  2-inch  4-inch  6-inch  Other \_\_\_\_\_  
Comments \_\_\_\_\_

### PURGING INFORMATION

Total well depth 32.10 ft Bottom:  Hard  Soft  Not measured Screen Interval(s): 11.87-31.87  
Depth to product - ft  
Depth to water 19.37 ft Intake Depth (BTOC) 23' Begin Purging Well: 1644  
Casing volume 12.73 ft (H<sub>2</sub>O) X 0.65 gal/ft = 8.27 gal. X 3 = 24.81 gal.  
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic  Centrifugal  Dedicated Bladder  Non-Dedicated Bladder Other \_\_\_\_\_  
Bailer type: \_\_\_\_\_ Water Disposal:  Drummed  Remediation System  Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: Faint odor, No sheen

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1648	19.43		15.5	1.12	6.33	6.53	-53.4	0.66
1651	19.47		15.1	1.11	0.73	6.50	-57.0	0.63
1654	19.49	0.16	15.3	1.11	0.52	6.49	-58.9	0.68
1657	19.48		15.3	1.11	0.41	6.50	-61.1	0.58
1700	19.48		15.1	1.11	0.36	6.49	-62.6	0.95
1703	19.48		15.2	1.11	0.33	6.50	-64.1	0.63
Sample @ 1705								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 ml VOA	3	HCl	No 0.45 0.10	
1 L amber	1	HCl	No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW22

Project Name: Coleman Oil Wenchuck      Sample I.D. MW22-W0418      Time: 1930  
 Hydrocon Project #: 2017-074      Field Duplicate I.D. MW103-W0418      Time: 1935  
 Date: 4/26/13      Personnel: CD

### WELL INFORMATION

Monument condition:  Good     Needs repair     Water in Monument  
 Well cap condition:  Good     Replaced     Needs replacement     Surface Water in Well  
 Headspace reading:  Not measured    \_\_\_\_\_ ppm     Odor \_\_\_\_\_  
 Well diameter:     2-inch     4-inch     6-inch     Other \_\_\_\_\_  
 Comments: New Well

### PURGING INFORMATION

Total well depth 39.10 ft    Bottom:  Hard     Soft     Not measured    Screen Interval(s): 13.37 - 38.87  
 Depth to product \_\_\_\_\_ ft  
 Depth to water 21.80 ft    Intake Depth (BTOC) 26'    Begin Purging Well: 1908  
 Casing volume 17.30 ft (H<sub>2</sub>O) X 0.65 gal/ft = 11.25 gal. X 3 = 33.75 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft    1"=0.04 gal/ft    2"=0.16 gal/ft    4"=0.65 gal/ft    6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic     Centrifugal     Dedicated Bladder     Non-Dedicated Bladder    Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_    Water Disposal:  Drummed     Remediation System     Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: Strong petro odor; sheen

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1911	21.82		13.6	0.97	2.96	6.85	-41.4	5.22
1914	21.82		14.0	0.95	2.08	6.70	-31.8	5.05
1917	21.82	0.16	14.1	0.94	1.29	6.68	-75.9	5.70
1920	21.83		14.1	0.94	1.11	6.68	-74.5	2.97
1923	21.83		14.1	0.94	1.03	6.67	-71.9	2.98
1926	21.83		14.1	0.94	0.98	6.68	-70.5	2.75
Sample @ 1930								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40ml VOA	3	HCl	(No) 0.45 0.10	
1 L amber	1	HCl	(No) 0.45 0.10	
250ml poly	1	HNO <sub>3</sub>	(No) 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_





# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: MW23

Project Name: Coleman Oil Wenchee      Sample I.D. MW23-W0418      Time: 1605  
 Hydrocon Project #: 2017-074      Field Duplicate I.D. -      Time: -  
 Date: 4/25/18      Personnel: CD

### WELL INFORMATION

Monument condition:  Good     Needs repair     Water in Monument  
 Well cap condition:  Good     Replaced     Needs replacement     Surface Water in Well  
 Headspace reading:  Not measured    \_\_\_\_\_ ppm     Odor \_\_\_\_\_  
 Well diameter:     2-inch     4-inch     6-inch     Other \_\_\_\_\_  
 Comments \_\_\_\_\_

### PURGING INFORMATION

Total well depth 22.04 ft    Bottom:  Hard     Soft     Not measured    Screen Interval(s): 6.31-21.81  
 Depth to product \_\_\_\_\_ ft  
 Depth to water 10.25 ft    Intake Depth (BTOC) 15'    Begin Purging Well: 1542  
 Casing volume 11.79 ft (H<sub>2</sub>O) X 0.65 gal/ft = 7.66 gal. X 3 = 22.98 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft    1"=0.04 gal/ft    2"=0.16 gal/ft    4"=0.65 gal/ft    6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic     Centrifugal     Dedicated Bladder     Non-Dedicated Bladder    Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_    Water Disposal:  Drummed     Remediation System     Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1546	10.37		13.5	0.71	3.77	6.50	67.7	4.59
1549	10.41	0.17	13.3	0.70	1.64	6.47	57.1	5.23
1552	10.43		13.1	0.70	1.36	6.46	55.7	2.57
1555	10.45		13.1	0.70	1.08	6.48	53.7	2.35
1558	10.46		13.1	0.69	1.01	6.47	53.9	2.01
1601	10.47		13.0	0.69	0.91	6.47	52.2	2.25
Sample @ 1605								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 ml VOA	3	HCl	No 0.45 0.10	
1 L amber	1	HCl	No 0.45 0.10	
250 ml poly	1	HNO <sub>3</sub>	No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: B101

Project Name: Coleman Oil Wastewater Sample I.D. B101-W0418 Time: 1340  
 Hydrocon Project #: 2017-074 Field Duplicate I.D. - Time: -  
 Date: 4/26/13 Personnel: CS

### WELL INFORMATION

Monument condition:  Good  Needs repair  Water in Monument  
 Well cap condition:  Good  Replaced  Needs replacement  Surface Water in Well  
 Headspace reading:  Not measured \_\_\_\_\_ ppm  Odor \_\_\_\_\_  
 Well diameter:  2-inch  4-inch  6-inch  Other \_\_\_\_\_  
 Comments \_\_\_\_\_

### PURGING INFORMATION

Total well depth 30 ft Bottom:  Hard  Soft  Not measured Screen Interval(s): 20-30  
 Depth to product - ft  
 Depth to water 23.06 ft Intake Depth (BTOC) 26' Begin Purging Well: 1319  
 Casing volume 6.44 ft (H<sub>2</sub>O) X 0.16 gal/ft = 1.11 gal. X 3 = 3.33 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic  Centrifugal  Dedicated Bladder  Non-Dedicated Bladder Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_ Water Disposal:  Drummed  Remediation System  Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: moderate petro odor; no sheen

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1320	23.02		23.8	1.16	2.62	6.55	22.8	1.42
1323	23.03		16.3	1.10	0.64	6.52	-109.8	1.98
1326	23.03	0.12	16.2	1.09	0.41	6.51	-104.7	1.73
1329	23.03		16.1	1.09	0.33	6.51	-106.6	1.47
1332	23.04		16.1	1.09	0.27	6.51	-108.3	3.08
1335	23.04		16.1	1.09	0.25	6.50	-107.2	
Sample @ 1340								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40ml VOA	3	HCl	(No) 0.45 0.10	
1 L amber	1	HCl	(No) 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: BH02

Project Name: Coleman Oil Wenchies      Sample I.D. BH02-W0418      Time: 1510  
 Hydrocon Project #: 2017-074      Field Duplicate I.D. -      Time: -  
 Date: 4/24/18      Personnel: CD

### WELL INFORMATION

Monument condition:  Good     Needs repair     Water in Monument  
 Well cap condition:  Good     Replaced     Needs replacement     Surface Water in Well  
 Headspace reading:  Not measured \_\_\_\_\_ ppm     Odor \_\_\_\_\_  
 Well diameter:  2-inch     4-inch     6-inch     Other \_\_\_\_\_  
 Comments: \_\_\_\_\_

### PURGING INFORMATION

Total well depth 35 ft    Bottom:  Hard     Soft     Not measured    Screen Interval(s): \_\_\_\_\_  
 Depth to product - ft  
 Depth to water 27.65 ft    Intake Depth (BTOC) 31'    Begin Purging Well: 1444  
 Casing volume 7.35 ft (H<sub>2</sub>O) X 0.16 gal/ft = 1.18 gal. X 3 = 3.54 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft    1"=0.04 gal/ft    2"=0.16 gal/ft    4"=0.65 gal/ft    6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic     Centrifugal     Dedicated Bladder     Non-Dedicated Bladder    Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_    Water Disposal:  Drummed     Remediation System     Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: Diesel odor Heavy Sheen

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1447	27.67		18.2	0.84	4.17	6.72	-51.1	0R
1450	27.97		16.13	0.78	0.83	6.55	-80	0R
1453	28.25		17.0	0.78	2.67	6.54	-80.8	707
1456	28.45	0.15	17.0	0.77	1.64	6.54	-80.4	654
1459	28.71		17.1	0.77	0.97	6.54	-77.7	331
1502	28.93		17.3	0.77	0.84	6.53	-72.6	164
1505	29.04		17.2	0.78	0.87	6.53	-69.2	137
1508	29.21		16.6	0.79	0.76	6.54	-68.7	69.3
Sample @ 1510								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: OR = overrange

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
<u>40ml VOA</u>	<u>3</u>	<u>HCl</u>	<u>No</u> 0.45 0.10	
<u>1 Liter amber</u>	<u>1</u>	<u>HCl</u>	<u>No</u> 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: BH03

Project Name: Coleman Oil Wenchive  
Hydrocon Project #: 2017-074  
Date: 4/26/18

Sample I.D.: BH03-W0418 Time: 15:15  
Field Duplicate I.D.: - Time: -  
Personnel: CD

### WELL INFORMATION

Monument condition:  Good  Needs repair  Water in Monument  
Well cap condition:  Good  Replaced  Needs replacement  Surface Water in Well  
Headspace reading:  Not measured \_\_\_\_\_ ppm  Odor \_\_\_\_\_  
Well diameter:  2-inch  4-inch  6-inch  Other \_\_\_\_\_  
Comments \_\_\_\_\_

### PURGING INFORMATION

Total well depth 30 ft Bottom:  Hard  Soft  Not measured Screen Interval(s): 15-30  
Depth to product \_\_\_\_\_ ft  
Depth to water 20.32 ft Intake Depth (BTOC) 24' Begin Purging Well: 1450  
Casing volume 9.68 ft (H<sub>2</sub>O) X 0.16 gal/ft = 1.55 gal. X 3 = 4.65 gal.  
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic  Centrifugal  Dedicated Bladder  Non-Dedicated Bladder Other \_\_\_\_\_  
Bailer type: \_\_\_\_\_ Water Disposal:  Drummed  Remediation System  Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: Faint petro odor, no sheen

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1452	20.35		15.7	1.24	2.14	6.63	-89.5	6.09
1455	20.57		14.8	1.23	0.72	6.60	-94.7	3.85
1458	20.78	0.135	14.8	1.23	0.52	6.59	-97.5	3.78
1501	20.99		14.7	1.22	0.45	6.59	-98.2	4.43
1504	21.24		14.7	1.22	0.41	6.60	-93.6	5.65
1507	21.47		14.7	1.21	0.38	6.59	-94.1	4.01
Sample @ 1515								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40ml VOA	3	HCl	No 0.45 0.10	
1L amber	1	HCl	No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# GROUNDWATER SAMPLE COLLECTION FORM

Well I.D. Number: RW01

Project Name: Coleman Oil Wenchee      Sample I.D. RW01-W0418      Time: 1430  
 Hydrocon Project #: 2017-074      Field Duplicate I.D. -      Time: -  
 Date: 4/26/18      Personnel: CD

### WELL INFORMATION

Monument condition:  Good     Needs repair     Water in Monument  
 Well cap condition:  Good     Replaced     Needs replacement     Surface Water in Well  
 Headspace reading:  Not measured    \_\_\_\_\_ ppm     Odor \_\_\_\_\_  
 Well diameter:     2-inch     4-inch     6-inch     Other 3"  
 Comments \_\_\_\_\_

### PURGING INFORMATION

Total well depth 30 ft    Bottom:  Hard     Soft     Not measured    Screen Interval(s): 15-30'  
 Depth to product \_\_\_\_\_ ft  
 Depth to water 22.13 ft    Intake Depth (BTOC) 25'    Begin Purging Well: 1407  
 Casing volume 7.87 ft (H<sub>2</sub>O) X 0.33 gal/ft = 2.60 gal. X 3 = 7.80 gal.  
 Volume Conversion Factors: 3/4"=0.02 gal/ft    1"=0.04 gal/ft    2"=0.16 gal/ft    4"=0.65 gal/ft    6"= 1.47 gal/ft

### PURGING/DISPOSAL METHOD

Pump type  Peristaltic     Centrifugal     Dedicated Bladder     Non-Dedicated Bladder    Other \_\_\_\_\_  
 Bailer type: \_\_\_\_\_    Water Disposal:  Drummed     Remediation System     Other \_\_\_\_\_

### FIELD PARAMETERS

Odor and/or Sheen: None detected

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1412	20.89		15.7	1.14	2.66	6.78	30.2	1.05
1415	21.14		15.4	1.13	0.66	6.75	30.2	1.21
1418	21.36	0.13	15.3	1.13	0.56	6.75	30.3	0.79
1421	21.53		15.2	1.13	0.53	6.75	30.0	0.77
1424	21.70		15.2	1.13	0.83	6.75	29.3	1.34
1427	21.85		15.3	1.13	0.89	6.74	30.3	1.13
Sample @ 1430								

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity or Dissolved Oxygen are recorded within their perspective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: \_\_\_\_\_

### SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40ml vOA	3	HCl	No 0.45 0.10	
1 L amber	1	HCl	No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: \_\_\_\_\_



# WATER QUALITY METER CALIBRATION

Site Name and (Number): Coleman Oil Wenatchee Calibration Date: 4/24/18  
 Hydrocon Site Number: 2017-074 Calibration Time: 1000  
 Weather: Clear Temperature: 55°F Barometric Pressure: 759.3 mm Hg  
 Personnel: Chris Daschel Water Quality Meter: YSI Pro Plus  
 Calibration Location: Site Office Other: \_\_\_\_\_

Parameter	1 <sup>st</sup> Standard	Initial Reading	Final Reading	2 <sup>nd</sup> Standard	Initial Reading	Final Reading
Temperature (°C)	-----	12.6°C	12.9°C	-----	-	-
Sp. Conductivity (mS/cm)	1.41	1.32	1.41	4.49	-	-
Dissolved Oxygen [(mg/L)/%]	-----	-----	-----	-----	7.54/90.4 %	10.53/99.8 %
pH (SU)	7.00	7.11	6.99	4.00	4.01	4.00
ORP (mV)	-----	-----	-----	220	265.7	219.8
Turbidity (NTU)	40.0	-	-	0.0	-	-

- Notes: 1. Quanta meters are calibrated beginning with a Level Two solution followed by the Auto-Cal solution.  
 2. Be sure to check the dissolved oxygen probe calibration procedure (each meter is different).  
 3. Temperature extremes will alter the calibration standards chemistry and the meter's results.

Calibration Comments: Turbidity calibrated on separate meter (Hach)  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



# WATER QUALITY METER CALIBRATION

Site Name and (Number): Coleman Oil Wenchese Calibration Date: 4/25/18  
 Hydrocon Site Number: 2017-074 Calibration Time: 0810  
 Weather: Clear Temperature: 53°F Barometric Pressure: 753.7 <sup>mm</sup> Hg  
 Personnel: CD Water Quality Meter: YSI Pro Plus  
 Calibration Location:  Site  Office  Other: \_\_\_\_\_

Parameter	1 <sup>st</sup> Standard	Initial Reading	Final Reading	2 <sup>nd</sup> Standard	Initial Reading	Final Reading
Temperature (°C)	-----	<u>12.0°C</u>		-----		
Sp. Conductivity (mS/cm)	1.41	<u>1.43</u>	<u>1.41</u>	4.49	-	-
Dissolved Oxygen [(mg/L)/%]	-----	-----	-----	-----	<u>89.01/359.4 %</u>	<u>92.59/101.9 %</u>
pH (SU)	7.00	<u>7.06</u>	<u>7.00</u>	4.00	<u>3.97</u>	<u>4.00</u>
ORP (mV)	-----	-----	-----	220	<u>218.2</u>	<u>220.2</u>
Turbidity (NTU)	40.0	-	-	0.0	-	-

- Notes: 1. Quanta meters are calibrated beginning with a Level Two solution followed by the Auto-Cal solution.
2. Be sure to check the dissolved oxygen probe calibration procedure (each meter is different).
3. Temperature extremes will alter the calibration standards chemistry and the meter's results.

Calibration Comments: Turbidity calibrated on separate meter (Hach) (passed)  
Ph also calibrated w/ 10.0 solution Initial: 10.03 → Final: 10.00

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# WATER QUALITY METER CALIBRATION

Site Name and (Number): Coleman Oil Wenchee Calibration Date: 4/26/18  
 Hydrocon Site Number: 2017-074 Calibration Time: 0800  
 Weather: Clear Temperature: 52°F Barometric Pressure: 754.5  $\frac{mm}{Hg}$   
 Personnel: Chris Darchel Water Quality Meter: YSI Pro Plus  
 Calibration Location: Site Office Other: \_\_\_\_\_

Parameter	1 <sup>st</sup> Standard	Initial Reading	Final Reading	2 <sup>nd</sup> Standard	Initial Reading	Final Reading
Temperature (°C)	-----	12.4°C	13.3	-----	-	-
Sp. Conductivity (mS/cm)	1.41	1.45	1.41	4.49	-	-
Dissolved Oxygen [(mg/L)/%]	-----	-----	-----	-----	9.76 / 93.2 %	10.38 / 99.3 %
pH (SU)	7.00	7.05	6.99	4.00	3.97	4.00
ORP (mV)	-----	-----	-----	220	232.1	219.8
Turbidity (NTU)	40.0	-	-	0.0	-	-

- Notes: 1. Quanta meters are calibrated beginning with a Level Two solution followed by the Auto-Cal solution.  
 2. Be sure to check the dissolved oxygen probe calibration procedure (each meter is different).  
 3. Temperature extremes will alter the calibration standards chemistry and the meter's results.

Calibration Comments: Calibration for turbidity conducted on separate meter (Hach), passed  
It also calibrated w/ 10.0 solution; Initial: 10.07 → Final: 9.99



**Appendix D**  
**Soil Disposal Receipts**

Greater Wenatchee Regional Landfill  
191 Webb Road  
Wenatchee, WA, 98802

Original  
Ticket# 806620  
Ph: (509) 884-2802

Customer Name COLEMAN OIL COMPANY LLC Carrier coleman  
Ticket Date 04/25/2018 Vehicle# 0  
Payment Type Credit Account Container  
Manual Ticket# Driver  
Route Check#  
Hauling Ticket# Billing# 0508602  
Destination Grid  
Manifest 112215wa  
Profile 112215WA (DIESEL FUEL IMPACTED SOIL)  
Generator WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC\_3 EAST CHEHALIS,  
WENATCH  
PO#

Time	Scale	Operator	Inbound	Gross	17580 lb
In 04/25/2018 11:04:28	Inbound	janelle		Tare	13680 lb
Out 04/25/2018 11:48:29	Outbound	janelle		Net	3900 lb
				Tons	1.95

Comments

Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1 Cont Soil Pet-RGC-Tons-C	100	1.95	Tons	32.00	2.25	\$62.40	CHELAN
2 CDHD FEE-Chelan Douglas	100	1.95	Tons	1.00	0.07	\$1.95	CHELAN
3 FEA-FUEL, ENV, ADMIN	100	1.95	Tons	4.16	0.29	\$8.11	CHELAN

Total Tax/Fees \$2.61  
Total Ticket \$75.07

Driver's Signature



The total amount includes fees and taxes that may not all be listed on this ticket due to technical limitation.

Greater Wenatchee Regional Landfill  
191 Webb Road  
Wenatchee, WA, 98802

Original  
Ticket# 806650  
Ph: (509) 884-2802

Customer Name COLEMAN OIL COMPANY LLC Carrier coleman  
Ticket Date 04/25/2018 Vehicle# 0  
Payment Type Credit Account Container  
Manual Ticket# Driver  
Route Check#  
Hauling Ticket# Billing# 0508602  
Destination Grid  
Manifest 112215wa  
Profile 112215WA (DIESEL FUEL IMPACTED SOIL)  
Generator WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC\_3 EAST CHEHALIS,  
WENATCH  
PO#

Time	Scale	Operator	Inbound	Gross	14920 lb
In 04/25/2018 14:22:49	Inbound	tgarcia9		Tare	10480 lb
Out 04/25/2018 15:20:00	Outbound	tgarcia9		Net	4440 lb
				Tons	2.22

Comments

Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1 Cont Soil Pet-RGC-Tons-C	100	2.22	Tons	32.00	2.56	\$71.04	CHELAN
2 CDHD FEE-Chelan Douglas	100	2.22	Tons	1.00	0.08	\$2.22	CHELAN
3 FEA-FUEL, ENV, ADMIN	100	2.22	Tons	4.16	0.33	\$9.24	CHELAN

Total Tax/Fees \$2.97  
Total Ticket \$85.47

Driver's Signature



The total amount includes fees and taxes that may not all be listed on this ticket due to technical limitation.

**Appendix E**  
**Surface Sediment Field Sample Record**

# Northern Resource Consulting, Inc.

ENVIRONMENTAL SERVICES

SUBCONTRACTOR:  
 NORTHERN RESOURCE CONSULTING, INC.  
 1339 COMMERCE AVE. STE 309B  
 LONGVIEW, WA 98632

## CONTRACT DAILY REPORT

PRIME CONTRACTOR <i>Hydro Con, LLC</i>		CONTRACT TITLE <i>Coleman Oil Sediment</i>		DATE <i>04/23/18</i>	
CONTRACT NO. <i>PO No. 2017-074</i>		REPORT NO. <i>1178</i>		AREA <i>Wenatchee, WA</i>	
WEATHER <i>Clear &amp; Sunny</i>					
William Clifton & Brian Perleberg					
MANPOWER	NO.	TOTAL HOURS	MAJOR EQUIPMENT	NO.	TOTAL HOURS
<i>BP &amp; WC</i>		<i>9.5 Hrs</i>	<i>NRC 27 Ft. Boat &amp; Van Veen</i>		<i>9.5</i>
			<i>24L Grab Sampler</i>		<i>9.5</i>
DIAGRAM WITH MEASUREMENTS OF WHAT YOU INSTALLED (FT)					
<p><i>0700 - Arrive at Boat Launch behind Ribus Market</i>  <i>0815 - Met Chris - Showed Sample to correspond w/ upland red stakes.</i>  <i>0840 - Collected First Sample SS03 - Decon Pan afterwards - 6" Stage</i>  <i>0945 - Collected SS02 - Water depth 50" - River Stage 6" - Decon afterwards</i>  <i>1025 - Collected SS01 - Water depth 48" - River Stage 6" - Decon afterwards</i>  <i>5 1/2 inch (13.97 cm Recovery).</i>  <i>1150 SS04 attempt encountered rock moved Sample in 25 Ft. towards Shore.</i>  <i>1204 SS04 Tried 8 more grabs 4" to 12" rock &amp; 1 1/2 inch of Sample moved</i>  <i>Sample point towards shore</i>  <i>1215 Collected SS04 - Water depth 21.6 Ft. - Approx 50 Ft. from Shore. 28 Grab.</i>  <i>1245 Collected SS05 - Water depth 15.8 Ft. took gps coordinate. 6th Grab</i>  <i>River Stage changed for SS04 &amp; SS05 so we measured top of Pole w/ Elevation to surface water = 5.0 Ft.</i>  <i>1345 - Started poking around w/ Metal Pole to observe any sheen</i> North  <i>3:00 - PM Picked up Chris to look for outfall E &amp; W Side</i></p>					
REMARKS BY CONTRACTOR (Delays, Interruptions, Deviations, Extra Work Activities, Unusual Occurrences, etc., Relevant to Today's Work).					
<i>4:30 - End of Day loaded boat onto trailer</i>					
<i>4:45 - Bought Diesel 20 gallons for drive home 04/24/2018.</i>					
YES	NO			DATE COMPLETED	
<i>X</i>		PICTURE OF SITE BEFORE WORK UPON ARRIVAL		<i>04/23/18</i>	
<i>X</i>		PICTURE OF DAILY WORK PROGRESS		<i>04/23/18</i>	
<i>X</i>		PICTURES OF ALL ELEMENTS INSTALLED		<i>04/23/18</i>	
<i>X</i>		ARE ALL PICTURES ON NRC, INC. SERVER		<i>04/23/18</i>	

## Surface Sediment Field Sample Record

Project Name: Coleman Oil Project No: PO No. 2017-074 Station ID: SS01

Sampling Crew: William Clifton & Brian Perleberg  
 Sample Date: 09/25/2018 Sampling Method: Grab Sample  
 Sampling Vessel: NRC ROY  
 Subcontractor(s): Northern Resource Consulting Weather: Clear & Sunny  
 Station Coordinates: N / Lat. Surveyor Recorded  
 E / Long. Location  
 Datum: NAD 83 / WGS 84 zone:

Sample ID: SS01  
 Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest  
 TS / TVS / Grain Size / TOC / Ammonia / Sulfides  
 (Circle Appropriate Analyses) Other: TPH

Grab Number: 01 Water Depth: 48" ft. = 4 Ft. Grab Recovery: 13.97 cm Time: 1025  
 Tide Level: N/A ft. 6" Stage Sample Interval: 13.97 cm  
 Bioassay / Chemistry Depth MLLW: N/A ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none	H2S	none
gravel	gray	soft/loose	slight	Petroleum	trace
sand C M F	black	mod dense/stiff	moderate	other:	slight
silt clay	brown	dense/stiff	strong		moderate
organic matter	brown surface	very dense/stiff	overwhelming		heavy

Comments:

Grab Number: \_\_\_\_\_ Water Depth: \_\_\_\_\_ ft. Grab Recovery: \_\_\_\_\_ cm Time: \_\_\_\_\_  
 Tide Level: \_\_\_\_\_ ft. Sample Interval: \_\_\_\_\_ cm  
 Bioassay / Chemistry Depth MLLW: \_\_\_\_\_ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none	H2S	none
gravel	gray	soft/loose	slight	Petroleum	trace
sand C M F	black	mod dense/stiff	moderate	other:	slight
silt clay	brown	dense/stiff	strong		moderate
organic matter	brown surface	very dense/stiff	overwhelming		heavy

Comments:

Grab Number: \_\_\_\_\_ Water Depth: \_\_\_\_\_ ft. Grab Recovery: \_\_\_\_\_ cm Time: \_\_\_\_\_  
 Tide Level: \_\_\_\_\_ ft. Sample Interval: \_\_\_\_\_ cm  
 Bioassay / Chemistry Depth MLLW: \_\_\_\_\_ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none	H2S	none
gravel	gray	soft/loose	slight	Petroleum	trace
sand C M F	black	mod dense/stiff	moderate	other:	slight
silt clay	brown	dense/stiff	strong		moderate
organic matter	brown surface	very dense/stiff	overwhelming		heavy

Comments:

Date/Time Lab Drop Off:

Recorded by: Brian Perleberg

## Surface Sediment Field Sample Record

Project Name: Coleman Oil Project No: PO No. 2017-074 Station ID: 5502

Sampling Crew: William Clifton & Brian Perleberg  
 Sample Date: 07/23/2018 Sampling Method: Grab Sample  
 Sampling Vessel: NRC ROY  
 Subcontractor(s): Northern Resource Consulting Weather: Clear & Sunny  
 Station Coordinates: N / Lat. Surveyor recorded N 47° 25' 07.63" N  
 E / Long. Location W 120° 18' 09.43" W 71-1M  
 Datum: NAD 83 / WGS 84 zone:

Sample ID: Coleman Oil  
 Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest Other: TPH  
 TS / TVS / Grain Size / TOC / Ammonia / Sulfides Other:  
 (Circle Appropriate Analyses)

Grab Number: 01 Water Depth: 50" ft. Grab Recovery: 11.75 cm Time: 0945  
 Tide Level: \_\_\_\_\_ ft. Sample Interval: 0-11.75 cm  
 Bioassay / Chemistry Depth MLLW: \_\_\_\_\_ ft. Tide Stage 6"

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none H2S	none	Dry
gravel	gray	soft/loose	slight Petroleum	trace	Damp
sand C M F	black	mod dense/stiff	moderate other:	slight	Moist
silt clay	brown	dense/stiff	strong	moderate	Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments:

Grab Number: \_\_\_\_\_ Water Depth: \_\_\_\_\_ ft. Grab Recovery: \_\_\_\_\_ cm Time: \_\_\_\_\_  
 Tide Level: \_\_\_\_\_ ft. Sample Interval: \_\_\_\_\_ cm  
 Bioassay / Chemistry Depth MLLW: \_\_\_\_\_ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none H2S	none	Dry
gravel	gray	soft/loose	slight Petroleum	trace	Damp
sand C M F	black	mod dense/stiff	moderate other:	slight	Moist
silt clay	brown	dense/stiff	strong	moderate	Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments:

Grab Number: \_\_\_\_\_ Water Depth: \_\_\_\_\_ ft. Grab Recovery: \_\_\_\_\_ cm Time: \_\_\_\_\_  
 Tide Level: \_\_\_\_\_ ft. Sample Interval: \_\_\_\_\_ cm  
 Bioassay / Chemistry Depth MLLW: \_\_\_\_\_ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none H2S	none	Dry
gravel	gray	soft/loose	slight Petroleum	trace	Damp
sand C M F	black	mod dense/stiff	moderate other:	slight	Moist
silt clay	brown	dense/stiff	strong	moderate	Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments:

Date/Time Lab Drop Off:

Recorded by: Brian Perleberg

## Surface Sediment Field Sample Record

Project Name: Coleman O:1 Project No: \_\_\_\_\_ Station ID: SS03

Sampling Crew: William Clifton, & Brian Perleberg  
 Sample Date: 08/23/2018 Sampling Method: Grab Sample  
 Sampling Vessel: NRC ROY  
 Subcontractor(s): Northern Resource Consulting, Inc. Weather: Clear & Sunny  
 Station Coordinates: N / Lat. Surveyor recorded  
 E / Long. Location  
 Datum: NAD 83 (WGS 84) zone: \_\_\_\_\_

Sample ID: SS03  
 Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest  
 TS / TVS / Grain Size / TOC / Ammonia / Sulfides  
 (Circle Appropriate Analyses)  
 Other: TPH  
 Other: \_\_\_\_\_

Grab Number: 01 Water Depth: 4.1 ft. Grab Recovery: 13.97 cm Time: 0840  
 Tide Level: N/A ft. Sample Interval: 0-14 cm  
 Bioassay / Chemistry Depth MLLW: N/A ft. 2.54 cm Per INCH

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	<u>Very soft/Loose</u>	none <u>H2S</u>	<u>none</u>	Dry
gravel	gray	soft/loose	slight Petroleum	trace	Damp
sand C M F	<u>black</u>	mod dense/stiff	moderate other:	slight	<u>Moist</u>
<u>silt clay</u>	brown	dense/stiff	strong	moderate	Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments: \_\_\_\_\_  
 \_\_\_\_\_

Grab Number: \_\_\_\_\_ Water Depth: \_\_\_\_\_ ft. Grab Recovery: \_\_\_\_\_ cm Time: \_\_\_\_\_  
 Tide Level: \_\_\_\_\_ ft. Sample Interval: \_\_\_\_\_ cm  
 Bioassay / Chemistry Depth MLLW: \_\_\_\_\_ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none H2S	none	Dry
gravel	gray	soft/loose	slight Petroleum	trace	Damp
sand C M F	black	mod dense/stiff	moderate other:	slight	Moist
silt clay	brown	dense/stiff	strong	moderate	Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments: \_\_\_\_\_  
 \_\_\_\_\_

Grab Number: \_\_\_\_\_ Water Depth: \_\_\_\_\_ ft. Grab Recovery: \_\_\_\_\_ cm Time: \_\_\_\_\_  
 Tide Level: \_\_\_\_\_ ft. Sample Interval: \_\_\_\_\_ cm  
 Bioassay / Chemistry Depth MLLW: \_\_\_\_\_ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none H2S	none	Dry
gravel	gray	soft/loose	slight Petroleum	trace	Damp
sand C M F	black	mod dense/stiff	moderate other:	slight	Moist
silt clay	brown	dense/stiff	strong	moderate	Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments: \_\_\_\_\_  
 \_\_\_\_\_

Date/Time Lab Drop Off: \_\_\_\_\_

Recorded by: Brian Perleberg



## Surface Sediment Field Sample Record

Project Name: Coleman Oil Project No: PO No 2017-074 Station ID: 5504

Sampling Crew: William Clifton & Brian Perleberg  
 Sample Date: 04/23/2018 Sampling Method: Grab  
 Sampling Vessel: NI  
 Subcontractor(s): Northern Resource Consulting Weather: Clear & Sunny  
 Station Coordinates: N / Lat. 47° 25' 07.7"  
 Waypoint 53 W / Long. 120° 18' 09.6"  
 Datum: NAD 83 (WGS 84) zone:

Sample ID: 5504  
 Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest  
 TS / TVS / Grain Size / TOC / Ammonia / Sulfides  
 (Circle Appropriate Analyses) Other: TPH

Grab Number: 31 Water Depth: 21 ft. Grab Recovery: 11.82 cm Time: 1220  
 Tide Level: N/A ft. Sample Interval: 0-11.82 cm  
 Bioassay / Chemistry Depth MLLW: N/A ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:		Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	<u>none</u>	H2S	<u>none</u>	Dry
gravel	gray	<u>soft/loose</u>	slight	Petroleum	trace	Damp
<u>sand C M F</u>	black	mod dense/stiff	moderate	other:	slight	Moist
silt clay	<u>brown</u>	dense/stiff	strong		moderate	<u>Wet</u>
organic matter	brown surface	very dense/stiff	overwhelming		heavy	

Comments: Had to move sample location 3 times & attempted 28 grab sample before getting one. Rock present along substrate to prevent sampler from closing.

Grab Number: \_\_\_\_\_ Water Depth: \_\_\_\_\_ ft. Grab Recovery: \_\_\_\_\_ cm Time: \_\_\_\_\_  
 Tide Level: \_\_\_\_\_ ft. Sample Interval: \_\_\_\_\_ cm  
 Bioassay / Chemistry Depth MLLW: \_\_\_\_\_ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:		Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none	H2S	none	Dry
gravel	gray	soft/loose	slight	Petroleum	trace	Damp
sand C M F	black	mod dense/stiff	moderate	other:	slight	Moist
silt clay	brown	dense/stiff	strong		moderate	Wet
organic matter	brown surface	very dense/stiff	overwhelming		heavy	

Comments: \_\_\_\_\_

Grab Number: \_\_\_\_\_ Water Depth: \_\_\_\_\_ ft. Grab Recovery: \_\_\_\_\_ cm Time: \_\_\_\_\_  
 Tide Level: \_\_\_\_\_ ft. Sample Interval: \_\_\_\_\_ cm  
 Bioassay / Chemistry Depth MLLW: \_\_\_\_\_ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:		Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none	H2S	none	Dry
gravel	gray	soft/loose	slight	Petroleum	trace	Damp
sand C M F	black	mod dense/stiff	moderate	other:	slight	Moist
silt clay	brown	dense/stiff	strong		moderate	Wet
organic matter	brown surface	very dense/stiff	overwhelming		heavy	

Comments: \_\_\_\_\_

Date/Time Lab Drop Off:

Recorded by: Brian Perleberg

## Surface Sediment Field Sample Record

PO No 2017-074

Project Name: Coleman Oil Project No: Coleman Oil Station ID: 5505

Sampling Crew: William Clifton & Brian Perleberg

Sample Date: 04/23/2018 Sampling Method: GRAB SAMPLE

Sampling Vessel: NRC ROY

Subcontractor(s): Northern Resource Consulting Weather: Clear & Sunny

Station Coordinates: N / Lat. 47° 25' 07.2"

W / Long. 120° 18' 09.2"

Datum: NAD 83 (WGS 84) zone:

Sample ID: 5505

Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest Other: TPH

TS / TVS / Grain Size / TOC / Ammonia / Sulfides Other: \_\_\_\_\_

(Circle Appropriate Analyses)

Grab Number: ~~26~~ 26 Water Depth: 15.8 ft. Grab Recovery: 13.97 cm Time: 1245

Tide Level: N/A ft. Sample Interval: 0-13.97 cm

Bioassay / Chemistry Depth MLLW: N/A ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	<u>Very soft/Loose</u>	<u>none</u> H2S	<u>none</u>	Dry
gravel	gray	soft/loose	slight Petroleum	trace	Damp
sand C M F	<u>black</u>	mod dense/stiff	moderate other:	slight	Moist
<u>silt clay</u> <u>Clay</u>	brown	dense/stiff	strong	moderate	<u>Wet</u>
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments:

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Grab Number: \_\_\_\_\_ Water Depth: \_\_\_\_\_ ft. Grab Recovery: \_\_\_\_\_ cm Time: \_\_\_\_\_

Tide Level: \_\_\_\_\_ ft. Sample Interval: \_\_\_\_\_ cm

Bioassay / Chemistry Depth MLLW: \_\_\_\_\_ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none H2S	none	Dry
gravel	gray	soft/loose	slight Petroleum	trace	Damp
sand C M F	black	mod dense/stiff	moderate other:	slight	Moist
silt clay	brown	dense/stiff	strong	moderate	Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments:

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Grab Number: \_\_\_\_\_ Water Depth: \_\_\_\_\_ ft. Grab Recovery: \_\_\_\_\_ cm Time: \_\_\_\_\_

Tide Level: \_\_\_\_\_ ft. Sample Interval: \_\_\_\_\_ cm

Bioassay / Chemistry Depth MLLW: \_\_\_\_\_ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none H2S	none	Dry
gravel	gray	soft/loose	slight Petroleum	trace	Damp
sand C M F	black	mod dense/stiff	moderate other:	slight	Moist
silt clay	brown	dense/stiff	strong	moderate	Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments:

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Date/Time Lab Drop Off:

Recorded by: \_\_\_\_\_

## Physical Description of Sediment Key

### Visual Sediment Descriptions consist of the following:

Moisture content, density/consistency, color, minor constituent, MAJOR CONSTITUENT/GROUP NAME. Amount and shape of minor constituents (e.g., wood, shells). Biota. Sheen, odor, petroleum (as needed). Structure descriptions (as needed). Use parenthesis to denote interpretation (e.g., asphalt, glass).

### Recovered and In-situ depths

Recovered = measured in the lab, actual sediment depth from core tube

In situ = compaction-corrected

### Sediment Description Terminology

1. Moisture Content		
Dry	Little perceptible moisture (upland only)	
Damp	Some perceptible moisture, probably below optimum (clays, core intervals at depth)	
Moist	Probably near optimum moisture content, no visible water (most sediment)	
Wet	Visible free water, probably above optimum	
2. Density (Core Drive Penetration & Finger Pressure)		
SAND or GRAVEL		
Density	Visual	Notes
Very loose	freefall	May occur at the top of a core or grab
Loose	easy penetration	
Medium dense	moderate penetration	Typically downcore due to compaction or compression
Dense	hard penetration	Bottom of a core, typical to glacial deposits
Very dense	refusal	
SILT or CLAY		
Consistency	Visual	Notes
Very soft	freefall	Soupy
Soft	easy penetration	Easily penetrated, just starting to be cohesive
Medium stiff	moderate penetration	Molded by finger pressure
Stiff	hard penetration	Can indent and mold by finger pressure
Very stiff/Hard	refusal	modeling clay (rolls to a ball)
3. Color and Shading		
Example Colors	Shades	
Black	Light	
Browns (olive, yellow, red)	Dark	
Grays (gray, olive brown)	Very Dark	
4. Minor and MAJOR Group Name		
Gravel	Silt	
Sand	Clay	
* MAJOR is written in all CAPITAL LETTERS		
* Description of minor constituent precedes MAJOR constituent, except for trace		
Minor Constituents	Percent	
Trace (clay, silt, etc.)*	0-5	
Slightly (clayey, silty, etc.)	5-15	
Clayey, silty, sandy, gravelly	15-30	
Very (clayey, silty, etc.)	30-50	
GROUP NAME	>50	
* For Trace minor constituents, place after MAJOR constituent		
Descriptors		
Sand and Gravel	Rounding (subrounded, subangular)	
	Sorting (poorly = many sizes, well = homogenous)	
	Grain color (black, white, grey, yellow, etc.)	

## Physical Description of Sediment Key

5. Other Minor Constituents: % vol. (anthropogenics, etc.)*	
Other Minor Constituents*	Percent
Trace	0-5
Occasional	5-10
Moderate	10-30
Substantial	30-50
*Separate major from other minor constituents with "and."	
6. Biota	
Beggiatoa - White/colorless, filamentous proteobacteria	
Marsh grass, peat, worms, etc.	
7. Odor Descriptions	
Trace	
Slight	
Moderate	
Strong	
Petroleum-like	
H <sub>2</sub> S - like (Hydrogen sulfide - like)	
Septic - like	
8. Sheen	
Amount	Percent
None, trace	<2
Slight	2-15
Moderate	15-40
Moderate to Heavy	40-70
Heavy	>70
*No odor or sheen observed unless noted	
Visual Description Terminology	
Rainbow	Multicolored
Metallic	Metallic gray-colored
Florets	Semi-circular and flat (2-D)
Blebs	Semi-circular and spherical (3-D)
9. Product	
Oil Stained	Visible brown or black stains on soil (fine grained soil)
Oil Coated	Visible brown or black coating on soil (coarse grained soil)
Oil Wetted	Visible brown or black oil wetting on soil. Oil appears as a liquid and is not held by soil grains (pools)
10. Structure and Other Sediment Descriptions	
Blocky	Cohesive soil that can be broken down into smaller lumps
Decomposed	Visible sign of decomposition or discoloration
Fresh	No visible sign of decomposition or discoloration
Gummy	Cohesive, pliable soil with high percentage of clay
Bed	Greater than 1/2" thick
Thin bed	Up to 1/2" thick
Laminated beds	Thin beds (<1/2" thick) lying between or alternating within a greater unit
Stratified beds	Beds (>1/2" thick) lying between or alternating within a greater unit
Layer	A bed or thin bed of anthropogenic material
Pockets	Semicircular to circular inclusion/deposit
Winnowed	Loss of material that occurred during coring
Anthropogenic	Debris originated from human activity
Contacts: For Core Processing Only	
@	Compositional change or presence of anthropogenic material
-----	Major unit change/non-discrete, gradational contact
—————	Major unit change/visually discrete, abrupt contact
-----	Minor unit change (competency, color)
Notes	
*Classification of sediment on core logs is based on visual field observations which include density/consistency, grain size, and plasticity estimates and should not be construed to imply field nor laboratory testing unless presented herein. Visual-manual classification method ASTM D-2488 for the description and identification of soils was used as an identification guide.	

**Appendix F**  
**Light Nonaqueous-Phase Liquid Recovery**



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
<b>Columbia River</b>				
Columbia River	3/27/2017	3/27/2017	30.00	pads
Columbia River	3/27/2017	4/2/2017	22.75	booms, pads
Columbia River	4/4/2017	4/4/2017	0.62	pads
Columbia River	4/5/2017	4/5/2017	2.89	booms, pads
Columbia River	4/6/2017	4/6/2017	2.02	booms, pads
Columbia River	4/7/2017	4/7/2017	3.77	booms, pads
Columbia River	4/8/2017	4/8/2017	2.59	pads
Columbia River	4/9/2017	4/9/2017	1.28	pads
Columbia River	4/10/2017	4/10/2017	1.77	pads
Columbia River	4/11/2017	4/11/2017	2.49	pads
Columbia River	4/12/2017	4/12/2017	2.69	pads
Columbia River	4/13/2017	4/13/2017	1.94	pads
Columbia River	4/14/2017	4/14/2017	1.65	pads
Columbia River	4/15/2017	4/15/2017	3.52	pads
Columbia River	4/16/2017	4/16/2017	1.21	pads
Columbia River	4/17/2017	4/17/2017	3.62	pads
Columbia River	4/18/2017	4/18/2017	1.13	pads
Columbia River	4/19/2017	4/19/2017	0.91	pads
Columbia River	4/20/2017	4/20/2017	0.76	pads
Columbia River	4/21/2017	4/21/2017	0.79	pads
Columbia River	4/22/2017	4/22/2017	1.08	pads
Columbia River	4/23/2017	4/23/2017	0.77	pads
Columbia River	4/25/2017	4/25/2017	0.44	pads
Columbia River	4/27/2017	4/27/2017	1.05	pads
Columbia River	4/28/2017	4/28/2017	0.95	pads
Columbia River	4/29/2017	4/29/2017	0.54	pads
Columbia River	4/30/2017	4/30/2017	1.09	pads
Columbia River	5/1/2017	5/1/2017	0.30	pads
Columbia River	5/3/2017	5/3/2017	2.00	pads
Columbia River	5/5/2017	5/5/2017	1.74	pads
Columbia River	5/6/2017	5/6/2017	0.95	pads
Columbia River	5/7/2017	5/7/2017	0.94	pads
Columbia River	5/9/2017	5/9/2017	1.85	pads
Columbia River	5/10/2017	5/10/2017	1.85	pads
Columbia River	5/11/2017	5/11/2017	2.96	pads
Columbia River	5/12/2017	5/12/2017	1.46	pads
Columbia River	5/13/2017	5/13/2017	0.60	pads
Columbia River	5/14/2017	5/14/2017	0.53	pads
Columbia River	5/15/2017	5/15/2017	0.83	pads
Columbia River	5/16/2017	5/16/2017	0.48	pads
Columbia River	5/17/2017	5/17/2017	1.19	pads
Columbia River	5/18/2017	5/18/2017	1.99	pads
Columbia River	5/19/2017	5/19/2017	0.24	pads
Columbia River	5/20/2017	5/20/2017	1.33	pads
Columbia River	5/21/2017	5/21/2017	0.79	pads



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
Columbia River	5/22/2017	5/22/2017	0.34	pads
Columbia River	5/31/2017	6/4/2017	0.41	pads
Columbia River	6/5/2017	6/5/2017	0.79	pads
Columbia River	5/25/2017	6/5/2017	1.24	boom
Columbia River	6/5/2017	6/6/2017	1.25	pads
Columbia River	6/6/2017	6/7/2017	0.10	pads
Columbia River	6/7/2017	6/8/2017	0.26	pads
Columbia River	6/8/2017	6/9/2017	0.40	pads
Columbia River	6/9/2017	6/10/2017	0.66	pads
Columbia River	6/10/2017	6/11/2017	0.30	pads
Columbia River	6/10/2017	6/11/2017	0.48	boom
Columbia River	6/11/2017	6/12/2017	1.70	pads
Columbia River	6/12/2017	6/13/2017	0.49	pads
Columbia River	6/18/2017	6/19/2017	0.82	pads
Columbia River	6/19/2017	6/20/2017	2.63	boom
Columbia River	6/19/2017	6/20/2017	0.94	pads
Columbia River	6/20/2017	6/21/2017	0.24	pads
Columbia River	6/20/2017	6/21/2017	0.30	boom
Columbia River	6/21/2017	6/22/2017	0.20	boom
Columbia River	6/21/2017	6/22/2017	0.46	pads
Columbia River	6/22/2017	6/23/2017	0.72	pads
Columbia River	6/23/2017	6/24/2017	0.06	pads
Columbia River	6/24/2017	6/25/2017	0.21	pads
Columbia River	6/25/2017	6/26/2017	0.53	pads
Columbia River	6/22/2017	6/26/2017	0.14	boom
Columbia River	6/26/2017	6/27/2017	0.08	pads
Columbia River	6/27/2017	6/28/2017	0.45	pads
Columbia River	6/26/2017	6/28/2017	0.72	boom
Columbia River	6/28/2017	6/29/2017	0.32	pads
Columbia River	6/29/2017	6/30/2017	1.47	boom
Columbia River	6/29/2017	6/30/2017	0.56	pads
Columbia River	6/30/2017	7/1/2017	0.30	pads
Columbia River	7/1/2017	7/2/2017	0.53	pads
Columbia River	7/1/2017	7/2/2017	0.68	boom
Columbia River	7/2/2017	7/3/2017	0.25	pads
Columbia River	7/3/2017	7/4/2017	0.14	pads
Columbia River	7/4/2017	7/5/2017	1.73	pads
Columbia River	7/4/2017	7/5/2017	0.81	boom
Columbia River	7/5/2017	7/6/2017	0.08	pads
Columbia River	7/6/2017	7/7/2017	0.31	pads
Columbia River	7/7/2017	7/8/2017	0.31	pads
Columbia River	7/8/2017	7/9/2017	0.41	pads
Columbia River	7/9/2017	7/10/2017	0.16	pads
Columbia River	7/10/2017	7/11/2017	0.22	pads
Columbia River	7/11/2017	7/13/2017	0.53	pads
Columbia River	7/13/2017	7/14/2017	0.11	pads



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
Columbia River	7/14/2017	7/15/2017	0.46	pads
Columbia River	7/15/2017	7/16/2017	0.29	pads
Columbia River	7/16/2017	7/17/2017	0.11	pads
Columbia River	7/18/2017	7/19/2017	0.06	pads
Columbia River	7/5/2017	7/19/2017	0.11	boom
Columbia River	7/19/2017	7/20/2017	0.13	pads
Columbia River	7/20/2017	7/21/2017	0.15	pads
Columbia River	7/21/2017	7/22/2017	0.18	pads
Columbia River	7/21/2017	7/23/2017	0.06	pads
Columbia River	7/19/2017	7/24/2017	0.35	boom
Columbia River	7/23/2017	7/24/2017	0.01	pads
Columbia River	7/24/2017	7/25/2017	0.06	pads
Columbia River	7/25/2017	7/26/2017	0.09	pads
Columbia River	7/26/2017	7/27/2017	0.15	pads
Columbia River	7/27/2017	7/28/2017	0.01	pads
Columbia River	7/24/2017	7/30/2017	0.00	boom
Columbia River	7/28/2017	7/30/2017	0.22	pads
Columbia River	7/30/2017	7/31/2017	0.12	pads
Columbia River	7/30/2017	8/1/2017	0.93	boom
Columbia River	7/30/2017	8/1/2017	0.17	pads
Columbia River	8/1/2017	8/2/2017	0.09	pads
Columbia River	8/1/2017	8/3/2017	0.24	boom
Columbia River	8/2/2017	8/3/2017	0.33	pads
Columbia River	8/3/2017	8/4/2017	0.14	pads
Columbia River	8/4/2017	8/5/2017	0.18	pads
Columbia River	8/3/2017	8/5/2017	0.30	boom
Columbia River	8/5/2017	8/6/2017	1.38	pads
Columbia River	8/6/2017	8/7/2017	0.19	pads
Columbia River	8/7/2017	8/8/2017	0.18	pads
Columbia River	8/5/2017	8/8/2017	0.85	boom
Columbia River	8/8/2017	8/9/2017	0.06	pads
Columbia River	8/8/2017	8/10/2017	0.05	boom
Columbia River	8/9/2017	8/10/2017	0.15	pads
Columbia River	8/10/2017	8/11/2017	0.18	pads
Columbia River	8/11/2017	8/12/2017	0.15	pads
Columbia River	8/12/2017	8/13/2017	0.24	pads
Columbia River	8/13/2017	8/14/2017	0.26	pads
Columbia River	8/10/2017	8/14/2017	0.05	boom
Columbia River	8/14/2017	8/15/2017	0.06	pads
Columbia River	8/15/2017	8/16/2017	0.30	pads
Columbia River	8/16/2017	8/17/2017	0.39	pads
Columbia River	8/17/2017	8/18/2017	0.13	pads
Columbia River	8/18/2017	8/19/2017	0.06	pads
Columbia River	8/19/2017	8/20/2017	0.20	pads
Columbia River	8/8/2017	8/20/2017	0.07	boom
Columbia River	8/20/2017	8/21/2017	0.17	pads





**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
Columbia River	8/21/2017	8/22/2017	0.05	pads
Columbia River	8/23/2017	8/23/2017	0.05	pads
Columbia River	8/24/2017	8/24/2017	0.03	pads
Columbia River	8/25/2017	8/25/2017	0.30	pads
Columbia River	8/26/2017	8/26/2017	0.07	pads
Columbia River	8/28/2017	8/28/2017	0.34	pads
Columbia River	8/29/2017	8/29/2017	0.18	pads
Columbia River	8/30/2017	8/30/2017	0.04	pads
Columbia River	8/20/2017	8/30/2017	0.46	boom
Columbia River	8/20/2017	8/31/2017	0.98	boom
Columbia River	9/1/2017	9/1/2017	0.22	pads
Columbia River	8/20/2017	9/1/2017	0.55	boom
Columbia River	9/2/2017	9/2/2017	0.13	pads
Columbia River	9/3/2017	9/3/2017	0.22	pads
Columbia River	8/30/2017	9/4/2017	1.30	boom
Columbia River	9/4/2017	9/4/2017	0.14	pads
Columbia River	9/5/2017	9/5/2017	0.37	pads
Columbia River	9/12/2017	9/12/2017	0.08	pads
Columbia River	8/20/2017	9/14/2017	0.24	boom
Columbia River	9/14/2017	9/14/2017	0.01	pads
Columbia River	9/15/2017	9/15/2017	0.20	pads
Columbia River	9/16/2017	9/16/2017	0.03	pads
Columbia River	9/17/2017	9/17/2017	0.22	pads
Columbia River	9/19/2017	9/19/2017	0.05	pads
Columbia River	9/20/2017	9/20/2017	0.03	pads
Columbia River	9/1/2017	9/21/2017	0.60	boom
Columbia River	9/1/2017	9/22/2017	0.76	boom
Columbia River	9/22/2017	9/22/2017	0.07	pads
Columbia River	9/25/2017	9/25/2017	0.11	pads
Columbia River	9/25/2017	10/1/2017	0.17	pads
Columbia River	unknown	10/2/2017	1.04	boom
Columbia River	10/2/2017	10/6/2017	0.25	pads
Columbia River	10/6/2017	10/31/2017	0.33	boom
Columbia River	11/31/17	11/29/2017	1.90	boom
Columbia River	10/31/2017	11/30/2017	3.38	boom
Columbia River	unknown	12/1/2017	0.37	pads
Columbia River	10/31/2017	12/3/2017	0.48	boom
Columbia River	unknown	12/5/2017	0.41	pads
Columbia River	12/5/2017	12/11/2017	0.58	pads
Columbia River	12/11/2017	12/16/2017	0.26	pads
Columbia River	12/16/2017	12/18/2017	0.51	pads
Columbia River	12/18/2017	12/20/2017	0.73	pads
Columbia River	12/20/2017	12/22/2017	0.23	pads
Columbia River	12/22/2017	12/23/2017	0.08	pad
Columbia River	12/22/2017	12/26/2017	0.34	pads
Columbia River	12/22/2017	12/27/2017	0.10	pads



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
Columbia River	12/26/2017	12/28/2017	0.27	pads
Columbia River	12/28/2017	12/29/2017	0.28	pads
Columbia River	12/29/2017	12/30/2017	0.31	pads
Columbia River	12/30/2017	12/31/2017	0.18	pads
Columbia River	12/28/2017	1/1/2018	0.51	pads
Columbia River	1/1/2018	1/3/2018	0.42	pads
Columbia River	1/3/2018	1/4/2018	0.63	pads
Columbia River	1/4/2018	1/6/2018	1.11	pads
Columbia River	1/6/2018	1/7/2018	0.41	pads
Columbia River	1/7/2018	1/8/2018	0.04	sock
Columbia River	1/8/2018	1/9/2018	0.28	socks
Columbia River	1/9/2018	1/10/2018	0.54	pads
Columbia River	1/10/2018	1/11/2018	0.49	pads
Columbia River	1/11/2018	1/12/2018	0.81	pads
Columbia River	1/12/2018	1/13/2018	0.41	pads
Columbia River	1/13/2018	1/14/2018	0.19	pads
Columbia River	1/14/2018	1/15/2018	0.19	pads
Columbia River	1/15/2018	1/16/2018	0.63	pads
Columbia River	1/16/2018	1/17/2018	0.33	pads
Columbia River	unknown	1/18/2018	1.99	boom
Columbia River	1/18/2018	1/18/2018	0.11	pads
Columbia River	1/18/2018	1/19/2018	0.30	pads
Columbia River	1/19/2018	1/20/2018	0.13	pads
Columbia River	1/20/2018	1/22/2018	0.29	pads
Columbia River	1/22/2018	1/23/2018	0.98	pads
Columbia River	1/23/2018	1/24/2018	0.79	pads
Columbia River	1/24/2018	1/25/2018	0.40	pads
Columbia River	1/25/2018	1/26/2018	0.61	pads
Columbia River	1/26/2018	1/27/2018	0.22	pads
Columbia River	1/27/2018	1/28/2018	1.08	pads
Columbia River	1/28/2018	1/29/2018	0.02	pads
Columbia River	1/29/2018	1/30/2018	0.51	pads
Columbia River	1/30/2018	1/31/2018	0.15	pads
Columbia River	1/31/2018	2/1/2018	0.46	pads
Columbia River	2/1/2018	2/2/2018	0.38	pads
Columbia River	2/2/2018	2/3/2018	0.40	pads
Columbia River	2/3/2018	2/5/2018	0.59	pads
Columbia River	2/5/2018	2/7/2018	1.62	boom
Columbia River	2/7/2018	2/7/2018	0.36	pads
Columbia River	2/7/2018	2/9/2018	0.63	pads
Columbia River	2/9/2018	2/11/2018	0.68	pads
Columbia River	2/11/2018	2/13/2018	0.16	pads
Columbia River	2/13/2018	2/14/2018	0.05	pads
Columbia River	2/14/2018	2/15/2018	0.18	pads
Columbia River	2/15/2018	2/16/2018	0.19	pads
Columbia River	2/16/2018	2/17/2018	0.39	pads



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
Columbia River	2/17/2018	2/19/2018	0.29	pads
Columbia River	2/19/2018	2/20/2018	0.71	pads
Columbia River	2/20/2018	2/21/2018	0.39	pads
Columbia River	2/21/2018	2/22/2018	0.13	pads
Columbia River	2/22/2018	2/24/2018	0.43	pads
Columbia River	2/24/2018	2/26/2018	0.29	pads
Columbia River	2/26/2018	2/27/2018	0.04	pads
Columbia River	2/27/2018	3/2/2018	0.15	pads
Columbia River	3/2/2018	3/5/2018	0.11	pads
Columbia River	3/5/2018	3/6/2018	0.14	pads
Columbia River	3/6/2018	3/7/2018	0.07	pads
Columbia River	3/7/2018	3/9/2018	0.20	pads
Columbia River	3/9/2018	3/14/2018	0.45	pads
Columbia River	3/14/2018	3/19/2018	0.05	pads
Columbia River	3/19/2018	3/20/2018	0.01	pads
Columbia River	3/20/2018	3/23/2018	0.25	pads
Columbia River	3/23/2018	3/24/2018	0.04	pads
Columbia River	3/24/2018	3/25/2018	0.03	pads
Columbia River	3/25/2018	3/26/2018	0.01	pads
Columbia River	3/26/2018	3/28/2018	0.10	pads
Columbia River	3/28/2018	3/29/2018	0.01	pads
Columbia River	3/29/2018	4/1/2018	0.01	pads
Columbia River	4/1/2018	4/3/2018	0.01	pads
Columbia River	4/3/2018	4/5/2018	0.01	pads
Columbia River	4/5/2018	4/6/2018	0.01	pads
Columbia River	4/6/2018	4/7/2018	0.01	pads
Columbia River	4/7/2018	4/9/2018	0.02	pads
Columbia River	4/9/2018	4/10/2018	0.01	pads
Columbia River	4/10/2018	4/11/2018	0.01	pads
Columbia River	4/11/2018	4/14/2018	0.17	pads
Columbia River	4/14/2018	4/16/2018	0.45	pads
Columbia River	4/16/2018	4/17/2018	0.15	pads
Columbia River	4/17/2018	4/18/2018	0.09	pads
Columbia River	4/18/2018	4/19/2018	0.29	pads
Columbia River	4/19/2018	4/20/2018	0.18	pads
Columbia River	4/20/2018	4/21/2018	0.02	pads
Columbia River	4/21/2018	4/22/2018	0.22	pads
Columbia River	4/22/2018	4/23/2018	0.24	pads
Columbia River	4/23/2018	4/24/2018	0.26	pads
Columbia River	4/24/2018	4/24/2018	2.84	socks
Columbia River	4/24/2018	4/25/2018	0.24	pads
Columbia River	4/25/2018	4/26/2018	0.34	pads
Columbia River	4/26/2018	4/27/2018	0.39	pads
Columbia River	4/27/2018	4/28/2018	0.22	pads
Columbia River	4/28/2018	4/29/2018	0.63	pads
Columbia River	4/29/2018	4/30/2018	0.02	pads



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
Columbia River	4/30/2018	5/1/2018	2.14	pads
Columbia River	4/30/2018	5/1/2018	0.07	pads
Columbia River	5/1/2018	5/2/2018	2.58	pads
Columbia River	5/2/2018	5/2/2018	0.23	pads
Columbia River	5/2/2018	5/3/2018	0.19	pads
Columbia River	5/3/2018	5/4/2018	0.20	pads
Columbia River	5/3/2018	5/4/2018	1.02	socks
Columbia River	5/4/2018	5/5/2018	0.04	pads
Columbia River	5/4/2018	5/5/2018	0.18	pads
Columbia River	5/5/2018	5/6/2018	0.04	pads
Columbia River	5/6/2018	5/7/2018	0.07	pads
Columbia River	5/7/2018	5/9/2018	0.26	pads
Columbia River	5/9/2018	5/10/2018	0.04	pads
Columbia River	5/10/2018	5/11/2018	0.18	pads
Columbia River	5/11/2018	5/15/2018	0.03	pads
Columbia River	5/15/2018	2/23/2018	0.32	pads
Columbia River	2/23/2018	5/25/2018	0.01	pads
Columbia River	5/25/2018	5/26/2018	0.13	pads
Columbia River	5/29/2018	6/3/2018	0.09	pads
<b>Total Recovered from Columbia River</b>	<b>3/27/2017</b>	<b>9/5/2017</b>	<b>211.50</b>	<b>pads &amp; booms</b>



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
<b>Sump #1 Near Fuel Rack</b>				
Sump #1	4/11/2017	4/11/2017	2.85	pads, booms
Sump #1	4/12/2017	4/12/2017	2.85	pads
Sump #1	4/13/2017	4/13/2017	1.21	pads
Sump #1	4/14/2017	4/14/2017	0.63	pads
Sump #1	4/15/2017	4/15/2017	0.73	boom
Sump #1	4/16/2017	4/16/2017	0.42	boom
Sump #1	4/18/2017	4/18/2017	0.42	pads
Sump #1	4/19/2017	4/19/2017	0.42	pads
Sump #1	4/20/2017	4/20/2017	0.05	pads
Sump #1	4/21/2017	4/21/2017	0.31	pads
Sump #1	4/23/2017	4/23/2017	0.05	pads
Sump #1	4/25/2017	4/25/2017	0.26	pads
Sump #1	4/26/2017	4/26/2017	0.50	pads
Sump #1	5/5/2017	5/5/2017	0.18	pads
Sump #1	5/6/2017	5/6/2017	0.16	pads
Sump #1	5/12/2017	5/12/2017	0.26	pads
Sump #1	5/14/2017	5/14/2017	0.16	pads
Sump #1	5/23/2017	6/2/2017	0.07	pads
Sump #1	6/2/2017	6/8/2017	0.19	pads
Sump #1	6/8/2017	6/12/2017	0.18	pads
Sump #1	8/9/2017	8/12/2017	0.02	pads
Sump #1	8/12/2017	8/16/2017	0.07	pads
Sump #1	8/16/2017	1/16/2018	0.42	pads
<b>Total Recovered from Sump #1</b>	<b>4/11/2017</b>	<b>8/16/2017</b>	<b>12.41</b>	<b>pads</b>



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
<b>Sump #2 Near Warehouse Loading Dock</b>				
Sump #2	4/19/2017	4/19/2017	0.48	pads
Sump #2	4/20/2017	4/20/2017	0.05	pads
Sump #2	4/21/2017	4/21/2017	0.31	pads
Sump #2	4/22/2017	4/22/2017	0.05	pads
Sump #2	4/23/2017	4/23/2017	0.15	pads
Sump #2	4/24/2017	4/24/2017	0.58	pads
Sump #2	4/26/2017	4/26/2017	0.63	pads
Sump #2	5/2/2017	5/2/2017	0.36	pads
Sump #2	5/3/2017	5/3/2017	2.17	pads
Sump #2	5/5/2017	5/5/2017	0.18	pads
Sump #2	5/23/2017	6/22/2017	0.01	pads
Sump #2	6/22/2017	6/28/2017	0.16	pads
Sump #2	6/28/2017	7/5/2017	0.24	pads
Sump #2	7/5/2017	7/11/2017	0.33	pads
Sump #2	7/11/2017	7/15/2017	0.31	pads
Sump #2	7/15/2017	7/16/2017	0.14	pads
Sump #2	7/16/2017	7/18/2017	0.24	pads
Sump #2	7/18/2017	7/19/2017	0.26	pads
Sump #2	7/19/2017	7/20/2017	0.21	pads
Sump #2	7/20/2017	7/21/2017	0.20	pads
Sump #2	7/21/2017	7/22/2017	0.10	pads
Sump #2	7/22/2017	7/24/2017	0.20	pads
Sump #2	7/24/2017	7/25/2017	0.08	pads
Sump #2	7/25/2017	7/26/2017	0.11	pads
Sump #2	7/26/2017	7/28/2017	0.15	pads
Sump #2	7/28/2017	7/30/2017	0.03	pads
Sump #2	7/30/2017	8/1/2017	0.07	pads
Sump #2	8/1/2017	8/3/2017	0.20	pads
Sump #2	8/3/2017	8/4/2017	0.09	pads
Sump #2	8/4/2017	8/6/2017	0.09	pads
Sump #2	8/6/2017	8/7/2017	0.08	pads
Sump #2	8/7/2017	8/8/2017	0.09	pads
Sump #2	8/8/2017	8/9/2017	0.19	pads
Sump #2	8/9/2017	8/10/2017	0.15	pads
Sump #2	8/10/2017	8/11/2017	0.27	pads
Sump #2	8/11/2017	8/12/2017	0.04	pads
Sump #2	8/12/2017	8/13/2017	0.22	pads
Sump #2	8/13/2017	8/15/2017	0.46	pads
Sump #2	8/15/2017	8/16/2017	0.03	pads
Sump #2	8/16/2017	8/17/2017	0.05	pads
Sump #2	8/18/2017	8/19/2017	0.06	pads
Sump #2	8/19/2017	8/21/2017	0.04	pads
Sump #2	8/21/2017	8/22/2017	0.04	pads
Sump #2	8/22/2017	8/23/2017	0.04	pads
Sump #2	8/23/2017	8/24/2017	0.07	pads



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
Sump #2	8/25/2017	8/26/2017	0.12	pads
Sump #2	8/26/2017	8/27/2017	0.07	pads
Sump #2	8/27/2017	8/28/2017	0.14	pads
Sump #2	8/28/2017	8/29/2017	0.07	pads
Sump #2	8/29/2017	8/29/2017	0.15	pads
Sump #2	8/29/2017	8/30/2017	0.14	pads
Sump #2	8/30/2017	8/31/2017	0.22	pads
Sump #2	8/31/2017	9/1/2017	0.23	pads
Sump #2	9/1/2017	9/2/2017	0.31	pads
Sump #2	9/2/2017	9/4/2017	0.18	pads
Sump #2	9/4/2017	9/5/2017	0.13	pads
Sump #2	9/5/2017	9/6/2017	0.13	pads
Sump #2	9/6/2017	9/6/2017	0.16	pads
Sump #2	9/11/2017	9/12/2017	0.13	pads
Sump #2	9/12/2017	9/13/2017	0.19	pads
Sump #2	9/13/2017	9/14/2017	0.24	pads
Sump #2	9/14/2017	9/15/2017	0.20	pads
Sump #2	9/15/2017	9/17/2017	0.24	pads
Sump #2	9/18/2017	9/18/2017	0.17	pads
Sump #2	9/18/2017	9/19/2017	0.13	pads
Sump #2	9/19/2017	9/20/2017	0.20	pads
Sump #2	9/20/2017	9/21/2017	0.12	pads
Sump #2	9/21/2017	9/22/2017	0.21	pads
Sump #2	9/22/2017	9/24/2017	0.30	pads
Sump #2	9/24/2017	9/25/2017	0.30	pads
Sump #2	9/25/2017	9/26/2017	0.17	pads
Sump #2	9/26/2017	9/27/2017	0.36	pads
Sump #2	9/27/2017	10/2/2017	0.31	pads
Sump #2	10/2/2017	10/3/2017	0.20	pads
Sump #2	10/3/2017	10/4/2017	0.17	pads
Sump #2	10/4/2017	10/5/2017	0.10	pads
Sump #2	10/5/2017	10/7/2017	0.10	pads
Sump #2	10/7/2017	10/9/2017	0.12	pads
Sump #2	10/9/2017	10/11/2017	0.17	pads
Sump #2	10/11/2017	10/13/2017	0.14	pads
Sump #2	10/13/2017	10/14/2017	0.23	pads
Sump #2	10/14/2017	10/15/2017	0.15	pads
Sump #2	10/15/2017	10/16/2017	0.10	pads
Sump #2	10/16/2017	10/17/2017	0.10	pads
Sump #2	10/17/2017	10/19/2017	0.18	pads
Sump #2	10/19/2017	10/20/2017	0.28	pads
Sump #2	10/20/2017	10/22/2017	0.32	pads
Sump #2	10/22/2017	10/23/2017	0.28	pads
Sump #2	10/23/2017	10/24/2017	0.30	pads
Sump #2	11/21/2017	12/5/2017	0.02	pads
Sump #2	12/5/2017	12/21/2017	0.03	pads



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
Sump #2	12/21/2017	1/2/2018	0.08	pads
Sump #2	12/21/2017	1/12/2018	0.01	pads
Sump #2	1/12/2018	4/20/2018	0.15	pads
Sump #2	4/20/2018	6/1/2018	0.10	pads
<b>Total Recovered from Sump #2</b>	<b>4/19/2017</b>	<b>6/1/2018</b>	<b>18.66</b>	<b>pads</b>
<b>Sump #3 Near Office</b>				
Sump #3	4/22/2017	4/22/2017	0.31	pads
Sump #3	4/23/2017	4/23/2017	0.36	pads
Sump #3	4/24/2017	4/24/2017	0.98	pads
Sump #3	4/26/2017	4/26/2017	0.05	pads
Sump #3	5/2/2017	5/2/2017	0.36	pads
Sump #3	5/3/2017	5/3/2017	1.22	pads
<b>Total Recovered from Sump #3</b>	<b>4/22/2017</b>	<b>5/3/2017</b>	<b>3.28</b>	<b>pads</b>





**Appendix F**

Light Nonaqueous-Phase Liquid Recovery  
 Coleman Oil  
 Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
<b>Sump #4 South End of Warehouse</b>				
Sump #4	4/25/2017	4/25/2017	0.05	pads
Sump #4	4/26/2017	4/26/2017	0.05	pads
Sump #4	5/23/2017	6/21/2017	0.03	pads
Sump #4	12/15/2007	12/19/2017	0.13	pads
Sump #4	12/19/2017	6/1/2018	0.10	pads
<b>Total Recovered from Sump #4</b>	<b>4/25/2017</b>	<b>6/1/2018</b>	<b>0.36</b>	<b>pads</b>
<b>Sump #5 Near Storage Building</b>				
Sump #5	5/27/2017	6/2/2017	0.07	pads
Sump #5	6/2/2017	6/3/2017	0.63	pads
Sump #5	6/3/2017	6/5/2017	0.24	pads
Sump #5	6/5/2017	6/6/2017	0.42	pads
Sump #5	6/6/2017	6/7/2017	0.53	pads
Sump #5	6/7/2017	6/8/2017	0.74	pads
Sump #5	6/8/2017	6/9/2017	0.57	pads
Sump #5	6/9/2017	6/10/2017	0.39	pads
Sump #5	6/10/2017	6/11/2017	0.34	pads
Sump #5	6/11/2017	6/12/2017	0.34	pads
Sump #5	6/12/2017	6/13/2017	0.48	pads
Sump #5	6/19/2017	6/20/2017	0.73	pads
Sump #5	6/20/2017	6/21/2017	0.19	pads
Sump #5	6/21/2017	6/22/2017	0.29	pads
Sump #5	6/22/2017	6/23/2017	0.55	pads
Sump #5	6/23/2017	6/24/2017	0.40	pads
Sump #5	6/24/2017	6/28/2017	0.36	pads
Sump #5	6/28/2017	6/29/2017	0.68	pads
Sump #5	6/29/2017	6/30/2017	1.36	pads
Sump #5	6/30/2017	7/2/2017	0.65	pads
Sump #5	7/2/2017	7/5/2017	0.38	pads
Sump #5	7/5/2017	7/12/2017	0.68	pads
Sump #5	7/12/2017	7/13/2017	0.69	pads
Sump #5	7/13/2017	7/14/2017	0.66	pads
Sump #5	7/14/2017	7/15/2017	1.11	pads
Sump #5	7/15/2017	7/16/2017	0.40	pads
Sump #5	7/16/2017	7/17/2017	0.66	pads
Sump #5	7/17/2017	7/18/2017	1.05	pads
Sump #5	7/18/2017	7/19/2017	0.42	pads
Sump #5	7/19/2017	7/20/2017	0.61	pads
Sump #5	7/20/2017	7/21/2017	0.46	pads
Sump #5	7/21/2017	7/22/2017	0.38	pads
Sump #5	7/22/2017	7/23/2017	0.11	pads
Sump #5	7/23/2017	7/24/2017	0.28	pads
Sump #5	7/24/2017	7/25/2017	0.57	pads
Sump #5	7/25/2017	7/26/2017	0.55	pads
Sump #5	7/26/2017	7/27/2017	0.53	pads
Sump #5	7/27/2017	7/28/2017	0.66	pads




**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
Sump #5	7/28/2017	7/29/2017	0.46	pads
Sump #5	7/29/2017	7/30/2017	0.38	pads
Sump #5	7/30/2017	7/31/2017	0.32	pads
Sump #5	7/31/2017	8/1/2017	0.30	pads
Sump #5	8/1/2017	8/2/2017	0.63	pads
Sump #5	8/2/2017	8/3/2017	0.50	pads
Sump #5	8/3/2017	8/4/2017	0.34	pads
Sump #5	8/4/2017	8/6/2017	0.32	pads
Sump #5	8/6/2017	8/7/2017	0.14	pads
Sump #5	8/7/2017	8/9/2017	0.51	pads
Sump #5	8/9/2017	8/11/2017	0.35	pads
Sump #5	8/11/2017	8/14/2017	0.26	pads
Sump #5	8/14/2017	8/15/2017	0.27	pads
Sump #5	8/15/2017	8/15/2017	0.15	pads
Sump #5	8/15/2017	8/16/2017	0.06	pads
Sump #5	8/16/2017	8/16/2017	0.26	pads
Sump #5	8/16/2017	8/17/2017	0.30	pads
Sump #5	8/17/2017	8/18/2017	0.21	pads
Sump #5	8/18/2017	8/19/2017	0.07	pads
Sump #5	8/19/2017	8/20/2017	0.26	pads
Sump #5	8/20/2017	8/21/2017	0.39	pads
Sump #5	8/21/2017	8/22/2017	0.40	pads
Sump #5	8/22/2017	8/23/2017	0.39	pads
Sump #5	8/23/2017	8/24/2017	0.28	pads
Sump #5	8/24/2017	8/25/2017	0.08	pads
Sump #5	8/25/2017	8/26/2017	0.05	pads
Sump #5	8/26/2017	8/27/2017	0.06	pads
Sump #5	8/27/2017	8/28/2017	0.08	pads
Sump #5	8/28/2017	8/30/2017	0.11	pads
Sump #5	8/30/2017	8/30/2017	0.20	pads
Sump #5	8/30/2017	8/31/2017	0.11	pads
Sump #5	8/31/2017	9/1/2017	0.21	pads
Sump #5	9/1/2017	9/2/2017	0.13	pads
Sump #5	9/2/2017	9/3/2017	0.14	pads
Sump #5	9/3/2017	9/6/2017	0.25	pads
Sump #5	9/11/2017	9/13/2017	0.20	pads
Sump #5	9/13/2017	9/15/2017	0.22	pads
Sump #5	9/15/2017	9/17/2017	0.08	pads
Sump #5	9/17/2017	9/19/2017	0.18	pads
Sump #5	9/19/2017	9/20/2017	0.10	pads
Sump #5	9/20/2017	9/21/2017	0.22	pads
Sump #5	9/21/2017	9/25/2017	0.16	pads
Sump #5	9/25/2017	9/27/2017	0.40	pads
Sump #5	9/25/2017	10/5/2017	0.09	pads
Sump #5	10/5/2017	10/9/2017	0.18	pads
Sump #5	10/9/2017	10/11/2017	0.09	pads



**Appendix F**  
 Light Nonaqueous-Phase Liquid Recovery  
 Coleman Oil  
 Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
Sump #5	10/11/2017	10/13/2017	0.12	pads
Sump #5	10/13/2017	10/16/2017	0.10	pads
Sump #5	10/16/2017	10/18/2017	0.13	pads
Sump #5	10/18/2017	10/19/2017	0.13	pads
Sump #5	10/19/2017	10/20/2017	0.34	pads
Sump #5	10/20/2017	10/22/2017	0.28	pads
Sump #5	10/22/2017	10/23/2017	0.19	pads
Sump #5	10/23/2017	10/24/2017	0.48	pads
Sump #5	11/23/2017	12/5/2017	0.15	pads
Sump #5	12/5/2017	12/21/2017	0.08	pads
Sump #5	12/21/2017	1/11/2018	0.15	pads
Sump #5	12/21/2017	2/2/2018	0.10	pads
Sump #5	2/2/2018	2/21/2018	0.13	pads
Sump #5	2/21/2018	4/17/2018	0.71	pads
<b>Total Recovered from Sump #5</b>	<b>5/27/2017</b>	<b>4/17/2018</b>	<b>34.14</b>	<b>pads</b>



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
<b>Sump #6 on Northern End of Warehouse</b>				
Sump #6	7/18/2017	7/18/2017	0.99	pads
Sump #6	7/18/2017	7/18/2017	5.55	pump
Sump #6	7/18/2017	7/19/2017	0.78	pads
Sump #6	7/19/2017	7/20/2017	0.24	pads
Sump #6	7/20/2017	7/24/2017	0.01	pads
Sump #6	7/24/2017	7/30/2017	0.07	pads
Sump #6	7/30/2017	8/1/2017	0.05	pads
Sump #6	8/1/2017	8/9/2017	0.20	pads
Sump #6	8/9/2017	8/11/2017	0.09	pads
Sump #6	8/11/2017	8/12/2017	0.05	pads
Sump #6	8/12/2017	8/13/2017	0.07	pads
Sump #6	8/13/2017	8/14/2017	0.07	pads
Sump #6	8/14/2017	8/15/2017	0.21	pads
Sump #6	8/15/2017	8/16/2017	0.11	pads
Sump #6	8/16/2017	8/17/2017	0.11	pads
Sump #6	8/16/2017	8/17/2017	0.04	pads
Sump #6	8/17/2017	8/18/2017	0.05	pads
Sump #6	8/18/2017	8/19/2017	0.10	pads
Sump #6	8/19/2017	8/20/2017	0.15	pads
Sump #6	8/20/2017	8/23/2017	0.11	pads
Sump #6	8/23/2017	8/24/2017	0.06	pads
Sump #6	8/24/2017	8/24/2017	0.07	pads
Sump #6	8/24/2017	8/25/2017	0.07	pads
Sump #6	8/25/2017	8/26/2017	0.10	pads
Sump #6	8/26/2017	8/27/2017	0.08	pads
Sump #6	8/27/2017	8/28/2017	0.12	pads
Sump #6	8/28/2017	8/29/2017	0.02	pads
Sump #6	8/30/2017	8/31/2017	0.06	pads
Sump #6	8/31/2017	9/1/2017	0.10	pads
Sump #6	9/1/2017	9/3/2017	0.17	pads
Sump #6	9/3/2017	9/6/2017	0.16	pads
Sump #6	9/11/2017	9/13/2017	0.07	pads
Sump #6	9/13/2017	9/15/2017	0.13	pads
Sump #6	9/15/2017	9/17/2017	0.10	pads
Sump #6	9/17/2017	9/20/2017	0.15	pads
Sump #6	9/20/2017	9/24/2017	0.18	pads
Sump #6	9/24/2017	9/26/2017	0.09	pads
Sump #6	9/26/2017	9/27/2017	0.06	pads
Sump #6	9/26/2017	10/2/2017	0.22	pads
Sump #6	10/2/2017	10/3/2017	0.05	pads
Sump #6	10/3/2017	10/4/2017	0.11	pads
Sump #6	10/4/2017	10/6/2017	0.05	pads
Sump #6	10/6/2017	10/9/2017	0.15	pads
Sump #6	10/9/2017	10/13/2017	0.09	pads
Sump #6	10/13/2017	10/16/2017	0.15	pads



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
Sump #6	10/16/2017	10/18/2017	0.20	pads
Sump #6	10/19/2017	10/20/2017	0.11	pads
Sump #6	10/20/2017	10/22/2017	0.48	pads
Sump #6	10/22/2017	10/24/2017	0.36	pads
Sump #6	11/22/2017	12/5/2017	0.19	pads
Sump #6	12/5/2017	12/21/2017	0.05	pads
Sump #6	12/5/2017	1/19/2018	0.26	pads
Sump #6	1/19/2018	4/17/2018	0.22	pads
Sump #6	4/17/2018	5/7/2018	0.04	pads
<b>Total Recovered from Sump #6</b>	<b>7/18/2017</b>	<b>5/7/2018</b>	<b>13.57</b>	<b>pads &amp; pump</b>



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
<b>MW-6</b>				
MW-6	6/16/2017	9/25/2017	0.09	sock
MW-6	9/30/2017	10/2/2017	0.11	sock
MW-6	10/2/2017	10/3/2017	0.19	sock
MW-6	10/3/2017	10/4/2017	0.08	sock
MW-6	10/4/2017	10/13/2017	0.04	sock
MW-6	10/13/2017	10/23/2017	0.10	sock
MW-6	10/23/2017	10/24/2017	0.10	sock
MW-6	10/24/2017	10/25/2017	0.10	sock
MW-6	10/25/2017	11/30/2017	0.08	sock
MW-6	11/30/2017	1/23/2018	0.03	sock
MW-6	1/23/2018	2/8/2018	0.01	sock
<b>Total Recovered from MW-6</b>	<b>6/16/2017</b>	<b>2/8/2018</b>	<b>0.93</b>	<b>sock</b>
<b>Monitoring Well MW-8</b>				
MW-8	4/13/2017	4/13/2017	1.86	pump
MW-8	5/4/2017	5/4/2017	1.62	pump
MW-8	5/5/2017	5/5/2017	0.68	pump
MW-8	5/6/2017	5/6/2017	0.57	pump
MW-8	5/7/2017	5/7/2017	0.51	pump
MW-8	5/8/2017	5/8/2017	0.67	pump
MW-8	5/10/2017	5/10/2017	1.12	pump
MW-8	5/11/2017	5/11/2017	0.79	pump
MW-8	5/12/2017	5/12/2017	0.56	pump
MW-8	5/13/2017	5/13/2017	0.79	pump
MW-8	5/14/2017	5/14/2017	0.34	pump
MW-8	5/15/2017	5/15/2017	0.34	pump
MW-8	5/16/2017	5/16/2017	0.34	pump
MW-8	5/17/2017	5/17/2017	0.11	pump
MW-8	5/18/2017	5/18/2017	0.11	pump
MW-8	5/20/2017	5/20/2017	0.07	socks
MW-8	5/21/2017	5/21/2017	0.08	socks
MW-8	5/22/2017	5/22/2017	0.03	socks
MW-8	5/29/2017	6/2/2017	0.10	socks
MW-8	6/2/2017	6/5/2017	0.06	sock
MW-8	6/2/2017	6/8/2017	0.05	sock
MW-8	6/18/2017	6/19/2017	0.12	sock
MW-8	6/19/2017	6/20/2017	0.11	sock
MW-8	6/20/2017	6/21/2017	0.21	sock
MW-8	6/21/2017	6/22/2017	0.15	sock
MW-8	6/22/2017	6/23/2017	0.13	sock
MW-8	6/23/2017	6/24/2017	0.09	sock
MW-8	6/24/2017	6/25/2017	0.10	sock
MW-8	6/25/2017	6/26/2017	0.08	sock
MW-8	6/26/2017	6/30/2017	0.08	sock
MW-8	6/30/2017	7/2/2017	0.09	sock
MW-8	7/2/2017	7/3/2017	0.11	sock



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
MW-8	7/4/2017	7/5/2017	0.11	sock
MW-8	7/5/2017	7/6/2017	0.07	sock
MW-8	7/6/2017	7/10/2017	0.05	sock
MW-8	7/10/2017	7/14/2017	0.07	sock
MW-8	7/14/2017	7/15/2017	0.10	sock
MW-8	7/15/2017	7/16/2017	0.11	sock
MW-8	7/16/2017	7/17/2017	0.11	sock
MW-8	7/17/2017	7/17/2017	0.62	pump
MW-8	7/17/2017	7/18/2017	0.08	sock
MW-8	7/18/2017	7/21/2017	0.07	sock
MW-8	7/21/2017	7/27/2017	0.02	sock
MW-8	7/27/2017	8/11/2017	0.03	sock
MW-8	8/11/2017	9/11/2017	0.04	sock
MW-8	9/11/2017	9/26/2017	0.02	sock
MW-8	9/30/2017	10/2/2017	0.11	sock
MW-8	10/2/2017	10/3/2017	0.11	sock
MW-8	10/3/2017	10/4/2017	0.09	sock
MW-8	10/4/2017	10/5/2017	0.07	sock
MW-8	10/2/2017	12/6/2017	0.05	sock
MW-8	10/5/2017	1/10/2018	0.02	sock
MW-8	10/5/2017	1/24/2018	0.04	sock
MW-8	1/24/2018	2/22/2018	0.01	sock
MW-8	2/22/2018	3/13/2018	0.03	sock
MW-8	3/13/2018	4/18/2018	0.02	sock
<b>Total Recovered from MW-8</b>	<b>4/13/2017</b>	<b>4/18/2018</b>	<b>14.12</b>	<b>pump &amp; socks</b>



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
<b>Monitoring Well MW-9</b>				
MW-9	5/2/2017	5/2/2017	3.00	pump
MW-9	5/4/2017	5/4/2017	3.58	pump
MW-9	5/5/2017	5/5/2017	1.80	pump
MW-9	5/6/2017	5/6/2017	0.56	pump
MW-9	5/7/2017	5/7/2017	0.28	pump
MW-9	5/8/2017	5/8/2017	2.70	pump
MW-9	5/9/2017	5/9/2017	4.14	pump
MW-9	5/10/2017	5/10/2017	3.82	pump
MW-9	5/11/2017	5/11/2017	1.46	pump
MW-9	5/12/2017	5/12/2017	1.80	pump
MW-9	5/13/2017	5/13/2017	1.57	pump
MW-9	5/14/2017	5/14/2017	1.12	pump
MW-9	5/15/2017	5/15/2017	0.45	pump
MW-9	5/16/2017	5/16/2017	0.67	pump
MW-9	5/17/2017	5/17/2017	0.67	pump
MW-9	5/18/2017	5/18/2017	0.45	pump
MW-9	5/19/2017	5/19/2017	0.45	pump
MW-9	5/20/2017	5/20/2017	0.35	sock
MW-9	5/21/2017	5/21/2017	0.21	sock
MW-9	5/22/2017	5/22/2017	0.26	sock
MW-9	6/2/2017	6/2/2017	0.32	sock
MW-9	6/3/2017	6/3/2017	0.16	sock
MW-9	6/4/2017	6/4/2017	0.21	sock
MW-9	6/5/2017	6/5/2017	0.24	sock
MW-9	6/5/2017	6/5/2017	0.11	sock
MW-9	6/5/2017	6/6/2017	0.34	pump
MW-9	6/7/2017	6/7/2017	0.25	sock
MW-9	6/8/2017	6/8/2017	0.36	sock
MW-9	6/8/2017	6/9/2017	0.09	sock
MW-9	6/9/2017	6/10/2017	0.10	sock
MW-9	6/10/2017	6/11/2017	0.11	sock
MW-9	6/11/2017	6/12/2017	0.10	sock
MW-9	6/12/2017	6/13/2017	0.11	sock
MW-9	6/13/2017	6/14/2017	0.12	sock
MW-9	6/19/2017	6/20/2017	0.11	sock
MW-9	6/20/2017	6/21/2017	0.21	sock
MW-9	6/21/2017	6/22/2017	0.19	sock
MW-9	6/22/2017	6/23/2017	0.15	sock
MW-9	6/23/2017	6/24/2017	0.08	sock
MW-9	6/24/2017	6/25/2017	0.08	sock
MW-9	6/25/2017	6/26/2017	0.18	sock
MW-9	6/26/2017	6/27/2017	0.18	sock
MW-9	6/27/2017	6/28/2017	0.16	sock
MW-9	6/29/2017	6/30/2017	0.10	sock
MW-9	6/30/2017	7/3/2017	0.07	sock





**Appendix F**

Light Nonaqueous-Phase Liquid Recovery  
 Coleman Oil  
 Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
MW-9	7/3/2017	7/7/2017	0.08	sock
MW-9	7/7/2017	7/17/2017	0.08	sock
MW-9	7/17/2017	7/23/2017	0.05	sock
MW-9	7/23/2017	7/27/2017	0.02	sock
MW-9	7/27/2017	8/11/2017	0.03	sock
MW-9	8/11/2017	8/23/2017	0.03	sock
MW-9	8/23/2017	9/11/2017	0.05	sock
MW-9	9/11/2017	9/26/2017	0.04	sock
MW-9	9/26/2017	10/24/2017	0.11	sock
MW-9	11/27/2017	12/6/2017	0.08	sock
MW-9	12/7/2017	12/8/2017	0.08	sock
MW-9	12/8/2017	12/9/2017	0.08	sock
MW-9	12/10/2017	12/10/2017	0.05	sock
MW-9	12/9/2017	12/10/2017	0.09	sock
MW-9	12/11/2017	12/11/2017	0.07	sock
MW-9	12/10/2017	12/11/2017	0.08	sock
MW-9	unknown	12/12/2017	0.13	pump
MW-9	12/12/2017	12/12/2017	0.06	sock
MW-9	12/11/2017	12/12/2017	0.09	sock
MW-9	12/12/2017	12/13/2017	0.04	sock
MW-9	unknown	12/12/2017	0.13	pump
MW-9	12/12/2017	12/12/2017	0.06	sock
MW-9	12/11/2017	12/12/2017	0.09	sock
MW-9	12/12/2017	12/13/2017	0.04	sock
MW-9	12/12/2017	12/14/2017	0.14	pump
MW-9	12/13/2017	12/14/2017	0.09	sock
MW-9	12/12/2017	12/15/2017	0.58	pump
MW-9	12/14/2017	12/15/2017	0.08	sock
MW-9	12/15/2017	12/16/2017	0.08	sock
MW-9	12/16/2017	12/17/2017	0.07	sock
MW-9	12/15/2017	12/18/2017	0.06	pump
MW-9	12/17/2017	12/18/2017	0.07	sock
MW-9	12/18/2017	12/19/2017	0.23	pump
MW-9	12/18/2017	12/19/2017	0.17	sock
MW-9	12/19/2017	12/20/2017	0.38	pump
MW-9	12/19/2017	12/20/2017	0.09	sock
MW-9	12/20/2017	12/21/2017	0.07	sock
MW-9	12/20/2017	12/22/2017	0.22	pump
MW-9	12/21/2017	12/22/2017	0.07	sock
MW-9	12/22/2017	12/23/2017	0.08	sock
MW-9	12/23/2017	12/24/2017	0.07	sock
MW-9	12/24/2017	12/25/2017	0.08	sock
MW-9	12/26/2017	12/26/2017	0.08	sock
MW-9	12/25/2017	12/26/2017	0.08	sock
MW-9	12/26/2017	12/27/2017	0.05	sock
MW-9	12/22/2017	12/27/2017	0.13	pump



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
MW-9	12/27/2017	12/28/2017	0.08	sock
MW-9	12/28/2017	12/29/2017	0.08	sock
MW-9	12/27/2017	12/29/2017	0.16	pump
MW-9	12/29/2017	12/30/2017	0.07	sock
MW-9	12/30/2017	1/1/2018	0.09	sock
MW-9	12/29/2017	1/2/2018	0.34	pump
MW-9	1/1/2018	1/2/2018	0.09	sock
MW-9	1/2/2018	1/3/2018	0.10	sock
MW-9	1/3/2018	1/4/2018	0.09	sock
MW-9	1/2/2018	1/5/2018	0.05	pump
MW-9	1/4/2018	1/5/2018	0.08	sock
MW-9	1/5/2018	1/6/2018	0.05	sock
MW-9	1/6/2018	1/8/2018	0.33	pads
MW-9	1/8/2018	1/10/2018	0.10	sock
MW-9	1/10/2018	1/11/2018	0.11	sock
MW-9	1/11/2018	1/12/2018	0.11	sock
MW-9	1/12/2018	1/13/2018	0.11	sock
MW-9	1/13/2018	1/14/2018	0.10	sock
MW-9	1/14/2018	1/15/2018	0.10	sock
MW-9	1/15/2018	1/24/2018	0.03	sock
MW-9	1/24/2018	1/31/2018	0.13	sock
MW-9	1/31/2018	2/5/2018	0.07	sock
MW-9	2/5/2018	2/8/2018	0.03	sock
MW-9	2/8/2018	3/20/2018	0.05	sock
MW-9	3/20/2018	3/21/2018	0.07	sock
MW-9	3/21/2018	3/22/2018	0.06	sock
MW-9	3/22/2018	3/24/2018	0.05	sock
MW-9	3/24/2018	3/26/2018	0.06	sock
MW-9	3/26/2018	3/27/2018	0.06	sock
MW-9	3/27/2018	3/28/2018	0.07	sock
MW-9	3/28/2018	3/30/2018	0.05	sock
MW-9	3/30/2018	3/31/2018	0.08	sock
MW-9	3/31/2018	4/1/2018	0.06	sock
MW-9	4/1/2018	4/2/2018	0.08	sock
MW-9	4/2/2018	4/3/2018	0.06	sock
MW-9	4/3/2018	4/5/2018	0.07	sock
MW-9	4/5/2018	4/8/2018	0.08	sock
MW-9	4/8/2018	4/10/2018	0.06	sock
MW-9	4/10/2018	4/15/2018	0.05	sock
<b>Total Recovered from MW-9</b>	<b>5/16/2017</b>	<b>4/15/2018</b>	<b>41.61</b>	<b>pump &amp; socks</b>



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery  
 Coleman Oil  
 Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
<b>Monitoring Well MW-10</b>				
MW-10	7/4/2017	7/5/2017	0.15	sock
MW-10	7/5/2017	7/6/2017	0.29	sock
MW-10	7/6/2017	7/7/2017	0.24	sock
MW-10	7/7/2017	7/10/2017	0.17	sock
MW-10	7/10/2017	7/11/2017	0.19	sock
MW-10	7/11/2017	7/12/2017	0.16	sock
MW-10	7/12/2017	7/13/2017	0.14	sock
MW-10	7/13/2017	7/14/2017	0.13	sock
MW-10	7/14/2017	7/15/2017	0.07	sock
MW-10	7/15/2017	7/16/2017	0.08	sock
MW-10	7/16/2017	7/17/2017	0.09	sock
MW-10	7/17/2017	7/17/2017	0.41	pump
MW-10	7/17/2017	7/18/2017	0.07	sock
MW-10	7/18/2017	7/18/2017	0.20	pump
MW-10	7/18/2017	7/19/2017	0.05	sock
MW-10	7/19/2017	7/19/2017	0.11	pump
MW-10	7/19/2017	7/20/2017	0.09	sock
MW-10	7/20/2017	7/20/2017	1.13	pump
MW-10	7/20/2017	7/21/2017	0.09	sock
MW-10	7/21/2017	7/21/2017	1.03	pump
MW-10	7/21/2017	7/22/2017	0.03	sock
MW-10	7/22/2017	7/23/2017	0.03	sock
MW-10	7/23/2017	7/24/2017	0.07	sock
MW-10	7/24/2017	7/24/2017	0.62	pump
MW-10	7/24/2017	7/25/2017	0.07	sock
MW-10	7/25/2017	7/25/2017	0.05	sock
MW-10	7/25/2017	7/26/2017	0.07	sock
MW-10	7/26/2017	7/26/2017	1.23	pump
MW-10	7/26/2017	7/27/2017	0.07	sock
MW-10	7/27/2017	7/27/2017	0.82	pump
MW-10	7/27/2017	7/27/2017	0.66	pump
MW-10	7/27/2017	7/27/2017	0.04	sock
MW-10	7/27/2017	7/28/2017	0.08	sock
MW-10	7/28/2017	7/29/2017	0.09	sock
MW-10	7/29/2017	7/30/2017	0.09	sock
MW-10	7/30/2017	7/31/2017	0.10	sock
MW-10	7/31/2017	8/1/2017	0.09	sock
MW-10	8/1/2017	8/2/2017	0.11	sock
MW-10	8/2/2017	8/3/2017	0.10	sock
MW-10	8/3/2017	8/3/2017	0.08	sock
MW-10	8/3/2017	8/4/2017	0.09	sock
MW-10	8/4/2017	8/5/2017	0.09	sock
MW-10	8/5/2017	8/6/2017	0.09	sock
MW-10	8/6/2017	8/7/2017	0.11	sock
MW-10	8/7/2017	8/8/2017	0.10	sock



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
MW-10	8/8/2017	8/9/2017	0.10	sock
MW-10	8/9/2017	8/11/2017	0.11	sock
MW-10	8/11/2017	8/11/2017	0.06	sock
MW-10	8/11/2017	8/13/2017	0.09	sock
MW-10	8/13/2017	8/14/2017	0.09	sock
MW-10	8/14/2017	8/14/2017	0.09	sock
MW-10	8/14/2017	8/14/2017	1.00	pump
MW-10	8/14/2017	8/15/2017	0.05	sock
MW-10	8/15/2017	8/15/2017	1.60	pump
MW-10	8/15/2017	8/15/2017	0.07	sock
MW-10	8/15/2017	8/16/2017	0.09	sock
MW-10	8/16/2017	8/16/2017	0.09	sock
MW-10	8/16/2017	8/17/2017	0.09	sock
MW-10	8/17/2017	8/17/2017	1.44	pump
MW-10	8/17/2017	8/17/2017	0.07	sock
MW-10	8/17/2017	8/18/2017	0.11	sock
MW-10	8/18/2017	8/18/2017	0.07	pump
MW-10	8/18/2017	8/18/2017	0.09	sock
MW-10	8/18/2017	8/19/2017	0.10	sock
MW-10	8/19/2017	8/20/2017	0.11	sock
MW-10	8/20/2017	8/21/2017	0.09	sock
MW-10	8/21/2017	8/21/2017	0.09	sock
MW-10	8/21/2017	8/21/2017	0.01	pump
MW-10	8/21/2017	8/22/2017	0.09	sock
MW-10	8/22/2017	8/22/2017	0.10	pump
MW-10	8/22/2017	8/22/2017	0.09	sock
MW-10	8/22/2017	8/23/2017	0.10	sock
MW-10	8/23/2017	8/23/2017	0.15	pump
MW-10	8/23/2017	8/23/2017	0.09	sock
MW-10	8/23/2017	8/24/2017	0.09	sock
MW-10	8/24/2017	8/24/2017	0.05	pump
MW-10	8/24/2017	8/24/2017	0.07	pads
MW-10	8/24/2017	8/25/2017	0.09	sock
MW-10	8/25/2017	8/25/2017	0.05	pump
MW-10	8/25/2017	8/25/2017	0.08	sock
MW-10	8/25/2017	8/26/2017	0.11	sock
MW-10	8/26/2017	8/27/2017	0.09	sock
MW-10	8/27/2017	8/28/2017	0.09	sock
MW-10	8/28/2017	8/28/2017	0.05	pump
MW-10	8/28/2017	8/28/2017	0.09	sock
MW-10	8/28/2017	8/29/2017	0.11	sock
MW-10	8/29/2017	8/29/2017	0.07	sock
MW-10	8/29/2017	8/30/2017	0.11	sock
MW-10	8/30/2017	8/30/2017	0.04	pump
MW-10	8/30/2017	8/31/2017	0.11	sock
MW-10	8/31/2017	9/1/2017	0.11	sock



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
MW-10	9/1/2017	9/1/2017	0.09	pump
MW-10	9/1/2017	9/1/2017	0.09	sock
MW-10	9/1/2017	9/2/2017	0.11	sock
MW-10	9/2/2017	9/3/2017	0.09	sock
MW-10	9/3/2017	9/4/2017	0.11	sock
MW-10	9/4/2017	9/5/2017	0.10	sock
MW-10	9/5/2017	9/5/2017	0.07	pump
MW-10	9/5/2017	9/5/2017	0.09	sock
MW-10	9/5/2017	9/6/2017	0.11	sock
MW-10	9/6/2017	9/6/2017	0.09	sock
MW-10	9/11/2017	9/12/2017	0.09	sock
MW-10	9/12/2017	9/12/2017	0.05	pump
MW-10	9/12/2017	9/12/2017	0.10	sock
MW-10	9/12/2017	9/13/2017	0.10	sock
MW-10	9/13/2017	9/13/2017	0.05	pump
MW-10	9/13/2017	9/13/2017	0.09	sock
MW-10	9/13/2017	9/14/2017	0.09	sock
MW-10	9/14/2017	9/14/2017	0.06	pump
MW-10	9/14/2017	9/14/2017	0.09	sock
MW-10	9/15/2017	9/15/2017	0.10	sock
MW-10	9/15/2017	9/15/2017	0.05	pump
MW-10	9/14/2017	9/15/2017	0.09	sock
MW-10	9/15/2017	9/17/2017	0.11	sock
MW-10	9/18/2017	9/18/2017	0.10	sock
MW-10	9/18/2017	9/18/2017	0.05	pump
MW-10	9/17/2017	9/18/2017	0.11	sock
MW-10	9/19/2017	9/19/2017	0.07	sock
MW-10	9/19/2017	9/19/2017	0.05	pump




**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
MW-10	9/18/2017	9/19/2017	0.10	sock
MW-10	9/20/2017	9/20/2017	0.02	pump
MW-10	9/19/2017	9/20/2017	0.09	sock
MW-10	9/20/2017	9/21/2017	0.09	sock
MW-10	9/22/2017	9/22/2017	0.02	pump
MW-10	9/21/2017	9/22/2017	0.11	sock
MW-10	9/22/2017	9/24/2017	0.11	sock
MW-10	9/25/2017	9/25/2017	0.05	pump
MW-10	9/24/2017	9/25/2017	0.11	sock
MW-10	9/25/2017	9/26/2017	0.11	sock
MW-10	9/26/2017	9/27/2017	0.06	pads
MW-10	9/27/2017	10/1/2017	0.11	sock
MW-10	9/30/2017	10/2/2017	0.12	sock
MW-10	10/2/2017	10/3/2017	0.18	sock
MW-10	10/3/2017	10/4/2017	0.20	sock
MW-10	10/4/2017	10/5/2017	0.10	sock
MW-10	10/5/2017	10/6/2017	0.10	sock
MW-10	10/6/2017	10/9/2017	0.09	sock
MW-10	10/6/2017	10/10/2017	0.09	sock
MW-10	10/10/2017	10/12/2017	0.10	sock
MW-10	10/12/2017	10/13/2017	0.10	sock
MW-10	10/13/2017	10/16/2017	0.05	sock
MW-10	10/16/2017	10/17/2017	0.08	sock
MW-10	10/17/2017	10/18/2017	0.09	sock
MW-10	10/18/2017	10/19/2017	0.09	sock
MW-10	10/19/2017	10/20/2017	0.16	sock
MW-10	10/20/2017	10/23/2017	0.19	sock/pump
MW-10	10/22/2017	10/24/2017	0.06	pump
MW-10	11/29/2017	1/9/2018	0.03	sock
MW-10	1/9/2018	2/8/2018	0.01	sock
MW-10	2/8/2018	2/15/2018	0.06	sock
MW-10	2/15/2018	3/20/2018	0.19	pump
MW-10	3/20/2018	3/20/2018	0.09	sock
MW-10	3/20/2018	3/21/2018	0.05	sock
MW-10	3/21/2018	3/29/2018	0.03	sock
MW-10	3/29/2018	3/31/2008	0.08	sock
MW-10	3/31/2008	4/1/2018	0.09	sock
MW-10	4/1/2018	4/15/2018	0.04	sock
MW-10	begin pumping	5/11/2018	12.81	pump
MW-10		5/24/2018	1.88	pump
MW-10		5/29/2018	0.24	pump
<b>Total Recovered from MW-10</b>	<b>7/4/2017</b>	<b>5/29/2018</b>	<b>38.39</b>	<b>pump, pads, &amp; socks</b>



**Appendix F**  
 Light Nonaqueous-Phase Liquid Recovery  
 Coleman Oil  
 Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
<b>Monitoring Well MW-11</b>				
MW-11	6/8/2017	6/9/2017	0.28	socks
MW-11	6/9/2017	6/10/2017	0.10	sock
MW-11	6/10/2017	6/11/2017	0.08	sock
MW-11	6/11/2017	6/13/2017	0.07	sock
MW-11	7/18/2017	7/19/2017	0.08	sock
MW-11	7/19/2017	8/4/2017	0.01	sock
MW-11	10/6/2017	10/7/2017	0.09	sock
MW-11	10/7/2017	10/8/2017	0.09	sock
MW-11	10/8/2017	10/10/2017	0.11	sock
MW-11	10/10/2017	10/12/2017	0.10	sock
MW-11	10/12/2017	10/23/2017	0.11	sock
MW-11	10/23/2017	10/24/2017	0.11	sock
MW-11	10/24/2017	10/25/2017	0.10	sock
MW-11	11/22/2017	1/2/2018	0.03	sock
MW-11	1/2/2018	1/23/2018	0.03	sock
MW-11	1/23/2018	2/8/2018	0.01	sock
MW-11	2/8/2018	2/25/2018	0.05	sock
MW-11	2/25/2018	3/11/2018	0.04	sock
<b>Total Recovered from MW-11</b>	<b>6/8/2017</b>	<b>3/11/2018</b>	<b>1.49</b>	<b>sock</b>



**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
<b>Monitoring Well BH-1</b>				
BH-1	7/4/2017	7/7/2017	0.03	sock
BH-1	7/7/2017	7/10/2017	0.04	sock
BH-1	7/10/2017	7/12/2017	0.04	sock
BH-1	7/12/2017	7/20/2017	0.07	sock
BH-1	7/20/2017	7/23/2017	0.01	sock
BH-1	7/23/2017	9/26/2017	0.02	sock
BH-1	9/26/2017	12/8/2017	0.07	sock
BH-1	12/8/2017	2/8/2018	0.01	sock
BH-1	2/8/2018	3/3/2018	0.09	sock
BH-1	3/3/2018	3/4/2018	0.08	sock
BH-1	3/4/2018	3/5/2018	0.09	sock
BH-1	3/5/2018	3/9/2018	0.06	sock
BH-1	3/9/2018	3/10/2018	0.09	sock
BH-1	3/12/2018	3/12/2018	0.31	pump
BH-1	3/10/2018	3/12/2018	0.08	sock
BH-1	3/12/2018	3/12/2018	0.11	sock
BH-1	3/12/2018	3/13/2018	0.08	sock
BH-1	3/14/2018	3/14/2018	0.09	pump
BH-1	3/13/2018	3/14/2018	0.07	sock
BH-1	3/14/2018	3/14/2018	0.09	sock
BH-1	3/14/2018	3/15/2018	0.08	sock
BH-1	3/15/2018	3/16/2018	0.07	sock
BH-1	3/16/2018	4/14/2018	0.09	sock
BH-1	4/14/2018	4/15/2018	0.08	sock
BH-1	4/15/2018	4/16/2018	0.07	sock
BH-1	4/16/2018	4/20/2018	0.04	sock
<b>Total Recovered from BH-1</b>	<b>7/4/2017</b>	<b>4/20/2018</b>	<b>1.96</b>	<b>sock</b>
<b>Monitoring Well BH-2</b>				
BH-2	5/20/2017	5/20/2017	0.18	socks
BH-2	5/21/2017	5/21/2017	0.08	socks
BH-2	5/22/2017	5/22/2017	0.03	socks
BH-2	5/23/2017	6/2/2017	0.03	sock
BH-2	6/2/2017	6/5/2017	0.02	sock
BH-2	6/5/2017	6/12/2017	0.08	sock
BH-2	6/18/2017	6/22/2017	0.03	sock
BH-2	6/22/2017	7/23/2017	0.02	sock
BH-2	7/23/2017	9/26/2017	0.01	sock
BH-2	10/31/2017	1/2/2018	0.03	sock
BH-2	1/2/2018	2/8/2018	0.01	sock
BH-2	2/8/2018	2/26/2018	0.01	sock
<b>Total Recovered from BH-2</b>	<b>6/18/2017</b>	<b>2/26/2018</b>	<b>0.52</b>	<b>sock</b>





**Appendix F**

Light Nonaqueous-Phase Liquid Recovery

Coleman Oil

Wenatchee, Washington

Recovery Location(s)	Time Recovered		Volume (gallons)	LNAPL Recovered with Pads, Booms, Socks, or Pumps <sup>1</sup>
	From:	To:		
<b>Oil-Water Separator</b>				
Oil-water separator	4/24/2017	4/24/2017	4.11	pump
Oil-water separator	7/23/2017	7/24/2017	0.82	pump
Oil-water separator	7/24/2017	7/24/2017	0.62	pump
Oil-water separator	7/25/2017	7/25/2017	1.18	pump
Oil-water separator	7/24/2017	8/14/2017	0.02	sock
Oil-water separator	8/23/2017	8/23/2017	0.05	pump
Oil-water separator	8/25/2017	8/25/2017	0.12	pump
Oil-water separator	8/25/2017	8/25/2017	0.05	pads
Oil-water separator	8/28/2017	8/28/2017	0.07	pump
Oil-water separator	8/29/2017	8/29/2017	0.02	pump
Oil-water separator	8/29/2017	8/29/2017	0.05	pads
Oil-water separator	8/30/2017	8/30/2017	0.02	pump
Oil-water separator	9/5/2017	9/5/2017	0.05	pump
Oil-water separator	9/18/2017	9/18/2017	0.10	pads
Oil-water separator	10/3/2017	10/6/2017	0.12	pads
Oil-water separator	11/30/2017	12/13/2017	0.12	pads
Oil-water separator	12/13/2017	12/18/2017	0.13	pads
Oil-water separator	12/18/2017	12/23/2017	0.20	pads
Oil-water separator	12/23/2017	1/3/2018	0.09	pads
Oil-water separator	1/3/2018	1/15/2018	0.42	pads
Oil-water separator	1/15/2018	1/20/2018	0.17	pads
Oil-water separator	1/20/2018	1/25/2018	0.18	pads
Oil-water separator	1/25/2018	2/1/2018	0.06	pads
Oil-water separator	2/1/2018	2/6/2018	0.14	pads
Oil-water separator	2/6/2018	2/15/2018	0.57	pads
Oil-water separator	2/15/2018	2/16/2018	0.27	pads
Oil-water separator	2/16/2018	2/21/2018	0.92	pads
Oil-water separator	2/21/2018	2/27/2018	0.17	pads
Oil-water separator	2/27/2018	3/17/2018	0.30	pads
Oil-water separator	3/17/2018	4/12/2018	0.23	pads
<b>Total Recovered from Oil-Water Separat</b>	<b>4/24/2017</b>	<b>9/5/2017</b>	<b>11.37</b>	
<b>Total Recovered LNAPL</b>	<b>3/27/2017</b>	<b>6/3/2018</b>	<b>404.30</b>	

NOTES:

<sup>1</sup>The quantity of LNAPL recovered by sorbent material in gallons was determined by subtracting the total weight of oiled sorbent material from the total weight of pre-oiled sorbent material, assuming 25% percent as water content. This process complies with requirements of Washington Administrative Code

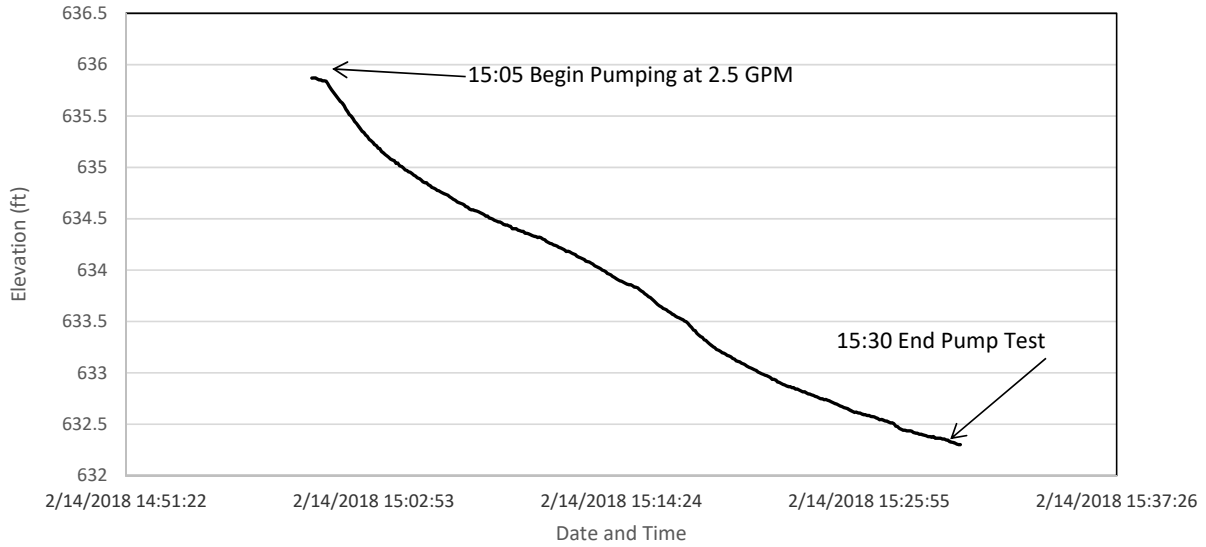
Ecology = Washington State Department of Ecology

LNAPL = light nonaqueous-phase liquid

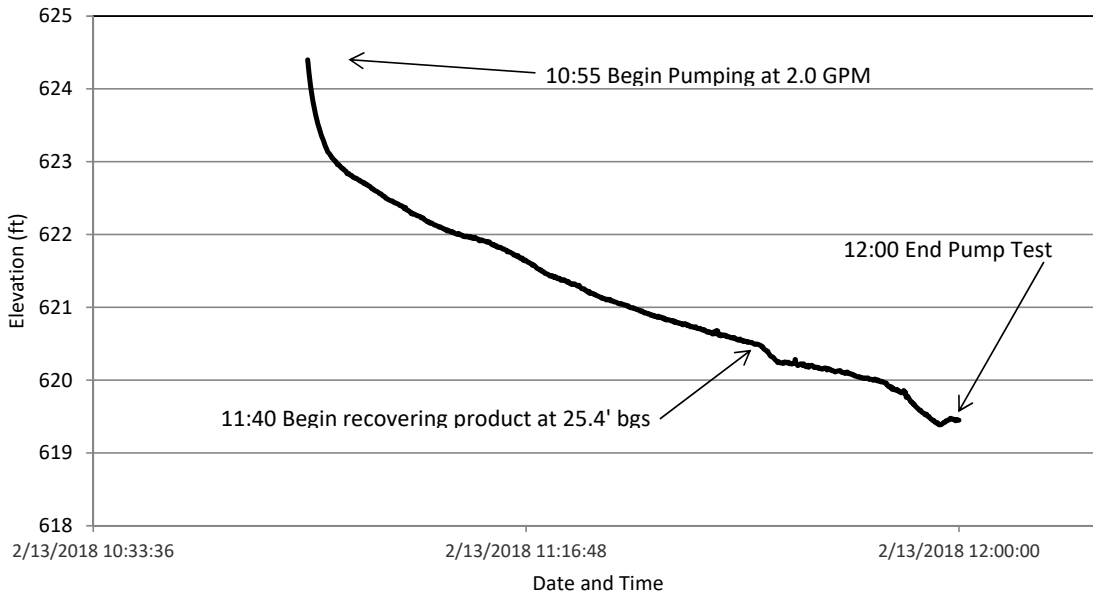
## **Appendix G**

### **Draw Down Plots**

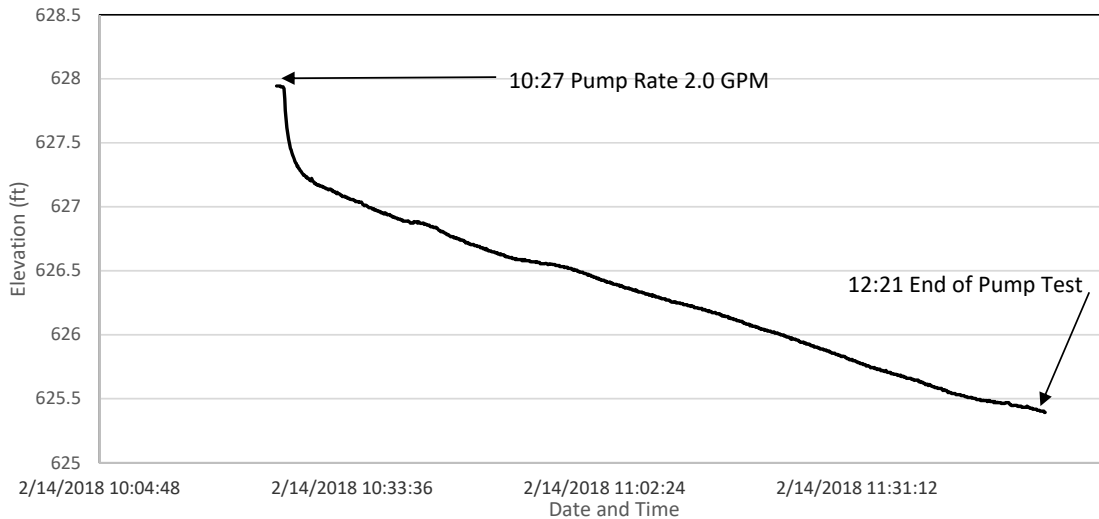
MW-09 Drawdown Test



MW-10 Drawdown Test



BH-1 Drawdown Test



**Appendix H**  
**Laboratory Analytical Reports**

# Apex Labs

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323 Phone  
503-718-0333 Fax

Wednesday, April 11, 2018

Craig Hultgren  
HydroCon LLC  
510 Allen St. Suite B  
Kelso, WA 98626

RE: Coleman Wenatchee / 2017-074

Enclosed are the results of analyses for work order A8D0007, which was received by the laboratory on 3/31/2018 at 11:35:00AM.

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

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

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Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

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Lisa Domenighini, Client Services Manager

HydroCon LLC  
 510 Allen St. Suite B  
 Kelso, WA 98626

Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

## ANALYTICAL REPORT FOR SAMPLES

### SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HC01-4.5	A8D0007-01	Soil	03/28/18 09:00	03/31/18 11:35
HC01-10	A8D0007-02	Soil	03/28/18 10:05	03/31/18 11:35
HC01-15	A8D0007-03	Soil	03/28/18 10:10	03/31/18 11:35
HC01-22	A8D0007-04	Soil	03/28/18 10:50	03/31/18 11:35
HC01-34	A8D0007-05	Soil	03/28/18 11:50	03/31/18 11:35
HC02-10	A8D0007-06	Soil	03/28/18 15:50	03/31/18 11:35
HC02-15	A8D0007-07	Soil	03/28/18 15:55	03/31/18 11:35
HC02-22	A8D0007-08	Soil	03/28/18 16:45	03/31/18 11:35
MW23-05	A8D0007-09	Soil	03/29/18 08:45	03/31/18 11:35
MW23-08	A8D0007-10	Soil	03/29/18 08:55	03/31/18 11:35
MW23-12	A8D0007-11	Soil	03/29/18 09:20	03/31/18 11:35
MW23-22	A8D0007-12	Soil	03/29/18 10:05	03/31/18 11:35
MW13-5	A8D0007-13	Soil	03/29/18 15:20	03/31/18 11:35
MW13-10	A8D0007-14	Soil	03/29/18 16:05	03/31/18 11:35
MW13-12	A8D0007-15	Soil	03/29/18 16:35	03/31/18 11:35
MW13-21	A8D0007-16	Soil	03/29/18 17:20	03/31/18 11:35
MW13-35	A8D0007-17	Soil	03/29/18 18:20	03/31/18 11:35
MW13-45	A8D0007-18	Soil	03/30/18 08:40	03/31/18 11:35
MW14-05	A8D0007-19	Soil	03/30/18 15:25	03/31/18 11:35
MW14-10	A8D0007-20	Soil	03/30/18 15:30	03/31/18 11:35
MW14-15	A8D0007-21	Soil	03/30/18 18:05	03/31/18 11:35
MW99-15	A8D0007-22	Soil	03/30/18 18:10	03/31/18 11:35

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HydroCon LLC  
510 Allen St. Suite B  
Kelso, WA 98626

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/11/18 13:27

## ANALYTICAL SAMPLE RESULTS

### Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>HC01-4.5 (A8D0007-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040465</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/04/18 20:51	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 77 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>HC01-10 (A8D0007-02)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040465</b>			
Diesel	<b>4680</b>	---	216	mg/kg dry	10	04/04/18 21:12	NWTPH-Dx	F-13
Oil	ND	---	433	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 100 %</i>	<i>Limits: 50-150 %</i>	"	"	"	S-05
<b>HC01-15 (A8D0007-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040465</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/04/18 21:53	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 72 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>HC01-22 (A8D0007-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040465</b>			
Diesel	<b>104</b>	---	25.0	mg/kg dry	1	04/04/18 22:14	NWTPH-Dx	F-13, F-15
Oil	<b>80.3</b>	---	50.0	"	"	"	"	F-03, F-16
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 83 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>HC01-34 (A8D0007-05)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040465</b>			
Diesel	<b>38.6</b>	---	25.0	mg/kg dry	1	04/04/18 22:35	NWTPH-Dx	F-13
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 92 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>HC02-10 (A8D0007-06)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040465</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/04/18 22:56	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 85 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>HC02-15 (A8D0007-07)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040465</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/04/18 23:16	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 92 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>HC02-22 (A8D0007-08)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040465</b>			
Diesel	<b>26.6</b>	---	25.0	mg/kg dry	1	04/04/18 23:37	NWTPH-Dx	F-13
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 88 %</i>	<i>Limits: 50-150 %</i>	"	"	"	

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Lisa Domenighini, Client Services Manager

HydroCon LLC  
510 Allen St. Suite B  
Kelso, WA 98626

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/11/18 13:27

## ANALYTICAL SAMPLE RESULTS

### Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW23-05 (A8D0007-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040465</b>			
Diesel	29.7	---	25.0	mg/kg dry	1	04/05/18 01:21	NWTPH-Dx	F-13
Oil	65.2	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 104 %</i>		<i>Limits: 50-150 %</i>			
<b>MW23-08 (A8D0007-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040465</b>			
Diesel	586	---	25.0	mg/kg dry	1	04/05/18 01:42	NWTPH-Dx	F-11, F-15
Oil	112	---	50.0	"	"	"	"	F-16
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 93 %</i>		<i>Limits: 50-150 %</i>			
<b>MW23-12 (A8D0007-11)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040465</b>			
Diesel	63.3	---	25.0	mg/kg dry	1	04/05/18 02:02	NWTPH-Dx	F-11
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 72 %</i>		<i>Limits: 50-150 %</i>			
<b>MW23-22 (A8D0007-12)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040465</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/05/18 02:23	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 100 %</i>		<i>Limits: 50-150 %</i>			
<b>MW13-5 (A8D0007-13)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040434</b>			
Diesel	1700	---	98.7	mg/kg dry	5	04/04/18 23:25	NWTPH-Dx	F-15
Oil	5310	---	197	"	"	"	"	F-16
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 120 %</i>		<i>Limits: 50-150 %</i>			
<b>MW13-10 (A8D0007-14)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040434</b>			
Diesel	2290	---	25.0	mg/kg dry	1	04/05/18 00:24	NWTPH-Dx	F-13
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 111 %</i>		<i>Limits: 50-150 %</i>			
<b>MW13-12 (A8D0007-15)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040434</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/05/18 00:44	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 91 %</i>		<i>Limits: 50-150 %</i>			
<b>MW13-21 (A8D0007-16)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040434</b>			
Diesel	90.9	---	25.0	mg/kg dry	1	04/05/18 01:04	NWTPH-Dx	F-13, F-15
Oil	209	---	50.0	"	"	"	"	F-03, F-16
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 97 %</i>		<i>Limits: 50-150 %</i>			

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Lisa Domenighini, Client Services Manager



HydroCon LLC  
510 Allen St. Suite B  
Kelso, WA 98626

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/11/18 13:27

## ANALYTICAL SAMPLE RESULTS

### Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW13-35 (A8D0007-17)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040434</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/05/18 01:24	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 88 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW13-45 (A8D0007-18)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040434</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/05/18 01:43	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 93 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW14-05 (A8D0007-19)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040434</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/05/18 02:03	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 105 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW14-10 (A8D0007-20)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040434</b>			
Diesel	50.2	---	25.0	mg/kg dry	1	04/05/18 02:23	NWTPH-Dx	F-13
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 92 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW14-15 (A8D0007-21)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040434</b>			
Diesel	447	---	25.0	mg/kg dry	1	04/05/18 02:43	NWTPH-Dx	F-13
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 105 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW99-15 (A8D0007-22)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040434</b>			
Diesel	328	---	25.0	mg/kg dry	1	04/04/18 22:46	NWTPH-Dx	F-13
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 82 %</i>	<i>Limits: 50-150 %</i>	"	"	"	

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 510 Allen St. Suite B  
 Kelso, WA 98626

Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

## ANALYTICAL SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting			Date Analyzed	Method	Notes
			Limit	Units	Dilution			
<b>HC01-4.5 (A8D0007-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040372</b>			
Gasoline Range Organics	ND	---	5.70	mg/kg dry	50	04/02/18 16:26	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 105 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			100 %	Limits: 50-150 %	"	"	"	
<b>HC01-10 (A8D0007-02)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040372</b>			
Gasoline Range Organics	671	---	51.8	mg/kg dry	500	04/02/18 17:20	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 138 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			101 %	Limits: 50-150 %	"	"	"	
<b>HC01-15 (A8D0007-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040372</b>			
Gasoline Range Organics	ND	---	4.25	mg/kg dry	50	04/02/18 17:47	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 114 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			101 %	Limits: 50-150 %	"	"	"	
<b>HC01-22 (A8D0007-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040372</b>			
Gasoline Range Organics	7.99	---	6.33	mg/kg dry	50	04/02/18 18:13	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 115 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			100 %	Limits: 50-150 %	"	"	"	
<b>HC01-34 (A8D0007-05)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040372</b>			
Gasoline Range Organics	ND	---	5.53	mg/kg dry	50	04/02/18 18:40	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 115 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			100 %	Limits: 50-150 %	"	"	"	
<b>HC02-10 (A8D0007-06)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040372</b>			
Gasoline Range Organics	ND	---	7.66	mg/kg dry	50	04/02/18 19:07	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 109 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			100 %	Limits: 50-150 %	"	"	"	
<b>HC02-15 (A8D0007-07)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
Gasoline Range Organics	37.7	---	5.13	mg/kg dry	50	04/03/18 11:03	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 139 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			103 %	Limits: 50-150 %	"	"	"	
<b>HC02-22 (A8D0007-08)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
Gasoline Range Organics	9.26	---	4.92	mg/kg dry	50	04/03/18 11:30	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 122 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			104 %	Limits: 50-150 %	"	"	"	

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HydroCon LLC  
510 Allen St. Suite B  
Kelso, WA 98626

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/11/18 13:27

## ANALYTICAL SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting			Date Analyzed	Method	Notes
			Limit	Units	Dilution			
<b>MW23-05 (A8D0007-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
Gasoline Range Organics	ND	---	4.63	mg/kg dry	50	04/03/18 12:23	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 110 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			104 %	Limits: 50-150 %	"	"	"	
<b>MW23-08 (A8D0007-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
Gasoline Range Organics	116	---	5.04	mg/kg dry	50	04/03/18 12:50	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 179 %	Limits: 50-150 %	1	"	"	S-08
1,4-Difluorobenzene (Sur)			104 %	Limits: 50-150 %	"	"	"	
<b>MW23-12 (A8D0007-11)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
Gasoline Range Organics	127	---	5.77	mg/kg dry	50	04/03/18 13:17	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 191 %	Limits: 50-150 %	1	"	"	S-08
1,4-Difluorobenzene (Sur)			100 %	Limits: 50-150 %	"	"	"	
<b>MW23-22 (A8D0007-12)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
Gasoline Range Organics	ND	---	6.69	mg/kg dry	50	04/03/18 13:44	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 112 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			102 %	Limits: 50-150 %	"	"	"	
<b>MW13-5 (A8D0007-13RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
Gasoline Range Organics	580	---	65.9	mg/kg dry	500	04/03/18 18:14	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 118 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			104 %	Limits: 50-150 %	"	"	"	
<b>MW13-10 (A8D0007-14RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
Gasoline Range Organics	3360	---	107	mg/kg dry	1000	04/03/18 19:07	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 155 %	Limits: 50-150 %	1	"	"	S-08
1,4-Difluorobenzene (Sur)			108 %	Limits: 50-150 %	"	"	"	
<b>MW13-12 (A8D0007-15)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
Gasoline Range Organics	12.1	---	5.12	mg/kg dry	50	04/03/18 15:05	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 114 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			103 %	Limits: 50-150 %	"	"	"	
<b>MW13-21 (A8D0007-16)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
Gasoline Range Organics	22.5	---	4.99	mg/kg dry	50	04/03/18 15:32	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 117 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			100 %	Limits: 50-150 %	"	"	"	

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Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/11/18 13:27

## ANALYTICAL SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting			Date Analyzed	Method	Notes
			Limit	Units	Dilution			
<b>MW13-35 (A8D0007-17)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
Gasoline Range Organics	ND	---	5.16	mg/kg dry	50	04/03/18 16:26	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 115 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>98 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW13-45 (A8D0007-18)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
Gasoline Range Organics	ND	---	7.12	mg/kg dry	50	04/03/18 16:53	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 110 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>100 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW14-05 (A8D0007-19)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040363</b>			
Gasoline Range Organics	ND	---	4.74	mg/kg dry	50	04/02/18 18:41	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 104 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>96 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW14-10 (A8D0007-20)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040363</b>			
Gasoline Range Organics	171	---	4.86	mg/kg dry	50	04/02/18 19:08	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 142 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>107 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW14-15 (A8D0007-21RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040401</b>			
Gasoline Range Organics	465	---	50.9	mg/kg dry	500	04/03/18 13:33	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 109 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>100 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW99-15 (A8D0007-22)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040363</b>			
Gasoline Range Organics	787	---	20.3	mg/kg dry	200	04/02/18 20:02	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 134 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>107 %</i>	<i>Limits: 50-150 %</i>	"	"	"	

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Lisa Domenighini, Client Services Manager

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HydroCon LLC  
 510 Allen St. Suite B  
 Kelso, WA 98626

Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>HC01-4.5 (A8D0007-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040372</b>			
Benzene	ND	---	0.0114	mg/kg dry	50	04/02/18 16:26	5035A/8260C	
Toluene	ND	---	0.0570	"	"	"	"	
Ethylbenzene	ND	---	0.0285	"	"	"	"	
Xylenes, total	ND	---	0.0855	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>HC01-10 (A8D0007-02)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040372</b>			
Benzene	ND	---	0.104	mg/kg dry	500	04/02/18 17:20	5035A/8260C	
Toluene	ND	---	0.518	"	"	"	"	
Ethylbenzene	ND	---	0.259	"	"	"	"	
Xylenes, total	ND	---	0.776	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 100 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>91 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>HC01-15 (A8D0007-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040372</b>			
Benzene	ND	---	0.00850	mg/kg dry	50	04/02/18 17:47	5035A/8260C	
Toluene	ND	---	0.0425	"	"	"	"	
Ethylbenzene	ND	---	0.0212	"	"	"	"	
Xylenes, total	ND	---	0.0637	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 104 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>HC01-22 (A8D0007-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040372</b>			
Benzene	ND	---	0.0127	mg/kg dry	50	04/02/18 18:13	5035A/8260C	
Toluene	ND	---	0.0633	"	"	"	"	
Ethylbenzene	ND	---	0.0316	"	"	"	"	
Xylenes, total	ND	---	0.0949	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>HC01-34 (A8D0007-05)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040372</b>			
Benzene	ND	---	0.0111	mg/kg dry	50	04/02/18 18:40	5035A/8260C	

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HydroCon LLC  
510 Allen St. Suite B  
Kelso, WA 98626

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/11/18 13:27

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting				Date Analyzed	Method	Notes
			Limit	Units	Dilution				
<b>HC01-34 (A8D0007-05)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040372</b>				
Toluene	ND	---	0.0553	mg/kg dry	50	"	5035A/8260C		
Ethylbenzene	ND	---	0.0277	"	"	"	"		
Xylenes, total	ND	---	0.0830	"	"	"	"		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>	1	"	"		
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 80-120 %</i>	"	"	"		
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"		
<b>HC02-10 (A8D0007-06)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040372</b>				
Benzene	ND	---	0.0153	mg/kg dry	50	04/02/18 19:07	5035A/8260C		
Toluene	ND	---	0.0766	"	"	"	"		
Ethylbenzene	ND	---	0.0383	"	"	"	"		
Xylenes, total	ND	---	0.115	"	"	"	"		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	1	"	"		
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"		
<i>4-Bromofluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"		
<b>HC02-15 (A8D0007-07)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>				
Benzene	ND	---	0.0103	mg/kg dry	50	04/03/18 11:03	5035A/8260C		
Toluene	ND	---	0.0513	"	"	"	"		
Ethylbenzene	ND	---	0.0257	"	"	"	"		
Xylenes, total	ND	---	0.0770	"	"	"	"		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 105 %</i>	<i>Limits: 80-120 %</i>	1	"	"		
<i>Toluene-d8 (Surr)</i>			<i>90 %</i>	<i>Limits: 80-120 %</i>	"	"	"		
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"		
<b>HC02-22 (A8D0007-08)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>				
Benzene	ND	---	0.00984	mg/kg dry	50	04/03/18 11:30	5035A/8260C		
Toluene	ND	---	0.0492	"	"	"	"		
Ethylbenzene	ND	---	0.0246	"	"	"	"		
Xylenes, total	ND	---	0.0738	"	"	"	"		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 105 %</i>	<i>Limits: 80-120 %</i>	1	"	"		
<i>Toluene-d8 (Surr)</i>			<i>94 %</i>	<i>Limits: 80-120 %</i>	"	"	"		
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"		
<b>MW23-05 (A8D0007-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>				
Benzene	ND	---	0.00926	mg/kg dry	50	04/03/18 12:23	5035A/8260C		
Toluene	ND	---	0.0463	"	"	"	"		

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HydroCon LLC  
510 Allen St. Suite B  
Kelso, WA 98626

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/11/18 13:27

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting				Date Analyzed	Method	Notes
			Limit	Units	Dilution				
<b>MW23-05 (A8D0007-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>				
Ethylbenzene	ND	---	0.0231	mg/kg dry	50	"	5035A/8260C		
Xylenes, total	ND	---	0.0694	"	"	"	"		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 105 %</i>	<i>Limits: 80-120 %</i>	1	"	"		
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"		
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"		
<b>MW23-08 (A8D0007-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>				
Benzene	ND	---	0.0101	mg/kg dry	50	04/03/18 12:50	5035A/8260C		
Toluene	ND	---	0.0504	"	"	"	"		
Ethylbenzene	ND	---	0.0252	"	"	"	"		
Xylenes, total	ND	---	0.0756	"	"	"	"		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 101 %</i>	<i>Limits: 80-120 %</i>	1	"	"		
<i>Toluene-d8 (Surr)</i>			<i>88 %</i>	<i>Limits: 80-120 %</i>	"	"	"		
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"		
<b>MW23-12 (A8D0007-11)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>				
Benzene	ND	---	0.0115	mg/kg dry	50	04/03/18 13:17	5035A/8260C		
Toluene	ND	---	0.0577	"	"	"	"		
Ethylbenzene	ND	---	0.0289	"	"	"	"		
Xylenes, total	ND	---	0.0866	"	"	"	"		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>	1	"	"		
<i>Toluene-d8 (Surr)</i>			<i>89 %</i>	<i>Limits: 80-120 %</i>	"	"	"		
<i>4-Bromofluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"		
<b>MW23-22 (A8D0007-12)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>				
Benzene	ND	---	0.0134	mg/kg dry	50	04/03/18 13:44	5035A/8260C		
Toluene	ND	---	0.0669	"	"	"	"		
Ethylbenzene	ND	---	0.0335	"	"	"	"		
Xylenes, total	ND	---	0.100	"	"	"	"		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 104 %</i>	<i>Limits: 80-120 %</i>	1	"	"		
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"		
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"		
<b>MW13-5 (A8D0007-13)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>				
<b>Benzene</b>	<b>0.701</b>	---	0.0132	mg/kg dry	50	04/03/18 14:11	5035A/8260C		
<b>Ethylbenzene</b>	<b>6.27</b>	---	0.0329	"	"	"	"		
<b>Xylenes, total</b>	<b>29.3</b>	---	0.0988	"	"	"	"		

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HydroCon LLC  
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Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting			Date Analyzed	Method	Notes
			Limit	Units	Dilution			
<b>MW13-5 (A8D0007-13)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	1	"	5035A/8260C	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW13-5 (A8D0007-13RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
<b>Toluene</b>	<b>25.5</b>	---	0.659	mg/kg dry	500	04/03/18 18:14	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 99 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW13-10 (A8D0007-14RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
<b>Benzene</b>	<b>1.51</b>	---	0.213	mg/kg dry	1000	04/03/18 19:07	5035A/8260C	
Toluene	ND	---	1.07	"	"	"	"	
Ethylbenzene	ND	---	0.533	"	"	"	"	
<b>Xylenes, total</b>	<b>5.20</b>	---	1.60	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 101 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW13-12 (A8D0007-15)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
Benzene	ND	---	0.0102	mg/kg dry	50	04/03/18 15:05	5035A/8260C	
Toluene	ND	---	0.0512	"	"	"	"	
Ethylbenzene	ND	---	0.0256	"	"	"	"	
<b>Xylenes, total</b>	<b>0.0774</b>	---	0.0768	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW13-21 (A8D0007-16)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
Benzene	ND	---	0.00998	mg/kg dry	50	04/03/18 15:32	5035A/8260C	
Toluene	ND	---	0.0499	"	"	"	"	
Ethylbenzene	ND	---	0.0250	"	"	"	"	
<b>Xylenes, total</b>	<b>ND</b>	---	0.0749	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 101 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW13-35 (A8D0007-17)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			

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510 Allen St. Suite B  
Kelso, WA 98626

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/11/18 13:27

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW13-35 (A8D0007-17)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
Benzene	ND	---	0.0103	mg/kg dry	50	04/03/18 16:26	5035A/8260C	
Toluene	ND	---	0.0516	"	"	"	"	
Ethylbenzene	ND	---	0.0258	"	"	"	"	
Xylenes, total	ND	---	0.0773	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW13-45 (A8D0007-18)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040399</b>			
Benzene	ND	---	0.0142	mg/kg dry	50	04/03/18 16:53	5035A/8260C	
Toluene	ND	---	0.0712	"	"	"	"	
Ethylbenzene	ND	---	0.0356	"	"	"	"	
Xylenes, total	ND	---	0.107	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

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Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW14-05 (A8D0007-19)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040363</b>			
Acetone	ND	---	0.948	mg/kg dry	50	04/02/18 18:41	5035A/8260C	
Acrylonitrile	ND	---	0.0948	"	"	"	"	
Benzene	ND	---	0.00948	"	"	"	"	
Bromobenzene	ND	---	0.0237	"	"	"	"	
Bromochloromethane	ND	---	0.0474	"	"	"	"	
Bromodichloromethane	ND	---	0.0474	"	"	"	"	
Bromoform	ND	---	0.0948	"	"	"	"	
Bromomethane	ND	---	0.474	"	"	"	"	
2-Butanone (MEK)	ND	---	0.474	"	"	"	"	
n-Butylbenzene	ND	---	0.0474	"	"	"	"	
sec-Butylbenzene	ND	---	0.0474	"	"	"	"	
tert-Butylbenzene	ND	---	0.0474	"	"	"	"	
Carbon disulfide	ND	---	0.474	"	"	"	"	
Carbon tetrachloride	ND	---	0.0474	"	"	"	"	
Chlorobenzene	ND	---	0.0237	"	"	"	"	
Chloroethane	ND	---	0.474	"	"	"	"	
Chloroform	ND	---	0.0474	"	"	"	"	
Chloromethane	ND	---	0.237	"	"	"	"	
2-Chlorotoluene	ND	---	0.0474	"	"	"	"	
4-Chlorotoluene	ND	---	0.0474	"	"	"	"	
Dibromochloromethane	ND	---	0.0948	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	0.237	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.0474	"	"	"	"	
Dibromomethane	ND	---	0.0474	"	"	"	"	
1,2-Dichlorobenzene	ND	---	0.0237	"	"	"	"	
1,3-Dichlorobenzene	ND	---	0.0237	"	"	"	"	
1,4-Dichlorobenzene	ND	---	0.0237	"	"	"	"	
Dichlorodifluoromethane	ND	---	0.0948	"	"	"	"	
1,1-Dichloroethane	ND	---	0.0237	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.0237	"	"	"	"	
1,1-Dichloroethene	ND	---	0.0237	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	0.0237	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	0.0237	"	"	"	"	
1,2-Dichloropropane	ND	---	0.0237	"	"	"	"	
1,3-Dichloropropane	ND	---	0.0474	"	"	"	"	

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Lisa Domenighini, Client Services Manager

HydroCon LLC  
 510 Allen St. Suite B  
 Kelso, WA 98626

Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW14-05 (A8D0007-19)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040363</b>			
2,2-Dichloropropane	ND	---	0.0474	mg/kg dry	50	"	5035A/8260C	
1,1-Dichloropropene	ND	---	0.0474	"	"	"	"	
cis-1,3-Dichloropropene	ND	---	0.0474	"	"	"	"	
trans-1,3-Dichloropropene	ND	---	0.0474	"	"	"	"	
Ethylbenzene	ND	---	0.0237	"	"	"	"	
Hexachlorobutadiene	ND	---	0.0948	"	"	"	"	
2-Hexanone	ND	---	0.474	"	"	"	"	
Isopropylbenzene	ND	---	0.0474	"	"	"	"	
4-Isopropyltoluene	ND	---	0.0474	"	"	"	"	
Methylene chloride	ND	---	0.237	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	0.474	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	0.0474	"	"	"	"	
Naphthalene	ND	---	0.0948	"	"	"	"	
n-Propylbenzene	ND	---	0.0237	"	"	"	"	
Styrene	ND	---	0.0474	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	0.0237	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	0.0474	"	"	"	"	
Tetrachloroethene (PCE)	ND	---	0.0237	"	"	"	"	
Toluene	ND	---	0.0474	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	0.237	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	0.237	"	"	"	"	
1,1,1-Trichloroethane	ND	---	0.0237	"	"	"	"	
1,1,2-Trichloroethane	ND	---	0.0237	"	"	"	"	
Trichloroethene (TCE)	ND	---	0.0237	"	"	"	"	
Trichlorofluoromethane	ND	---	0.0948	"	"	"	"	
1,2,3-Trichloropropane	ND	---	0.0474	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	0.0474	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	0.0474	"	"	"	"	
Vinyl chloride	ND	---	0.0237	"	"	"	"	
m,p-Xylene	ND	---	0.0474	"	"	"	"	
o-Xylene	ND	---	0.0237	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

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## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW14-10 (A8D0007-20)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040363</b>			
Acetone	ND	---	0.971	mg/kg dry	50	04/02/18 19:08	5035A/8260C	
Acrylonitrile	ND	---	0.0971	"	"	"	"	
Benzene	ND	---	0.00971	"	"	"	"	
Bromobenzene	ND	---	0.0243	"	"	"	"	
Bromochloromethane	ND	---	0.0486	"	"	"	"	
Bromodichloromethane	ND	---	0.0486	"	"	"	"	
Bromoform	ND	---	0.0971	"	"	"	"	
Bromomethane	ND	---	0.486	"	"	"	"	
2-Butanone (MEK)	ND	---	0.728	"	"	"	"	R-02
n-Butylbenzene	ND	---	0.0486	"	"	"	"	
<b>sec-Butylbenzene</b>	<b>0.105</b>	---	0.0486	"	"	"	"	
tert-Butylbenzene	ND	---	0.0486	"	"	"	"	
Carbon disulfide	ND	---	0.486	"	"	"	"	
Carbon tetrachloride	ND	---	0.0486	"	"	"	"	
Chlorobenzene	ND	---	0.0243	"	"	"	"	
Chloroethane	ND	---	0.486	"	"	"	"	
Chloroform	ND	---	0.0486	"	"	"	"	
Chloromethane	ND	---	0.243	"	"	"	"	
2-Chlorotoluene	ND	---	0.0486	"	"	"	"	
4-Chlorotoluene	ND	---	0.0486	"	"	"	"	
Dibromochloromethane	ND	---	0.0971	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	0.243	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.0486	"	"	"	"	
Dibromomethane	ND	---	0.0486	"	"	"	"	
1,2-Dichlorobenzene	ND	---	0.0243	"	"	"	"	
1,3-Dichlorobenzene	ND	---	0.0243	"	"	"	"	
1,4-Dichlorobenzene	ND	---	0.0243	"	"	"	"	
Dichlorodifluoromethane	ND	---	0.0971	"	"	"	"	
1,1-Dichloroethane	ND	---	0.0243	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.0243	"	"	"	"	
1,1-Dichloroethene	ND	---	0.0243	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	0.0243	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	0.0243	"	"	"	"	
1,2-Dichloropropane	ND	---	0.0243	"	"	"	"	
1,3-Dichloropropane	ND	---	0.0486	"	"	"	"	

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## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW14-10 (A8D0007-20)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040363</b>			
2,2-Dichloropropane	ND	---	0.0486	mg/kg dry	50	"	5035A/8260C	
1,1-Dichloropropene	ND	---	0.0486	"	"	"	"	
cis-1,3-Dichloropropene	ND	---	0.0486	"	"	"	"	
trans-1,3-Dichloropropene	ND	---	0.0486	"	"	"	"	
Ethylbenzene	ND	---	0.0243	"	"	"	"	
Hexachlorobutadiene	ND	---	0.0971	"	"	"	"	
2-Hexanone	ND	---	0.486	"	"	"	"	
Isopropylbenzene	ND	---	0.0486	"	"	"	"	
<b>4-Isopropyltoluene</b>	<b>0.0724</b>	---	0.0486	"	"	"	"	
Methylene chloride	ND	---	0.243	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	0.728	"	"	"	"	R-02
Methyl tert-butyl ether (MTBE)	ND	---	0.0486	"	"	"	"	
Naphthalene	ND	---	0.0971	"	"	"	"	
n-Propylbenzene	ND	---	0.0243	"	"	"	"	
Styrene	ND	---	0.0486	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	0.0243	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	0.243	"	"	"	"	R-02
Tetrachloroethene (PCE)	ND	---	0.0243	"	"	"	"	
Toluene	ND	---	0.0486	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	0.243	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	0.243	"	"	"	"	
1,1,1-Trichloroethane	ND	---	0.0243	"	"	"	"	
1,1,2-Trichloroethane	ND	---	0.0243	"	"	"	"	
Trichloroethene (TCE)	ND	---	0.0243	"	"	"	"	
Trichlorofluoromethane	ND	---	0.0971	"	"	"	"	
1,2,3-Trichloropropane	ND	---	0.0486	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	0.0486	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	0.0486	"	"	"	"	
Vinyl chloride	ND	---	0.0243	"	"	"	"	
m,p-Xylene	ND	---	0.0486	"	"	"	"	
o-Xylene	ND	---	0.0243	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

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## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW14-15 (A8D0007-21)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040363</b>			
Acetone	ND	---	1.02	mg/kg dry	50	04/02/18 19:35	5035A/8260C	
Acrylonitrile	ND	---	0.357	"	"	"	"	R-02
Benzene	ND	---	0.0102	"	"	"	"	
Bromobenzene	ND	---	0.0255	"	"	"	"	
Bromochloromethane	ND	---	0.0509	"	"	"	"	
Bromodichloromethane	ND	---	0.0509	"	"	"	"	
Bromoform	ND	---	0.102	"	"	"	"	
Bromomethane	ND	---	0.509	"	"	"	"	
2-Butanone (MEK)	ND	---	3.57	"	"	"	"	R-02
<b>n-Butylbenzene</b>	<b>0.151</b>	---	0.0509	"	"	"	"	
<b>sec-Butylbenzene</b>	<b>0.196</b>	---	0.0509	"	"	"	"	
tert-Butylbenzene	ND	---	0.0662	"	"	"	"	R-02
Carbon disulfide	ND	---	0.509	"	"	"	"	
Carbon tetrachloride	ND	---	0.0509	"	"	"	"	
Chlorobenzene	ND	---	0.0509	"	"	"	"	R-02
Chloroethane	ND	---	0.509	"	"	"	"	
Chloroform	ND	---	0.0509	"	"	"	"	
Chloromethane	ND	---	0.255	"	"	"	"	
2-Chlorotoluene	ND	---	0.102	"	"	"	"	R-02
4-Chlorotoluene	ND	---	0.0509	"	"	"	"	
Dibromochloromethane	ND	---	0.102	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	0.255	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.0509	"	"	"	"	
Dibromomethane	ND	---	0.0509	"	"	"	"	
1,2-Dichlorobenzene	ND	---	0.0255	"	"	"	"	
1,3-Dichlorobenzene	ND	---	0.0255	"	"	"	"	
1,4-Dichlorobenzene	ND	---	0.0255	"	"	"	"	
Dichlorodifluoromethane	ND	---	0.102	"	"	"	"	
1,1-Dichloroethane	ND	---	0.0255	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.0255	"	"	"	"	
1,1-Dichloroethene	ND	---	0.0255	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	0.0255	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	0.0255	"	"	"	"	
1,2-Dichloropropane	ND	---	0.0255	"	"	"	"	
1,3-Dichloropropane	ND	---	0.0509	"	"	"	"	

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## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW14-15 (A8D0007-21)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040363</b>				
2,2-Dichloropropane	ND	---	0.0509	mg/kg dry	50	"	5035A/8260C	
1,1-Dichloropropene	ND	---	0.0509	"	"	"	"	
cis-1,3-Dichloropropene	ND	---	0.0509	"	"	"	"	
trans-1,3-Dichloropropene	ND	---	0.0509	"	"	"	"	
Ethylbenzene	ND	---	0.0255	"	"	"	"	
Hexachlorobutadiene	ND	---	0.102	"	"	"	"	
2-Hexanone	ND	---	0.509	"	"	"	"	
Isopropylbenzene	ND	---	0.0509	"	"	"	"	
<b>4-Isopropyltoluene</b>	<b>0.0728</b>	---	0.0509	"	"	"	"	
Methylene chloride	ND	---	0.255	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	1.53	"	"	"	"	R-02
Methyl tert-butyl ether (MTBE)	ND	---	0.0509	"	"	"	"	
Naphthalene	ND	---	0.102	"	"	"	"	
<b>n-Propylbenzene</b>	<b>0.0525</b>	---	0.0255	"	"	"	"	
Styrene	ND	---	0.0509	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	0.0255	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	0.306	"	"	"	"	R-02
Tetrachloroethene (PCE)	ND	---	0.0255	"	"	"	"	
Toluene	ND	---	0.0509	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	0.255	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	0.255	"	"	"	"	
1,1,1-Trichloroethane	ND	---	0.0255	"	"	"	"	
1,1,2-Trichloroethane	ND	---	0.0255	"	"	"	"	
Trichloroethene (TCE)	ND	---	0.0255	"	"	"	"	
Trichlorofluoromethane	ND	---	0.102	"	"	"	"	
1,2,3-Trichloropropane	ND	---	0.204	"	"	"	"	R-02
1,2,4-Trimethylbenzene	ND	---	0.0509	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	0.0509	"	"	"	"	
Vinyl chloride	ND	---	0.0255	"	"	"	"	
m,p-Xylene	ND	---	0.0509	"	"	"	"	
o-Xylene	ND	---	0.0255	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>106 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>104 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

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## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW99-15 (A8D0007-22)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040363</b>			
Acetone	ND	---	4.06	mg/kg dry	200	04/02/18 20:02	5035A/8260C	
Acrylonitrile	ND	---	1.02	"	"	"	"	R-02
Benzene	ND	---	0.0406	"	"	"	"	
Bromobenzene	ND	---	0.102	"	"	"	"	
Bromochloromethane	ND	---	0.203	"	"	"	"	
Bromodichloromethane	ND	---	0.203	"	"	"	"	
Bromoform	ND	---	0.406	"	"	"	"	
Bromomethane	ND	---	2.03	"	"	"	"	
2-Butanone (MEK)	ND	---	6.10	"	"	"	"	R-02
<b>n-Butylbenzene</b>	<b>0.258</b>	---	0.203	"	"	"	"	
<b>sec-Butylbenzene</b>	<b>0.323</b>	---	0.203	"	"	"	"	
tert-Butylbenzene	ND	---	0.203	"	"	"	"	
Carbon disulfide	ND	---	2.03	"	"	"	"	
Carbon tetrachloride	ND	---	0.203	"	"	"	"	
Chlorobenzene	ND	---	0.102	"	"	"	"	
Chloroethane	ND	---	2.03	"	"	"	"	
Chloroform	ND	---	0.203	"	"	"	"	
Chloromethane	ND	---	1.02	"	"	"	"	
2-Chlorotoluene	ND	---	0.203	"	"	"	"	
4-Chlorotoluene	ND	---	0.203	"	"	"	"	
Dibromochloromethane	ND	---	0.406	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	1.02	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.203	"	"	"	"	
Dibromomethane	ND	---	0.203	"	"	"	"	
1,2-Dichlorobenzene	ND	---	0.102	"	"	"	"	
1,3-Dichlorobenzene	ND	---	0.102	"	"	"	"	
1,4-Dichlorobenzene	ND	---	0.102	"	"	"	"	
Dichlorodifluoromethane	ND	---	0.406	"	"	"	"	
1,1-Dichloroethane	ND	---	0.102	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.102	"	"	"	"	
1,1-Dichloroethene	ND	---	0.102	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	0.102	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	0.102	"	"	"	"	
1,2-Dichloropropane	ND	---	0.102	"	"	"	"	
1,3-Dichloropropane	ND	---	0.203	"	"	"	"	

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## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW99-15 (A8D0007-22)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040363</b>			
2,2-Dichloropropane	ND	---	0.203	mg/kg dry	200	"	5035A/8260C	
1,1-Dichloropropene	ND	---	0.203	"	"	"	"	
cis-1,3-Dichloropropene	ND	---	0.203	"	"	"	"	
trans-1,3-Dichloropropene	ND	---	0.203	"	"	"	"	
Ethylbenzene	ND	---	0.102	"	"	"	"	
Hexachlorobutadiene	ND	---	0.406	"	"	"	"	
2-Hexanone	ND	---	2.03	"	"	"	"	
Isopropylbenzene	ND	---	0.203	"	"	"	"	
4-Isopropyltoluene	ND	---	0.203	"	"	"	"	
Methylene chloride	ND	---	1.02	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	4.06	"	"	"	"	R-02
Methyl tert-butyl ether (MTBE)	ND	---	0.203	"	"	"	"	
Naphthalene	ND	---	0.406	"	"	"	"	
n-Propylbenzene	ND	---	0.102	"	"	"	"	
Styrene	ND	---	0.203	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	0.102	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	0.813	"	"	"	"	R-02
Tetrachloroethene (PCE)	ND	---	0.102	"	"	"	"	
Toluene	ND	---	0.203	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	1.02	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	1.02	"	"	"	"	
1,1,1-Trichloroethane	ND	---	0.102	"	"	"	"	
1,1,2-Trichloroethane	ND	---	0.102	"	"	"	"	
Trichloroethene (TCE)	ND	---	0.102	"	"	"	"	
Trichlorofluoromethane	ND	---	0.406	"	"	"	"	
1,2,3-Trichloropropane	ND	---	0.203	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	0.203	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	0.203	"	"	"	"	
Vinyl chloride	ND	---	0.102	"	"	"	"	
m,p-Xylene	ND	---	0.203	"	"	"	"	
o-Xylene	ND	---	0.102	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

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Lisa Domenighini, Client Services Manager

HydroCon LLC  
 510 Allen St. Suite B  
 Kelso, WA 98626

Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

## ANALYTICAL SAMPLE RESULTS

Percent Dry Weight								
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>HC01-4.5 (A8D0007-01)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040419</b>				
% Solids	87.3	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>HC01-10 (A8D0007-02)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040419</b>				
% Solids	84.3	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>HC01-15 (A8D0007-03)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040419</b>				
% Solids	83.7	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>HC01-22 (A8D0007-04)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040419</b>				
% Solids	77.9	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>HC01-34 (A8D0007-05)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040419</b>				
% Solids	91.4	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>HC02-10 (A8D0007-06)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040419</b>				
% Solids	86.4	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>HC02-15 (A8D0007-07)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040419</b>				
% Solids	80.0	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>HC02-22 (A8D0007-08)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040419</b>				
% Solids	85.9	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>MW23-05 (A8D0007-09)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040419</b>				
% Solids	87.5	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>MW23-08 (A8D0007-10)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040419</b>				
% Solids	85.4	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>MW23-12 (A8D0007-11)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040419</b>				
% Solids	82.1	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>MW23-22 (A8D0007-12)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040419</b>				
% Solids	77.8	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>MW13-5 (A8D0007-13)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040419</b>				
% Solids	75.8	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>MW13-10 (A8D0007-14)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040419</b>				
% Solids	86.1	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>MW13-12 (A8D0007-15)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040419</b>				
% Solids	88.3	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>MW13-21 (A8D0007-16)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040419</b>				
% Solids	84.4	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	

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Lisa Domenighini, Client Services Manager

HydroCon LLC  
 510 Allen St. Suite B  
 Kelso, WA 98626

Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

## ANALYTICAL SAMPLE RESULTS

### Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW13-35 (A8D0007-17)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040419</b>			
% Solids	88.6	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>MW13-45 (A8D0007-18)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040419</b>			
% Solids	75.0	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>MW14-05 (A8D0007-19)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040419</b>			
% Solids	95.3	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>MW14-10 (A8D0007-20)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040419</b>			
% Solids	90.0	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>MW14-15 (A8D0007-21)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040419</b>			
% Solids	88.5	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	
<b>MW99-15 (A8D0007-22)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040419</b>			
% Solids	90.1	---	1.00	% by Weight	1	04/04/18 09:03	EPA 8000C	

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Kelso, WA 98626

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/11/18 13:27

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040434 - EPA 3546 (Fuels)</b>						<b>Soil</b>						
<b>Blank (8040434-BLK2)</b>						Prepared: 04/04/18 07:10 Analyzed: 04/05/18 07:23						
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	"	"	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>			<i>Recovery: 93 %</i>			<i>Limits: 50-150 %</i>			<i>Dilution: 1x</i>			
<b>LCS (8040434-BS1)</b>						Prepared: 04/04/18 07:10 Analyzed: 04/04/18 23:05						
NWTPH-Dx												
Diesel	127	---	25.0	mg/kg wet	1	125	---	102	76-115%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>			<i>Recovery: 116 %</i>			<i>Limits: 50-150 %</i>			<i>Dilution: 1x</i>			
<b>Duplicate (8040434-DUP1)</b>						Prepared: 04/04/18 07:10 Analyzed: 04/04/18 23:45						
QC Source Sample: MW13-5 (A8D0007-13)												
NWTPH-Dx												
Diesel	1690	---	100	mg/kg dry	5	---	1700	---	---	0.3	30%	F-15
Oil	5350	---	201	"	"	---	5310	---	---	0.6	30%	F-16
<i>Surr: o-Terphenyl (Surr)</i>			<i>Recovery: 121 %</i>			<i>Limits: 50-150 %</i>			<i>Dilution: 5x</i>			
<b>Batch 8040465 - EPA 3546 (Fuels)</b>						<b>Soil</b>						
<b>Blank (8040465-BLK1)</b>						Prepared: 04/04/18 13:18 Analyzed: 04/04/18 19:28						
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	"	"	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>			<i>Recovery: 100 %</i>			<i>Limits: 50-150 %</i>			<i>Dilution: 1x</i>			
<b>LCS (8040465-BS1)</b>						Prepared: 04/04/18 13:18 Analyzed: 04/04/18 19:48						
NWTPH-Dx												
Diesel	110	---	25.0	mg/kg wet	1	125	---	88	76-115%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>			<i>Recovery: 103 %</i>			<i>Limits: 50-150 %</i>			<i>Dilution: 1x</i>			

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<b>HydroCon LLC</b> 510 Allen St. Suite B Kelso, WA 98626	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/11/18 13:27
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## QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	------	--------------	---------------	------	-------------	-----	-----------	-------

#### Batch 8040363 - EPA 5035A

#### Soil

##### Blank (8040363-BLK1)

Prepared: 04/02/18 10:00 Analyzed: 04/02/18 12:00

##### NWTPH-Gx (MS)

Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 101 %</i>					<i>Limits: 50-150 %</i>				<i>Dilution: 1x</i>
<i>1,4-Difluorobenzene (Sur)</i>			<i>96 %</i>					<i>50-150 %</i>				<i>"</i>

##### LCS (8040363-BS2)

Prepared: 04/02/18 10:00 Analyzed: 04/02/18 11:34

##### NWTPH-Gx (MS)

Gasoline Range Organics	27.5	---	5.00	mg/kg wet	50	25.0	---	110	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 100 %</i>					<i>Limits: 50-150 %</i>				<i>Dilution: 1x</i>
<i>1,4-Difluorobenzene (Sur)</i>			<i>97 %</i>					<i>50-150 %</i>				<i>"</i>



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## QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040372 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040372-BLK1)</b>						Prepared: 04/02/18 13:00 Analyzed: 04/02/18 15:05						
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	5.00	mg/kg wet	50	---	---	---	---	---	---	---
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 106 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		98 %		50-150 %		"						
<b>LCS (8040372-BS2)</b>						Prepared: 04/02/18 13:00 Analyzed: 04/02/18 14:38						
NWTPH-Gx (MS)												
Gasoline Range Organics	23.0	---	5.00	mg/kg wet	50	25.0	---	92	80-120%	---	---	---
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 105 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		100 %		50-150 %		"						
<b>Duplicate (8040372-DUP1)</b>						Prepared: 04/02/18 14:46 Analyzed: 04/02/18 16:53						
QC Source Sample: HC01-4.5 (A8D0007-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	5.69	mg/kg dry	50	---	ND	---	---	---	---	30%
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 106 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		100 %		50-150 %		"						

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## QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040399 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040399-BLK1)</b>						Prepared: 04/03/18 09:00 Analyzed: 04/03/18 10:36						
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 106 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			103 %	50-150 %		"						
<b>LCS (8040399-BS2)</b>						Prepared: 04/03/18 09:00 Analyzed: 04/03/18 10:09						
NWTPH-Gx (MS)												
Gasoline Range Organics	23.2	---	5.00	mg/kg wet	50	25.0	---	93	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 107 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			104 %	50-150 %		"						
<b>Duplicate (8040399-DUP1)</b>						Prepared: 03/28/18 16:45 Analyzed: 04/03/18 11:57						
QC Source Sample: HC02-22 (A8D0007-08)												
NWTPH-Gx (MS)												
Gasoline Range Organics	6.56	---	4.42	mg/kg dry	50	---	9.26	---	---	34	30%	Q-05
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 120 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			101 %	50-150 %		"						
<b>Duplicate (8040399-DUP2)</b>						Prepared: 03/29/18 17:20 Analyzed: 04/03/18 15:59						
QC Source Sample: MW13-21 (A8D0007-16)												
NWTPH-Gx (MS)												
Gasoline Range Organics	23.5	---	5.04	mg/kg dry	50	---	22.5	---	---	4	30%	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 115 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			98 %	50-150 %		"						

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04/11/18 13:27

## QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040401 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040401-BLK1)</b>						Prepared: 04/03/18 08:30 Analyzed: 04/03/18 10:40						
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 105 %</i>	<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>			<i>96 %</i>	<i>50-150 %</i>		<i>"</i>						
<b>LCS (8040401-BS2)</b>						Prepared: 04/03/18 08:30 Analyzed: 04/03/18 10:13						
NWTPH-Gx (MS)												
Gasoline Range Organics	26.5	---	5.00	mg/kg wet	50	25.0	---	106	80-120%	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 100 %</i>	<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>			<i>98 %</i>	<i>50-150 %</i>		<i>"</i>						

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 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

## QUALITY CONTROL (QC) SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040372 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040372-BLK1)</b>						Prepared: 04/02/18 13:00 Analyzed: 04/02/18 15:05						
<b>5035A/8260C</b>												
Benzene	ND	---	0.0100	mg/kg wet	50	---	---	---	---	---	---	---
Toluene	ND	---	0.0500	"	"	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.0250	"	"	---	---	---	---	---	---	---
Xylenes, total	ND	---	0.0750	"	"	---	---	---	---	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>		<i>80-120 %</i>		<i>"</i>					
<b>LCS (8040372-BS1)</b>						Prepared: 04/02/18 13:00 Analyzed: 04/02/18 14:11						
<b>5035A/8260C</b>												
Benzene	1.03	---	0.0100	mg/kg wet	50	1.00	---	103	80-120%	---	---	---
Toluene	0.965	---	0.0500	"	"	"	---	96	"	---	---	---
Ethylbenzene	1.03	---	0.0250	"	"	"	---	103	"	---	---	---
Xylenes, total	3.25	---	0.0750	"	"	3.00	---	108	"	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>		<i>80-120 %</i>		<i>"</i>					
<b>Duplicate (8040372-DUP1)</b>						Prepared: 04/02/18 14:46 Analyzed: 04/02/18 16:53						
<b>QC Source Sample: HC01-4.5 (A8D0007-01)</b>												
<b>5035A/8260C</b>												
Benzene	ND	---	0.0114	mg/kg dry	50	---	ND	---	---	---	30%	---
Toluene	ND	---	0.0569	"	"	---	ND	---	---	---	30%	---
Ethylbenzene	ND	---	0.0285	"	"	---	ND	---	---	---	30%	---
Xylenes, total	ND	---	0.0854	"	"	---	ND	---	---	---	30%	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>102 %</i>		<i>80-120 %</i>		<i>"</i>					



HydroCon LLC  
510 Allen St. Suite B  
Kelso, WA 98626

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/11/18 13:27

## QUALITY CONTROL (QC) SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040399 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040399-BLK1)</b>						Prepared: 04/03/18 09:00 Analyzed: 04/03/18 10:36						
<b>5035A/8260C</b>												
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	---
Toluene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Xylenes, total	ND	---	0.0500	"	"	---	---	---	---	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 105 %</i>	<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>80-120 %</i>		<i>"</i>						
<b>LCS (8040399-BS1)</b>						Prepared: 04/03/18 09:00 Analyzed: 04/03/18 09:42						
<b>5035A/8260C</b>												
Benzene	1.02	---	0.0100	mg/kg wet	50	1.00	---	102	80-120%	---	---	---
Toluene	0.909	---	0.0500	"	"	"	---	91	"	---	---	---
Ethylbenzene	0.983	---	0.0250	"	"	"	---	98	"	---	---	---
Xylenes, total	3.08	---	0.0750	"	"	3.00	---	103	"	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>80-120 %</i>		<i>"</i>						
<b>Duplicate (8040399-DUP1)</b>						Prepared: 03/28/18 16:45 Analyzed: 04/03/18 11:57						
<b>QC Source Sample: HC02-22 (A8D0007-08)</b>												
<b>5035A/8260C</b>												
Benzene	ND	---	0.00884	mg/kg dry	50	---	ND	---	---	---	30%	---
Toluene	ND	---	0.0442	"	"	---	ND	---	---	---	30%	---
Ethylbenzene	ND	---	0.0221	"	"	---	ND	---	---	---	30%	---
Xylenes, total	ND	---	0.0663	"	"	---	ND	---	---	---	30%	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>			<i>94 %</i>	<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>80-120 %</i>		<i>"</i>						
<b>Duplicate (8040399-DUP2)</b>						Prepared: 03/29/18 17:20 Analyzed: 04/03/18 15:59						
<b>QC Source Sample: MW13-21 (A8D0007-16)</b>												
<b>5035A/8260C</b>												
Benzene	ND	---	0.0101	mg/kg dry	50	---	ND	---	---	---	30%	---
Toluene	ND	---	0.0504	"	"	---	ND	---	---	---	30%	---
Ethylbenzene	ND	---	0.0252	"	"	---	ND	---	---	---	30%	---

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Lisa Domenighini, Client Services Manager

HydroCon LLC  
 510 Allen St. Suite B  
 Kelso, WA 98626

Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

## QUALITY CONTROL (QC) SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040399 - EPA 5035A</b>						<b>Soil</b>						
<b>Duplicate (8040399-DUP2)</b>						Prepared: 03/29/18 17:20 Analyzed: 04/03/18 15:59						
QC Source Sample: MW13-21 (A8D0007-16)												
5035A/8260C												
Xylenes, total	ND	---	0.0756	mg/kg dry	"	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)			Recovery: 99 %		Limits: 80-120 %		Dilution: 1x					
Toluene-d8 (Surr)			96 %		80-120 %		"					
4-Bromofluorobenzene (Surr)			104 %		80-120 %		"					
<b>Matrix Spike (8040399-MS1)</b>						Prepared: 03/30/18 08:40 Analyzed: 04/03/18 17:20						
QC Source Sample: MW13-45 (A8D0007-18)												
5035A/8260C												
Benzene	1.46	---	0.0142	mg/kg dry	50	1.42	ND	102	77-121%	---	---	
Toluene	1.29	---	0.0712	"	"	"	ND	91	"	---	---	
Ethylbenzene	1.42	---	0.0356	"	"	"	ND	100	76-122%	---	---	
Xylenes, total	4.42	---	0.107	"	"	4.27	ND	104	78-124%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			Recovery: 103 %		Limits: 80-120 %		Dilution: 1x					
Toluene-d8 (Surr)			95 %		80-120 %		"					
4-Bromofluorobenzene (Surr)			102 %		80-120 %		"					



<b>HydroCon LLC</b> 510 Allen St. Suite B Kelso, WA 98626	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/11/18 13:27
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## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040363 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040363-BLK1)</b>						Prepared: 04/02/18 10:00 Analyzed: 04/02/18 12:00						
<b>5035A/8260C</b>												
Acetone	ND	---	0.667	mg/kg wet	50	---	---	---	---	---	---	---
Acrylonitrile	ND	---	0.0667	"	"	---	---	---	---	---	---	---
Benzene	ND	---	0.00667	"	"	---	---	---	---	---	---	---
Bromobenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Bromochloromethane	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Bromodichloromethane	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Bromoform	ND	---	0.0667	"	"	---	---	---	---	---	---	---
Bromomethane	ND	---	0.333	"	"	---	---	---	---	---	---	---
2-Butanone (MEK)	ND	---	0.333	"	"	---	---	---	---	---	---	---
n-Butylbenzene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
sec-Butylbenzene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
tert-Butylbenzene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Carbon disulfide	ND	---	0.333	"	"	---	---	---	---	---	---	---
Carbon tetrachloride	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Chlorobenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Chloroethane	ND	---	0.333	"	"	---	---	---	---	---	---	---
Chloroform	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Chloromethane	ND	---	0.167	"	"	---	---	---	---	---	---	---
2-Chlorotoluene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
4-Chlorotoluene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Dibromochloromethane	ND	---	0.0667	"	"	---	---	---	---	---	---	---
1,2-Dibromo-3-chloropropane	ND	---	0.167	"	"	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Dibromomethane	ND	---	0.0333	"	"	---	---	---	---	---	---	---
1,2-Dichlorobenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
1,3-Dichlorobenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
1,4-Dichlorobenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Dichlorodifluoromethane	ND	---	0.0667	"	"	---	---	---	---	---	---	---
1,1-Dichloroethane	ND	---	0.0167	"	"	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.0167	"	"	---	---	---	---	---	---	---
1,1-Dichloroethene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
cis-1,2-Dichloroethene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
trans-1,2-Dichloroethene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
1,2-Dichloropropane	ND	---	0.0167	"	"	---	---	---	---	---	---	---

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HydroCon LLC  
510 Allen St. Suite B  
Kelso, WA 98626

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/11/18 13:27

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040363 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040363-BLK1)</b>						Prepared: 04/02/18 10:00 Analyzed: 04/02/18 12:00						
<b>5035A/8260C</b>												
1,3-Dichloropropane	ND	---	0.0333	mg/kg wet	"	---	---	---	---	---	---	---
2,2-Dichloropropane	ND	---	0.0333	"	"	---	---	---	---	---	---	---
1,1-Dichloropropene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
cis-1,3-Dichloropropene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
trans-1,3-Dichloropropene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Hexachlorobutadiene	ND	---	0.0667	"	"	---	---	---	---	---	---	---
2-Hexanone	ND	---	0.333	"	"	---	---	---	---	---	---	---
Isopropylbenzene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
4-Isopropyltoluene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Methylene chloride	ND	---	0.167	"	"	---	---	---	---	---	---	---
4-Methyl-2-pentanone (MiBK)	ND	---	0.333	"	"	---	---	---	---	---	---	---
Methyl tert-butyl ether (MTBE)	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Naphthalene	ND	---	0.0667	"	"	---	---	---	---	---	---	---
n-Propylbenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Styrene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
1,1,1,2-Tetrachloroethane	ND	---	0.0167	"	"	---	---	---	---	---	---	---
1,1,2,2-Tetrachloroethane	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Tetrachloroethene (PCE)	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Toluene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
1,2,3-Trichlorobenzene	ND	---	0.167	"	"	---	---	---	---	---	---	---
1,2,4-Trichlorobenzene	ND	---	0.167	"	"	---	---	---	---	---	---	---
1,1,1-Trichloroethane	ND	---	0.0167	"	"	---	---	---	---	---	---	---
1,1,2-Trichloroethane	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Trichloroethene (TCE)	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Trichlorofluoromethane	ND	---	0.0667	"	"	---	---	---	---	---	---	---
1,2,3-Trichloropropane	ND	---	0.0333	"	"	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Vinyl chloride	ND	---	0.0167	"	"	---	---	---	---	---	---	---
m,p-Xylene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
o-Xylene	ND	---	0.0167	"	"	---	---	---	---	---	---	---

Surr: 1,4-Difluorobenzene (Surr)  
Toluene-d8 (Surr)

Recovery: 101 % Limits: 80-120 % Dilution: 1x  
101 % 80-120 % "

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HydroCon LLC  
 510 Allen St. Suite B  
 Kelso, WA 98626

Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040363 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040363-BLK1)</b>						Prepared: 04/02/18 10:00 Analyzed: 04/02/18 12:00						
<b>5035A/8260C</b>												
<i>Surr: 4-Bromofluorobenzene (Surr)</i>						<i>Recovery: 98 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>		
<b>LCS (8040363-BS1)</b>						Prepared: 04/02/18 10:00 Analyzed: 04/02/18 11:05						
<b>5035A/8260C</b>												
Acetone	1.58	---	1.00	mg/kg wet	50	2.00	---	79	80-120%	---	---	Q-55
Acrylonitrile	0.944	---	0.100	"	"	1.00	---	94	"	---	---	
Benzene	0.986	---	0.0100	"	"	"	---	99	"	---	---	
Bromobenzene	1.00	---	0.0250	"	"	"	---	100	"	---	---	
Bromochloromethane	1.02	---	0.0500	"	"	"	---	102	"	---	---	
Bromodichloromethane	0.949	---	0.0500	"	"	"	---	95	"	---	---	
Bromoform	1.10	---	0.100	"	"	"	---	110	"	---	---	
Bromomethane	1.08	---	0.500	"	"	"	---	108	"	---	---	
2-Butanone (MEK)	1.67	---	0.500	"	"	2.00	---	84	"	---	---	
n-Butylbenzene	0.968	---	0.0500	"	"	1.00	---	97	"	---	---	
sec-Butylbenzene	1.05	---	0.0500	"	"	"	---	105	"	---	---	
tert-Butylbenzene	0.986	---	0.0500	"	"	"	---	99	"	---	---	
Carbon disulfide	0.872	---	0.500	"	"	"	---	87	"	---	---	
Carbon tetrachloride	0.990	---	0.0500	"	"	"	---	99	"	---	---	
Chlorobenzene	1.02	---	0.0250	"	"	"	---	102	"	---	---	
Chloroethane	1.04	---	0.500	"	"	"	---	104	"	---	---	
Chloroform	0.947	---	0.0500	"	"	"	---	95	"	---	---	
Chloromethane	0.873	---	0.250	"	"	"	---	87	"	---	---	
2-Chlorotoluene	1.00	---	0.0500	"	"	"	---	100	"	---	---	
4-Chlorotoluene	1.00	---	0.0500	"	"	"	---	100	"	---	---	
Dibromochloromethane	1.19	---	0.100	"	"	"	---	119	"	---	---	
1,2-Dibromo-3-chloropropane	1.14	---	0.250	"	"	"	---	114	"	---	---	
1,2-Dibromoethane (EDB)	1.00	---	0.0500	"	"	"	---	100	"	---	---	
Dibromomethane	0.945	---	0.0500	"	"	"	---	94	"	---	---	
1,2-Dichlorobenzene	0.970	---	0.0250	"	"	"	---	97	"	---	---	
1,3-Dichlorobenzene	1.01	---	0.0250	"	"	"	---	101	"	---	---	
1,4-Dichlorobenzene	0.961	---	0.0250	"	"	"	---	96	"	---	---	
Dichlorodifluoromethane	0.824	---	0.100	"	"	"	---	82	"	---	---	
1,1-Dichloroethane	1.00	---	0.0250	"	"	"	---	100	"	---	---	
1,2-Dichloroethane (EDC)	0.962	---	0.0250	"	"	"	---	96	"	---	---	
1,1-Dichloroethene	0.940	---	0.0250	"	"	"	---	94	"	---	---	

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HydroCon LLC  
510 Allen St. Suite B  
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Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/11/18 13:27

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040363 - EPA 5035A</b>						<b>Soil</b>						
<b>LCS (8040363-BS1)</b>						Prepared: 04/02/18 10:00 Analyzed: 04/02/18 11:05						
<b>5035A/8260C</b>												
cis-1,2-Dichloroethene	0.992	---	0.0250	mg/kg wet	"	"	---	99	"	---	---	
trans-1,2-Dichloroethene	0.985	---	0.0250	"	"	"	---	99	"	---	---	
1,2-Dichloropropane	1.00	---	0.0250	"	"	"	---	100	"	---	---	
1,3-Dichloropropane	0.996	---	0.0500	"	"	"	---	100	"	---	---	
2,2-Dichloropropane	0.931	---	0.0500	"	"	"	---	93	"	---	---	
1,1-Dichloropropene	0.972	---	0.0500	"	"	"	---	97	"	---	---	
cis-1,3-Dichloropropene	1.00	---	0.0500	"	"	"	---	100	"	---	---	
trans-1,3-Dichloropropene	1.02	---	0.0500	"	"	"	---	102	"	---	---	
Ethylbenzene	0.986	---	0.0250	"	"	"	---	99	"	---	---	
Hexachlorobutadiene	0.956	---	0.100	"	"	"	---	96	"	---	---	
2-Hexanone	1.78	---	0.500	"	"	2.00	---	89	"	---	---	
Isopropylbenzene	0.980	---	0.0500	"	"	1.00	---	98	"	---	---	
4-Isopropyltoluene	0.998	---	0.0500	"	"	"	---	100	"	---	---	
Methylene chloride	0.928	---	0.250	"	"	"	---	93	"	---	---	
4-Methyl-2-pentanone (MiBK)	1.79	---	0.500	"	"	2.00	---	89	"	---	---	
Methyl tert-butyl ether (MTBE)	0.916	---	0.0500	"	"	1.00	---	92	"	---	---	
Naphthalene	1.01	---	0.100	"	"	"	---	101	"	---	---	
n-Propylbenzene	1.04	---	0.0250	"	"	"	---	104	"	---	---	
Styrene	0.970	---	0.0500	"	"	"	---	97	"	---	---	
1,1,1,2-Tetrachloroethane	0.997	---	0.0250	"	"	"	---	100	"	---	---	
1,1,2,2-Tetrachloroethane	1.12	---	0.0500	"	"	"	---	112	"	---	---	
Tetrachloroethene (PCE)	0.982	---	0.0250	"	"	"	---	98	"	---	---	
Toluene	1.01	---	0.0500	"	"	"	---	101	"	---	---	
1,2,3-Trichlorobenzene	0.986	---	0.250	"	"	"	---	99	"	---	---	
1,2,4-Trichlorobenzene	0.970	---	0.250	"	"	"	---	97	"	---	---	
1,1,1-Trichloroethane	0.943	---	0.0250	"	"	"	---	94	"	---	---	
1,1,2-Trichloroethane	1.00	---	0.0250	"	"	"	---	100	"	---	---	
Trichloroethene (TCE)	0.960	---	0.0250	"	"	"	---	96	"	---	---	
Trichlorofluoromethane	0.987	---	0.100	"	"	"	---	99	"	---	---	
1,2,3-Trichloropropane	0.985	---	0.0500	"	"	"	---	99	"	---	---	
1,2,4-Trimethylbenzene	0.955	---	0.0500	"	"	"	---	95	"	---	---	
1,3,5-Trimethylbenzene	0.990	---	0.0500	"	"	"	---	99	"	---	---	
Vinyl chloride	0.912	---	0.0250	"	"	"	---	91	"	---	---	
m,p-Xylene	1.96	---	0.0500	"	"	2.00	---	98	"	---	---	

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Lisa Domenighini, Client Services Manager

HydroCon LLC  
510 Allen St. Suite B  
Kelso, WA 98626

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/11/18 13:27

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040363 - EPA 5035A</b>						<b>Soil</b>						
<b>LCS (8040363-BS1)</b>						Prepared: 04/02/18 10:00 Analyzed: 04/02/18 11:05						
<b>5035A/8260C</b>												
o-Xylene	0.969	---	0.0250	mg/kg wet	"	1.00	---	97	"	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>102 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>		<i>80-120 %</i>		<i>"</i>					
<b>Matrix Spike (8040363-MS1)</b>						Prepared: 03/30/18 18:10 Analyzed: 04/02/18 20:28						
<b>QC Source Sample: MW99-15 (A8D0007-22)</b>												
<b>5035A/8260C</b>												
Acetone	7.01	---	4.06	mg/kg dry	200	8.12	ND	86	36-164%	---	---	Q-54
Acrylonitrile	5.11	---	0.406	"	"	4.06	ND	103	65-134%	---	---	
Benzene	4.22	---	0.0406	"	"	"	ND	104	77-121%	---	---	
Bromobenzene	4.11	---	0.102	"	"	"	ND	101	78-121%	---	---	
Bromochloromethane	4.37	---	0.203	"	"	"	ND	108	78-125%	---	---	
Bromodichloromethane	4.02	---	0.203	"	"	"	ND	99	75-127%	---	---	
Bromoform	4.21	---	0.406	"	"	"	ND	104	67-132%	---	---	
Bromomethane	4.33	---	2.03	"	"	"	ND	107	53-143%	---	---	
2-Butanone (MEK)	13.6	---	2.03	"	"	8.12	ND	105	51-148%	---	---	
n-Butylbenzene	4.41	---	0.203	"	"	4.06	0.258	102	70-128%	---	---	
sec-Butylbenzene	4.69	---	0.203	"	"	"	0.323	107	73-126%	---	---	
tert-Butylbenzene	4.22	---	0.203	"	"	"	ND	104	73-125%	---	---	
Carbon disulfide	3.57	---	2.03	"	"	"	ND	88	63-132%	---	---	
Carbon tetrachloride	4.13	---	0.203	"	"	"	ND	102	70-135%	---	---	
Chlorobenzene	4.30	---	0.102	"	"	"	ND	106	79-120%	---	---	
Chloroethane	4.32	---	2.03	"	"	"	ND	106	59-139%	---	---	
Chloroform	4.12	---	0.203	"	"	"	ND	101	78-123%	---	---	
Chloromethane	3.54	---	1.02	"	"	"	ND	87	50-136%	---	---	
2-Chlorotoluene	4.37	---	0.203	"	"	"	ND	105	75-122%	---	---	
4-Chlorotoluene	4.19	---	0.203	"	"	"	ND	103	72-124%	---	---	
Dibromochloromethane	4.89	---	0.406	"	"	"	ND	121	74-126%	---	---	
1,2-Dibromo-3-chloropropane	4.43	---	1.02	"	"	"	ND	109	61-132%	---	---	
1,2-Dibromoethane (EDB)	4.35	---	0.203	"	"	"	ND	107	78-122%	---	---	
Dibromomethane	4.13	---	0.203	"	"	"	ND	102	78-125%	---	---	
1,2-Dichlorobenzene	3.98	---	0.102	"	"	"	ND	98	78-121%	---	---	
1,3-Dichlorobenzene	4.23	---	0.102	"	"	"	ND	104	77-121%	---	---	

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Lisa Domenighini, Client Services Manager



HydroCon LLC  
510 Allen St. Suite B  
Kelso, WA 98626

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/11/18 13:27

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040363 - EPA 5035A</b>						<b>Soil</b>						
<b>Matrix Spike (8040363-MS1)</b>						Prepared: 03/30/18 18:10 Analyzed: 04/02/18 20:28						
<b>QC Source Sample: MW99-15 (A8D0007-22)</b>												
<b>5035A/8260C</b>												
1,4-Dichlorobenzene	3.96	---	0.102	mg/kg dry	"	"	ND	97	75-120%	---	---	
Dichlorodifluoromethane	3.27	---	0.406	"	"	"	ND	80	29-149%	---	---	
1,1-Dichloroethane	4.31	---	0.102	"	"	"	ND	106	76-125%	---	---	
1,2-Dichloroethane (EDC)	4.01	---	0.102	"	"	"	ND	99	73-128%	---	---	
1,1-Dichloroethene	4.04	---	0.102	"	"	"	ND	99	70-131%	---	---	
cis-1,2-Dichloroethene	4.24	---	0.102	"	"	"	ND	104	77-123%	---	---	
trans-1,2-Dichloroethene	4.14	---	0.102	"	"	"	ND	102	74-125%	---	---	
1,2-Dichloropropane	4.32	---	0.102	"	"	"	ND	106	76-123%	---	---	
1,3-Dichloropropane	4.27	---	0.203	"	"	"	ND	105	77-121%	---	---	
2,2-Dichloropropane	3.55	---	0.203	"	"	"	ND	87	67-133%	---	---	
1,1-Dichloropropene	4.24	---	0.203	"	"	"	ND	104	76-125%	---	---	
cis-1,3-Dichloropropene	4.18	---	0.203	"	"	"	ND	103	74-126%	---	---	
trans-1,3-Dichloropropene	4.09	---	0.203	"	"	"	ND	101	71-130%	---	---	
Ethylbenzene	4.11	---	0.102	"	"	"	ND	101	76-122%	---	---	
Hexachlorobutadiene	4.28	---	0.406	"	"	"	ND	105	61-135%	---	---	
2-Hexanone	8.46	---	2.03	"	"	8.12	ND	104	53-145%	---	---	
Isopropylbenzene	4.28	---	0.203	"	"	4.06	ND	105	68-134%	---	---	
4-Isopropyltoluene	4.44	---	0.203	"	"	"	0.124	106	73-127%	---	---	
Methylene chloride	3.99	---	1.02	"	"	"	ND	98	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	13.1	---	2.03	"	"	8.12	ND	123	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	3.95	---	0.203	"	"	4.06	ND	97	73-125%	---	---	
Naphthalene	4.32	---	0.406	"	"	"	ND	106	62-129%	---	---	
n-Propylbenzene	4.46	---	0.102	"	"	"	ND	108	73-125%	---	---	
Styrene	4.34	---	0.203	"	"	"	ND	107	76-124%	---	---	
1,1,1,2-Tetrachloroethane	4.11	---	0.102	"	"	"	ND	101	78-125%	---	---	
1,1,2,2-Tetrachloroethane	4.59	---	0.203	"	"	"	ND	97	70-124%	---	---	
Tetrachloroethene (PCE)	4.19	---	0.102	"	"	"	ND	103	73-128%	---	---	
Toluene	4.27	---	0.203	"	"	"	ND	105	77-121%	---	---	
1,2,3-Trichlorobenzene	3.87	---	1.02	"	"	"	ND	95	66-130%	---	---	
1,2,4-Trichlorobenzene	3.78	---	1.02	"	"	"	ND	93	67-129%	---	---	
1,1,1-Trichloroethane	4.04	---	0.102	"	"	"	ND	99	73-130%	---	---	
1,1,2-Trichloroethane	6.26	---	0.102	"	"	"	ND	154	78-121%	---	---	Q-01
Trichloroethene (TCE)	4.32	---	0.102	"	"	"	ND	106	77-123%	---	---	

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Lisa Domenighini, Client Services Manager

HydroCon LLC  
 510 Allen St. Suite B  
 Kelso, WA 98626

Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040363 - EPA 5035A</b>						<b>Soil</b>						
<b>Matrix Spike (8040363-MS1)</b>						Prepared: 03/30/18 18:10 Analyzed: 04/02/18 20:28						
<b>QC Source Sample: MW99-15 (A8D0007-22)</b>												
<b>5035A/8260C</b>												
Trichlorofluoromethane	3.73	---	0.406	mg/kg dry	"	"	ND	92	62-140%	---	---	
1,2,3-Trichloropropane	4.12	---	0.203	"	"	"	ND	101	73-125%	---	---	
1,2,4-Trimethylbenzene	3.98	---	0.203	"	"	"	ND	98	75-123%	---	---	
1,3,5-Trimethylbenzene	4.19	---	0.203	"	"	"	ND	103	73-124%	---	---	
Vinyl chloride	3.76	---	0.102	"	"	"	ND	93	56-135%	---	---	
m,p-Xylene	8.33	---	0.203	"	"	8.12	ND	103	77-124%	---	---	
o-Xylene	4.23	---	0.102	"	"	4.06	ND	104	77-123%	---	---	

Surr: 1,4-Difluorobenzene (Surr)	Recovery: 102 %	Limits: 80-120 %	Dilution: 1x
Toluene-d8 (Surr)	103 %	80-120 %	"
4-Bromofluorobenzene (Surr)	99 %	80-120 %	"



<b>HydroCon LLC</b> 510 Allen St. Suite B Kelso, WA 98626	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/11/18 13:27
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## QUALITY CONTROL (QC) SAMPLE RESULTS

### Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040419 - Total Solids (Dry Weight)</b>						<b>Soil</b>						
<b>Duplicate (8040419-DUP3)</b>						Prepared: 04/03/18 18:11 Analyzed: 04/04/18 09:03						
QC Source Sample: HC01-4.5 (A8D0007-01)												
EPA 8000C												
% Solids	86.6	---	1.00	% by Weight	1	---	87.3	---	---	0.7	10%	
<b>Duplicate (8040419-DUP4)</b>						Prepared: 04/03/18 18:11 Analyzed: 04/04/18 09:03						
QC Source Sample: MW23-12 (A8D0007-11)												
EPA 8000C												
% Solids	82.2	---	1.00	% by Weight	1	---	82.1	---	---	0.1	10%	

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



HydroCon LLC  
 510 Allen St. Suite B  
 Kelso, WA 98626

Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

## 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
<b>Batch: 8040434</b>							
A8D0007-13	Soil	NWTPH-Dx	03/29/18 15:20	04/04/18 07:10	13.36g/5mL	10g/5mL	0.75
A8D0007-14	Soil	NWTPH-Dx	03/29/18 16:05	04/04/18 07:10	12.17g/5mL	10g/5mL	0.82
A8D0007-15	Soil	NWTPH-Dx	03/29/18 16:35	04/04/18 07:10	12.98g/5mL	10g/5mL	0.77
A8D0007-16	Soil	NWTPH-Dx	03/29/18 17:20	04/04/18 07:10	12.47g/5mL	10g/5mL	0.80
A8D0007-17	Soil	NWTPH-Dx	03/29/18 18:20	04/04/18 07:10	12.44g/5mL	10g/5mL	0.80
A8D0007-18	Soil	NWTPH-Dx	03/30/18 08:40	04/04/18 07:10	13.6g/5mL	10g/5mL	0.74
A8D0007-19	Soil	NWTPH-Dx	03/30/18 15:25	04/04/18 07:10	12.88g/5mL	10g/5mL	0.78
A8D0007-20	Soil	NWTPH-Dx	03/30/18 15:30	04/04/18 07:10	13.25g/5mL	10g/5mL	0.76
A8D0007-21	Soil	NWTPH-Dx	03/30/18 18:05	04/04/18 07:10	13.31g/5mL	10g/5mL	0.75
A8D0007-22	Soil	NWTPH-Dx	03/30/18 18:10	04/04/18 07:10	13.53g/5mL	10g/5mL	0.74
<b>Batch: 8040465</b>							
A8D0007-01	Soil	NWTPH-Dx	03/28/18 09:00	04/04/18 13:18	10.95g/5mL	10g/5mL	0.91
A8D0007-02	Soil	NWTPH-Dx	03/28/18 10:05	04/04/18 13:18	10.97g/5mL	10g/5mL	0.91
A8D0007-03	Soil	NWTPH-Dx	03/28/18 10:10	04/04/18 13:18	10.63g/5mL	10g/5mL	0.94
A8D0007-04	Soil	NWTPH-Dx	03/28/18 10:50	04/04/18 13:18	10.68g/5mL	10g/5mL	0.94
A8D0007-05	Soil	NWTPH-Dx	03/28/18 11:50	04/04/18 13:18	10.2g/5mL	10g/5mL	0.98
A8D0007-06	Soil	NWTPH-Dx	03/28/18 15:50	04/04/18 13:18	10.87g/5mL	10g/5mL	0.92
A8D0007-07	Soil	NWTPH-Dx	03/28/18 15:55	04/04/18 13:18	10.18g/5mL	10g/5mL	0.98
A8D0007-08	Soil	NWTPH-Dx	03/28/18 16:45	04/04/18 13:18	10.08g/5mL	10g/5mL	0.99
A8D0007-09	Soil	NWTPH-Dx	03/29/18 08:45	04/04/18 13:18	10.55g/5mL	10g/5mL	0.95
A8D0007-10	Soil	NWTPH-Dx	03/29/18 08:55	04/04/18 13:18	10.53g/5mL	10g/5mL	0.95
A8D0007-11	Soil	NWTPH-Dx	03/29/18 09:20	04/04/18 13:18	10.3g/5mL	10g/5mL	0.97
A8D0007-12	Soil	NWTPH-Dx	03/29/18 10:05	04/04/18 13:18	10.89g/5mL	10g/5mL	0.92

### 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
<b>Batch: 8040363</b>							
A8D0007-19	Soil	NWTPH-Gx (MS)	03/30/18 15:25	03/30/18 15:25	5.84g/5mL	5g/5mL	0.86
A8D0007-20	Soil	NWTPH-Gx (MS)	03/30/18 15:30	03/30/18 15:30	6.46g/5mL	5g/5mL	0.77
A8D0007-22	Soil	NWTPH-Gx (MS)	03/30/18 18:10	03/30/18 18:10	6.13g/5mL	5g/5mL	0.82
<b>Batch: 8040372</b>							
A8D0007-01	Soil	NWTPH-Gx (MS)	03/28/18 09:00	03/28/18 09:00	5.76g/5mL	5g/5mL	0.87

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Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

## 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
A8D0007-02	Soil	NWTPH-Gx (MS)	03/28/18 10:05	03/28/18 10:05	6.99g/5mL	5g/5mL	0.72
A8D0007-03	Soil	NWTPH-Gx (MS)	03/28/18 10:10	03/28/18 10:10	9.12g/5mL	5g/5mL	0.55
A8D0007-04	Soil	NWTPH-Gx (MS)	03/28/18 10:50	03/28/18 10:50	6.54g/5mL	5g/5mL	0.77
A8D0007-05	Soil	NWTPH-Gx (MS)	03/28/18 11:50	03/28/18 11:50	5.41g/5mL	5g/5mL	0.92
A8D0007-06	Soil	NWTPH-Gx (MS)	03/28/18 15:50	03/28/18 15:50	4.21g/5mL	5g/5mL	1.19
<b>Batch: 8040399</b>							
A8D0007-07	Soil	NWTPH-Gx (MS)	03/28/18 15:55	03/28/18 15:55	8.04g/5mL	5g/5mL	0.62
A8D0007-08	Soil	NWTPH-Gx (MS)	03/28/18 16:45	03/28/18 16:45	7.1g/5mL	5g/5mL	0.70
A8D0007-09	Soil	NWTPH-Gx (MS)	03/29/18 08:45	03/29/18 08:45	7.3g/5mL	5g/5mL	0.69
A8D0007-10	Soil	NWTPH-Gx (MS)	03/29/18 08:55	03/29/18 08:55	6.99g/5mL	5g/5mL	0.72
A8D0007-11	Soil	NWTPH-Gx (MS)	03/29/18 09:20	03/29/18 09:20	6.51g/5mL	5g/5mL	0.77
A8D0007-12	Soil	NWTPH-Gx (MS)	03/29/18 10:05	03/29/18 10:05	6.1g/5mL	5g/5mL	0.82
A8D0007-13RE1	Soil	NWTPH-Gx (MS)	03/29/18 15:20	03/29/18 15:20	6.61g/5mL	5g/5mL	0.76
A8D0007-14RE1	Soil	NWTPH-Gx (MS)	03/29/18 16:05	03/29/18 16:05	6.42g/5mL	5g/5mL	0.78
A8D0007-15	Soil	NWTPH-Gx (MS)	03/29/18 16:35	03/29/18 16:35	6.35g/5mL	5g/5mL	0.79
A8D0007-16	Soil	NWTPH-Gx (MS)	03/29/18 17:20	03/29/18 17:20	7.28g/5mL	5g/5mL	0.69
A8D0007-17	Soil	NWTPH-Gx (MS)	03/29/18 18:20	03/29/18 18:20	6.25g/5mL	5g/5mL	0.80
A8D0007-18	Soil	NWTPH-Gx (MS)	03/30/18 08:40	03/30/18 08:40	6.11g/5mL	5g/5mL	0.82
<b>Batch: 8040401</b>							
A8D0007-21RE1	Soil	NWTPH-Gx (MS)	03/30/18 18:05	03/30/18 18:05	6.35g/5mL	5g/5mL	0.79

### BTEX Compounds by EPA 8260C

**Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 8040372</b>							
A8D0007-01	Soil	5035A/8260C	03/28/18 09:00	03/28/18 09:00	5.76g/5mL	5g/5mL	0.87
A8D0007-02	Soil	5035A/8260C	03/28/18 10:05	03/28/18 10:05	6.99g/5mL	5g/5mL	0.72
A8D0007-03	Soil	5035A/8260C	03/28/18 10:10	03/28/18 10:10	9.12g/5mL	5g/5mL	0.55
A8D0007-04	Soil	5035A/8260C	03/28/18 10:50	03/28/18 10:50	6.54g/5mL	5g/5mL	0.77
A8D0007-05	Soil	5035A/8260C	03/28/18 11:50	03/28/18 11:50	5.41g/5mL	5g/5mL	0.92
A8D0007-06	Soil	5035A/8260C	03/28/18 15:50	03/28/18 15:50	4.21g/5mL	5g/5mL	1.19
<b>Batch: 8040399</b>							
A8D0007-07	Soil	5035A/8260C	03/28/18 15:55	03/28/18 15:55	8.04g/5mL	5g/5mL	0.62
A8D0007-08	Soil	5035A/8260C	03/28/18 16:45	03/28/18 16:45	7.1g/5mL	5g/5mL	0.70

Apex Laboratories

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HydroCon LLC  
 510 Allen St. Suite B  
 Kelso, WA 98626

Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

## SAMPLE PREPARATION INFORMATION

### BTEX Compounds by EPA 8260C

**Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A8D0007-09	Soil	5035A/8260C	03/29/18 08:45	03/29/18 08:45	7.3g/5mL	5g/5mL	0.69
A8D0007-10	Soil	5035A/8260C	03/29/18 08:55	03/29/18 08:55	6.99g/5mL	5g/5mL	0.72
A8D0007-11	Soil	5035A/8260C	03/29/18 09:20	03/29/18 09:20	6.51g/5mL	5g/5mL	0.77
A8D0007-12	Soil	5035A/8260C	03/29/18 10:05	03/29/18 10:05	6.1g/5mL	5g/5mL	0.82
A8D0007-13	Soil	5035A/8260C	03/29/18 15:20	03/29/18 15:20	6.61g/5mL	5g/5mL	0.76
A8D0007-13RE1	Soil	5035A/8260C	03/29/18 15:20	03/29/18 15:20	6.61g/5mL	5g/5mL	0.76
A8D0007-14RE1	Soil	5035A/8260C	03/29/18 16:05	03/29/18 16:05	6.42g/5mL	5g/5mL	0.78
A8D0007-15	Soil	5035A/8260C	03/29/18 16:35	03/29/18 16:35	6.35g/5mL	5g/5mL	0.79
A8D0007-16	Soil	5035A/8260C	03/29/18 17:20	03/29/18 17:20	7.28g/5mL	5g/5mL	0.69
A8D0007-17	Soil	5035A/8260C	03/29/18 18:20	03/29/18 18:20	6.25g/5mL	5g/5mL	0.80
A8D0007-18	Soil	5035A/8260C	03/30/18 08:40	03/30/18 08:40	6.11g/5mL	5g/5mL	0.82

### Volatile Organic Compounds by EPA 5035A/8260C

**Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8040363							
A8D0007-19	Soil	5035A/8260C	03/30/18 15:25	03/30/18 15:25	5.84g/5mL	5g/5mL	0.86
A8D0007-20	Soil	5035A/8260C	03/30/18 15:30	03/30/18 15:30	6.46g/5mL	5g/5mL	0.77
A8D0007-21	Soil	5035A/8260C	03/30/18 18:05	03/30/18 18:05	6.35g/5mL	5g/5mL	0.79
A8D0007-22	Soil	5035A/8260C	03/30/18 18:10	03/30/18 18:10	6.13g/5mL	5g/5mL	0.82

### Percent Dry Weight

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

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8040419							
A8D0007-01	Soil	EPA 8000C	03/28/18 09:00	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-02	Soil	EPA 8000C	03/28/18 10:05	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-03	Soil	EPA 8000C	03/28/18 10:10	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-04	Soil	EPA 8000C	03/28/18 10:50	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-05	Soil	EPA 8000C	03/28/18 11:50	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-06	Soil	EPA 8000C	03/28/18 15:50	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-07	Soil	EPA 8000C	03/28/18 15:55	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-08	Soil	EPA 8000C	03/28/18 16:45	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-09	Soil	EPA 8000C	03/29/18 08:45	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA

Apex Laboratories

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Lisa Domenighini, Client Services Manager

HydroCon LLC  
 510 Allen St. Suite B  
 Kelso, WA 98626

Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

## 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
A8D0007-10	Soil	EPA 8000C	03/29/18 08:55	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-11	Soil	EPA 8000C	03/29/18 09:20	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-12	Soil	EPA 8000C	03/29/18 10:05	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-13	Soil	EPA 8000C	03/29/18 15:20	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-14	Soil	EPA 8000C	03/29/18 16:05	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-15	Soil	EPA 8000C	03/29/18 16:35	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-16	Soil	EPA 8000C	03/29/18 17:20	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-17	Soil	EPA 8000C	03/29/18 18:20	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-18	Soil	EPA 8000C	03/30/18 08:40	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-19	Soil	EPA 8000C	03/30/18 15:25	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-20	Soil	EPA 8000C	03/30/18 15:30	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-21	Soil	EPA 8000C	03/30/18 18:05	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA
A8D0007-22	Soil	EPA 8000C	03/30/18 18:10	04/03/18 18:11	1N/A/1N/A	1N/A/1N/A	NA

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Lisa Domenighini, Client Services Manager

HydroCon LLC  
510 Allen St. Suite B  
Kelso, WA 98626

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/11/18 13:27

## Notes and Definitions

### Qualifiers:

- 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.
- F-11 The hydrocarbon pattern indicates possible weathered diesel, or a contribution from a related component.
- F-13 The chromatographic pattern does not resemble the fuel standard used for quantitation
- F-15 Results for diesel are estimated due to overlap from the reported oil result.
- F-16 Results for oil are estimated due to overlap from the reported diesel result.
- Q-01 Spike recovery and/or RPD is outside acceptance limits.
- Q-05 Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-54 Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by -1%. The results are reported as Estimated Values.
- Q-55 Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260C, however there is adequate sensitivity to ensure detection at the reporting level.
- R-02 The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- S-05 Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
- S-08 TPH-Gx Surrogate recovery cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract. See 8260B results for accurate Surrogate recovery.

### Notes and Conventions:

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.
- RPD Relative Percent Difference
- MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
- WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
- Batch QC Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
- Blank Policy Apex assesses blank data for potential high bias down to a level equal to 1/2 the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they 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.

Apex Laboratories

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Lisa Domenighini, Client Services Manager



**HydroCon LLC**

510 Allen St. Suite B  
Kelso, WA 98626

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

**Reported:**

04/11/18 13:27

For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor.

Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.

--- 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).



HydroCon LLC  
 510 Allen St. Suite B  
 Kelso, WA 98626

Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

Lab # 1800007 COC 1 of 3

### CHAIN OF CUSTODY

**APEX LABS**

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Company: <u>HydroCon</u>		Project Mgr: <u>Craig Hultgren</u>		Project Name: <u>Coleman Oil Wenatchee</u>		Project # <u>2017-074</u>	
Address: <u>314 W 15th Ave Vancouver, WA 98660</u>		Phone: <u>(509) 743-6074</u>		Fax: <u>-</u>		Email: <u>Craig.H@hydrocon.com</u>	
Sampled by: <u>Chris Deschel</u>		ANALYSIS REQUEST: <u>Robotics</u>					
Site Location: <u>OR</u>	OR						
Other: <u>(WA)</u>	WA						
LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTRH-BCID	NWTRH-DX	NWTRH-GX
HC01-15	3/28/18	0805	Oil	5	X	X	X
HC01-10	4/10/18	1510					
HC01-15	4/10/18	1510					
HC01-22	4/10/18	1550					
HC01-34	4/10/18	1550					
HC02-10	4/10/18	1550					
HC02-15	4/10/18	1615					
HC02-22	4/10/18	1615					
MW23-05	3/28/18	0815					
MW23-08	3/28/18	0855					
Normal Turn Around Time (TAT) = 10 Business Days		YES		NO			
TAT Requested (circle)		1 Day		2 Day		3 Day	
		4 DAY		5 DAY		Other: _____	
SAMPLES ARE HELD FOR 30 DAYS							
RECEIVED BY:				RECEIVED BY:			
Signature: <u>Chris Deschel</u>				Signature: _____			
Date: <u>3/28/18</u>				Date: <u>3/28/18</u>			
Printed Name: <u>Chris Deschel</u>				Printed Name: <u>Chris Deschel</u>			
Time: <u>1:55</u>				Time: <u>1:25</u>			
Company: <u>HydroCon</u>				Company: <u>Apex Labs</u>			

Apex Laboratories

*Lisa Domenighini*

Lisa Domenighini, Client Services Manager

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HydroCon LLC  
510 Allen St. Suite B  
Kelso, WA 98626

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/11/18 13:27

**APEX LABS**      **CHAIN OF CUSTODY**      Lab # 180007      COC 2 of 3

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Company: HydroCon      Project Mgr: Craig Hultgren      Project # 2017-074  
 Address: 314 W 15th Ave Suite 300 Vancouver, WA 98660      Phone: (509) 733-6081      Email: Craig.Hultgren@hydroconllc.net  
 Sampled by: Chris Daxel      Fax: \_\_\_\_\_      Email: robath@hydroconllc.net

Site Location: OR      (WA)      Project Name: Coleman Wenatchee

LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 VOCs Full List	8260 HVOCS	8260 REX VOCs	8270 SVOC	8270 SIM PAHs	8082 PCBs	600 TTO	R CRA Metals (8)	TCLP Metals (8)	As, Ba, Be, B, Bi, Br, Ca, Cd, Cr, Cu, Fe, Pb, P, Pt, Se, Si, Sn, Sr, Tl, V, Zn, Zr	1200-COLS	1200-Z
MW23-12	3/21/18	09:20	soil	3		X				X									
MW23-22		1905																	
MW13-5		1520																	
MW13-10		1605																	
MW13-12		1635																	
MW13-21		1720																	
MW13-35	3/21/18	1820																	
MW13-45	3/21/18	08:10																	
MW14-05		15:25																	
MW14-10		15:50																	

Normal Turn Around Time (TAT) = 10 Business Days      YES      NO

TAT Requested (circle):      1 Day      2 Day      3 Day      4 DAY      5 DAY      Other: \_\_\_\_\_

SPECIAL INSTRUCTIONS:

RECEIVED BY: \_\_\_\_\_      RECEIVED BY: \_\_\_\_\_      RECEIVED BY: \_\_\_\_\_  
 Signature: \_\_\_\_\_      Signature: \_\_\_\_\_      Signature: \_\_\_\_\_  
 Date: 3/21/18      Date: 3/21/18      Date: \_\_\_\_\_  
 Printed Name: Chris Daxel      Printed Name: AMSBA Leggett      Printed Name: \_\_\_\_\_  
 Time: 11:35      Time: 11:35      Time: \_\_\_\_\_  
 Company: HydroCon      Company: Apex Labs      Company: \_\_\_\_\_

Apex Laboratories



Lisa Domenighini, Client Services Manager

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HydroCon LLC  
 510 Allen St. Suite B  
 Kelso, WA 98626

Project: **Coleman Wenatchee**  
 Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/11/18 13:27

**CHAIN OF CUSTODY**

Lab # ABD007 COC 3 of 3

**APEX LABS**

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Company: <u>HydroCon</u>		Project Name: <u>Coleman Wenatchee</u>		Project # <u>2017-074</u>	
Address: <u>314 W 15th Ave Suite 300 Vancouver, WA 98660</u>		Phone: <u>503-660-7160</u>		Email: <u>HydroCon@HydroCon.com</u>	
Sampled by: <u>Chris DeSobrad</u>		ANALYSIS REQUEST			
Site Location: <u>OR</u>	OR <u>WA</u>	8260 VOCs Full List	8260 RBDM VOCs	8260 HVOCs	8260 BTEX VOCs
Other: _____	_____	NWTPH-GX	NWTPH-DX	NWTPH-HCID	8270 SVOC
SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	8270 SIM PAHs
1 MWA-15	4/10/18	12:05	Soil	3	8082 PCBs
2 MWA-15	4/10/18	13:10	Soil	4	600 TTO
3					RCRA Metals (8)
4					TCLP Metals (8)
5					AL, SH, AS, BA, BE, CD, CA, CR, CU, NI, PB, PC, Hg, Mn, Mo, Ni, P, Se, Ag, Na, Ti, V, Zn, TOTAL DISS TCLP
6					1200-COLS
7					1200-Z
8					
9					
10					
Normal Turn Around Time (TAT) = 10 Business Days		YES <input checked="" type="radio"/> NO <input type="radio"/>		SPECIAL INSTRUCTIONS:	
TAT Requested (circle)		1 Day 2 Day 3 Day			
4 DAY 5 DAY Other: _____					
RELIQUISHED BY: <u>Chris DeSobrad</u>		RECEIVED BY: <u>AS</u>			
Signature: _____ Date: <u>4/11/18</u>		Signature: _____ Date: <u>4/11/18</u>			
Printed Name: <u>Chris DeSobrad</u> Time: <u>11:55</u>		Printed Name: <u>HydroCon</u> Time: <u>11:35</u>			
Company: <u>HydroCon</u>		Company: <u>Apex Labs</u>			

Apex Laboratories

*Lisa Domenighini*

Lisa Domenighini, Client Services Manager

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<b>HydroCon LLC</b> 510 Allen St. Suite B Kelso, WA 98626	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/11/18 13:27
---	--	------------------------------------

**APEX LABS COOLER RECEIPT FORM**

Client: HydroCon Element WO#: A8 D0007

Project/Project #: Coleman oil Wenatchee | 2017-074

**Delivery info:**

Date/Time Received: 3/21/18 @ 11:35 By: AKK  
 Delivered by: Apex  Client  ESS  FedEx  UPS  Swift  Senvoy  SDS  Other

**Cooler Inspection** Inspected by: AKK : 3/21/18 @ 1140

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 (deg. C)							
Received on Ice? (Y/N)							
Temp. Blanks? (Y/N)	<u>1.4</u>						
Ice Type: (Gel/Real/Other)	<u>Real</u>						
Condition:	<u>good</u>						

Cooler out of temp? (Y/N) Possible reason why: \_\_\_\_\_  
 If some coolers are in temp and some out, were green dot applied to out of temperature samples? Yes/No/NA

**Samples Inspection:** Inspected by: AKK : 3/21/18 @ 9:43

All Samples Intact? Yes  No  Comments: \_\_\_\_\_

Bottle Labels/COCs agree? Yes  No  Comments: \_\_\_\_\_

Containers/Volumes Received Appropriate for Analysis? Yes  No  Comments: \_\_\_\_\_

Do VOA Vials have Visible Headspace? Yes  No  NA   
 Comments: \_\_\_\_\_

Water Samples: pH Checked and Appropriate (except VOAs): Yes  No  NA   
 Comments: \_\_\_\_\_

**Additional Information:**  
 \_\_\_\_\_  
 \_\_\_\_\_

Labeled by: [Signature] Witness: [Signature] Cooler Inspected by: AKK See Project Contact Form:  Y

*Lisa Domenighini*

# Apex Labs

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323 Phone  
503-718-0333 Fax

Thursday, April 19, 2018

Craig Hultgren  
HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

RE: Coleman Wenatchee / 2017-074

Enclosed are the results of analyses for work order A8D0237, which was received by the laboratory on 4/7/2018 at 10:55:00AM.

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

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

---

Apex Laboratories



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Lisa Domenighini, Client Services Manager

HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/19/18 09:44

## ANALYTICAL REPORT FOR SAMPLES

### SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW14-25	A8D0237-01	Soil	04/02/18 09:30	04/07/18 10:55
MW12-10	A8D0237-03	Soil	04/02/18 15:45	04/07/18 10:55
MW12-20	A8D0237-04	Soil	04/02/18 17:10	04/07/18 10:55
MW3S-10	A8D0237-05	Soil	04/03/18 08:35	04/07/18 10:55
MW3S-15	A8D0237-06	Soil	04/03/18 09:30	04/07/18 10:55
MW3S-20	A8D0237-07	Soil	04/03/18 10:20	04/07/18 10:55
MW1S-10	A8D0237-08	Soil	04/03/18 15:10	04/07/18 10:55
MW1S-20	A8D0237-09	Soil	04/03/18 16:10	04/07/18 10:55
MW17-10	A8D0237-10	Soil	04/04/18 09:15	04/07/18 10:55
MW17-15	A8D0237-11	Soil	04/04/18 09:25	04/07/18 10:55
MW17-17	A8D0237-12	Soil	04/04/18 09:55	04/07/18 10:55
MW17-20	A8D0237-13	Soil	04/04/18 10:00	04/07/18 10:55
MW17-25	A8D0237-14	Soil	04/04/18 10:30	04/07/18 10:55
MW17-30	A8D0237-15	Soil	04/04/18 10:35	04/07/18 10:55
MW19-10	A8D0237-16	Soil	04/05/18 08:40	04/07/18 10:55
MW19-18	A8D0237-17	Soil	04/05/18 09:30	04/07/18 10:55
MW19-25	A8D0237-18	Soil	04/05/18 09:55	04/07/18 10:55
MW19-30	A8D0237-19	Soil	04/05/18 10:20	04/07/18 10:55
MW16-10	A8D0237-20	Soil	04/05/18 16:15	04/07/18 10:55
MW16-14	A8D0237-21	Soil	04/05/18 16:55	04/07/18 10:55
MW16-25	A8D0237-22	Soil	04/06/18 09:00	04/07/18 10:55

Apex Laboratories



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Lisa Domenighini, Client Services Manager

**HydroCon LLC**

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/19/18 09:44

## ANALYTICAL SAMPLE RESULTS

### Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW14-25 (A8D0237-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040740</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/12/18 22:55	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 52 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW12-10 (A8D0237-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040740</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/12/18 23:16	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 83 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW12-20 (A8D0237-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040740</b>			
<b>Diesel</b>	<b>42.5</b>	---	25.0	mg/kg dry	1	04/12/18 23:58	NWTPH-Dx	F-13, F-15
<b>Oil</b>	<b>66.7</b>	---	50.0	"	"	"	"	F-03, F-16
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 80 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW3S-15 (A8D0237-06)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040740</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/13/18 00:19	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 80 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW3S-20 (A8D0237-07)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040740</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/13/18 00:41	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 75 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW1S-10 (A8D0237-08)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040740</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/13/18 01:02	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 72 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW1S-20 (A8D0237-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040740</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/13/18 01:23	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 67 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW17-10 (A8D0237-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040740</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/13/18 01:44	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 75 %</i>	<i>Limits: 50-150 %</i>	"	"	"	

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Lisa Domenighini, Client Services Manager

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Project: Coleman Wenatchee

Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/19/18 09:44

## ANALYTICAL SAMPLE RESULTS

### Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW17-17 (A8D0237-12)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040740</b>			
Diesel	1650	---	25.0	mg/kg dry	1	04/13/18 02:05	NWTPH-Dx	F-13, F-15
Oil	740	---	50.0	"	"	"	"	F-16
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 87 %</i>		<i>Limits: 50-150 %</i>			
<b>MW17-25 (A8D0237-14)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040740</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/13/18 03:49	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 83 %</i>		<i>Limits: 50-150 %</i>			
<b>MW17-30 (A8D0237-15)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040740</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/13/18 04:10	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 77 %</i>		<i>Limits: 50-150 %</i>			
<b>MW19-10 (A8D0237-16)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040740</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/13/18 04:31	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 84 %</i>		<i>Limits: 50-150 %</i>			
<b>MW19-18 (A8D0237-17)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040740</b>			
Diesel	2010	---	25.0	mg/kg dry	1	04/13/18 04:52	NWTPH-Dx	F-13
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 80 %</i>		<i>Limits: 50-150 %</i>			
<b>MW19-30 (A8D0237-19)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040740</b>			
Diesel	167	---	25.0	mg/kg dry	1	04/13/18 05:12	NWTPH-Dx	F-13, F-15
Oil	284	---	50.0	"	"	"	"	F-03, F-16
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 66 %</i>		<i>Limits: 50-150 %</i>			
<b>MW16-10 (A8D0237-20)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040740</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/13/18 05:33	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 87 %</i>		<i>Limits: 50-150 %</i>			
<b>MW16-14 (A8D0237-21)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040740</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/13/18 05:54	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 74 %</i>		<i>Limits: 50-150 %</i>			

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314 W 15th Street Suite 300  
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Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/19/18 09:44

## ANALYTICAL SAMPLE RESULTS

### Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW16-25 (A8D0237-22)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040740</b>				
Diesel	ND	---	25.0	mg/kg dry	1	04/13/18 06:15	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 86 %</i>	<i>Limits: 50-150 %</i>	"	"	"	

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## ANALYTICAL SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW14-25 (A8D0237-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040599</b>			
Gasoline Range Organics	ND	---	3.97	mg/kg dry	50	04/09/18 18:22	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 106 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>97 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW12-10 (A8D0237-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
Gasoline Range Organics	ND	---	5.10	mg/kg dry	50	04/09/18 11:48	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 108 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>98 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW12-20 (A8D0237-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
Gasoline Range Organics	ND	---	4.79	mg/kg dry	50	04/09/18 12:41	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 117 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>98 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW3S-15 (A8D0237-06)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040599</b>			
Gasoline Range Organics	83.8	---	4.55	mg/kg dry	50	04/09/18 19:15	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 109 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>103 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW3S-20 (A8D0237-07)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
Gasoline Range Organics	ND	---	6.58	mg/kg dry	50	04/09/18 16:45	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 108 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>99 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW1S-10 (A8D0237-08)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
Gasoline Range Organics	ND	---	5.26	mg/kg dry	50	04/09/18 17:12	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 107 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>100 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW1S-20 (A8D0237-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
Gasoline Range Organics	ND	---	4.88	mg/kg dry	50	04/09/18 17:39	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 106 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>98 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW17-10 (A8D0237-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
Gasoline Range Organics	ND	---	4.71	mg/kg dry	50	04/09/18 18:06	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 108 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>101 %</i>	<i>Limits: 50-150 %</i>	"	"	"	

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## ANALYTICAL SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting			Date Analyzed	Method	Notes
			Limit	Units	Dilution			
<b>MW17-17 (A8D0237-12RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040630</b>			
<b>Gasoline Range Organics</b>	<b>1900</b>	---	180	mg/kg dry	2000	04/10/18 14:07	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 148 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>105 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW17-25 (A8D0237-14RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040630</b>			
<b>Gasoline Range Organics</b>	<b>83.6</b>	---	5.08	mg/kg dry	50	04/10/18 13:40	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 119 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>87 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW17-30 (A8D0237-15)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	4.86	mg/kg dry	50	04/09/18 19:55	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 110 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>103 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW19-10 (A8D0237-16)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	5.34	mg/kg dry	50	04/09/18 20:22	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 106 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>102 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW19-18 (A8D0237-17)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
<b>Gasoline Range Organics</b>	<b>386</b>	---	5.18	mg/kg dry	50	04/09/18 20:49	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 295 %</i>	<i>Limits: 50-150 %</i>	1	"	"	S-08
<i>1,4-Difluorobenzene (Sur)</i>			<i>107 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW19-30 (A8D0237-19RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040630</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	5.48	mg/kg dry	50	04/10/18 13:13	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 117 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>100 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW16-10 (A8D0237-20RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040630</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	4.78	mg/kg dry	50	04/10/18 12:46	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 107 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>101 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW16-14 (A8D0237-21)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040599</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	5.09	mg/kg dry	50	04/09/18 20:35	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 103 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>99 %</i>	<i>Limits: 50-150 %</i>	"	"	"	

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## ANALYTICAL SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW16-25 (A8D0237-22)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040599</b>			
Gasoline Range Organics	ND	---	2.38	mg/kg dry	50	04/09/18 21:02	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 105 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>100 %</i>	<i>Limits: 50-150 %</i>	"	"	"	

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## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW12-10 (A8D0237-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
Benzene	ND	---	0.0102	mg/kg dry	50	04/09/18 11:48	5035A/8260C	
Toluene	ND	---	0.0510	"	"	"	"	
Ethylbenzene	ND	---	0.0255	"	"	"	"	
Xylenes, total	ND	---	0.0766	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>104 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW12-20 (A8D0237-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
Benzene	ND	---	0.00958	mg/kg dry	50	04/09/18 12:41	5035A/8260C	
Toluene	ND	---	0.0479	"	"	"	"	
Ethylbenzene	ND	---	0.0239	"	"	"	"	
Xylenes, total	ND	---	0.0718	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 100 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW3S-20 (A8D0237-07)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
Benzene	ND	---	0.0132	mg/kg dry	50	04/09/18 16:45	5035A/8260C	
Toluene	ND	---	0.0658	"	"	"	"	
Ethylbenzene	ND	---	0.0329	"	"	"	"	
Xylenes, total	ND	---	0.0987	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW1S-10 (A8D0237-08)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
Benzene	ND	---	0.0105	mg/kg dry	50	04/09/18 17:12	5035A/8260C	
Toluene	ND	---	0.0526	"	"	"	"	
Ethylbenzene	ND	---	0.0263	"	"	"	"	
Xylenes, total	ND	---	0.0790	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW1S-20 (A8D0237-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
Benzene	<b>0.318</b>	---	0.00975	mg/kg dry	50	04/09/18 17:39	5035A/8260C	

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Lisa Domenighini, Client Services Manager

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HydroCon LLC

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/19/18 09:44

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting			Date Analyzed	Method	Notes	
			Limit	Units	Dilution				
<b>MW1S-20 (A8D0237-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>				
Toluene	ND	---	0.0488	mg/kg dry	50	"	5035A/8260C		
Ethylbenzene	ND	---	0.0244	"	"	"	"		
Xylenes, total	ND	---	0.0731	"	"	"	"		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>		
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>		<i>Limits: 80-120 %</i>		<i>"</i>		
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>		<i>Limits: 80-120 %</i>		<i>"</i>		
<b>MW17-10 (A8D0237-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>				
Benzene	ND	---	0.00943	mg/kg dry	50	04/09/18 18:06	5035A/8260C		
Toluene	ND	---	0.0471	"	"	"	"		
Ethylbenzene	ND	---	0.0236	"	"	"	"		
Xylenes, total	ND	---	0.0707	"	"	"	"		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>		
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>		<i>Limits: 80-120 %</i>		<i>"</i>		
<i>4-Bromofluorobenzene (Surr)</i>			<i>102 %</i>		<i>Limits: 80-120 %</i>		<i>"</i>		
<b>MW17-17 (A8D0237-12)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>				<b>R-04</b>
Benzene	ND	---	0.0360	mg/kg dry	200	04/09/18 18:33	5035A/8260C		
Toluene	ND	---	0.180	"	"	"	"		
Ethylbenzene	ND	---	0.0900	"	"	"	"		
Xylenes, total	ND	---	0.270	"	"	"	"		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 105 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>		
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>		<i>Limits: 80-120 %</i>		<i>"</i>		
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>		<i>Limits: 80-120 %</i>		<i>"</i>		
<b>MW17-25 (A8D0237-14RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040630</b>				
<b>Benzene</b>	<b>0.0109</b>	---	0.0102	mg/kg dry	50	04/10/18 13:40	5035A/8260C		
Toluene	ND	---	0.0508	"	"	"	"		
<b>Ethylbenzene</b>	<b>0.0631</b>	---	0.0254	"	"	"	"		
<b>Xylenes, total</b>	<b>0.0799</b>	---	0.0762	"	"	"	"		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 107 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>		
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>		<i>Limits: 80-120 %</i>		<i>"</i>		
<i>4-Bromofluorobenzene (Surr)</i>			<i>106 %</i>		<i>Limits: 80-120 %</i>		<i>"</i>		
<b>MW17-30 (A8D0237-15)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>				
Benzene	ND	---	0.00973	mg/kg dry	50	04/09/18 19:55	5035A/8260C		
Toluene	ND	---	0.0486	"	"	"	"		
Ethylbenzene	ND	---	0.0243	"	"	"	"		

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Lisa Domenighini, Client Services Manager

HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/19/18 09:44

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW17-30 (A8D0237-15)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
Xylenes, total	ND	---	0.0730	mg/kg dry	50	"	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW19-10 (A8D0237-16)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
Benzene	ND	---	0.0107	mg/kg dry	50	04/09/18 20:22	5035A/8260C	
Toluene	ND	---	0.0534	"	"	"	"	
Ethylbenzene	ND	---	0.0267	"	"	"	"	
Xylenes, total	ND	---	0.0801	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW19-18 (A8D0237-17)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
Benzene	ND	---	0.0104	mg/kg dry	50	04/09/18 20:49	5035A/8260C	
Toluene	ND	---	0.0518	"	"	"	"	
Ethylbenzene	ND	---	0.0259	"	"	"	"	
Xylenes, total	ND	---	0.0776	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 98 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>92 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW19-30 (A8D0237-19)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040591</b>			
Benzene	ND	---	0.0110	mg/kg dry	50	04/09/18 21:16	5035A/8260C	
Toluene	ND	---	0.0548	"	"	"	"	
Ethylbenzene	ND	---	0.0274	"	"	"	"	
Xylenes, total	ND	---	0.0822	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 101 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW16-10 (A8D0237-20RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040630</b>			
Benzene	ND	---	0.00955	mg/kg dry	50	04/10/18 12:46	5035A/8260C	
Toluene	ND	---	0.0478	"	"	"	"	
Ethylbenzene	ND	---	0.0239	"	"	"	"	
Xylenes, total	ND	---	0.0717	"	"	"	"	

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**HydroCon LLC**

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/19/18 09:44

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW16-10 (A8D0237-20RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040630</b>			
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 104 %</i>	<i>Limits: 80-120 %</i>	1	"	5035A/8260C	
<i>Toluene-d8 (Surr)</i>			96 %	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			103 %	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW16-14 (A8D0237-21)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040599</b>			
Benzene	ND	---	0.0102	mg/kg dry	50	04/09/18 20:35	5035A/8260C	
Toluene	ND	---	0.0509	"	"	"	"	
Ethylbenzene	ND	---	0.0255	"	"	"	"	
Xylenes, total	ND	---	0.0764	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			101 %	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			99 %	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW16-25 (A8D0237-22)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040599</b>			
Benzene	ND	---	0.00476	mg/kg dry	50	04/09/18 21:02	5035A/8260C	
Toluene	ND	---	0.0238	"	"	"	"	
Ethylbenzene	ND	---	0.0119	"	"	"	"	
Xylenes, total	ND	---	0.0357	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 104 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			100 %	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			97 %	<i>Limits: 80-120 %</i>	"	"	"	

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Lisa Domenighini, Client Services Manager

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HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/19/18 09:44

## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW14-25 (A8D0237-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040599</b>			
Acetone	ND	---	0.794	mg/kg dry	50	04/09/18 18:22	5035A/8260C	
Acrylonitrile	ND	---	0.0794	"	"	"	"	
Benzene	ND	---	0.00794	"	"	"	"	
Bromobenzene	ND	---	0.0198	"	"	"	"	
Bromochloromethane	ND	---	0.0397	"	"	"	"	
Bromodichloromethane	ND	---	0.0397	"	"	"	"	
Bromoform	ND	---	0.0794	"	"	"	"	
Bromomethane	ND	---	0.397	"	"	"	"	
2-Butanone (MEK)	ND	---	0.397	"	"	"	"	
n-Butylbenzene	ND	---	0.0397	"	"	"	"	
sec-Butylbenzene	ND	---	0.0397	"	"	"	"	
tert-Butylbenzene	ND	---	0.0397	"	"	"	"	
Carbon disulfide	ND	---	0.397	"	"	"	"	
Carbon tetrachloride	ND	---	0.0397	"	"	"	"	
Chlorobenzene	ND	---	0.0198	"	"	"	"	
Chloroethane	ND	---	0.397	"	"	"	"	
Chloroform	ND	---	0.0397	"	"	"	"	
Chloromethane	ND	---	0.198	"	"	"	"	
2-Chlorotoluene	ND	---	0.0397	"	"	"	"	
4-Chlorotoluene	ND	---	0.0397	"	"	"	"	
Dibromochloromethane	ND	---	0.0794	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	0.198	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.0397	"	"	"	"	
Dibromomethane	ND	---	0.0397	"	"	"	"	
1,2-Dichlorobenzene	ND	---	0.0198	"	"	"	"	
1,3-Dichlorobenzene	ND	---	0.0198	"	"	"	"	
1,4-Dichlorobenzene	ND	---	0.0198	"	"	"	"	
Dichlorodifluoromethane	ND	---	0.0794	"	"	"	"	
1,1-Dichloroethane	ND	---	0.0198	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.0198	"	"	"	"	
1,1-Dichloroethene	ND	---	0.0198	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	0.0198	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	0.0198	"	"	"	"	
1,2-Dichloropropane	ND	---	0.0198	"	"	"	"	
1,3-Dichloropropane	ND	---	0.0397	"	"	"	"	

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314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/19/18 09:44

## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW14-25 (A8D0237-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040599</b>			
2,2-Dichloropropane	ND	---	0.0397	mg/kg dry	50	"	5035A/8260C	
1,1-Dichloropropene	ND	---	0.0397	"	"	"	"	
cis-1,3-Dichloropropene	ND	---	0.0397	"	"	"	"	
trans-1,3-Dichloropropene	ND	---	0.0397	"	"	"	"	
Ethylbenzene	ND	---	0.0198	"	"	"	"	
Hexachlorobutadiene	ND	---	0.0794	"	"	"	"	
2-Hexanone	ND	---	0.397	"	"	"	"	
Isopropylbenzene	ND	---	0.0397	"	"	"	"	
4-Isopropyltoluene	ND	---	0.0397	"	"	"	"	
Methylene chloride	ND	---	0.198	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	0.397	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	0.0397	"	"	"	"	
Naphthalene	ND	---	0.0794	"	"	"	"	
n-Propylbenzene	ND	---	0.0198	"	"	"	"	
Styrene	ND	---	0.0397	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	0.0198	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	0.0397	"	"	"	"	
Tetrachloroethene (PCE)	ND	---	0.0198	"	"	"	"	
Toluene	ND	---	0.0397	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	0.198	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	0.198	"	"	"	"	
1,1,1-Trichloroethane	ND	---	0.0198	"	"	"	"	
1,1,2-Trichloroethane	ND	---	0.0198	"	"	"	"	
Trichloroethene (TCE)	ND	---	0.0198	"	"	"	"	
Trichlorofluoromethane	ND	---	0.0794	"	"	"	"	
1,2,3-Trichloropropane	ND	---	0.0397	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	0.0397	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	0.0397	"	"	"	"	
Vinyl chloride	ND	---	0.0198	"	"	"	"	
m,p-Xylene	ND	---	0.0397	"	"	"	"	
o-Xylene	ND	---	0.0198	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

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Lisa Domenighini, Client Services Manager

HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/19/18 09:44

## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW3S-15 (A8D0237-06)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040599</b>			
Acetone	ND	---	0.910	mg/kg dry	50	04/09/18 19:15	5035A/8260C	
Acrylonitrile	ND	---	0.0910	"	"	"	"	
Benzene	ND	---	0.00910	"	"	"	"	
Bromobenzene	ND	---	0.0227	"	"	"	"	
Bromochloromethane	ND	---	0.0455	"	"	"	"	
Bromodichloromethane	ND	---	0.0455	"	"	"	"	
Bromoform	ND	---	0.0910	"	"	"	"	
Bromomethane	ND	---	0.455	"	"	"	"	
2-Butanone (MEK)	ND	---	2.27	"	"	"	"	R-02
n-Butylbenzene	ND	---	0.0455	"	"	"	"	
sec-Butylbenzene	ND	---	0.0455	"	"	"	"	
tert-Butylbenzene	ND	---	0.0455	"	"	"	"	
Carbon disulfide	ND	---	0.455	"	"	"	"	
Carbon tetrachloride	ND	---	0.0455	"	"	"	"	
Chlorobenzene	ND	---	0.0227	"	"	"	"	
Chloroethane	ND	---	0.455	"	"	"	"	
Chloroform	ND	---	0.0455	"	"	"	"	
Chloromethane	ND	---	0.227	"	"	"	"	
2-Chlorotoluene	ND	---	0.0455	"	"	"	"	
4-Chlorotoluene	ND	---	0.0455	"	"	"	"	
Dibromochloromethane	ND	---	0.0910	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	0.227	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.0455	"	"	"	"	
Dibromomethane	ND	---	0.0455	"	"	"	"	
1,2-Dichlorobenzene	ND	---	0.0227	"	"	"	"	
1,3-Dichlorobenzene	ND	---	0.0227	"	"	"	"	
1,4-Dichlorobenzene	ND	---	0.0227	"	"	"	"	
Dichlorodifluoromethane	ND	---	0.0910	"	"	"	"	
1,1-Dichloroethane	ND	---	0.0227	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.0227	"	"	"	"	
1,1-Dichloroethene	ND	---	0.0227	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	0.0227	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	0.0227	"	"	"	"	
1,2-Dichloropropane	ND	---	0.0227	"	"	"	"	
1,3-Dichloropropane	ND	---	0.0455	"	"	"	"	

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HydroCon LLC

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/19/18 09:44

## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW3S-15 (A8D0237-06)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040599</b>				
2,2-Dichloropropane	ND	---	0.0455	mg/kg dry	50	"	5035A/8260C	
1,1-Dichloropropene	ND	---	0.0455	"	"	"	"	
cis-1,3-Dichloropropene	ND	---	0.0455	"	"	"	"	
trans-1,3-Dichloropropene	ND	---	0.0455	"	"	"	"	
Ethylbenzene	ND	---	0.0227	"	"	"	"	
Hexachlorobutadiene	ND	---	0.0910	"	"	"	"	
2-Hexanone	ND	---	0.455	"	"	"	"	
Isopropylbenzene	ND	---	0.0455	"	"	"	"	
4-Isopropyltoluene	ND	---	0.0455	"	"	"	"	
Methylene chloride	ND	---	0.227	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	0.455	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	0.0455	"	"	"	"	
Naphthalene	ND	---	0.0910	"	"	"	"	
n-Propylbenzene	ND	---	0.0227	"	"	"	"	
Styrene	ND	---	0.0455	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	0.0227	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	0.0455	"	"	"	"	
Tetrachloroethene (PCE)	ND	---	0.0227	"	"	"	"	
Toluene	ND	---	0.0455	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	0.227	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	0.227	"	"	"	"	
1,1,1-Trichloroethane	ND	---	0.0227	"	"	"	"	
1,1,2-Trichloroethane	ND	---	0.0227	"	"	"	"	
Trichloroethene (TCE)	ND	---	0.0227	"	"	"	"	
Trichlorofluoromethane	ND	---	0.0910	"	"	"	"	
1,2,3-Trichloropropane	ND	---	0.0455	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	0.0455	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	0.0455	"	"	"	"	
Vinyl chloride	ND	---	0.0227	"	"	"	"	
m,p-Xylene	ND	---	0.0455	"	"	"	"	
o-Xylene	ND	---	0.0227	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>104 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

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HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/19/18 09:44

## ANALYTICAL SAMPLE RESULTS

Percent Dry Weight								
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW14-25 (A8D0237-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040677</b>			
% Solids	91.5	---	1.00	% by Weight	1	04/12/18 08:41	EPA 8000C	
<b>MW12-10 (A8D0237-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040677</b>			
% Solids	94.7	---	1.00	% by Weight	1	04/12/18 08:41	EPA 8000C	
<b>MW12-20 (A8D0237-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040677</b>			
% Solids	88.4	---	1.00	% by Weight	1	04/12/18 08:41	EPA 8000C	
<b>MW3S-15 (A8D0237-06)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040618</b>			
% Solids	88.5	---	1.00	% by Weight	1	04/10/18 10:50	EPA 8000C	
<b>MW3S-20 (A8D0237-07)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040677</b>			
% Solids	85.2	---	1.00	% by Weight	1	04/12/18 08:41	EPA 8000C	
<b>MW1S-10 (A8D0237-08)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040677</b>			
% Solids	91.2	---	1.00	% by Weight	1	04/12/18 08:41	EPA 8000C	
<b>MW1S-20 (A8D0237-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040677</b>			
% Solids	86.6	---	1.00	% by Weight	1	04/12/18 08:41	EPA 8000C	
<b>MW17-10 (A8D0237-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040677</b>			
% Solids	85.3	---	1.00	% by Weight	1	04/12/18 08:41	EPA 8000C	
<b>MW17-17 (A8D0237-12)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040677</b>			
% Solids	90.3	---	1.00	% by Weight	1	04/12/18 08:41	EPA 8000C	
<b>MW17-25 (A8D0237-14)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040677</b>			
% Solids	83.8	---	1.00	% by Weight	1	04/12/18 08:41	EPA 8000C	
<b>MW17-30 (A8D0237-15)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040677</b>			
% Solids	90.1	---	1.00	% by Weight	1	04/12/18 08:41	EPA 8000C	
<b>MW19-10 (A8D0237-16)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040677</b>			
% Solids	92.7	---	1.00	% by Weight	1	04/12/18 08:41	EPA 8000C	
<b>MW19-18 (A8D0237-17)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040677</b>			
% Solids	85.0	---	1.00	% by Weight	1	04/12/18 08:41	EPA 8000C	
<b>MW19-30 (A8D0237-19)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040677</b>			
% Solids	83.5	---	1.00	% by Weight	1	04/12/18 08:41	EPA 8000C	
<b>MW16-10 (A8D0237-20)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040677</b>			
% Solids	94.4	---	1.00	% by Weight	1	04/12/18 08:41	EPA 8000C	
<b>MW16-14 (A8D0237-21)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040677</b>			
% Solids	88.1	---	1.00	% by Weight	1	04/12/18 08:41	EPA 8000C	

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Lisa Domenighini, Client Services Manager

<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/19/18 09:44
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## ANALYTICAL SAMPLE RESULTS

<b>Percent Dry Weight</b>
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Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW16-25 (A8D0237-22)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040677</b>			
% Solids	94.0	---	1.00	% by Weight	1	04/12/18 08:41	EPA 8000C	

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## QUALITY CONTROL (QC) SAMPLE RESULTS

### Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040740 - EPA 3546 (Fuels)</b>						<b>Soil</b>						
<b>Blank (8040740-BLK1)</b>						Prepared: 04/12/18 13:16 Analyzed: 04/12/18 22:13						
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	---
Oil	ND	---	50.0	"	"	---	---	---	---	---	---	---
<i>Surr: o-Terphenyl (Surr)</i>			<i>Recovery: 87 % Limits: 50-150 %</i>			<i>Dilution: 1x</i>						
<b>LCS (8040740-BS1)</b>						Prepared: 04/12/18 13:16 Analyzed: 04/12/18 22:34						
NWTPH-Dx												
Diesel	110	---	25.0	mg/kg wet	1	125	---	88	76-115%	---	---	---
<i>Surr: o-Terphenyl (Surr)</i>			<i>Recovery: 92 % Limits: 50-150 %</i>			<i>Dilution: 1x</i>						
<b>Duplicate (8040740-DUP1)</b>						Prepared: 04/12/18 13:16 Analyzed: 04/12/18 23:37						
QC Source Sample: MW12-10 (A8D0237-03)												
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg dry	1	---	ND	---	---	---	---	30%
Oil	ND	---	50.0	"	"	---	ND	---	---	---	---	30%
<i>Surr: o-Terphenyl (Surr)</i>			<i>Recovery: 86 % Limits: 50-150 %</i>			<i>Dilution: 1x</i>						





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04/19/18 09:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040591 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040591-BLK1)</b>						Prepared: 04/09/18 09:30 Analyzed: 04/09/18 10:55						
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	---
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 106 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			98 %	50-150 %		"						
<b>LCS (8040591-BS2)</b>						Prepared: 04/09/18 09:30 Analyzed: 04/09/18 10:28						
NWTPH-Gx (MS)												
Gasoline Range Organics	22.7	---	5.00	mg/kg wet	50	25.0	---	91	80-120%	---	---	---
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 105 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			99 %	50-150 %		"						
<b>Duplicate (8040591-DUP1)</b>						Prepared: 04/02/18 15:45 Analyzed: 04/09/18 12:14						
QC Source Sample: MW12-10 (A8D0237-03)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	5.12	mg/kg dry	50	---	ND	---	---	---	---	30%
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 108 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			100 %	50-150 %		"						
<b>Duplicate (8040591-DUP2)</b>						Prepared: 04/04/18 10:30 Analyzed: 04/09/18 19:27						
QC Source Sample: MW17-25 (A8D0237-14)												
NWTPH-Gx (MS)												
Gasoline Range Organics	107	---	5.08	mg/kg dry	50	---	76.8	---	---	33	30%	---
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 117 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			99 %	50-150 %		"						

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314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:

04/19/18 09:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040599 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040599-BLK1)</b>						Prepared: 04/09/18 10:00 Analyzed: 04/09/18 12:40						
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	---
Surr: 4-Bromofluorobenzene (Sur) Recovery: 96 % Limits: 50-150 % Dilution: 1x												
1,4-Difluorobenzene (Sur) 94 % 50-150 % "												
<b>LCS (8040599-BS2)</b>						Prepared: 04/09/18 10:00 Analyzed: 04/09/18 12:13						
NWTPH-Gx (MS)												
Gasoline Range Organics	25.2	---	5.00	mg/kg wet	50	25.0	---	101	80-120%	---	---	---
Surr: 4-Bromofluorobenzene (Sur) Recovery: 96 % Limits: 50-150 % Dilution: 1x												
1,4-Difluorobenzene (Sur) 94 % 50-150 % "												
<b>Duplicate (8040599-DUP1)</b>						Prepared: 04/02/18 09:30 Analyzed: 04/09/18 18:48						
QC Source Sample: MW14-25 (A8D0237-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	5.01	mg/kg dry	50	---	ND	---	---	---	---	30%
Surr: 4-Bromofluorobenzene (Sur) Recovery: 103 % Limits: 50-150 % Dilution: 1x												
1,4-Difluorobenzene (Sur) 97 % 50-150 % "												



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/19/18 09:44
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## QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040630 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040630-BLK1)</b>						Prepared: 04/10/18 09:00 Analyzed: 04/10/18 11:26						
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 107 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>100 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>LCS (8040630-BS2)</b>						Prepared: 04/10/18 09:00 Analyzed: 04/10/18 10:59						
NWTPH-Gx (MS)												
Gasoline Range Organics	21.9	---	5.00	mg/kg wet	50	25.0	---	88	80-120%	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 106 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>101 %</i>		<i>50-150 %</i>		<i>"</i>						



**HydroCon LLC**

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/19/18 09:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040591 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040591-BLK1)</b>						Prepared: 04/09/18 09:30 Analyzed: 04/09/18 10:55						
<b>5035A/8260C</b>												
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	0.0333	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	0.0500	"	"	---	---	---	---	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>104 %</i>		<i>80-120 %</i>		<i>"</i>					
<b>LCS (8040591-BS1)</b>						Prepared: 04/09/18 09:30 Analyzed: 04/09/18 09:59						
<b>5035A/8260C</b>												
Benzene	1.01	---	0.0100	mg/kg wet	50	1.00	---	101	80-120%	---	---	
Toluene	0.936	---	0.0500	"	"	"	---	94	"	---	---	
Ethylbenzene	0.998	---	0.0250	"	"	"	---	100	"	---	---	
Xylenes, total	3.16	---	0.0750	"	"	3.00	---	105	"	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>		<i>80-120 %</i>		<i>"</i>					
<b>Duplicate (8040591-DUP1)</b>						Prepared: 04/02/18 15:45 Analyzed: 04/09/18 12:14						
<b>QC Source Sample: MW12-10 (A8D0237-03)</b>												
<b>5035A/8260C</b>												
Benzene	ND	---	0.0102	mg/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	0.0512	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.0256	"	"	---	ND	---	---	---	30%	
Xylenes, total	ND	---	0.0768	"	"	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>104 %</i>		<i>80-120 %</i>		<i>"</i>					
<b>Duplicate (8040591-DUP2)</b>						Prepared: 04/04/18 10:30 Analyzed: 04/09/18 19:27						
<b>QC Source Sample: MW17-25 (A8D0237-14)</b>												
<b>5035A/8260C</b>												
Benzene	<b>0.0109</b>	---	0.0102	mg/kg dry	50	---	ND	---	---	---	30%	Q-05
Toluene	ND	---	0.0508	"	"	---	ND	---	---	---	30%	
Ethylbenzene	<b>0.0631</b>	---	0.0254	"	"	---	0.0398	---	---	45	30%	Q-05

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Lisa Domenighini, Client Services Manager

<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/19/18 09:44
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## QUALITY CONTROL (QC) SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040591 - EPA 5035A</b>						<b>Soil</b>						
<b>Duplicate (8040591-DUP2)</b>						Prepared: 04/04/18 10:30 Analyzed: 04/09/18 19:27						
QC Source Sample: MW17-25 (A8D0237-14)												
5035A/8260C												
Xylenes, total	0.0889	---	0.0762	mg/kg dry	"	---	0.0571	---	---	44	30%	Q-05
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 105 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>106 %</i>		<i>80-120 %</i>		<i>"</i>					



**HydroCon LLC**

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/19/18 09:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040599 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040599-BLK1)</b>						Prepared: 04/09/18 10:00 Analyzed: 04/09/18 12:40						
<b>5035A/8260C</b>												
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	---
Toluene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Xylenes, total	ND	---	0.0500	"	"	---	---	---	---	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			Recovery: 100 %		Limits: 80-120 %		Dilution: 1x					
<i>Toluene-d8 (Surr)</i>			101 %		80-120 %		"					
<i>4-Bromofluorobenzene (Surr)</i>			99 %		80-120 %		"					
<b>LCS (8040599-BS1)</b>						Prepared: 04/09/18 10:00 Analyzed: 04/09/18 11:46						
<b>5035A/8260C</b>												
Benzene	0.951	---	0.0100	mg/kg wet	50	1.00	---	95	80-120%	---	---	---
Toluene	0.998	---	0.0500	"	"	"	---	100	"	---	---	---
Ethylbenzene	0.956	---	0.0250	"	"	"	---	96	"	---	---	---
Xylenes, total	2.85	---	0.0750	"	"	3.00	---	95	"	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			Recovery: 98 %		Limits: 80-120 %		Dilution: 1x					
<i>Toluene-d8 (Surr)</i>			100 %		80-120 %		"					
<i>4-Bromofluorobenzene (Surr)</i>			97 %		80-120 %		"					
<b>Duplicate (8040599-DUP1)</b>						Prepared: 04/02/18 09:30 Analyzed: 04/09/18 18:48						
<b>QC Source Sample: MW14-25 (A8D0237-01)</b>												
<b>5035A/8260C</b>												
Benzene	ND	---	0.0100	mg/kg dry	50	---	ND	---	---	---	30%	---
Toluene	ND	---	0.0501	"	"	---	ND	---	---	---	30%	---
Ethylbenzene	ND	---	0.0251	"	"	---	ND	---	---	---	30%	---
Xylenes, total	ND	---	0.0752	"	"	---	ND	---	---	---	30%	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			Recovery: 101 %		Limits: 80-120 %		Dilution: 1x					
<i>Toluene-d8 (Surr)</i>			100 %		80-120 %		"					
<i>4-Bromofluorobenzene (Surr)</i>			96 %		80-120 %		"					
<b>Matrix Spike (8040599-MS1)</b>						Prepared: 04/03/18 09:30 Analyzed: 04/09/18 19:42						
<b>QC Source Sample: MW3S-15 (A8D0237-06)</b>												
<b>5035A/8260C</b>												
Benzene	0.988	---	0.00910	mg/kg dry	50	0.910	ND	109	77-121%	---	---	---
Toluene	0.958	---	0.0455	"	"	"	ND	105	"	---	---	---
Ethylbenzene	0.936	---	0.0227	"	"	"	ND	103	76-122%	---	---	---

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Lisa Domenighini, Client Services Manager

HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/19/18 09:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040599 - EPA 5035A</b>						<b>Soil</b>						
<b>Matrix Spike (8040599-MS1)</b>						Prepared: 04/03/18 09:30 Analyzed: 04/09/18 19:42						
<b>QC Source Sample: MW3S-15 (A8D0237-06)</b>												
<b>5035A/8260C</b>												
Xylenes, total	2.87	---	0.0682	mg/kg dry	"	2.73	ND	105	78-124%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>97 %</i>		<i>80-120 %</i>		<i>"</i>					

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Lisa Domenighini, Client Services Manager

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<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/19/18 09:44
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## QUALITY CONTROL (QC) SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040630 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040630-BLK1)</b>						Prepared: 04/10/18 09:00 Analyzed: 04/10/18 11:26						
<b>5035A/8260C</b>												
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	---
Toluene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Xylenes, total	ND	---	0.0500	"	"	---	---	---	---	---	---	---

Surr: 1,4-Difluorobenzene (Surr)      Recovery: 104 %      Limits: 80-120 %      Dilution: 1x  
 Toluene-d8 (Surr)      97 %      80-120 %      "  
 4-Bromofluorobenzene (Surr)      104 %      80-120 %      "

**LCS (8040630-BS1)**      Prepared: 04/10/18 09:00      Analyzed: 04/10/18 10:25

<b>5035A/8260C</b>												
Benzene	1.03	---	0.0100	mg/kg wet	50	1.00	---	103	80-120%	---	---	---
Toluene	0.931	---	0.0500	"	"	"	---	93	"	---	---	---
Ethylbenzene	1.00	---	0.0250	"	"	"	---	100	"	---	---	---
Xylenes, total	3.14	---	0.0750	"	"	3.00	---	105	"	---	---	---

Surr: 1,4-Difluorobenzene (Surr)      Recovery: 101 %      Limits: 80-120 %      Dilution: 1x  
 Toluene-d8 (Surr)      96 %      80-120 %      "  
 4-Bromofluorobenzene (Surr)      99 %      80-120 %      "





HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/19/18 09:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040599 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040599-BLK1)</b>						Prepared: 04/09/18 10:00 Analyzed: 04/09/18 12:40						
<b>5035A/8260C</b>												
Acetone	ND	---	0.667	mg/kg wet	50	---	---	---	---	---	---	---
Acrylonitrile	ND	---	0.0667	"	"	---	---	---	---	---	---	---
Benzene	ND	---	0.00667	"	"	---	---	---	---	---	---	---
Bromobenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Bromochloromethane	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Bromodichloromethane	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Bromoform	ND	---	0.0667	"	"	---	---	---	---	---	---	---
Bromomethane	ND	---	0.333	"	"	---	---	---	---	---	---	---
2-Butanone (MEK)	ND	---	0.333	"	"	---	---	---	---	---	---	---
n-Butylbenzene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
sec-Butylbenzene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
tert-Butylbenzene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Carbon disulfide	ND	---	0.333	"	"	---	---	---	---	---	---	---
Carbon tetrachloride	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Chlorobenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Chloroethane	ND	---	0.333	"	"	---	---	---	---	---	---	---
Chloroform	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Chloromethane	ND	---	0.167	"	"	---	---	---	---	---	---	---
2-Chlorotoluene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
4-Chlorotoluene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Dibromochloromethane	ND	---	0.0667	"	"	---	---	---	---	---	---	---
1,2-Dibromo-3-chloropropane	ND	---	0.167	"	"	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Dibromomethane	ND	---	0.0333	"	"	---	---	---	---	---	---	---
1,2-Dichlorobenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
1,3-Dichlorobenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
1,4-Dichlorobenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Dichlorodifluoromethane	ND	---	0.0667	"	"	---	---	---	---	---	---	---
1,1-Dichloroethane	ND	---	0.0167	"	"	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.0167	"	"	---	---	---	---	---	---	---
1,1-Dichloroethene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
cis-1,2-Dichloroethene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
trans-1,2-Dichloroethene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
1,2-Dichloropropane	ND	---	0.0167	"	"	---	---	---	---	---	---	---

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HydroCon LLC

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/19/18 09:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040599 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040599-BLK1)</b>						Prepared: 04/09/18 10:00 Analyzed: 04/09/18 12:40						
<b>5035A/8260C</b>												
1,3-Dichloropropane	ND	---	0.0333	mg/kg wet	"	---	---	---	---	---	---	---
2,2-Dichloropropane	ND	---	0.0333	"	"	---	---	---	---	---	---	---
1,1-Dichloropropene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
cis-1,3-Dichloropropene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
trans-1,3-Dichloropropene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Hexachlorobutadiene	ND	---	0.0667	"	"	---	---	---	---	---	---	---
2-Hexanone	ND	---	0.333	"	"	---	---	---	---	---	---	---
Isopropylbenzene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
4-Isopropyltoluene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Methylene chloride	ND	---	0.167	"	"	---	---	---	---	---	---	---
4-Methyl-2-pentanone (MiBK)	ND	---	0.333	"	"	---	---	---	---	---	---	---
Methyl tert-butyl ether (MTBE)	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Naphthalene	ND	---	0.0667	"	"	---	---	---	---	---	---	---
n-Propylbenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Styrene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
1,1,1,2-Tetrachloroethane	ND	---	0.0167	"	"	---	---	---	---	---	---	---
1,1,2,2-Tetrachloroethane	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Tetrachloroethene (PCE)	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Toluene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
1,2,3-Trichlorobenzene	ND	---	0.167	"	"	---	---	---	---	---	---	---
1,2,4-Trichlorobenzene	ND	---	0.167	"	"	---	---	---	---	---	---	---
1,1,1-Trichloroethane	ND	---	0.0167	"	"	---	---	---	---	---	---	---
1,1,2-Trichloroethane	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Trichloroethene (TCE)	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Trichlorofluoromethane	ND	---	0.0667	"	"	---	---	---	---	---	---	---
1,2,3-Trichloropropane	ND	---	0.0333	"	"	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Vinyl chloride	ND	---	0.0167	"	"	---	---	---	---	---	---	---
m,p-Xylene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
o-Xylene	ND	---	0.0167	"	"	---	---	---	---	---	---	---

Surr: 1,4-Difluorobenzene (Surr)

Recovery: 100 %

Limits: 80-120 %

Dilution: 1x

Toluene-d8 (Surr)

101 %

80-120 %

"

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HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/19/18 09:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040599 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040599-BLK1)</b>						Prepared: 04/09/18 10:00 Analyzed: 04/09/18 12:40						
<b>5035A/8260C</b>												
<i>Surr: 4-Bromofluorobenzene (Surr)</i>						<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>		
<b>LCS (8040599-BS1)</b>						Prepared: 04/09/18 10:00 Analyzed: 04/09/18 11:46						
<b>5035A/8260C</b>												
Acetone	1.32	---	1.00	mg/kg wet	50	2.00	---	66	80-120%	---	---	Q-55
Acrylonitrile	0.840	---	0.100	"	"	1.00	---	84	"	---	---	
Benzene	0.951	---	0.0100	"	"	"	---	95	"	---	---	
Bromobenzene	0.953	---	0.0250	"	"	"	---	95	"	---	---	
Bromochloromethane	0.998	---	0.0500	"	"	"	---	100	"	---	---	
Bromodichloromethane	0.902	---	0.0500	"	"	"	---	90	"	---	---	
Bromoform	1.07	---	0.100	"	"	"	---	107	"	---	---	
Bromomethane	1.01	---	0.500	"	"	"	---	101	"	---	---	
2-Butanone (MEK)	1.45	---	0.500	"	"	2.00	---	72	"	---	---	Q-55
n-Butylbenzene	0.940	---	0.0500	"	"	1.00	---	94	"	---	---	
sec-Butylbenzene	0.994	---	0.0500	"	"	"	---	99	"	---	---	
tert-Butylbenzene	0.924	---	0.0500	"	"	"	---	92	"	---	---	
Carbon disulfide	0.829	---	0.500	"	"	"	---	83	"	---	---	
Carbon tetrachloride	0.940	---	0.0500	"	"	"	---	94	"	---	---	
Chlorobenzene	0.996	---	0.0250	"	"	"	---	100	"	---	---	
Chloroethane	0.899	---	0.500	"	"	"	---	90	"	---	---	
Chloroform	0.916	---	0.0500	"	"	"	---	92	"	---	---	
Chloromethane	0.816	---	0.250	"	"	"	---	82	"	---	---	
2-Chlorotoluene	0.951	---	0.0500	"	"	"	---	95	"	---	---	
4-Chlorotoluene	0.948	---	0.0500	"	"	"	---	95	"	---	---	
Dibromochloromethane	1.14	---	0.100	"	"	"	---	114	"	---	---	
1,2-Dibromo-3-chloropropane	1.02	---	0.250	"	"	"	---	102	"	---	---	
1,2-Dibromoethane (EDB)	0.962	---	0.0500	"	"	"	---	96	"	---	---	
Dibromomethane	0.889	---	0.0500	"	"	"	---	89	"	---	---	
1,2-Dichlorobenzene	0.946	---	0.0250	"	"	"	---	95	"	---	---	
1,3-Dichlorobenzene	0.991	---	0.0250	"	"	"	---	99	"	---	---	
1,4-Dichlorobenzene	0.955	---	0.0250	"	"	"	---	95	"	---	---	
Dichlorodifluoromethane	0.771	---	0.100	"	"	"	---	77	"	---	---	Q-55
1,1-Dichloroethane	0.944	---	0.0250	"	"	"	---	94	"	---	---	
1,2-Dichloroethane (EDC)	0.890	---	0.0250	"	"	"	---	89	"	---	---	
1,1-Dichloroethene	0.873	---	0.0250	"	"	"	---	87	"	---	---	

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HydroCon LLC

314 W 15th Street Suite 300  
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Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/19/18 09:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040599 - EPA 5035A</b>						<b>Soil</b>						
<b>LCS (8040599-BS1)</b>						Prepared: 04/09/18 10:00 Analyzed: 04/09/18 11:46						
<b>5035A/8260C</b>												
cis-1,2-Dichloroethene	0.936	---	0.0250	mg/kg wet	"	"	---	94	"	---	---	
trans-1,2-Dichloroethene	0.942	---	0.0250	"	"	"	---	94	"	---	---	
1,2-Dichloropropane	0.947	---	0.0250	"	"	"	---	95	"	---	---	
1,3-Dichloropropane	0.953	---	0.0500	"	"	"	---	95	"	---	---	
2,2-Dichloropropane	0.929	---	0.0500	"	"	"	---	93	"	---	---	
1,1-Dichloropropene	0.923	---	0.0500	"	"	"	---	92	"	---	---	
cis-1,3-Dichloropropene	0.938	---	0.0500	"	"	"	---	94	"	---	---	
trans-1,3-Dichloropropene	0.979	---	0.0500	"	"	"	---	98	"	---	---	
Ethylbenzene	0.956	---	0.0250	"	"	"	---	96	"	---	---	
Hexachlorobutadiene	0.964	---	0.100	"	"	"	---	96	"	---	---	
2-Hexanone	1.60	---	0.500	"	"	2.00	---	80	"	---	---	
Isopropylbenzene	0.948	---	0.0500	"	"	1.00	---	95	"	---	---	
4-Isopropyltoluene	0.952	---	0.0500	"	"	"	---	95	"	---	---	
Methylene chloride	0.880	---	0.250	"	"	"	---	88	"	---	---	
4-Methyl-2-pentanone (MiBK)	1.62	---	0.500	"	"	2.00	---	81	"	---	---	
Methyl tert-butyl ether (MTBE)	0.842	---	0.0500	"	"	1.00	---	84	"	---	---	
Naphthalene	0.895	---	0.100	"	"	"	---	90	"	---	---	
n-Propylbenzene	0.981	---	0.0250	"	"	"	---	98	"	---	---	
Styrene	0.964	---	0.0500	"	"	"	---	96	"	---	---	
1,1,1,2-Tetrachloroethane	0.986	---	0.0250	"	"	"	---	99	"	---	---	
1,1,2,2-Tetrachloroethane	1.04	---	0.0500	"	"	"	---	104	"	---	---	
Tetrachloroethene (PCE)	0.990	---	0.0250	"	"	"	---	99	"	---	---	
Toluene	0.998	---	0.0500	"	"	"	---	100	"	---	---	
1,2,3-Trichlorobenzene	0.928	---	0.250	"	"	"	---	93	"	---	---	
1,2,4-Trichlorobenzene	0.916	---	0.250	"	"	"	---	92	"	---	---	
1,1,1-Trichloroethane	0.906	---	0.0250	"	"	"	---	91	"	---	---	
1,1,2-Trichloroethane	0.978	---	0.0250	"	"	"	---	98	"	---	---	
Trichloroethene (TCE)	0.936	---	0.0250	"	"	"	---	94	"	---	---	
Trichlorofluoromethane	0.940	---	0.100	"	"	"	---	94	"	---	---	
1,2,3-Trichloropropane	0.933	---	0.0500	"	"	"	---	93	"	---	---	
1,2,4-Trimethylbenzene	0.912	---	0.0500	"	"	"	---	91	"	---	---	
1,3,5-Trimethylbenzene	0.936	---	0.0500	"	"	"	---	94	"	---	---	
Vinyl chloride	0.802	---	0.0250	"	"	"	---	80	"	---	---	
m,p-Xylene	1.93	---	0.0500	"	"	2.00	---	96	"	---	---	

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Lisa Domenighini, Client Services Manager

HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/19/18 09:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040599 - EPA 5035A</b>						<b>Soil</b>						
<b>LCS (8040599-BS1)</b>						Prepared: 04/09/18 10:00 Analyzed: 04/09/18 11:46						
<b>5035A/8260C</b>												
o-Xylene	0.920	---	0.0250	mg/kg wet	"	1.00	---	92	"	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 98 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>97 %</i>		<i>80-120 %</i>		<i>"</i>					
<b>Duplicate (8040599-DUP1)</b>						Prepared: 04/02/18 09:30 Analyzed: 04/09/18 18:48						
<b>QC Source Sample: MW14-25 (A8D0237-01)</b>												
<b>5035A/8260C</b>												
Acetone	ND	---	1.00	mg/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	0.100	"	"	---	ND	---	---	---	30%	
Benzene	ND	---	0.0100	"	"	---	ND	---	---	---	30%	
Bromobenzene	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
Bromoform	ND	---	0.100	"	"	---	ND	---	---	---	30%	
Bromomethane	ND	---	0.501	"	"	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	0.501	"	"	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	0.501	"	"	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
Chloroethane	ND	---	0.501	"	"	---	ND	---	---	---	30%	
Chloroform	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
Chloromethane	ND	---	0.251	"	"	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	0.100	"	"	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	0.251	"	"	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
Dibromomethane	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.0251	"	"	---	ND	---	---	---	30%	

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Lisa Domenighini, Client Services Manager

HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/19/18 09:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040599 - EPA 5035A</b>						<b>Soil</b>						
<b>Duplicate (8040599-DUP1)</b>						Prepared: 04/02/18 09:30 Analyzed: 04/09/18 18:48						
<b>QC Source Sample: MW14-25 (A8D0237-01)</b>												
<b>5035A/8260C</b>												
1,4-Dichlorobenzene	ND	---	0.0251	mg/kg dry	"	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	0.100	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	0.100	"	"	---	ND	---	---	---	30%	
2-Hexanone	ND	---	0.501	"	"	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
Methylene chloride	ND	---	0.251	"	"	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	0.501	"	"	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
Naphthalene	ND	---	0.100	"	"	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
Styrene	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
Toluene	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	0.251	"	"	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	0.251	"	"	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	0.0251	"	"	---	ND	---	---	---	30%	

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Lisa Domenighini, Client Services Manager

HydroCon LLC

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:

04/19/18 09:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040599 - EPA 5035A</b>												
<b>Soil</b>												
<b>Duplicate (8040599-DUP1)</b>						Prepared: 04/02/18 09:30 Analyzed: 04/09/18 18:48						
QC Source Sample: MW14-25 (A8D0237-01)												
5035A/8260C												
Trichlorofluoromethane	ND	---	0.100	mg/kg dry	"	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	0.0501	"	"	---	ND	---	---	---	30%	
o-Xylene	ND	---	0.0251	"	"	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)			Recovery: 101 %		Limits: 80-120 %		Dilution: 1x					
Toluene-d8 (Surr)			100 %		80-120 %		"					
4-Bromofluorobenzene (Surr)			96 %		80-120 %		"					
<b>Matrix Spike (8040599-MS1)</b>												
QC Source Sample: MW3S-15 (A8D0237-06)						Prepared: 04/03/18 09:30 Analyzed: 04/09/18 19:42						
5035A/8260C												
Acetone	2.27	---	0.910	mg/kg dry	50	1.82	ND	125	36-164%	---	---	Q-54
Acrylonitrile	1.26	---	0.0910	"	"	0.910	ND	139	65-134%	---	---	Q-01
Benzene	0.988	---	0.00910	"	"	"	ND	109	77-121%	---	---	
Bromobenzene	0.935	---	0.0227	"	"	"	ND	103	78-121%	---	---	
Bromochloromethane	1.13	---	0.0455	"	"	"	ND	124	78-125%	---	---	
Bromodichloromethane	0.965	---	0.0455	"	"	"	ND	106	75-127%	---	---	
Bromoform	1.09	---	0.0910	"	"	"	ND	120	67-132%	---	---	
Bromomethane	1.11	---	0.455	"	"	"	ND	121	53-143%	---	---	
2-Butanone (MEK)	4.19	---	0.455	"	"	1.82	ND	125	51-148%	---	---	Q-54b
n-Butylbenzene	0.878	---	0.0455	"	"	0.910	ND	96	70-128%	---	---	
sec-Butylbenzene	0.943	---	0.0455	"	"	"	ND	104	73-126%	---	---	
tert-Butylbenzene	0.883	---	0.0455	"	"	"	ND	97	73-125%	---	---	
Carbon disulfide	0.969	---	0.455	"	"	"	ND	106	63-132%	---	---	
Carbon tetrachloride	0.984	---	0.0455	"	"	"	ND	108	70-135%	---	---	
Chlorobenzene	0.977	---	0.0227	"	"	"	ND	107	79-120%	---	---	
Chloroethane	1.07	---	0.455	"	"	"	ND	118	59-139%	---	---	
Chloroform	0.990	---	0.0455	"	"	"	ND	109	78-123%	---	---	
Chloromethane	0.907	---	0.227	"	"	"	ND	100	50-136%	---	---	
2-Chlorotoluene	0.934	---	0.0455	"	"	"	ND	103	75-122%	---	---	

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HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/19/18 09:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040599 - EPA 5035A</b>						<b>Soil</b>						
<b>Matrix Spike (8040599-MS1)</b>						Prepared: 04/03/18 09:30 Analyzed: 04/09/18 19:42						
<b>QC Source Sample: MW3S-15 (A8D0237-06)</b>												
<b>5035A/8260C</b>												
4-Chlorotoluene	0.932	---	0.0455	mg/kg dry	"	"	ND	102	72-124%	---	---	
Dibromochloromethane	1.15	---	0.0910	"	"	"	ND	126	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1.03	---	0.227	"	"	"	ND	113	61-132%	---	---	
1,2-Dibromoethane (EDB)	1.00	---	0.0455	"	"	"	ND	110	78-122%	---	---	
Dibromomethane	1.01	---	0.0455	"	"	"	ND	111	78-125%	---	---	
1,2-Dichlorobenzene	0.916	---	0.0227	"	"	"	ND	101	78-121%	---	---	
1,3-Dichlorobenzene	0.941	---	0.0227	"	"	"	ND	103	77-121%	---	---	
1,4-Dichlorobenzene	0.910	---	0.0227	"	"	"	ND	100	75-120%	---	---	
Dichlorodifluoromethane	0.859	---	0.0910	"	"	"	ND	94	29-149%	---	---	Q-54a
1,1-Dichloroethane	1.08	---	0.0227	"	"	"	ND	118	76-125%	---	---	
1,2-Dichloroethane (EDC)	0.994	---	0.0227	"	"	"	ND	109	73-128%	---	---	
1,1-Dichloroethene	1.01	---	0.0227	"	"	"	ND	110	70-131%	---	---	
cis-1,2-Dichloroethene	1.02	---	0.0227	"	"	"	ND	112	77-123%	---	---	
trans-1,2-Dichloroethene	0.998	---	0.0227	"	"	"	ND	110	74-125%	---	---	
1,2-Dichloropropane	1.04	---	0.0227	"	"	"	ND	115	76-123%	---	---	
1,3-Dichloropropane	0.994	---	0.0455	"	"	"	ND	109	77-121%	---	---	
2,2-Dichloropropane	0.841	---	0.0455	"	"	"	ND	92	67-133%	---	---	
1,1-Dichloropropene	1.00	---	0.0455	"	"	"	ND	110	76-125%	---	---	
cis-1,3-Dichloropropene	0.938	---	0.0455	"	"	"	ND	103	74-126%	---	---	
trans-1,3-Dichloropropene	0.953	---	0.0455	"	"	"	ND	105	71-130%	---	---	
Ethylbenzene	0.936	---	0.0227	"	"	"	ND	103	76-122%	---	---	
Hexachlorobutadiene	0.887	---	0.0910	"	"	"	ND	97	61-135%	---	---	
2-Hexanone	2.01	---	0.455	"	"	1.82	ND	110	53-145%	---	---	
Isopropylbenzene	0.928	---	0.0455	"	"	0.910	ND	102	68-134%	---	---	
4-Isopropyltoluene	0.897	---	0.0455	"	"	"	ND	99	73-127%	---	---	
Methylene chloride	1.01	---	0.227	"	"	"	ND	111	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	2.21	---	0.455	"	"	1.82	ND	105	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	0.903	---	0.0455	"	"	0.910	ND	99	73-125%	---	---	
Naphthalene	0.930	---	0.0910	"	"	"	ND	102	62-129%	---	---	
n-Propylbenzene	0.950	---	0.0227	"	"	"	ND	104	73-125%	---	---	
Styrene	0.981	---	0.0455	"	"	"	ND	108	76-124%	---	---	
1,1,1,2-Tetrachloroethane	0.936	---	0.0227	"	"	"	ND	103	78-125%	---	---	
1,1,2,2-Tetrachloroethane	1.08	---	0.0455	"	"	"	ND	119	70-124%	---	---	

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HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/19/18 09:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040599 - EPA 5035A</b>						<b>Soil</b>						
<b>Matrix Spike (8040599-MS1)</b>						Prepared: 04/03/18 09:30 Analyzed: 04/09/18 19:42						
<b>QC Source Sample: MW3S-15 (A8D0237-06)</b>												
<b>5035A/8260C</b>												
Tetrachloroethene (PCE)	0.902	---	0.0227	mg/kg dry	"	"	ND	99	73-128%	---	---	
Toluene	0.958	---	0.0455	"	"	"	ND	105	77-121%	---	---	
1,2,3-Trichlorobenzene	0.894	---	0.227	"	"	"	ND	98	66-130%	---	---	
1,2,4-Trichlorobenzene	0.885	---	0.227	"	"	"	ND	97	67-129%	---	---	
1,1,1-Trichloroethane	0.964	---	0.0227	"	"	"	ND	106	73-130%	---	---	
1,1,2-Trichloroethane	1.04	---	0.0227	"	"	"	ND	114	78-121%	---	---	
Trichloroethene (TCE)	0.996	---	0.0227	"	"	"	ND	109	77-123%	---	---	
Trichlorofluoromethane	0.904	---	0.0910	"	"	"	ND	99	62-140%	---	---	
1,2,3-Trichloropropane	0.932	---	0.0455	"	"	"	ND	102	73-125%	---	---	
1,2,4-Trimethylbenzene	0.869	---	0.0455	"	"	"	ND	95	75-123%	---	---	
1,3,5-Trimethylbenzene	0.910	---	0.0455	"	"	"	ND	100	73-124%	---	---	
Vinyl chloride	1.14	---	0.0227	"	"	"	ND	125	56-135%	---	---	
m,p-Xylene	1.90	---	0.0455	"	"	1.82	ND	104	77-124%	---	---	
o-Xylene	0.971	---	0.0227	"	"	0.910	ND	107	77-123%	---	---	

Surr: 1,4-Difluorobenzene (Surr)	Recovery: 103 %	Limits: 80-120 %	Dilution: 1x
Toluene-d8 (Surr)	101 %	80-120 %	"
4-Bromofluorobenzene (Surr)	97 %	80-120 %	"

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HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/19/18 09:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040618 - Total Solids (Dry Weight)</b>						<b>Soil</b>						
<b>Duplicate (8040618-DUP1)</b>						Prepared: 04/10/18 05:30 Analyzed: 04/10/18 10:50						
QC Source Sample: MW3S-15 (A8D0237-06)												
EPA 8000C												
% Solids	86.9	---	1.00	% by Weight	1	---	88.5	---	---	2	10%	

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

<b>Batch 8040677 - Total Solids (Dry Weight)</b>						<b>Soil</b>						
<b>Duplicate (8040677-DUP1)</b>						Prepared: 04/11/18 09:50 Analyzed: 04/12/18 08:41						
QC Source Sample: MW14-25 (A8D0237-01)												
EPA 8000C												
% Solids	92.6	---	1.00	% by Weight	1	---	91.5	---	---	1	10%	
<b>Duplicate (8040677-DUP2)</b>						Prepared: 04/11/18 09:50 Analyzed: 04/12/18 08:41						
QC Source Sample: MW17-30 (A8D0237-15)												
EPA 8000C												
% Solids	89.8	---	1.00	% by Weight	1	---	90.1	---	---	0.3	10%	

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



HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/19/18 09:44

## 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
<b>Batch: 8040740</b>							
A8D0237-01	Soil	NWTPH-Dx	04/02/18 09:30	04/12/18 13:16	10.05g/5mL	10g/5mL	1.00
A8D0237-03	Soil	NWTPH-Dx	04/02/18 15:45	04/12/18 13:16	10.07g/5mL	10g/5mL	0.99
A8D0237-04	Soil	NWTPH-Dx	04/02/18 17:10	04/12/18 13:16	10.32g/5mL	10g/5mL	0.97
A8D0237-06	Soil	NWTPH-Dx	04/03/18 09:30	04/12/18 13:16	10.77g/5mL	10g/5mL	0.93
A8D0237-07	Soil	NWTPH-Dx	04/03/18 10:20	04/12/18 13:16	10.46g/5mL	10g/5mL	0.96
A8D0237-08	Soil	NWTPH-Dx	04/03/18 15:10	04/12/18 13:16	10.67g/5mL	10g/5mL	0.94
A8D0237-09	Soil	NWTPH-Dx	04/03/18 16:10	04/12/18 13:16	10.6g/5mL	10g/5mL	0.94
A8D0237-10	Soil	NWTPH-Dx	04/04/18 09:15	04/12/18 13:16	10.68g/5mL	10g/5mL	0.94
A8D0237-12	Soil	NWTPH-Dx	04/04/18 09:55	04/12/18 13:16	10.33g/5mL	10g/5mL	0.97
A8D0237-14	Soil	NWTPH-Dx	04/04/18 10:30	04/12/18 13:16	10.42g/5mL	10g/5mL	0.96
A8D0237-15	Soil	NWTPH-Dx	04/04/18 10:35	04/12/18 13:16	10.19g/5mL	10g/5mL	0.98
A8D0237-16	Soil	NWTPH-Dx	04/05/18 08:40	04/12/18 13:16	11.32g/5mL	10g/5mL	0.88
A8D0237-17	Soil	NWTPH-Dx	04/05/18 09:30	04/12/18 13:16	10.42g/5mL	10g/5mL	0.96
A8D0237-19	Soil	NWTPH-Dx	04/05/18 10:20	04/12/18 13:16	10.92g/5mL	10g/5mL	0.92
A8D0237-20	Soil	NWTPH-Dx	04/05/18 16:15	04/12/18 13:16	10.81g/5mL	10g/5mL	0.93
A8D0237-21	Soil	NWTPH-Dx	04/05/18 16:55	04/12/18 13:16	10.38g/5mL	10g/5mL	0.96
A8D0237-22	Soil	NWTPH-Dx	04/06/18 09:00	04/12/18 13:16	10.21g/5mL	10g/5mL	0.98

### 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
<b>Batch: 8040591</b>							
A8D0237-03	Soil	NWTPH-Gx (MS)	04/02/18 15:45	04/02/18 15:45	5.47g/5mL	5g/5mL	0.91
A8D0237-04	Soil	NWTPH-Gx (MS)	04/02/18 17:10	04/02/18 17:10	6.85g/5mL	5g/5mL	0.73
A8D0237-07	Soil	NWTPH-Gx (MS)	04/03/18 10:20	04/03/18 10:20	5.14g/5mL	5g/5mL	0.97
A8D0237-08	Soil	NWTPH-Gx (MS)	04/03/18 15:10	04/03/18 15:10	5.74g/5mL	5g/5mL	0.87
A8D0237-09	Soil	NWTPH-Gx (MS)	04/03/18 16:10	04/03/18 16:10	7.04g/5mL	5g/5mL	0.71
A8D0237-10	Soil	NWTPH-Gx (MS)	04/04/18 09:15	04/04/18 09:15	7.62g/5mL	5g/5mL	0.66
A8D0237-15	Soil	NWTPH-Gx (MS)	04/04/18 10:35	04/04/18 10:35	6.43g/5mL	5g/5mL	0.78
A8D0237-16	Soil	NWTPH-Gx (MS)	04/05/18 08:40	04/05/18 08:40	5.45g/5mL	5g/5mL	0.92
A8D0237-17	Soil	NWTPH-Gx (MS)	04/05/18 09:30	04/05/18 09:30	6.86g/5mL	5g/5mL	0.73
<b>Batch: 8040599</b>							
A8D0237-01	Soil	NWTPH-Gx (MS)	04/02/18 09:30	04/02/18 09:30	7.8g/5mL	5g/5mL	0.64

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Lisa Domenighini, Client Services Manager

**HydroCon LLC**

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/19/18 09:44

**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
A8D0237-06	Soil	NWTPH-Gx (MS)	04/03/18 09:30	04/03/18 09:30	7.25g/5mL	5g/5mL	0.69
A8D0237-21	Soil	NWTPH-Gx (MS)	04/05/18 16:55	04/05/18 16:55	6.42g/5mL	5g/5mL	0.78
A8D0237-22	Soil	NWTPH-Gx (MS)	04/06/18 09:00	04/06/18 09:00	12.88g/5mL	5g/5mL	0.39
<b>Batch: 8040630</b>							
A8D0237-12RE1	Soil	NWTPH-Gx (MS)	04/04/18 09:55	04/04/18 09:55	6.99g/5mL	5g/5mL	0.72
A8D0237-14RE1	Soil	NWTPH-Gx (MS)	04/04/18 10:30	04/04/18 10:30	7.26g/5mL	5g/5mL	0.69
A8D0237-19RE1	Soil	NWTPH-Gx (MS)	04/05/18 10:20	04/05/18 10:20	6.67g/5mL	5g/5mL	0.75
A8D0237-20RE1	Soil	NWTPH-Gx (MS)	04/05/18 16:15	04/05/18 16:15	5.91g/5mL	5g/5mL	0.85

**BTEX Compounds by EPA 8260C**

**Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 8040591</b>							
A8D0237-03	Soil	5035A/8260C	04/02/18 15:45	04/02/18 15:45	5.47g/5mL	5g/5mL	0.91
A8D0237-04	Soil	5035A/8260C	04/02/18 17:10	04/02/18 17:10	6.85g/5mL	5g/5mL	0.73
A8D0237-07	Soil	5035A/8260C	04/03/18 10:20	04/03/18 10:20	5.14g/5mL	5g/5mL	0.97
A8D0237-08	Soil	5035A/8260C	04/03/18 15:10	04/03/18 15:10	5.74g/5mL	5g/5mL	0.87
A8D0237-09	Soil	5035A/8260C	04/03/18 16:10	04/03/18 16:10	7.04g/5mL	5g/5mL	0.71
A8D0237-10	Soil	5035A/8260C	04/04/18 09:15	04/04/18 09:15	7.62g/5mL	5g/5mL	0.66
A8D0237-12	Soil	5035A/8260C	04/04/18 09:55	04/04/18 09:55	6.99g/5mL	5g/5mL	0.72
A8D0237-15	Soil	5035A/8260C	04/04/18 10:35	04/04/18 10:35	6.43g/5mL	5g/5mL	0.78
A8D0237-16	Soil	5035A/8260C	04/05/18 08:40	04/05/18 08:40	5.45g/5mL	5g/5mL	0.92
A8D0237-17	Soil	5035A/8260C	04/05/18 09:30	04/05/18 09:30	6.86g/5mL	5g/5mL	0.73
A8D0237-19	Soil	5035A/8260C	04/05/18 10:20	04/05/18 10:20	6.67g/5mL	5g/5mL	0.75
<b>Batch: 8040599</b>							
A8D0237-21	Soil	5035A/8260C	04/05/18 16:55	04/05/18 16:55	6.42g/5mL	5g/5mL	0.78
A8D0237-22	Soil	5035A/8260C	04/06/18 09:00	04/06/18 09:00	12.88g/5mL	5g/5mL	0.39
<b>Batch: 8040630</b>							
A8D0237-14RE1	Soil	5035A/8260C	04/04/18 10:30	04/04/18 10:30	7.26g/5mL	5g/5mL	0.69
A8D0237-20RE1	Soil	5035A/8260C	04/05/18 16:15	04/05/18 16:15	5.91g/5mL	5g/5mL	0.85

**Volatile Organic Compounds by EPA 5035A/8260C**

**Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
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Lisa Domenighini, Client Services Manager

**HydroCon LLC**

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/19/18 09:44

**SAMPLE PREPARATION INFORMATION**

**Volatile Organic Compounds by EPA 5035A/8260C**

Batch: 8040599

A8D0237-01	Soil	5035A/8260C	04/02/18 09:30	04/02/18 09:30	7.8g/5mL	5g/5mL	0.64
A8D0237-06	Soil	5035A/8260C	04/03/18 09:30	04/03/18 09:30	7.25g/5mL	5g/5mL	0.69

**Percent Dry Weight**

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

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: <u>8040618</u>							
A8D0237-06	Soil	EPA 8000C	04/03/18 09:30	04/10/18 05:30	1N/A/1N/A	1N/A/1N/A	NA
Batch: <u>8040677</u>							
A8D0237-01	Soil	EPA 8000C	04/02/18 09:30	04/11/18 09:50	1N/A/1N/A	1N/A/1N/A	NA
A8D0237-03	Soil	EPA 8000C	04/02/18 15:45	04/11/18 09:50	1N/A/1N/A	1N/A/1N/A	NA
A8D0237-04	Soil	EPA 8000C	04/02/18 17:10	04/11/18 09:50	1N/A/1N/A	1N/A/1N/A	NA
A8D0237-07	Soil	EPA 8000C	04/03/18 10:20	04/11/18 09:50	1N/A/1N/A	1N/A/1N/A	NA
A8D0237-08	Soil	EPA 8000C	04/03/18 15:10	04/11/18 09:50	1N/A/1N/A	1N/A/1N/A	NA
A8D0237-09	Soil	EPA 8000C	04/03/18 16:10	04/11/18 09:50	1N/A/1N/A	1N/A/1N/A	NA
A8D0237-10	Soil	EPA 8000C	04/04/18 09:15	04/11/18 09:50	1N/A/1N/A	1N/A/1N/A	NA
A8D0237-12	Soil	EPA 8000C	04/04/18 09:55	04/11/18 09:50	1N/A/1N/A	1N/A/1N/A	NA
A8D0237-14	Soil	EPA 8000C	04/04/18 10:30	04/11/18 09:50	1N/A/1N/A	1N/A/1N/A	NA
A8D0237-15	Soil	EPA 8000C	04/04/18 10:35	04/11/18 09:50	1N/A/1N/A	1N/A/1N/A	NA
A8D0237-16	Soil	EPA 8000C	04/05/18 08:40	04/11/18 09:50	1N/A/1N/A	1N/A/1N/A	NA
A8D0237-17	Soil	EPA 8000C	04/05/18 09:30	04/11/18 09:50	1N/A/1N/A	1N/A/1N/A	NA
A8D0237-19	Soil	EPA 8000C	04/05/18 10:20	04/11/18 09:50	1N/A/1N/A	1N/A/1N/A	NA
A8D0237-20	Soil	EPA 8000C	04/05/18 16:15	04/11/18 09:50	1N/A/1N/A	1N/A/1N/A	NA
A8D0237-21	Soil	EPA 8000C	04/05/18 16:55	04/11/18 09:50	1N/A/1N/A	1N/A/1N/A	NA
A8D0237-22	Soil	EPA 8000C	04/06/18 09:00	04/11/18 09:50	1N/A/1N/A	1N/A/1N/A	NA

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**HydroCon LLC**

314 W 15th Street Suite 300  
Vancouver, WA 98660

**Project: Coleman Wenatchee**

Project Number: 2017-074  
Project Manager: Craig Hultgren

**Reported:**  
04/19/18 09:44

## Notes and Definitions

### Qualifiers:

- 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.
- F-13 The chromatographic pattern does not resemble the fuel standard used for quantitation
- F-15 Results for diesel are estimated due to overlap from the reported oil result.
- F-16 Results for oil are estimated due to overlap from the reported diesel result.
- Q-01 Spike recovery and/or RPD is outside acceptance limits.
- Q-05 Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-54 Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by -14.1%. 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 8260C/8270D by -2.9%. The results are reported as Estimated Values.
- Q-54b Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by -7.7%. The results are reported as Estimated Values.
- Q-55 Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260C, however there is adequate sensitivity to ensure detection at the reporting level.
- R-02 The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- R-04 Reporting levels elevated due to dilution necessary for analysis.
- S-08 TPH-Gx Surrogate recovery cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract. See 8260B results for accurate Surrogate recovery.

### Notes and Conventions:

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.
- RPD Relative Percent Difference
- MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
- WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
- Batch QC Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.

Apex Laboratories

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Lisa Domenighini, Client Services Manager

**HydroCon LLC**

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/19/18 09:44

**Blank Policy** Apex assesses blank data for potential high bias down to a level equal to ½ the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they 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.

For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor.

Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.

--- 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).



HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/19/18 09:44

Lab # **A8D0237** COC 1 of 3

### CHAIN OF CUSTODY

**APEX LABS**

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333  
 Company: **HydroCon** Project Mgr: **Craig Hultgren** Project Name: **Coleman Wenatchee** Project # **2017-074**  
 Address: **314 W 15th Ave, Vancouver, WA 98660** Phone: **(503) 708-6079** Fax: **-** Email: **Craig.Hultgren@hydroconllc.net**  
 Sampled by: **Chris Dushek**

LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-DX	NWTPH-GX	8260 VOCs Full List	8260 RBDM VOCs	8260 HVOCS	8260 BTEX VOCs	8270 SVOC	8270 SIM PAHs	8082 PCBs	600 TIO	RCCA Metals (8)	TCLP Metals (8)	Mn, Pb, Cu, Ni, Fe, Zn, Cd, Cr, As, Ba, Be, C, Hg, Se, V, Ni, Ag, Bi, Br, Cl, Co, Cr, Mn, Mo, Ni, Pb, Sn, Tl, U, W, Y, Zn	TOTAL DISS TCLP	1200-COLS	1200-Z		
MW14-25	4/18/18	08:30	Soil	3	X	X	X	X															
MW14-35		10:50			X	X	X	X															
MW12-10		15:45			X	X	X	X															
MW12-20		17:10			X	X	X	X															
MW35-10	4/18/18	08:35			X	X	X	X															
MW35-15		08:30			X	X	X	X															
MW35-20		10:20			X	X	X	X															
MW15-10		15:10			X	X	X	X															
MW15-20		16:10			X	X	X	X															
MW17-10	4/18/18	09:15		7	X	X	X	X															

Normal Turn Around Time (TAT) = 10 Business Days  
 YES  NO   
 TAT Requested (circle): 1 Day  2 Day  3 Day  4 DAY  5 DAY  Other: \_\_\_\_\_

SPECIAL INSTRUCTIONS:

RECEIVED BY: \_\_\_\_\_ Date: 4/18/18 Signature: [Signature] Time: 10:55  
 Signature: [Signature] Date: 4/18/18  
 Printed Name: Chris Dushek  
 Company: HydroCon

RECEIVED BY: \_\_\_\_\_ Date: \_\_\_\_\_ Signature: \_\_\_\_\_ Time: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_

Apex Laboratories

*Lisa Domenighini*

Lisa Domenighini, Client Services Manager

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HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/19/18 09:44

**APEX LABS**      **CHAIN OF CUSTODY**      Lab # **PSD0237**      COC **2 of 3**

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Company: **HydroCon**      Project Mgr: **Craig Hultgren**      Project Name: **Coleman Oil Wenatchee**      Project # **2017-074**  
 Address: **314 W 15th Ave Vancouver, WA 98660**      Phone: **(360) 702-6074**      Fax: **-**      Email: **craig@hydrocon.com**  
 Sampled by: **Chris Daschel**      ANALYSIS REQUEST      **robert.h@hydrocon.net**

LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-CID	NWTPH-DX	NWTPH-GX	8260 VOCs Full List	8260 RBDM VOCs	8260 HVOCs	8260 BTEX VOCs	8270 SVOC	8270 SIM PAHs	8082 PCBs	600 TTO	RCA Metals (8)	TCLP Metals (8)	Al, Sb, As, Ba, Be, Cd, Cr, Cu, Ni, Pb, Se, Ag, Na, TH, V, Zn, Hg, Mg, Mn, Mo, Ni, K, Fe, Zn	TOTAL DISS TCLP	1200-COLS	1200-Z
MW17-15	4/18	0925	soil	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW17-17	4/18	0955			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW17-20	4/20	1020			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW17-25	4/30	1030			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW17-30	4/30	1035			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW19-10	4/18	0810			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW19-18	4/30	0930			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW19-25	4/30	0955			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW19-30	4/30	1020			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW16-10	4/15	1615			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Normal Turn Around Time (TAT) = 10 Business Days      YES  NO

TAT Requested (circle):      1 Day      2 Day      3 Day      4 DAY      5 DAY      Other: \_\_\_\_\_

SPECIAL INSTRUCTIONS:

RELINQUISHED BY: *Chris Daschel*      Date: 4/18/18      Signature: *Chris Daschel*      Date: 4/18/18

RECEIVED BY: *Robert Hultgren*      Date: 4/19/18      Signature: *Robert Hultgren*      Date: 4/19/18

Printed Name: **Chris Daschel**      Time: 1055      Printed Name: **Robert Hultgren**      Time: 1055

Company: **HydroCon**      Company: **Apex**

*Lisa Domenighini*

HydroCon LLC
314 W 15th Street Suite 300
Vancouver, WA 98660

Project: Coleman Wenatchee
Project Number: 2017-074
Project Manager: Craig Hultgren

Reported:
04/19/18 09:44

APEX LABS CHAIN OF CUSTODY Lab # A6D0267 COC 3 of 3

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Form header section containing company info, project name (HydroCon), address (314 W 15th Ave Suite 300 Vancouver WA 98660), and PO# (2017-074).

Table with 10 rows (numbered 1-10) and multiple columns for tracking sample analysis. Columns include DATE, TIME, LAB ID #, MATRIX, # OF CONTAINERS, and various chemical analysis categories like ANALYSIS REQUEST.

SPECIAL INSTRUCTIONS:

TAT Requested (circle) section with 1 Day, 2 Day, 3 Day, 4 Day, 5 Day, and Other options.

SAMPLES ARE HELD FOR 30 DAYS

Signature and Date fields for RELINQUISHED BY and RECEIVED BY. Includes handwritten signatures and dates.

Apex Laboratories

Signature of Lisa Domenighini

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Lisa Domenighini, Client Services Manager

<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/19/18 09:44
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**APEX LABS COOLER RECEIPT FORM**

Client: Hydrocon Element WO#: A8 D0237  
 Project/Project #: Coleman oil Wenatchee

**Delivery info:**

Date/Time Received: 4/17/18 @ 1055 By: KM  
 Delivered by: Apex  Client  ESS  FedEx  UPS  Swift  Senvoy  SDS  Other

**Cooler Inspection** Inspected by: KM : 4/17/18 @ 1055  
 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 (deg. C)	<u>1.4</u>						
Received on Ice? <input checked="" type="checkbox"/> <u>Y/N</u>							
Temp. Blanks? <input checked="" type="checkbox"/> <u>Y/N</u>	<u>24</u>						
Ice Type: (Gel/Real/Other) <u>Real</u>							
Condition: <u>good</u>							

Cooler out of temp?  Y/N Possible reason why: \_\_\_\_\_  
 If some coolers are in temp and some out, were green dot applied to out of temperature samples? Yes/No/NA

**Samples Inspection:** Inspected by: KM : 4/17/18 @ 1223

All Samples Intact? Yes  No  Comments: \_\_\_\_\_

Bottle Labels/COCs agree? Yes  No  Comments: acc 4/17/18  
1055. MW19-30 IS on Conts read 1025.

Containers/Volumes Received Appropriate for Analysis? Yes  No  Comments: \_\_\_\_\_

Do VOA Vials have Visible Headspace? Yes  No  NA   
 Comments: \_\_\_\_\_

Water Samples: pH Checked and Appropriate (except VOAs): Yes  No  NA   
 Comments: \_\_\_\_\_

**Additional Information:** \_\_\_\_\_

Labeled by: [Signature] Witness: AKX Cooler Inspected by: [Signature] See Project Contact Form: Y

*Lisa Domenighini*

# Apex Labs

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323 Phone  
503-718-0333 Fax

Sunday, April 22, 2018

Craig Hultgren  
HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

RE: Coleman Wenatchee / 2017-074

Enclosed are the results of analyses for work order A8D0535, which was received by the laboratory on 4/14/2018 at 10:30:00AM.

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

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

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Lisa Domenighini, Client Services Manager

HydroCon LLC

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/22/18 07:36

## ANALYTICAL REPORT FOR SAMPLES

### SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SL01-0.5	A8D0535-01	Soil	04/12/18 11:00	04/14/18 10:30
SL02-0.5	A8D0535-02	Soil	04/12/18 11:15	04/14/18 10:30
SL03-0.5	A8D0535-03	Soil	04/12/18 11:30	04/14/18 10:30
SL04-0.5	A8D0535-04	Soil	04/12/18 11:45	04/14/18 10:30
SL05-0.5	A8D0535-05	Soil	04/12/18 12:00	04/14/18 10:30

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Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/22/18 07:36

## ANALYTICAL CASE NARRATIVE

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**Work Order: A8D0535**

At the request of the client, only samples with "SL" prefixes were included in this report.

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Lisa Domenighini, Client Services Manager

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<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/22/18 07:36
---	--	------------------------------------

## ANALYTICAL SAMPLE RESULTS

### Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>SL01-0.5 (A8D0535-01)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040993</b>				
Diesel	39400	---	1180	mg/kg dry	50	04/20/18 01:05	NWTPH-Dx	F-13
Oil	ND	---	2350	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: %</i>	<i>Limits: 50-150 %</i>	"	"	"	<i>S-01</i>
<b>SL02-0.5 (A8D0535-02)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040993</b>				
Diesel	30400	---	1290	mg/kg dry	50	04/20/18 01:26	NWTPH-Dx	F-13
Oil	ND	---	2570	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: %</i>	<i>Limits: 50-150 %</i>	"	"	"	<i>S-01</i>
<b>SL03-0.5 (A8D0535-03)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040993</b>				
Diesel	21400	---	1120	mg/kg dry	50	04/20/18 02:07	NWTPH-Dx	F-13
Oil	ND	---	2240	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: %</i>	<i>Limits: 50-150 %</i>	"	"	"	<i>S-01</i>
<b>SL04-0.5 (A8D0535-04)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040993</b>				
Diesel	18100	---	1150	mg/kg dry	50	04/20/18 02:28	NWTPH-Dx	F-13
Oil	ND	---	2310	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: %</i>	<i>Limits: 50-150 %</i>	"	"	"	<i>S-01</i>
<b>SL05-0.5 (A8D0535-05)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040993</b>				
Diesel	ND	---	221	mg/kg dry	10	04/20/18 03:10	NWTPH-Dx	
Oil	527	---	442	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 50-150 %</i>	"	"	"	<i>S-05</i>



HydroCon LLC

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/22/18 07:36

## ANALYTICAL SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>SL01-0.5 (A8D0535-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
<b>Gasoline Range Organics</b>	<b>1140</b>	---	123	mg/kg dry	1000	04/17/18 15:00	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 141 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>98 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>SL02-0.5 (A8D0535-02RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040914</b>			
<b>Gasoline Range Organics</b>	<b>629</b>	---	26.4	mg/kg dry	200	04/18/18 16:21	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 140 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>109 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>SL03-0.5 (A8D0535-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
<b>Gasoline Range Organics</b>	<b>2580</b>	---	102	mg/kg dry	1000	04/17/18 16:21	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 165 %</i>	<i>Limits: 50-150 %</i>	1	"	"	S-08
<i>1,4-Difluorobenzene (Sur)</i>			<i>97 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>SL04-0.5 (A8D0535-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
<b>Gasoline Range Organics</b>	<b>968</b>	---	105	mg/kg dry	1000	04/17/18 16:48	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 130 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>94 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>SL05-0.5 (A8D0535-05RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040914</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	5.15	mg/kg dry	50	04/18/18 15:54	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 108 %</i>	<i>Limits: 50-150 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>108 %</i>	<i>Limits: 50-150 %</i>	"	"	"	

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Lisa Domenighini, Client Services Manager

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HydroCon LLC

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/22/18 07:36

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting			Date Analyzed	Method	Notes
			Limit	Units	Dilution			
<b>SL01-0.5 (A8D0535-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>		<b>R-04</b>	
Benzene	ND	---	0.246	mg/kg dry	1000	04/17/18 15:00	5035A/8260C	
Toluene	ND	---	1.23	"	"	"	"	
Ethylbenzene	ND	---	0.614	"	"	"	"	
Xylenes, total	ND	---	1.84	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 100 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>89 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>SL02-0.5 (A8D0535-02RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040914</b>		<b>R-04</b>	
Benzene	ND	---	0.0528	mg/kg dry	200	04/18/18 16:21	5035A/8260C	
Toluene	ND	---	0.264	"	"	"	"	
Ethylbenzene	ND	---	0.132	"	"	"	"	
Xylenes, total	ND	---	0.396	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 108 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>SL03-0.5 (A8D0535-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Benzene	ND	---	0.203	mg/kg dry	1000	04/17/18 16:21	5035A/8260C	
Toluene	ND	---	1.02	"	"	"	"	
Ethylbenzene	ND	---	0.508	"	"	"	"	
Xylenes, total	<b>1.60</b>	---	1.52	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 99 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>91 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>105 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>SL04-0.5 (A8D0535-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>		<b>R-04</b>	
Benzene	ND	---	0.209	mg/kg dry	1000	04/17/18 16:48	5035A/8260C	
Toluene	ND	---	1.05	"	"	"	"	
Ethylbenzene	ND	---	0.523	"	"	"	"	
Xylenes, total	ND	---	1.57	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 96 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>91 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>105 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>SL05-0.5 (A8D0535-05RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040914</b>			
Benzene	ND	---	0.0103	mg/kg dry	50	04/18/18 15:54	5035A/8260C	

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Lisa Domenighini, Client Services Manager

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**HydroCon LLC**

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/22/18 07:36

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>SL05-0.5 (A8D0535-05RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040914</b>			
Toluene	ND	---	0.0515	mg/kg dry	50	"	5035A/8260C	
Ethylbenzene	ND	---	0.0258	"	"	"	"	
Xylenes, total	ND	---	0.0773	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 107 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

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 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/22/18 07:36

## ANALYTICAL SAMPLE RESULTS

### Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>SL01-0.5 (A8D0535-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	82.1	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>SL02-0.5 (A8D0535-02)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	74.7	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>SL03-0.5 (A8D0535-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	84.0	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>SL04-0.5 (A8D0535-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	82.7	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>SL05-0.5 (A8D0535-05)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	87.3	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	

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 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/22/18 07:36

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040993 - EPA 3546 (Fuels)</b>						<b>Soil</b>						
<b>Blank (8040993-BLK1)</b>						Prepared: 04/19/18 14:31 Analyzed: 04/19/18 21:57						
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	---
Oil	ND	---	50.0	"	"	---	---	---	---	---	---	---
Mineral Oil	ND	---	36.4	"	"	---	---	---	---	---	---	---
<i>Surr: o-Terphenyl (Surr)</i>			<i>Recovery: 95 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>					
<b>LCS (8040993-BS1)</b>						Prepared: 04/19/18 14:31 Analyzed: 04/19/18 22:18						
NWTPH-Dx												
Diesel	120	---	25.0	mg/kg wet	1	125	---	96	76-115%	---	---	---
<i>Surr: o-Terphenyl (Surr)</i>			<i>Recovery: 106 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>					

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Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/22/18 07:36

## QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040834 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040834-BLK1)</b>						Prepared: 04/17/18 09:00 Analyzed: 04/17/18 13:39						
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	---
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 108 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			100 %	50-150 %		"						
<b>LCS (8040834-BS5)</b>						Prepared: 04/17/18 09:00 Analyzed: 04/17/18 13:12						
NWTPH-Gx (MS)												
Gasoline Range Organics	22.8	---	5.00	mg/kg wet	50	25.0	---	91	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 105 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			101 %	50-150 %		"						
<b>Duplicate (8040834-DUP1)</b>						Prepared: 04/12/18 11:00 Analyzed: 04/17/18 15:27						
QC Source Sample: SL01-0.5 (A8D0535-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	1170	---	126	mg/kg dry	1000	---	1140	---	---	3	30%	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 140 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			97 %	50-150 %		"						



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/22/18 07:36
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## QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040914 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040914-BLK1)</b>						Prepared: 04/18/18 09:40 Analyzed: 04/18/18 12:20						
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>102 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>LCS (8040914-BS3)</b>						Prepared: 04/18/18 09:40 Analyzed: 04/18/18 11:54						
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	26.0	---	5.00	mg/kg wet	50	25.0	---	104	80-120%	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 100 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>103 %</i>		<i>50-150 %</i>		<i>"</i>						

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Lisa Domenighini, Client Services Manager

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**HydroCon LLC**

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/22/18 07:36

## QUALITY CONTROL (QC) SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040834 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040834-BLK1)</b>						Prepared: 04/17/18 09:00 Analyzed: 04/17/18 13:39						
<b>5035A/8260C</b>												
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	---
Toluene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Xylenes, total	ND	---	0.0500	"	"	---	---	---	---	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>104 %</i>		<i>80-120 %</i>		<i>"</i>					
<b>LCS (8040834-BS4)</b>						Prepared: 04/17/18 09:00 Analyzed: 04/17/18 12:36						
<b>5035A/8260C</b>												
Benzene	1.09	---	0.0100	mg/kg wet	50	1.00	---	109	80-120%	---	---	---
Toluene	0.966	---	0.0500	"	"	"	---	97	"	---	---	---
Ethylbenzene	1.05	---	0.0250	"	"	"	---	105	"	---	---	---
Xylenes, total	3.26	---	0.0750	"	"	3.00	---	109	"	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>		<i>80-120 %</i>		<i>"</i>					
<b>Duplicate (8040834-DUP1)</b>						Prepared: 04/12/18 11:00 Analyzed: 04/17/18 15:27						
<b>QC Source Sample: SL01-0.5 (A8D0535-01)</b>												
<b>5035A/8260C</b>												
Benzene	ND	---	0.251	mg/kg dry	1000	---	ND	---	---	---	30%	---
Toluene	ND	---	1.26	"	"	---	ND	---	---	---	30%	---
Ethylbenzene	ND	---	0.628	"	"	---	ND	---	---	---	30%	---
Xylenes, total	ND	---	1.88	"	"	---	ND	---	---	---	30%	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>89 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>		<i>80-120 %</i>		<i>"</i>					

Apex Laboratories



Lisa Domenighini, Client Services Manager

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<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/22/18 07:36
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## QUALITY CONTROL (QC) SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040914 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040914-BLK1)</b>						Prepared: 04/18/18 09:40 Analyzed: 04/18/18 12:20						
<b>5035A/8260C</b>												
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	---
Toluene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Xylenes, total	ND	---	0.0500	"	"	---	---	---	---	---	---	---

Surr: 1,4-Difluorobenzene (Surr)	Recovery: 104 %	Limits: 80-120 %	Dilution: 1x
Toluene-d8 (Surr)	102 %	80-120 %	"
4-Bromofluorobenzene (Surr)	97 %	80-120 %	"

**LCS (8040914-BS2)** Prepared: 04/18/18 09:40 Analyzed: 04/18/18 11:27

<b>5035A/8260C</b>												
Benzene	1.03	---	0.0100	mg/kg wet	50	1.00	---	103	80-120%	---	---	---
Toluene	0.992	---	0.0500	"	"	"	---	99	"	---	---	---
Ethylbenzene	0.970	---	0.0250	"	"	"	---	97	"	---	---	---
Xylenes, total	2.91	---	0.0750	"	"	3.00	---	97	"	---	---	---

Surr: 1,4-Difluorobenzene (Surr)	Recovery: 102 %	Limits: 80-120 %	Dilution: 1x
Toluene-d8 (Surr)	100 %	80-120 %	"
4-Bromofluorobenzene (Surr)	96 %	80-120 %	"





HydroCon LLC

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/22/18 07:36

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	------	--------------	---------------	------	-------------	-----	-----------	-------

### Batch 8040876 - Total Solids (Dry Weight)

Soil

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

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Lisa Domenighini, Client Services Manager

HydroCon LLC

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/22/18 07:36

## 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: 8040993							
A8D0535-01	Soil	NWTPH-Dx	04/12/18 11:00	04/19/18 14:31	10.35g/5mL	10g/5mL	0.97
A8D0535-02	Soil	NWTPH-Dx	04/12/18 11:15	04/19/18 14:31	10.41g/5mL	10g/5mL	0.96
A8D0535-03	Soil	NWTPH-Dx	04/12/18 11:30	04/19/18 14:31	10.63g/5mL	10g/5mL	0.94
A8D0535-04	Soil	NWTPH-Dx	04/12/18 11:45	04/19/18 14:31	10.47g/5mL	10g/5mL	0.96
A8D0535-05	Soil	NWTPH-Dx	04/12/18 12:00	04/19/18 14:31	10.37g/5mL	10g/5mL	0.96

### 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: 8040834							
A8D0535-01	Soil	NWTPH-Gx (MS)	04/12/18 11:00	04/12/18 11:00	6.04g/5mL	5g/5mL	0.83
A8D0535-03	Soil	NWTPH-Gx (MS)	04/12/18 11:30	04/12/18 11:30	7.2g/5mL	5g/5mL	0.69
A8D0535-04	Soil	NWTPH-Gx (MS)	04/12/18 11:45	04/12/18 11:45	7.22g/5mL	5g/5mL	0.69
Batch: 8040914							
A8D0535-02RE1	Soil	NWTPH-Gx (MS)	04/12/18 11:15	04/12/18 11:15	6.83g/5mL	5g/5mL	0.73
A8D0535-05RE1	Soil	NWTPH-Gx (MS)	04/12/18 12:00	04/12/18 12:00	6.47g/5mL	5g/5mL	0.77

### BTEX Compounds by EPA 8260C

**Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8040834							
A8D0535-01	Soil	5035A/8260C	04/12/18 11:00	04/12/18 11:00	6.04g/5mL	5g/5mL	0.83
A8D0535-03	Soil	5035A/8260C	04/12/18 11:30	04/12/18 11:30	7.2g/5mL	5g/5mL	0.69
A8D0535-04	Soil	5035A/8260C	04/12/18 11:45	04/12/18 11:45	7.22g/5mL	5g/5mL	0.69
Batch: 8040914							
A8D0535-02RE1	Soil	5035A/8260C	04/12/18 11:15	04/12/18 11:15	6.83g/5mL	5g/5mL	0.73
A8D0535-05RE1	Soil	5035A/8260C	04/12/18 12:00	04/12/18 12:00	6.47g/5mL	5g/5mL	0.77

### Percent Dry Weight

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

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8040876							

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**HydroCon LLC**

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

**Reported:**

04/22/18 07:36

## 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
A8D0535-01	Soil	EPA 8000C	04/12/18 11:00	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0535-02	Soil	EPA 8000C	04/12/18 11:15	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0535-03	Soil	EPA 8000C	04/12/18 11:30	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0535-04	Soil	EPA 8000C	04/12/18 11:45	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0535-05	Soil	EPA 8000C	04/12/18 12:00	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA

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Lisa Domenighini, Client Services Manager

**HydroCon LLC**

314 W 15th Street Suite 300  
Vancouver, WA 98660

**Project: Coleman Wenatchee**

Project Number: 2017-074  
Project Manager: Craig Hultgren

**Reported:**  
04/22/18 07:36

## Notes and Definitions

### Qualifiers:

- F-13 The chromatographic pattern does not resemble the fuel standard used for quantitation
- R-04 Reporting levels elevated due to dilution necessary for analysis.
- S-01 Surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
- S-05 Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
- S-08 TPH-Gx Surrogate recovery cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract. See 8260B results for accurate Surrogate recovery.

### Notes and Conventions:

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.
- RPD Relative Percent Difference
- MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
- WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
- Batch QC Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
- Blank Policy Apex assesses blank data for potential high bias down to a level equal to ½ the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they 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.  
  
For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor.  
  
Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.
- 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).

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Lisa Domenighini, Client Services Manager

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HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/22/18 07:36

**CHAIN OF CUSTODY**

APEX LABS Lab # **180535**

COC 2 of 3

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Company: <u>HydroCon</u>		Project Mgr: <u>Craig Hultgren</u>		Project Name: <u>Coleman Oil Wenatchee</u>		Project # <u>2017-074</u>	
Address: <u>HydroCon</u>		Phone: _____		Fax: _____		Email: <u>Craig@hydroconllc.com</u>	
Sampled by: <u>Chris Dastchel</u>		ANALYSIS REQUEST					
Site Location: OR <u>(WA)</u>	MATRIX	DATE	TIME	# OF CONTAINERS	NWTPH-CID	NWTPH-DX	NWTPH-GX
Other: _____							
SAMPLE ID							
MW18-25	Soil	4/18/18	0925	3	X		X
MW18-35		1020				HOLD	
MW15-10		4/12/18	0845		X		X
MW15-20			0830				
MW15-30			1000				
SLO1-0.5			1100				
SLO2-0.5			1115				
SLO3-0.5			1130				
SLO4-0.5			1145				
SLO5-0.5			1200				
Normal Turn Around Time (TAT) = 10 Business Days		YES <input checked="" type="checkbox"/>		NO <input type="checkbox"/>			
TAT Requested (circle)		1 Day	2 Day	3 Day	Other: _____		
		4 DAY	5 DAY				
SAMPLES ARE HELD FOR 30 DAYS							
RELINQUISHED BY:		RECEIVED BY:		RECEIVED BY:			
Signature: <u>[Signature]</u>		Signature: <u>[Signature]</u>		Signature: _____			
Date: <u>4/18/18</u>		Date: <u>4/18/18</u>		Date: _____			
Printed Name: <u>Chris Dastchel</u>		Printed Name: <u>Sammy [Signature]</u>		Printed Name: _____			
Time: <u>10:30</u>		Time: <u>10:30</u>		Time: _____			
Company: <u>HydroCon</u>		Company: <u>Apex</u>		Company: _____			

Put SL samples on separate report

*Lisa Domenighini*

<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/22/18 07:36
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**APEX LABS COOLER RECEIPT FORM**

Client: Hydrocon Element WO#: A8 D0535  
 Project/Project #: Coleman Oil Wenatchee

**Delivery info:**  
 Date/Time Received: 4/14/18 @ 1030 By: [Signature]  
 Delivered by: Apex  Client  ESS  FedEx  UPS  Swift  Senvoy  SDS  Other   
**Cooler Inspection** Inspected by: [Signature] : 4/14/18 @ 1030  
 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 (deg. C)	<u>1.3</u>						
Received on Ice? (Y/N)	<u>(Y/N)</u>						
Temp. Blanks? (Y/N)							
Ice Type: (Gel/Real/Other)	<u>(Real)</u>						
Condition:	<u>good</u>						

Cooler out of temp? (Y/N) (N) Possible reason why: \_\_\_\_\_  
 If some coolers are in temp and some out, were green dot applied to out of temperature samples? Yes/No (NA)  
**Samples Inspection:** Inspected by: [Signature] : 4/14/18 @ 1045

All Samples Intact? Yes  No  Comments: \_\_\_\_\_

Bottle Labels/COCs agree? Yes  No  Comments: \_\_\_\_\_

Containers/Volumes Received Appropriate for Analysis? Yes  No  Comments: \_\_\_\_\_

Do VOA Vials have Visible Headspace? Yes  No  NA

Comments: \_\_\_\_\_

Water Samples: pH Checked and Appropriate (except VOAs): Yes  No  NA

Comments: \_\_\_\_\_

**Additional Information:** \_\_\_\_\_

Labeled by: [Signature] Witness: [Signature] Cooler Inspected by: [Signature] See Project Contact Form: Y

*Lisa Domenighini*

# Apex Labs

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323 Phone  
503-718-0333 Fax

Sunday, April 22, 2018

Craig Hultgren  
HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

RE: Coleman Wenatchee / 2017-074

Enclosed are the results of analyses for work order A8D0538, which was received by the laboratory on 4/14/2018 at 10:30:00AM.

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

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

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Lisa Domenighini, Client Services Manager

HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/22/18 07:54

## ANALYTICAL REPORT FOR SAMPLES

### SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW21-10	A8D0538-01	Soil	04/09/18 08:25	04/14/18 10:30
MW21-25	A8D0538-02	Soil	04/09/18 09:35	04/14/18 10:30
MW21-32	A8D0538-03	Soil	04/09/18 10:15	04/14/18 10:30
MW20-10	A8D0538-04	Soil	04/10/18 08:45	04/14/18 10:30
MW20-15	A8D0538-05	Soil	04/10/18 09:25	04/14/18 10:30
MW20-23.5	A8D0538-06	Soil	04/10/18 10:30	04/14/18 10:30
MW100-23.5	A8D0538-07	Soil	04/10/18 10:30	04/14/18 10:30
MW20-26	A8D0538-08	Soil	04/10/18 11:05	04/14/18 10:30
MW18-10	A8D0538-09	Soil	04/11/18 08:20	04/14/18 10:30
MW18-15	A8D0538-10	Soil	04/11/18 08:35	04/14/18 10:30
MW18-25	A8D0538-11	Soil	04/11/18 09:25	04/14/18 10:30
MW18-35	A8D0538-12	Soil	04/11/18 10:20	04/14/18 10:30
MW15-10	A8D0538-13	Soil	04/12/18 08:45	04/14/18 10:30
MW15-20	A8D0538-14	Soil	04/12/18 09:30	04/14/18 10:30
MW15-30	A8D0538-15	Soil	04/12/18 10:00	04/14/18 10:30
MW22-15	A8D0538-16	Soil	04/13/18 09:00	04/14/18 10:30
MW22-25	A8D0538-17	Soil	04/13/18 09:20	04/14/18 10:30
MW22-30	A8D0538-18	Soil	04/13/18 09:45	04/14/18 10:30
MW22-40	A8D0538-19	Soil	04/13/18 10:30	04/14/18 10:30

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Lisa Domenighini, Client Services Manager



HydroCon LLC

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/22/18 07:54

## ANALYTICAL SAMPLE RESULTS

### Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW21-10 (A8D0538-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040993</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/20/18 04:54	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 88 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW21-25 (A8D0538-02)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040993</b>			
Diesel	47.2	---	25.0	mg/kg dry	1	04/20/18 05:15	NWTPH-Dx	F-11
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 80 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW21-32 (A8D0538-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040993</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/20/18 05:36	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 88 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW20-10 (A8D0538-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040993</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/20/18 05:56	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 95 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW20-15 (A8D0538-05)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040993</b>			
Diesel	72.9	---	25.0	mg/kg dry	1	04/20/18 06:18	NWTPH-Dx	F-13
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 86 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW20-23.5 (A8D0538-06)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040993</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/20/18 06:38	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 98 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW100-23.5 (A8D0538-07)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040993</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/20/18 07:00	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 89 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW20-26 (A8D0538-08)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040993</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/20/18 07:20	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 82 %</i>	<i>Limits: 50-150 %</i>	"	"	"	

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Lisa Domenighini, Client Services Manager

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HydroCon LLC

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/22/18 07:54

## ANALYTICAL SAMPLE RESULTS

### Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW18-10 (A8D0538-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040993</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/20/18 07:41	NWTPH-Dx	
Oil	102	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 94 %</i>		<i>Limits: 50-150 %</i>		"	"
<b>MW18-15 (A8D0538-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040993</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/20/18 08:02	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 92 %</i>		<i>Limits: 50-150 %</i>		"	"
<b>MW18-25 (A8D0538-11)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040993</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/20/18 08:23	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 89 %</i>		<i>Limits: 50-150 %</i>		"	"
<b>MW15-10 (A8D0538-13)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040997</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/19/18 22:39	NWTPH-Dx	
Oil	75.8	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 95 %</i>		<i>Limits: 50-150 %</i>		"	"
<b>MW15-20 (A8D0538-14)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040997</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/19/18 23:00	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 79 %</i>		<i>Limits: 50-150 %</i>		"	"
<b>MW15-30 (A8D0538-15)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040997</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/19/18 23:20	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 81 %</i>		<i>Limits: 50-150 %</i>		"	"
<b>MW22-15 (A8D0538-16)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040997</b>			
Diesel	ND	---	25.0	mg/kg dry	1	04/19/18 23:41	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 92 %</i>		<i>Limits: 50-150 %</i>		"	"
<b>MW22-25 (A8D0538-17)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040997</b>			
Diesel	ND	---	25.9	mg/kg dry	1	04/20/18 00:02	NWTPH-Dx	
Oil	ND	---	51.8	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 79 %</i>		<i>Limits: 50-150 %</i>		"	"

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Lisa Domenighini, Client Services Manager

HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/22/18 07:54

## ANALYTICAL SAMPLE RESULTS

### Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW22-30 (A8D0538-18)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040997</b>				
Diesel	45700	---	4080	mg/kg dry	100	04/20/18 00:23	NWTPH-Dx	F-13
Oil	ND	---	8160	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: %</i>	<i>Limits: 50-150 %</i>	"	"	"	<i>S-01</i>
<b>MW22-40 (A8D0538-19)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040997</b>				
Diesel	52.5	---	25.0	mg/kg dry	1	04/20/18 01:05	NWTPH-Dx	F-24
Oil	ND	---	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 96 %</i>	<i>Limits: 50-150 %</i>	"	"	"	

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HydroCon LLC

314 W 15th Street Suite 300  
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Project: Coleman Wenatchee

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/22/18 07:54

## ANALYTICAL SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting			Date Analyzed	Method	Notes
			Limit	Units	Dilution			
<b>MW21-10 (A8D0538-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Gasoline Range Organics	ND	---	5.32	mg/kg dry	50	04/17/18 18:09	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 109 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			95 %	Limits: 50-150 %	"	"	"	
<b>MW21-25 (A8D0538-02)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Gasoline Range Organics	9.65	---	5.70	mg/kg dry	50	04/17/18 23:04	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 125 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			98 %	Limits: 50-150 %	"	"	"	
<b>MW21-32 (A8D0538-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Gasoline Range Organics	ND	---	5.69	mg/kg dry	50	04/17/18 19:29	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 108 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			97 %	Limits: 50-150 %	"	"	"	
<b>MW20-10 (A8D0538-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Gasoline Range Organics	ND	---	5.02	mg/kg dry	50	04/17/18 19:56	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 105 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			97 %	Limits: 50-150 %	"	"	"	
<b>MW20-15 (A8D0538-05)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Gasoline Range Organics	60.3	---	5.08	mg/kg dry	50	04/17/18 20:23	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 145 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			96 %	Limits: 50-150 %	"	"	"	
<b>MW20-23.5 (A8D0538-06)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Gasoline Range Organics	ND	---	6.84	mg/kg dry	50	04/17/18 20:50	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 115 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			98 %	Limits: 50-150 %	"	"	"	
<b>MW100-23.5 (A8D0538-07)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Gasoline Range Organics	ND	---	6.61	mg/kg dry	50	04/17/18 21:17	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 117 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			98 %	Limits: 50-150 %	"	"	"	
<b>MW20-26 (A8D0538-08)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Gasoline Range Organics	ND	---	5.05	mg/kg dry	50	04/17/18 21:44	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 108 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			98 %	Limits: 50-150 %	"	"	"	

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Lisa Domenighini, Client Services Manager

HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/22/18 07:54

## ANALYTICAL SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting			Date Analyzed	Method	Notes
			Limit	Units	Dilution			
<b>MW18-10 (A8D0538-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Gasoline Range Organics	ND	---	6.01	mg/kg dry	50	04/17/18 22:11	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 106 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			98 %	Limits: 50-150 %	"	"	"	
<b>MW18-15 (A8D0538-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Gasoline Range Organics	ND	---	5.45	mg/kg dry	50	04/17/18 22:38	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 105 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			98 %	Limits: 50-150 %	"	"	"	
<b>MW18-25 (A8D0538-11)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Gasoline Range Organics	ND	---	4.66	mg/kg dry	50	04/17/18 23:31	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 107 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			98 %	Limits: 50-150 %	"	"	"	
<b>MW15-10 (A8D0538-13)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040912</b>			
Gasoline Range Organics	ND	---	5.17	mg/kg dry	50	04/18/18 20:07	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 112 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			95 %	Limits: 50-150 %	"	"	"	
<b>MW15-20 (A8D0538-14)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040912</b>			
Gasoline Range Organics	ND	---	5.74	mg/kg dry	50	04/18/18 20:34	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 116 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			97 %	Limits: 50-150 %	"	"	"	
<b>MW15-30 (A8D0538-15)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040912</b>			
Gasoline Range Organics	ND	---	5.73	mg/kg dry	50	04/18/18 21:01	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 115 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			98 %	Limits: 50-150 %	"	"	"	
<b>MW22-15 (A8D0538-16)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040912</b>			
Gasoline Range Organics	ND	---	5.15	mg/kg dry	50	04/18/18 21:28	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 114 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			96 %	Limits: 50-150 %	"	"	"	
<b>MW22-25 (A8D0538-17)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040912</b>			
Gasoline Range Organics	ND	---	13.4	mg/kg dry	50	04/18/18 21:55	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 113 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			97 %	Limits: 50-150 %	"	"	"	

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HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/22/18 07:54

## ANALYTICAL SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW22-30 (A8D0538-18)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040912</b>			
<b>Gasoline Range Organics</b>	<b>4180</b>	---	587	mg/kg dry	5000	04/18/18 22:22	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 114 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>96 %</i>		<i>Limits: 50-150 %</i>		"	"	"
<b>MW22-40 (A8D0538-19)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040912</b>			
<b>Gasoline Range Organics</b>	<b>248</b>	---	5.31	mg/kg dry	50	04/18/18 23:16	NWTPH-Gx (MS)	Q-42
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 178 %</i>		<i>Limits: 50-150 %</i>		1	"	" S-08
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>Limits: 50-150 %</i>		"	"	"

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Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/22/18 07:54

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW21-10 (A8D0538-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Benzene	ND	---	0.0106	mg/kg dry	50	04/17/18 18:09	5035A/8260C	
Toluene	ND	---	0.0532	"	"	"	"	
Ethylbenzene	ND	---	0.0266	"	"	"	"	
Xylenes, total	ND	---	0.0797	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 101 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>105 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW21-25 (A8D0538-02)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Benzene	ND	---	0.0114	mg/kg dry	50	04/17/18 23:04	5035A/8260C	
Toluene	ND	---	0.0570	"	"	"	"	
Ethylbenzene	ND	---	0.0285	"	"	"	"	
Xylenes, total	ND	---	0.0854	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 101 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>93 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW21-32 (A8D0538-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Benzene	ND	---	0.0114	mg/kg dry	50	04/17/18 19:29	5035A/8260C	
Toluene	ND	---	0.0569	"	"	"	"	
Ethylbenzene	ND	---	0.0285	"	"	"	"	
Xylenes, total	ND	---	0.0854	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 101 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>106 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW20-10 (A8D0538-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Benzene	ND	---	0.0100	mg/kg dry	50	04/17/18 19:56	5035A/8260C	
Toluene	ND	---	0.0502	"	"	"	"	
Ethylbenzene	ND	---	0.0251	"	"	"	"	
Xylenes, total	ND	---	0.0753	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 101 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>104 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW20-15 (A8D0538-05)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Benzene	ND	---	0.0102	mg/kg dry	50	04/17/18 20:23	5035A/8260C	

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Lisa Domenighini, Client Services Manager

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HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/22/18 07:54

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting			Date Analyzed	Method	Notes
			Limit	Units	Dilution			
<b>MW20-15 (A8D0538-05)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Toluene	ND	---	0.0508	mg/kg dry	50	"	5035A/8260C	
Ethylbenzene	ND	---	0.0254	"	"	"	"	
Xylenes, total	ND	---	0.0762	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 99 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>88 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>106 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW20-23.5 (A8D0538-06)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Benzene	ND	---	0.0137	mg/kg dry	50	04/17/18 20:50	5035A/8260C	
Toluene	ND	---	0.0684	"	"	"	"	
Ethylbenzene	ND	---	0.0342	"	"	"	"	
Xylenes, total	ND	---	0.103	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>94 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>105 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW100-23.5 (A8D0538-07)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Benzene	ND	---	0.0132	mg/kg dry	50	04/17/18 21:17	5035A/8260C	
Toluene	ND	---	0.0661	"	"	"	"	
Ethylbenzene	ND	---	0.0330	"	"	"	"	
Xylenes, total	ND	---	0.0991	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>106 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW20-26 (A8D0538-08)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Benzene	ND	---	0.0101	mg/kg dry	50	04/17/18 21:44	5035A/8260C	
Toluene	ND	---	0.0505	"	"	"	"	
Ethylbenzene	ND	---	0.0253	"	"	"	"	
Xylenes, total	ND	---	0.0758	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>106 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW18-10 (A8D0538-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Benzene	ND	---	0.0120	mg/kg dry	50	04/17/18 22:11	5035A/8260C	
Toluene	ND	---	0.0601	"	"	"	"	

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HydroCon LLC

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/22/18 07:54

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW18-10 (A8D0538-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Ethylbenzene	ND	---	0.0301	mg/kg dry	50	"	5035A/8260C	
Xylenes, total	ND	---	0.0902	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>105 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW18-15 (A8D0538-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Benzene	ND	---	0.0109	mg/kg dry	50	04/17/18 22:38	5035A/8260C	
Toluene	ND	---	0.0545	"	"	"	"	
Ethylbenzene	ND	---	0.0273	"	"	"	"	
Xylenes, total	ND	---	0.0818	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>104 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW18-25 (A8D0538-11)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040834</b>			
Benzene	ND	---	0.00932	mg/kg dry	50	04/17/18 23:31	5035A/8260C	
Toluene	ND	---	0.0466	"	"	"	"	
Ethylbenzene	ND	---	0.0233	"	"	"	"	
Xylenes, total	ND	---	0.0699	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW15-10 (A8D0538-13)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040912</b>			
Benzene	ND	---	0.0103	mg/kg dry	50	04/18/18 20:07	5035A/8260C	
Toluene	ND	---	0.0517	"	"	"	"	
Ethylbenzene	ND	---	0.0258	"	"	"	"	
Xylenes, total	ND	---	0.0775	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 97 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>108 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW15-20 (A8D0538-14)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040912</b>			
Benzene	ND	---	0.0115	mg/kg dry	50	04/18/18 20:34	5035A/8260C	
Toluene	ND	---	0.0574	"	"	"	"	
Ethylbenzene	ND	---	0.0287	"	"	"	"	

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Project: Coleman Wenatchee

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/22/18 07:54

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW15-20 (A8D0538-14)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040912</b>			
Xylenes, total	ND	---	0.0862	mg/kg dry	50	"	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 98 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>110 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW15-30 (A8D0538-15)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040912</b>			
Benzene	ND	---	0.0115	mg/kg dry	50	04/18/18 21:01	5035A/8260C	
Toluene	ND	---	0.0573	"	"	"	"	
Ethylbenzene	ND	---	0.0286	"	"	"	"	
Xylenes, total	ND	---	0.0859	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 99 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>108 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW22-15 (A8D0538-16)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040912</b>			
Benzene	ND	---	0.0103	mg/kg dry	50	04/18/18 21:28	5035A/8260C	
Toluene	ND	---	0.0515	"	"	"	"	
Ethylbenzene	ND	---	0.0258	"	"	"	"	
Xylenes, total	ND	---	0.0773	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 98 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>109 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW22-25 (A8D0538-17)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040912</b>			
Benzene	ND	---	0.0268	mg/kg dry	50	04/18/18 21:55	5035A/8260C	
Toluene	ND	---	0.134	"	"	"	"	
Ethylbenzene	ND	---	0.0670	"	"	"	"	
Xylenes, total	ND	---	0.201	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 98 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>108 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW22-30 (A8D0538-18)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040912</b>			
<b>Benzene</b>	<b>10.7</b>	---	1.17	mg/kg dry	5000	04/18/18 22:22	5035A/8260C	
Toluene	ND	---	5.87	"	"	"	"	
<b>Ethylbenzene</b>	<b>23.1</b>	---	2.94	"	"	"	"	
<b>Xylenes, total</b>	<b>43.8</b>	---	8.81	"	"	"	"	

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<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/22/18 07:54
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## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW22-30 (A8D0538-18)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040912</b>				
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 98 %</i>	<i>Limits: 80-120 %</i>	1	"	5035A/8260C	
<i>Toluene-d8 (Surr)</i>			97 %	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			105 %	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW22-40 (A8D0538-19)</b>			<b>Matrix: Soil</b>	<b>Batch: 8040912</b>				
<b>Benzene</b>	<b>0.0854</b>	---	0.0106	mg/kg dry	50	04/18/18 23:16	5035A/8260C	Q-42
<b>Toluene</b>	<b>0.0850</b>	---	0.0531	"	"	"	"	Q-42
<b>Ethylbenzene</b>	<b>0.156</b>	---	0.0266	"	"	"	"	Q-42
<b>Xylenes, total</b>	<b>0.696</b>	---	0.0797	"	"	"	"	Q-42
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 96 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			96 %	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			108 %	<i>Limits: 80-120 %</i>	"	"	"	

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HydroCon LLC

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Project: Coleman Wenatchee

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/22/18 07:54

## ANALYTICAL SAMPLE RESULTS

Percent Dry Weight								
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW21-10 (A8D0538-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	90.9	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>MW21-25 (A8D0538-02)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	85.8	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>MW21-32 (A8D0538-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	81.5	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>MW20-10 (A8D0538-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	87.5	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>MW20-15 (A8D0538-05)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	85.6	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>MW20-23.5 (A8D0538-06)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	75.6	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>MW100-23.5 (A8D0538-07)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	90.6	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>MW20-26 (A8D0538-08)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	82.1	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>MW18-10 (A8D0538-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	93.6	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>MW18-15 (A8D0538-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	92.4	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>MW18-25 (A8D0538-11)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	90.1	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>MW15-10 (A8D0538-13)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	94.4	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>MW15-20 (A8D0538-14)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	80.7	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>MW15-30 (A8D0538-15)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	81.6	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>MW22-15 (A8D0538-16)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	88.8	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>MW22-25 (A8D0538-17)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	72.2	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	

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<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/22/18 07:54
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## ANALYTICAL SAMPLE RESULTS

Percent Dry Weight								
--------------------	--	--	--	--	--	--	--	--

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW22-30 (A8D0538-18)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	74.4	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	
<b>MW22-40 (A8D0538-19)</b>			<b>Matrix: Soil</b>		<b>Batch: 8040876</b>			
% Solids	92.3	---	1.00	% by Weight	1	04/18/18 09:45	EPA 8000C	

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Project: Coleman Wenatchee

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/22/18 07:54

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040993 - EPA 3546 (Fuels)</b>						<b>Soil</b>						
<b>Blank (8040993-BLK1)</b>						Prepared: 04/19/18 14:31 Analyzed: 04/19/18 21:57						
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	"	"	---	---	---	---	---	---	
Mineral Oil	ND	---	36.4	"	"	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>			<i>Recovery: 95 %</i>			<i>Limits: 50-150 %</i>			<i>Dilution: 1x</i>			
<b>LCS (8040993-BS1)</b>						Prepared: 04/19/18 14:31 Analyzed: 04/19/18 22:18						
NWTPH-Dx												
Diesel	120	---	25.0	mg/kg wet	1	125	---	96	76-115%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>			<i>Recovery: 106 %</i>			<i>Limits: 50-150 %</i>			<i>Dilution: 1x</i>			
<b>Duplicate (8040993-DUP2)</b>						Prepared: 04/19/18 14:31 Analyzed: 04/20/18 08:45						
QC Source Sample: MW18-25 (A8D0538-11)												
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	---	50.0	"	"	---	ND	---	---	---	30%	
Mineral Oil	ND	---	43.2	"	"	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>			<i>Recovery: 95 %</i>			<i>Limits: 50-150 %</i>			<i>Dilution: 1x</i>			
<b>Batch 8040997 - EPA 3546 (Fuels)</b>						<b>Soil</b>						
<b>Blank (8040997-BLK1)</b>						Prepared: 04/19/18 16:53 Analyzed: 04/19/18 22:02						
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	"	"	---	---	---	---	---	---	
Mineral Oil	ND	---	33.3	"	"	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>			<i>Recovery: 92 %</i>			<i>Limits: 50-150 %</i>			<i>Dilution: 1x</i>			
<b>LCS (8040997-BS1)</b>						Prepared: 04/19/18 16:53 Analyzed: 04/19/18 22:22						
NWTPH-Dx												
Diesel	108	---	25.0	mg/kg wet	1	125	---	87	76-115%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>			<i>Recovery: 94 %</i>			<i>Limits: 50-150 %</i>			<i>Dilution: 1x</i>			

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**HydroCon LLC**

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/22/18 07:54

## QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040834 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040834-BLK1)</b>						Prepared: 04/17/18 09:00 Analyzed: 04/17/18 13:39						
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 108 %</i>	<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>			<i>100 %</i>	<i>50-150 %</i>		<i>"</i>						
<b>LCS (8040834-BS5)</b>						Prepared: 04/17/18 09:00 Analyzed: 04/17/18 13:12						
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	22.8	---	5.00	mg/kg wet	50	25.0	---	91	80-120%	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 105 %</i>	<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>			<i>101 %</i>	<i>50-150 %</i>		<i>"</i>						
<b>Duplicate (8040834-DUP2)</b>						Prepared: 04/09/18 08:25 Analyzed: 04/17/18 18:36						
<b>QC Source Sample: MW21-10 (A8D0538-01)</b>												
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	ND	---	4.92	mg/kg dry	50	---	ND	---	---	---	---	30%
<i>Surr: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 108 %</i>	<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>			<i>97 %</i>	<i>50-150 %</i>		<i>"</i>						

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HydroCon LLC

314 W 15th Street Suite 300  
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Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/22/18 07:54

## QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040912 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040912-BLK1)</b>						Prepared: 04/13/18 17:00 Analyzed: 04/18/18 18:47						
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 112 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			95 %	50-150 %		"						
<b>LCS (8040912-BS2)</b>						Prepared: 04/13/18 17:00 Analyzed: 04/18/18 18:20						
NWTPH-Gx (MS)												
Gasoline Range Organics	26.1	---	5.00	mg/kg wet	50	25.0	---	104	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 109 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			98 %	50-150 %		"						
<b>Duplicate (8040912-DUP1)</b>						Prepared: 04/13/18 10:30 Analyzed: 04/18/18 23:43						
QC Source Sample: MW22-40 (A8D0538-19)												
NWTPH-Gx (MS)												
Gasoline Range Organics	35.7	---	6.97	mg/kg dry	50	---	248	---	---	150	30%	Q-04
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 117 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			97 %	50-150 %		"						

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Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/22/18 07:54

## QUALITY CONTROL (QC) SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040834 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040834-BLK1)</b>						Prepared: 04/17/18 09:00 Analyzed: 04/17/18 13:39						
<b>5035A/8260C</b>												
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	---
Toluene	ND	---	0.0333	"	"	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	---
Xylenes, total	ND	---	0.0500	"	"	---	---	---	---	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			Recovery: 103 %		Limits: 80-120 %		Dilution: 1x					
<i>Toluene-d8 (Surr)</i>			97 %		80-120 %		"					
<i>4-Bromofluorobenzene (Surr)</i>			104 %		80-120 %		"					
<b>LCS (8040834-BS4)</b>						Prepared: 04/17/18 09:00 Analyzed: 04/17/18 12:36						
<b>5035A/8260C</b>												
Benzene	1.09	---	0.0100	mg/kg wet	50	1.00	---	109	80-120%	---	---	---
Toluene	0.966	---	0.0500	"	"	"	---	97	"	---	---	---
Ethylbenzene	1.05	---	0.0250	"	"	"	---	105	"	---	---	---
Xylenes, total	3.26	---	0.0750	"	"	3.00	---	109	"	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			Recovery: 101 %		Limits: 80-120 %		Dilution: 1x					
<i>Toluene-d8 (Surr)</i>			96 %		80-120 %		"					
<i>4-Bromofluorobenzene (Surr)</i>			100 %		80-120 %		"					
<b>Duplicate (8040834-DUP2)</b>						Prepared: 04/09/18 08:25 Analyzed: 04/17/18 18:36						
<b>QC Source Sample: MW21-10 (A8D0538-01)</b>												
<b>5035A/8260C</b>												
Benzene	ND	---	0.00984	mg/kg dry	50	---	ND	---	---	---	30%	---
Toluene	ND	---	0.0492	"	"	---	ND	---	---	---	30%	---
Ethylbenzene	ND	---	0.0246	"	"	---	ND	---	---	---	30%	---
Xylenes, total	ND	---	0.0738	"	"	---	ND	---	---	---	30%	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			Recovery: 102 %		Limits: 80-120 %		Dilution: 1x					
<i>Toluene-d8 (Surr)</i>			95 %		80-120 %		"					
<i>4-Bromofluorobenzene (Surr)</i>			106 %		80-120 %		"					
<b>Matrix Spike (8040834-MS1)</b>						Prepared: 04/11/18 09:25 Analyzed: 04/17/18 23:58						
<b>QC Source Sample: MW18-25 (A8D0538-11)</b>												
<b>5035A/8260C</b>												
Benzene	0.921	---	0.00932	mg/kg dry	50	0.932	ND	99	77-121%	---	---	---
Toluene	0.828	---	0.0466	"	"	"	ND	89	"	---	---	---
Ethylbenzene	0.888	---	0.0233	"	"	"	ND	95	76-122%	---	---	---

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Lisa Domenighini, Client Services Manager

<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/22/18 07:54
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## QUALITY CONTROL (QC) SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
<b>Batch 8040834 - EPA 5035A</b>						<b>Soil</b>							
<b>Matrix Spike (8040834-MS1)</b>						Prepared: 04/11/18 09:25 Analyzed: 04/17/18 23:58							
<b>QC Source Sample: MW18-25 (A8D0538-11)</b>													
<b>5035A/8260C</b>													
Xylenes, total	2.77	---	0.0699	mg/kg dry	"	2.79	ND	99	78-124%	---	---		
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 100 %</i>									<i>Limits: 80-120 %</i>	<i>Dilution: 1x</i>
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>									<i>80-120 %</i>	<i>"</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>									<i>80-120 %</i>	<i>"</i>



HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/22/18 07:54

## QUALITY CONTROL (QC) SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040912 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8040912-BLK1)</b>						Prepared: 04/13/18 17:00 Analyzed: 04/18/18 18:47						
<b>5035A/8260C</b>												
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	0.0333	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0167	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	0.0500	"	"	---	---	---	---	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 97 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>109 %</i>		<i>80-120 %</i>		<i>"</i>					
<b>LCS (8040912-BS1)</b>						Prepared: 04/13/18 17:00 Analyzed: 04/18/18 17:53						
<b>5035A/8260C</b>												
Benzene	0.990	---	0.0100	mg/kg wet	50	1.00	---	99	80-120%	---	---	
Toluene	0.948	---	0.0500	"	"	"	---	95	"	---	---	
Ethylbenzene	1.03	---	0.0250	"	"	"	---	103	"	---	---	
Xylenes, total	3.31	---	0.0750	"	"	3.00	---	110	"	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 96 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>105 %</i>		<i>80-120 %</i>		<i>"</i>					
<b>Duplicate (8040912-DUP1)</b>						Prepared: 04/13/18 10:30 Analyzed: 04/18/18 23:43						
<b>QC Source Sample: MW22-40 (A8D0538-19)</b>												
<b>5035A/8260C</b>												
Benzene	<b>0.0578</b>	---	0.0139	mg/kg dry	50	---	0.0854	---	---	39	30%	Q-04
Toluene	ND	---	0.0697	"	"	---	0.0850	---	---	46	30%	Q-04
Ethylbenzene	<b>0.112</b>	---	0.0348	"	"	---	0.156	---	---	33	30%	Q-04
Xylenes, total	<b>0.430</b>	---	0.104	"	"	---	0.696	---	---	47	30%	Q-04
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 96 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>109 %</i>		<i>80-120 %</i>		<i>"</i>					
<b>Matrix Spike (8040912-MS1)</b>						Prepared: 04/13/18 10:30 Analyzed: 04/19/18 00:10						
<b>QC Source Sample: MW22-40 (A8D0538-19)</b>												
<b>5035A/8260C</b>												
Benzene	1.07	---	0.0106	mg/kg dry	50	1.06	0.0854	93	77-121%	---	---	
Toluene	1.02	---	0.0531	"	"	"	0.0850	89	"	---	---	
Ethylbenzene	1.20	---	0.0266	"	"	"	0.156	98	76-122%	---	---	

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Lisa Domenighini, Client Services Manager

<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: 2017-074 Project Manager: Craig Hultgren	<b>Reported:</b> 04/22/18 07:54
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## QUALITY CONTROL (QC) SAMPLE RESULTS

### BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040912 - EPA 5035A</b>						<b>Soil</b>						
<b>Matrix Spike (8040912-MS1)</b>						Prepared: 04/13/18 10:30 Analyzed: 04/19/18 00:10						
<b>QC Source Sample: MW22-40 (A8D0538-19)</b>												
<b>5035A/8260C</b>												
Xylenes, total	4.18	---	0.0797	mg/kg dry	"	3.18	0.696	110	78-124%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 95 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>106 %</i>		<i>80-120 %</i>		<i>"</i>					



HydroCon LLC

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04/22/18 07:54

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040876 - Total Solids (Dry Weight)</b>						<b>Soil</b>						
<b>Duplicate (8040876-DUP3)</b>						Prepared: 04/17/18 09:53 Analyzed: 04/18/18 09:45						
QC Source Sample: MW20-15 (A8D0538-05)												
EPA 8000C												
% Solids	84.5	---	1.00	% by Weight	1	---	85.6	---	---	1	10%	
<b>Duplicate (8040876-DUP4)</b>						Prepared: 04/17/18 09:53 Analyzed: 04/18/18 09:45						
QC Source Sample: MW22-40 (A8D0538-19)												
EPA 8000C												
% Solids	92.0	---	1.00	% by Weight	1	---	92.3	---	---	0.3	10%	

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

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 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/22/18 07:54

## 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
<b>Batch: 8040993</b>							
A8D0538-01	Soil	NWTPH-Dx	04/09/18 08:25	04/19/18 14:31	10.16g/5mL	10g/5mL	0.98
A8D0538-02	Soil	NWTPH-Dx	04/09/18 09:35	04/19/18 14:31	10.24g/5mL	10g/5mL	0.98
A8D0538-03	Soil	NWTPH-Dx	04/09/18 10:15	04/19/18 14:31	10.69g/5mL	10g/5mL	0.94
A8D0538-04	Soil	NWTPH-Dx	04/10/18 08:45	04/19/18 14:31	10.34g/5mL	10g/5mL	0.97
A8D0538-05	Soil	NWTPH-Dx	04/10/18 09:25	04/19/18 14:31	10.4g/5mL	10g/5mL	0.96
A8D0538-06	Soil	NWTPH-Dx	04/10/18 10:30	04/19/18 14:31	10.65g/5mL	10g/5mL	0.94
A8D0538-07	Soil	NWTPH-Dx	04/10/18 10:30	04/19/18 14:31	10.84g/5mL	10g/5mL	0.92
A8D0538-08	Soil	NWTPH-Dx	04/10/18 11:05	04/19/18 14:31	10.25g/5mL	10g/5mL	0.98
A8D0538-09	Soil	NWTPH-Dx	04/11/18 08:20	04/19/18 14:31	10.32g/5mL	10g/5mL	0.97
A8D0538-10	Soil	NWTPH-Dx	04/11/18 08:35	04/19/18 14:31	10.81g/5mL	10g/5mL	0.93
A8D0538-11	Soil	NWTPH-Dx	04/11/18 09:25	04/19/18 14:31	10.25g/5mL	10g/5mL	0.98
<b>Batch: 8040997</b>							
A8D0538-13	Soil	NWTPH-Dx	04/12/18 08:45	04/19/18 16:53	10.85g/5mL	10g/5mL	0.92
A8D0538-14	Soil	NWTPH-Dx	04/12/18 09:30	04/19/18 16:53	10.85g/5mL	10g/5mL	0.92
A8D0538-15	Soil	NWTPH-Dx	04/12/18 10:00	04/19/18 16:53	10.66g/5mL	10g/5mL	0.94
A8D0538-16	Soil	NWTPH-Dx	04/13/18 09:00	04/19/18 16:53	11.32g/5mL	10g/5mL	0.88
A8D0538-17	Soil	NWTPH-Dx	04/13/18 09:20	04/19/18 16:53	10.71g/5mL	10g/5mL	0.93
A8D0538-18	Soil	NWTPH-Dx	04/13/18 09:45	04/19/18 16:53	6.59g/5mL	10g/5mL	1.52
A8D0538-19	Soil	NWTPH-Dx	04/13/18 10:30	04/19/18 16:53	11.12g/5mL	10g/5mL	0.90

### 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
<b>Batch: 8040834</b>							
A8D0538-01	Soil	NWTPH-Gx (MS)	04/09/18 08:25	04/09/18 08:25	5.71g/5mL	5g/5mL	0.88
A8D0538-02	Soil	NWTPH-Gx (MS)	04/09/18 09:35	04/09/18 09:35	5.98g/5mL	5g/5mL	0.84
A8D0538-03	Soil	NWTPH-Gx (MS)	04/09/18 10:15	04/09/18 10:15	6.73g/5mL	5g/5mL	0.74
A8D0538-04	Soil	NWTPH-Gx (MS)	04/10/18 08:45	04/10/18 08:45	6.64g/5mL	5g/5mL	0.75
A8D0538-05	Soil	NWTPH-Gx (MS)	04/10/18 09:25	04/10/18 09:25	6.88g/5mL	5g/5mL	0.73
A8D0538-06	Soil	NWTPH-Gx (MS)	04/10/18 10:30	04/10/18 10:30	6.33g/5mL	5g/5mL	0.79
A8D0538-07	Soil	NWTPH-Gx (MS)	04/10/18 10:30	04/10/18 10:30	4.53g/5mL	5g/5mL	1.10
A8D0538-08	Soil	NWTPH-Gx (MS)	04/10/18 11:05	04/10/18 11:05	7.68g/5mL	5g/5mL	0.65
A8D0538-09	Soil	NWTPH-Gx (MS)	04/11/18 08:20	04/11/18 08:20	4.71g/5mL	5g/5mL	1.06

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314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/22/18 07:54

## 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
A8D0538-10	Soil	NWTPH-Gx (MS)	04/11/18 08:35	04/11/18 08:35	5.37g/5mL	5g/5mL	0.93
A8D0538-11	Soil	NWTPH-Gx (MS)	04/11/18 09:25	04/11/18 09:25	6.74g/5mL	5g/5mL	0.74
<b>Batch: 8040912</b>							
A8D0538-13	Soil	NWTPH-Gx (MS)	04/12/18 08:45	04/12/18 08:45	5.43g/5mL	5g/5mL	0.92
A8D0538-14	Soil	NWTPH-Gx (MS)	04/12/18 09:30	04/12/18 09:30	6.81g/5mL	5g/5mL	0.73
A8D0538-15	Soil	NWTPH-Gx (MS)	04/12/18 10:00	04/12/18 10:00	6.66g/5mL	5g/5mL	0.75
A8D0538-16	Soil	NWTPH-Gx (MS)	04/13/18 09:00	04/13/18 09:00	6.23g/5mL	5g/5mL	0.80
A8D0538-17	Soil	NWTPH-Gx (MS)	04/13/18 09:20	04/13/18 09:20	3.02g/5mL	5g/5mL	1.66
A8D0538-18	Soil	NWTPH-Gx (MS)	04/13/18 09:45	04/13/18 09:45	8.1g/5mL	5g/5mL	0.62
A8D0538-19	Soil	NWTPH-Gx (MS)	04/13/18 10:30	04/13/18 10:30	5.54g/5mL	5g/5mL	0.90

### BTEX Compounds by EPA 8260C

**Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 8040834</b>							
A8D0538-01	Soil	5035A/8260C	04/09/18 08:25	04/09/18 08:25	5.71g/5mL	5g/5mL	0.88
A8D0538-02	Soil	5035A/8260C	04/09/18 09:35	04/09/18 09:35	5.98g/5mL	5g/5mL	0.84
A8D0538-03	Soil	5035A/8260C	04/09/18 10:15	04/09/18 10:15	6.73g/5mL	5g/5mL	0.74
A8D0538-04	Soil	5035A/8260C	04/10/18 08:45	04/10/18 08:45	6.64g/5mL	5g/5mL	0.75
A8D0538-05	Soil	5035A/8260C	04/10/18 09:25	04/10/18 09:25	6.88g/5mL	5g/5mL	0.73
A8D0538-06	Soil	5035A/8260C	04/10/18 10:30	04/10/18 10:30	6.33g/5mL	5g/5mL	0.79
A8D0538-07	Soil	5035A/8260C	04/10/18 10:30	04/10/18 10:30	4.53g/5mL	5g/5mL	1.10
A8D0538-08	Soil	5035A/8260C	04/10/18 11:05	04/10/18 11:05	7.68g/5mL	5g/5mL	0.65
A8D0538-09	Soil	5035A/8260C	04/11/18 08:20	04/11/18 08:20	4.71g/5mL	5g/5mL	1.06
A8D0538-10	Soil	5035A/8260C	04/11/18 08:35	04/11/18 08:35	5.37g/5mL	5g/5mL	0.93
A8D0538-11	Soil	5035A/8260C	04/11/18 09:25	04/11/18 09:25	6.74g/5mL	5g/5mL	0.74
<b>Batch: 8040912</b>							
A8D0538-13	Soil	5035A/8260C	04/12/18 08:45	04/12/18 08:45	5.43g/5mL	5g/5mL	0.92
A8D0538-14	Soil	5035A/8260C	04/12/18 09:30	04/12/18 09:30	6.81g/5mL	5g/5mL	0.73
A8D0538-15	Soil	5035A/8260C	04/12/18 10:00	04/12/18 10:00	6.66g/5mL	5g/5mL	0.75
A8D0538-16	Soil	5035A/8260C	04/13/18 09:00	04/13/18 09:00	6.23g/5mL	5g/5mL	0.80
A8D0538-17	Soil	5035A/8260C	04/13/18 09:20	04/13/18 09:20	3.02g/5mL	5g/5mL	1.66
A8D0538-18	Soil	5035A/8260C	04/13/18 09:45	04/13/18 09:45	8.1g/5mL	5g/5mL	0.62
A8D0538-19	Soil	5035A/8260C	04/13/18 10:30	04/13/18 10:30	5.54g/5mL	5g/5mL	0.90

Apex Laboratories

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Lisa Domenighini, Client Services Manager

HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

Reported:

04/22/18 07:54

## 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
<b>Batch: 8040876</b>							
A8D0538-01	Soil	EPA 8000C	04/09/18 08:25	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-02	Soil	EPA 8000C	04/09/18 09:35	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-03	Soil	EPA 8000C	04/09/18 10:15	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-04	Soil	EPA 8000C	04/10/18 08:45	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-05	Soil	EPA 8000C	04/10/18 09:25	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-06	Soil	EPA 8000C	04/10/18 10:30	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-07	Soil	EPA 8000C	04/10/18 10:30	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-08	Soil	EPA 8000C	04/10/18 11:05	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-09	Soil	EPA 8000C	04/11/18 08:20	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-10	Soil	EPA 8000C	04/11/18 08:35	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-11	Soil	EPA 8000C	04/11/18 09:25	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-13	Soil	EPA 8000C	04/12/18 08:45	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-14	Soil	EPA 8000C	04/12/18 09:30	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-15	Soil	EPA 8000C	04/12/18 10:00	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-16	Soil	EPA 8000C	04/13/18 09:00	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-17	Soil	EPA 8000C	04/13/18 09:20	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-18	Soil	EPA 8000C	04/13/18 09:45	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA
A8D0538-19	Soil	EPA 8000C	04/13/18 10:30	04/17/18 09:53	1N/A/1N/A	1N/A/1N/A	NA

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Lisa Domenighini, Client Services Manager



**HydroCon LLC**

314 W 15th Street Suite 300  
Vancouver, WA 98660

**Project: Coleman Wenatchee**

Project Number: 2017-074  
Project Manager: Craig Hultgren

**Reported:**  
04/22/18 07:54

## Notes and Definitions

### Qualifiers:

- F-11 The hydrocarbon pattern indicates possible weathered diesel, or a contribution from a related component.
- F-13 The chromatographic pattern does not resemble the fuel standard used for quantitation
- F-24 The chromatographic pattern does not resemble the fuel standard used for quantitation. The Diesel result represents carbon range C12 to C24, and the Oil result represents >C24 to C40.
- Q-04 Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- 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.)
- S-01 Surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
- S-08 TPH-Gx Surrogate recovery cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract. See 8260B results for accurate Surrogate recovery.

### Notes and Conventions:

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.
- RPD Relative Percent Difference
- MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
- WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
- Batch QC Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
- Blank Policy Apex assesses blank data for potential high bias down to a level equal to 1/2 the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they 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.
- For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor.
- Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.
- QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

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Lisa Domenighini, Client Services Manager

**HydroCon LLC**

314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**

Project Number: 2017-074

Project Manager: Craig Hultgren

**Reported:**

04/22/18 07:54

\*\*\* 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).



HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/22/18 07:54

Lab # **A8D0538** COC 1 of 3

## CHAIN OF CUSTODY

**APEX LABS**

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Company: <b>HydroCon</b>		Project Mgr: <b>Craig Hultgren</b>		Project Name: <b>Coleman Wenatchee</b>		Project # <b>2017-074</b>	
Address: <b>314 W 15th Ave Vancouver WA 98660</b>		Phone: <b>(503) 703-6033</b>		Email: <b>craig.hultgren@hydrocon.com</b>		PO#	
Sampled by: <b>Chris Doshel</b>		<b>ANALYSIS REQUEST</b>					
Site Location: <b>OR</b>	Other: <b>WA</b>	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-CTD
							NWTPH-DX
							NWTPH-GX
							8260 VOCs Full List
							8260 RBDM VOCs
							8260 HVOCs
							8260 BTEX VOCs
							8270 SVOC
							8270 SIM PAHs
							8082 PCBs
							600 TTO
							RCCA Metals (8)
							TCLP Metals (8)
							Al, Sb, As, Ba, Be, Cd, Ca, Cr, Cu, Fe, Pb, Hg, Mg, Mn, Ni, K, Se, Ag, Na, Ti, V, Zn, TOTAL DISS TCLP
							1200-COLS
							1200-Z
Normal Turn Around Time (TAT) = 10 Business Days		YES		NO		SPECIAL INSTRUCTIONS:	
TAT Requested (circle)		1 Day	2 Day	3 Day	4 DAY	5 DAY	Other: _____
SAMPLES ARE HELD FOR 30 DAYS		RECEIVED BY:		RECEIVED BY:		RECEIVED BY:	
Signature: <b>Chris Doshel</b>		Date: <b>4/18/18</b>		Signature: <b>Craig Hultgren</b>		Date: <b>4/18/18</b>	
Printed Name: <b>Chris Doshel</b>		Time: <b>10:30</b>		Printed Name: <b>Craig Hultgren</b>		Time: _____	
Company: <b>HydroCon</b>		Company: <b>HydroCon</b>		Company: <b>HydroCon</b>		Company: _____	

Apex Laboratories

*Chris Doshel*

Lisa Domenighini, Client Services Manager

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HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/22/18 07:54

**CHAIN OF CUSTODY**

Lab # **A8 DOS38** COC **2** of **3**

Company: **HydroCon** Address: **12232 S.W. Garden Place, Tigard, OR 97223** Ph: 503-718-2323 Fax: 503-718-0333

Project Mgr: **Craig Hultgren** Project Name: **Coleman Wenatchee Oil Wastewater** PO#: **2017-074**

Sampled by: **Chris Duschel** Email: **Craig.Hultgren@hydroconllc.com**

LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-DX	NWTPH-GX	8260 VOCs Full List	8260 RBDM VOCs	8260 HVOCs	8260 RTEX VOCs	8270 SVOC	8270 SIM PAHs	8082 PCBs	600 TTO	R CRA Metals (8)	TCLP Metals (8)	AL, SH, AS, BA, BE, CA, CR, CU, CY, FE, NI, PB, SE, MG, MN, NI, V, ZN	Ag, As, Ba, Be, Bi, Br, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ag, Na, TL, V, Zn	TOTAL DISS TCLP	1200-Z	
MW18-25	4/11/18	09:25	Soil	3	X	X	X	14220			X											
MW18-35	4/12/18	10:20			X	X					X											
MW15-10	4/12/18	08:45																				
MW15-20		08:30																				
MW15-30		10:00																				
SLO1-0.5		11:00																				
SLO2-0.5		11:15																				
SL03-0.5		11:30																				
SL04-0.5		11:45																				
SL05-0.5		12:00																				

Normal Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): **1 Day** 2 Day 3 Day 4 DAY 5 DAY Other: \_\_\_\_\_

SPECIAL INSTRUCTIONS: **Put SL samples on separate report**

RECEIVED BY: **Chris Duschel** Date: **4/17/18** Signature: **Chris Duschel** Printed Name: **Chris Duschel** Time: **10:30**

RECEIVED BY: **HydroCon** Date: \_\_\_\_\_ Signature: \_\_\_\_\_ Printed Name: \_\_\_\_\_ Time: \_\_\_\_\_

Apex Laboratories

*Lisa Domenighini*

Lisa Domenighini, Client Services Manager

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HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Reported:  
04/22/18 07:54

**CHAIN OF CUSTODY**

Lab # A890538      PO# 2017-074  
COC 2 of 3

Company: HydroCon      Project Mgr: Craig Hultgren      Project Name: Coleman Oil Refinery      Project # 2017-074  
Address: \_\_\_\_\_      Phone: \_\_\_\_\_      Fax: \_\_\_\_\_      Email: \_\_\_\_\_

Sampled by: Chris Daschel

Site Location: OR      Other: \_\_\_\_\_

LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-CID	NWTPH-DX	NWTPH-GX	8260 VOCs Full List	8260 RBDM VOCs	8260 HVOCs	8260 BTEX VOCs	8270 SVOC	8270 SIM PAHs	8082 PCBs	600 TTO	R CRA Metals (8)	TCLP Metals (8)	AL, SH, AS, BA, BE, CD, CA, CR, CU, NI, PB, PC, PG, PM, SE, V, Zn	TOTAL DISS TCLP	1200-COLS	1200-Z
MW22-15	4/18/18	09:00	soil	3	X		X														
MW22-25	4/18/18	09:20		1	X		X														
MW22-30	4/18/18	09:45		1	X		X														
MW22-40	4/18/18	10:30		4	X		X														

Normal Turn Around Time (TAT) = 10 Business Days      YES      NO

TAT Requested (circle):      1 Day      2 Day      3 Day      4 DAY      5 DAY      Other: \_\_\_\_\_

SAMPLES ARE HELD FOR 30 DAYS

RELIQUISHED BY: \_\_\_\_\_      RECEIVED BY: \_\_\_\_\_  
Signature: Chris Daschel      Date: 4/18/18      Signature: [Signature]      Date: 4/18/18  
Printed Name: Chris Daschel      Time: 10:50      Printed Name: [Signature]      Time: [Signature]  
Company: HydroCon      Company: [Signature]

Apex Laboratories

*Lisa Domenighini*

Lisa Domenighini, Client Services Manager

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HydroCon LLC

314 W 15th Street Suite 300  
 Vancouver, WA 98660

Project: Coleman Wenatchee

Project Number: 2017-074  
 Project Manager: Craig Hultgren

Reported:  
 04/22/18 07:54

**APEX LABS COOLER RECEIPT FORM**

Client: Hydrocon Element WO#: A8 D0538

Project/Project #: Coleman Oil Wenatchee

**Delivery info:**

Date/Time Received: 4/14/18 @ 1030 By: [Signature]

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

**Cooler Inspection** Inspected by: [Signature] : 4/14/18 @ 1030

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 (deg. C)	<u>1.3</u>						
Received on Ice? (Y/N)	<u>(Y/N)</u>						
Temp. Blanks? (Y/N)	<u>(Y/N)</u>						
Ice Type: (Gel/Real/Other)	<u>(Real)</u>						
Condition:	<u>good</u>						

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

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

**Samples Inspection:** Inspected by: [Signature] : 4/16/18 @ 1810

All Samples Intact? Yes  No  Comments: MW15-10 4 oz jar broken in lab. Salvaged 3/4 volume

Bottle Labels/COCs agree? Yes  No  Comments: MW21-25 Don Jar & 1/2 vials reads 4-9-17. MW18-35 T on 1/2 vials reads 1030.

Containers/Volumes Received Appropriate for Analysis? Yes  No  Comments: \_\_\_\_\_

Do VOA Vials have Visible Headspace? Yes  No  NA

Comments: \_\_\_\_\_

Water Samples: pH Checked and Appropriate (except VOAs): Yes  No  NA

Comments: \_\_\_\_\_

Additional Information: MW18-10 1/2 MeOH vials weight smudged

Labeled by: [Signature] Witness: [Signature] Cooler Inspected by: [Signature] See Project Contact Form: Y

*Lisa Domenighini*



Apex Laboratories, LLC

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323  
EPA ID: OR01039

Tuesday, May 8, 2018

Craig Hultgren  
HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

RE: A8D0907 - 2017-074

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 A8D0907, which was received by the laboratory on 4/28/2018 at 10:55:00AM.

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

---

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.

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Apex Laboratories

A handwritten signature in black ink that reads "Lisa A. Domenighini".

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

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Lisa Domenighini, Client Services Manager



HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Report ID:  
A8D0907 - 050818 0221

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW1S-W	A8D0907-01	Water	04/24/18 17:05	04/28/18 10:55
MW02-W	A8D0907-02	Water	04/25/18 14:00	04/28/18 10:55
MW3S-W	A8D0907-03	Water	04/25/18 09:00	04/28/18 10:55
MW04-W	A8D0907-04	Water	04/25/18 14:40	04/28/18 10:55
MW05-W	A8D0907-05	Water	04/24/18 13:40	04/28/18 10:55
MW06-W	A8D0907-06	Water	04/25/18 16:55	04/28/18 10:55
MW07-W	A8D0907-07	Water	04/25/18 15:20	04/28/18 10:55
MW08-W	A8D0907-08	Water	04/26/18 12:05	04/28/18 10:55
MW09-W	A8D0907-09	Water	04/26/18 18:45	04/28/18 10:55
MW10-W	A8D0907-10	Water	04/26/18 16:15	04/28/18 10:55
MW11-W	A8D0907-11	Water	04/26/18 10:20	04/28/18 10:55
MW12-W	A8D0907-12	Water	04/25/18 09:55	04/28/18 10:55
MW13-W	A8D0907-13	Water	04/25/18 10:50	04/28/18 10:55
MW14-W	A8D0907-14	Water	04/25/18 12:05	04/28/18 10:55
MW16-W	A8D0907-15	Water	04/26/18 09:20	04/28/18 10:55
MW17-W	A8D0907-16	Water	04/26/18 11:05	04/28/18 10:55
MW19-W	A8D0907-17	Water	04/26/18 13:00	04/28/18 10:55
MW20-W	A8D0907-18	Water	04/26/18 17:55	04/28/18 10:55
MW21-W	A8D0907-19	Water	04/26/18 17:05	04/28/18 10:55
MW22-W	A8D0907-20	Water	04/26/18 19:30	04/28/18 10:55
MW23-W	A8D0907-21	Water	04/25/18 16:05	04/28/18 10:55
BH01-W	A8D0907-22	Water	04/26/18 13:40	04/28/18 10:55
BH02-W	A8D0907-23	Water	04/24/18 15:10	04/28/18 10:55
BH03-W	A8D0907-24	Water	04/26/18 15:15	04/28/18 10:55
RWO1-W	A8D0907-25	Water	04/26/18 14:30	04/28/18 10:55
MW102-W	A8D0907-26	Water	04/26/18 11:10	04/28/18 10:55
MW103-W	A8D0907-27	Water	04/26/18 19:35	04/28/18 10:55
BLANK	A8D0907-28	Water	04/24/18 13:00	04/28/18 10:55





<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**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
<b>MW1S-W (A8D0907-01)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	ND	---	187	ug/L	1	05/02/18	NWTPH-Dx	F-11
Oil	ND	---	374	ug/L	1	05/02/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 101 %		Limits: 50-150 %		1	05/02/18	NWTPH-Dx
<b>MW02-W (A8D0907-02)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	ND	---	187	ug/L	1	05/02/18	NWTPH-Dx	
Oil	ND	---	374	ug/L	1	05/02/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 99 %		Limits: 50-150 %		1	05/02/18	NWTPH-Dx
<b>MW3S-W (A8D0907-03)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	ND	---	187	ug/L	1	05/03/18	NWTPH-Dx	F-11
Oil	ND	---	374	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 98 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx
<b>MW04-W (A8D0907-04)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	ND	---	187	ug/L	1	05/03/18	NWTPH-Dx	
Oil	ND	---	374	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 98 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx
<b>MW05-W (A8D0907-05)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	ND	---	189	ug/L	1	05/03/18	NWTPH-Dx	
Oil	ND	---	377	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 97 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx
<b>MW06-W (A8D0907-06)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	<b>1620</b>	---	<b>187</b>	ug/L	1	05/03/18	NWTPH-Dx	F-13
Oil	ND	---	374	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 98 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx

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HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Report ID:  
A8D0907 - 050818 0221

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
<b>MW07-W (A8D0907-07)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	435	---	187	ug/L	1	05/03/18	NWTPH-Dx	F-11
Oil	ND	---	374	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 99 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx
<b>MW08-W (A8D0907-08)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	1300	---	187	ug/L	1	05/03/18	NWTPH-Dx	F-13
Oil	ND	---	374	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 99 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx
<b>MW09-W (A8D0907-09)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	2620	---	187	ug/L	1	05/03/18	NWTPH-Dx	F-13
Oil	ND	---	374	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 102 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx
<b>MW10-W (A8D0907-10)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	1500	---	189	ug/L	1	05/03/18	NWTPH-Dx	F-13
Oil	ND	---	377	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 99 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx
<b>MW11-W (A8D0907-11)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	1140	---	187	ug/L	1	05/03/18	NWTPH-Dx	F-13
Oil	ND	---	374	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 100 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx
<b>MW12-W (A8D0907-12)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	ND	---	189	ug/L	1	05/03/18	NWTPH-Dx	
Oil	ND	---	377	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 99 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx

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**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
<b>MW13-W (A8D0907-13)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	1790	---	189	ug/L	1	05/03/18	NWTPH-Dx	F-11, F-20
Oil	ND	---	377	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 101 %	Limits: 50-150 %		1	05/03/18	NWTPH-Dx	
<b>MW14-W (A8D0907-14)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	900	---	187	ug/L	1	05/03/18	NWTPH-Dx	F-11, F-20
Oil	ND	---	374	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 101 %	Limits: 50-150 %		1	05/03/18	NWTPH-Dx	
<b>MW16-W (A8D0907-15)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	330	---	187	ug/L	1	05/03/18	NWTPH-Dx	F-11
Oil	ND	---	374	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 102 %	Limits: 50-150 %		1	05/03/18	NWTPH-Dx	
<b>MW17-W (A8D0907-16)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	1630	---	189	ug/L	1	05/03/18	NWTPH-Dx	F-13, F-20
Oil	ND	---	377	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 102 %	Limits: 50-150 %		1	05/03/18	NWTPH-Dx	
<b>MW19-W (A8D0907-17)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	979	---	189	ug/L	1	05/03/18	NWTPH-Dx	F-13
Oil	ND	---	377	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 102 %	Limits: 50-150 %		1	05/03/18	NWTPH-Dx	
<b>MW20-W (A8D0907-18)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	1320	---	189	ug/L	1	05/03/18	NWTPH-Dx	F-13
Oil	ND	---	377	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 99 %	Limits: 50-150 %		1	05/03/18	NWTPH-Dx	

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**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
<b>MW21-W (A8D0907-19)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	965	---	187	ug/L	1	05/03/18	NWTPH-Dx	F-13
Oil	ND	---	374	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 102 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx
<b>MW22-W (A8D0907-20)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				
Diesel	4690	---	189	ug/L	1	05/03/18	NWTPH-Dx	F-13
Oil	ND	---	377	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 103 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx
<b>MW23-W (A8D0907-21)</b>		<b>Matrix: Water</b>		<b>Batch: 8050449</b>				
Diesel	419	---	190	ug/L	1	05/03/18	NWTPH-Dx	F-11
Oil	ND	---	381	ug/L	1	05/03/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 96 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx
<b>BH01-W (A8D0907-22)</b>		<b>Matrix: Water</b>		<b>Batch: 8050343</b>				
Diesel	1390	---	189	ug/L	1	05/02/18	NWTPH-Dx	F-13
Oil	ND	---	377	ug/L	1	05/02/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 100 %		Limits: 50-150 %		1	05/02/18	NWTPH-Dx
<b>BH02-W (A8D0907-23)</b>		<b>Matrix: Water</b>		<b>Batch: 8050343</b>				
Diesel	9360	---	189	ug/L	1	05/02/18	NWTPH-Dx	F-13
Oil	ND	---	377	ug/L	1	05/02/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 106 %		Limits: 50-150 %		1	05/02/18	NWTPH-Dx
<b>BH03-W (A8D0907-24)</b>		<b>Matrix: Water</b>		<b>Batch: 8050343</b>				
Diesel	1130	---	189	ug/L	1	05/02/18	NWTPH-Dx	F-13
Oil	ND	---	377	ug/L	1	05/02/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 102 %		Limits: 50-150 %		1	05/02/18	NWTPH-Dx

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**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
<b>RWO1-W (A8D0907-25)</b>		<b>Matrix: Water</b>		<b>Batch: 8050343</b>				
Diesel	ND	---	189	ug/L	1	05/02/18	NWTPH-Dx	
Oil	ND	---	377	ug/L	1	05/02/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 101 %	Limits: 50-150 %		1	05/02/18	NWTPH-Dx	
<b>MW102-W (A8D0907-26)</b>		<b>Matrix: Water</b>		<b>Batch: 8050343</b>				
Diesel	<b>1650</b>	---	<b>189</b>	ug/L	1	05/02/18	NWTPH-Dx	F-13
Oil	ND	---	377	ug/L	1	05/02/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 103 %	Limits: 50-150 %		1	05/02/18	NWTPH-Dx	
<b>MW103-W (A8D0907-27)</b>		<b>Matrix: Water</b>		<b>Batch: 8050343</b>				
Diesel	<b>4490</b>	---	<b>189</b>	ug/L	1	05/02/18	NWTPH-Dx	F-13
Oil	ND	---	377	ug/L	1	05/02/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 105 %	Limits: 50-150 %		1	05/02/18	NWTPH-Dx	
<b>BLANK (A8D0907-28)</b>		<b>Matrix: Water</b>		<b>Batch: 8050343</b>				
Diesel	ND	---	189	ug/L	1	05/02/18	NWTPH-Dx	
Oil	ND	---	377	ug/L	1	05/02/18	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 99 %	Limits: 50-150 %		1	05/02/18	NWTPH-Dx	



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**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
<b>MW1S-W (A8D0907-01)</b>		<b>Matrix: Water</b>		<b>Batch: 8041230</b>				
<b>Gasoline Range Organics</b>	<b>188</b>	---	<b>100</b>	ug/L	1	04/30/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 100 %	Limits: 50-150 %		1	04/30/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		94 %	50-150 %		1	04/30/18	NWTPH-Gx (MS)	
<b>MW02-W (A8D0907-02)</b>		<b>Matrix: Water</b>		<b>Batch: 8041230</b>				
<b>Gasoline Range Organics</b>	ND	---	100	ug/L	1	04/30/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 102 %	Limits: 50-150 %		1	04/30/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		93 %	50-150 %		1	04/30/18	NWTPH-Gx (MS)	
<b>MW3S-W (A8D0907-03)</b>		<b>Matrix: Water</b>		<b>Batch: 8041230</b>				
<b>Gasoline Range Organics</b>	ND	---	100	ug/L	1	04/30/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 102 %	Limits: 50-150 %		1	04/30/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		95 %	50-150 %		1	04/30/18	NWTPH-Gx (MS)	
<b>MW04-W (A8D0907-04)</b>		<b>Matrix: Water</b>		<b>Batch: 8041230</b>				
<b>Gasoline Range Organics</b>	ND	---	100	ug/L	1	04/30/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 103 %	Limits: 50-150 %		1	04/30/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		93 %	50-150 %		1	04/30/18	NWTPH-Gx (MS)	
<b>MW05-W (A8D0907-05)</b>		<b>Matrix: Water</b>		<b>Batch: 8041230</b>				
<b>Gasoline Range Organics</b>	ND	---	100	ug/L	1	04/30/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 101 %	Limits: 50-150 %		1	04/30/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		94 %	50-150 %		1	04/30/18	NWTPH-Gx (MS)	
<b>MW06-W (A8D0907-06RE1)</b>		<b>Matrix: Water</b>		<b>Batch: 8050336</b>				
<b>Gasoline Range Organics</b>	<b>643</b>	---	<b>100</b>	ug/L	1	05/01/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 116 %	Limits: 50-150 %		1	05/01/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		98 %	50-150 %		1	05/01/18	NWTPH-Gx (MS)	

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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
<b>MW07-W (A8D0907-07)</b>		<b>Matrix: Water</b>		<b>Batch: 8041230</b>				
Gasoline Range Organics	ND	---	100	ug/L	1	04/30/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 108 %	Limits: 50-150 %		1	04/30/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		95 %	50-150 %		1	04/30/18	NWTPH-Gx (MS)	
<b>MW08-W (A8D0907-08)</b>		<b>Matrix: Water</b>		<b>Batch: 8041230</b>				
Gasoline Range Organics	702	---	100	ug/L	1	04/30/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 106 %	Limits: 50-150 %		1	04/30/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		96 %	50-150 %		1	04/30/18	NWTPH-Gx (MS)	
<b>MW09-W (A8D0907-09RE1)</b>		<b>Matrix: Water</b>		<b>Batch: 8050336</b>				
Gasoline Range Organics	2810	---	100	ug/L	1	05/01/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 112 %	Limits: 50-150 %		1	05/01/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		97 %	50-150 %		1	05/01/18	NWTPH-Gx (MS)	
<b>MW10-W (A8D0907-10)</b>		<b>Matrix: Water</b>		<b>Batch: 8041230</b>				
Gasoline Range Organics	2290	---	100	ug/L	1	04/30/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 111 %	Limits: 50-150 %		1	04/30/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		95 %	50-150 %		1	04/30/18	NWTPH-Gx (MS)	
<b>MW11-W (A8D0907-11)</b>		<b>Matrix: Water</b>		<b>Batch: 8041230</b>				
Gasoline Range Organics	1240	---	100	ug/L	1	04/30/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 107 %	Limits: 50-150 %		1	04/30/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		97 %	50-150 %		1	04/30/18	NWTPH-Gx (MS)	
<b>MW12-W (A8D0907-12)</b>		<b>Matrix: Water</b>		<b>Batch: 8041230</b>				
Gasoline Range Organics	ND	---	100	ug/L	1	04/30/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 105 %	Limits: 50-150 %		1	04/30/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		95 %	50-150 %		1	04/30/18	NWTPH-Gx (MS)	

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<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**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
<b>MW13-W (A8D0907-13)</b>		<b>Matrix: Water</b>		<b>Batch: 8041255</b>				
<b>Gasoline Range Organics</b>	<b>40900</b>	---	<b>1000</b>	ug/L	10	05/01/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 113 %	Limits: 50-150 %		1	05/01/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		106 %	50-150 %		1	05/01/18	NWTPH-Gx (MS)	
<b>MW14-W (A8D0907-14)</b>		<b>Matrix: Water</b>		<b>Batch: 8041255</b>				
<b>Gasoline Range Organics</b>	<b>4620</b>	---	<b>100</b>	ug/L	1	04/30/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 108 %	Limits: 50-150 %		1	04/30/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		96 %	50-150 %		1	04/30/18	NWTPH-Gx (MS)	
<b>MW16-W (A8D0907-15)</b>		<b>Matrix: Water</b>		<b>Batch: 8041255</b>				
<b>Gasoline Range Organics</b>	<b>ND</b>	---	<b>100</b>	ug/L	1	05/01/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 100 %	Limits: 50-150 %		1	05/01/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		105 %	50-150 %		1	05/01/18	NWTPH-Gx (MS)	
<b>MW17-W (A8D0907-16)</b>		<b>Matrix: Water</b>		<b>Batch: 8041255</b>				
<b>Gasoline Range Organics</b>	<b>2800</b>	---	<b>100</b>	ug/L	1	05/01/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 108 %	Limits: 50-150 %		1	05/01/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		97 %	50-150 %		1	05/01/18	NWTPH-Gx (MS)	
<b>MW19-W (A8D0907-17RE1)</b>		<b>Matrix: Water</b>		<b>Batch: 8050380</b>				
<b>Gasoline Range Organics</b>	<b>280</b>	---	<b>100</b>	ug/L	1	05/02/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 108 %	Limits: 50-150 %		1	05/02/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		98 %	50-150 %		1	05/02/18	NWTPH-Gx (MS)	
<b>MW20-W (A8D0907-18)</b>		<b>Matrix: Water</b>		<b>Batch: 8041255</b>				
<b>Gasoline Range Organics</b>	<b>1270</b>	---	<b>100</b>	ug/L	1	05/01/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 101 %	Limits: 50-150 %		1	05/01/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		107 %	50-150 %		1	05/01/18	NWTPH-Gx (MS)	

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Lisa Domenighini, Client Services Manager





**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0907 - 050818 0221**

**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
<b>MW21-W (A8D0907-19RE1)</b>		<b>Matrix: Water</b>		<b>Batch: 8050333</b>				
<b>Gasoline Range Organics</b>	<b>991</b>	---	<b>100</b>	ug/L	1	05/01/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 102 %	Limits: 50-150 %		1	05/01/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		107 %	50-150 %		1	05/01/18	NWTPH-Gx (MS)	
<b>MW22-W (A8D0907-20RE1)</b>		<b>Matrix: Water</b>		<b>Batch: 8050333</b>				
<b>Gasoline Range Organics</b>	<b>6960</b>	---	<b>500</b>	ug/L	5	05/01/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 101 %	Limits: 50-150 %		1	05/01/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		108 %	50-150 %		1	05/01/18	NWTPH-Gx (MS)	
<b>MW23-W (A8D0907-21)</b>		<b>Matrix: Water</b>		<b>Batch: 8050336</b>				
<b>Gasoline Range Organics</b>	<b>ND</b>	---	<b>100</b>	ug/L	1	05/01/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 96 %	Limits: 50-150 %		1	05/01/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		92 %	50-150 %		1	05/01/18	NWTPH-Gx (MS)	
<b>BH01-W (A8D0907-22)</b>		<b>Matrix: Water</b>		<b>Batch: 8050336</b>				
<b>Gasoline Range Organics</b>	<b>2140</b>	---	<b>100</b>	ug/L	1	05/01/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 101 %	Limits: 50-150 %		1	05/01/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		94 %	50-150 %		1	05/01/18	NWTPH-Gx (MS)	
<b>BH02-W (A8D0907-23)</b>		<b>Matrix: Water</b>		<b>Batch: 8050336</b>				
<b>Gasoline Range Organics</b>	<b>854</b>	---	<b>100</b>	ug/L	1	05/01/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 104 %	Limits: 50-150 %		1	05/01/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		94 %	50-150 %		1	05/01/18	NWTPH-Gx (MS)	
<b>BH03-W (A8D0907-24)</b>		<b>Matrix: Water</b>		<b>Batch: 8050336</b>				
<b>Gasoline Range Organics</b>	<b>172</b>	---	<b>100</b>	ug/L	1	05/01/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 97 %	Limits: 50-150 %		1	05/01/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		91 %	50-150 %		1	05/01/18	NWTPH-Gx (MS)	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**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
<b>RW01-W (A8D0907-25)</b>		<b>Matrix: Water</b>		<b>Batch: 8041257</b>				
Gasoline Range Organics	ND	---	100	ug/L	1	05/01/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 109 %	Limits: 50-150 %		1	05/01/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		113 %	50-150 %		1	05/01/18	NWTPH-Gx (MS)	
<b>MW102-W (A8D0907-26)</b>		<b>Matrix: Water</b>		<b>Batch: 8050336</b>				
Gasoline Range Organics	2650	---	100	ug/L	1	05/01/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 110 %	Limits: 50-150 %		1	05/01/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		96 %	50-150 %		1	05/01/18	NWTPH-Gx (MS)	
<b>MW103-W (A8D0907-27)</b>		<b>Matrix: Water</b>		<b>Batch: 8050336</b>				
Gasoline Range Organics	6940	---	1000	ug/L	10	05/01/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 96 %	Limits: 50-150 %		1	05/01/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		94 %	50-150 %		1	05/01/18	NWTPH-Gx (MS)	
<b>BLANK (A8D0907-28)</b>		<b>Matrix: Water</b>		<b>Batch: 8041255</b>				
Gasoline Range Organics	ND	---	100	ug/L	1	04/30/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 101 %	Limits: 50-150 %		1	04/30/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		104 %	50-150 %		1	04/30/18	NWTPH-Gx (MS)	



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**ANALYTICAL SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW1S-W (A8D0907-01)</b>			<b>Matrix: Water</b>		<b>Batch: 8041230</b>			
Benzene	0.420	---	0.200	ug/L	1	04/30/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Ethylbenzene	5.80	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Xylenes, total	9.48	---	1.50	ug/L	1	04/30/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 98 %	Limits: 80-120 %		1	04/30/18	EPA 8260C	
Toluene-d8 (Surr)		101 %	80-120 %		1	04/30/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		103 %	80-120 %		1	04/30/18	EPA 8260C	

<b>MW02-W (A8D0907-02)</b>			<b>Matrix: Water</b>		<b>Batch: 8041230</b>			
Benzene	ND	---	0.200	ug/L	1	04/30/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Xylenes, total	ND	---	1.50	ug/L	1	04/30/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 100 %	Limits: 80-120 %		1	04/30/18	EPA 8260C	
Toluene-d8 (Surr)		101 %	80-120 %		1	04/30/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		104 %	80-120 %		1	04/30/18	EPA 8260C	

<b>MW04-W (A8D0907-04)</b>			<b>Matrix: Water</b>		<b>Batch: 8041230</b>			
Benzene	ND	---	0.200	ug/L	1	04/30/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Xylenes, total	ND	---	1.50	ug/L	1	04/30/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 100 %	Limits: 80-120 %		1	04/30/18	EPA 8260C	
Toluene-d8 (Surr)		100 %	80-120 %		1	04/30/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		103 %	80-120 %		1	04/30/18	EPA 8260C	

<b>MW05-W (A8D0907-05)</b>			<b>Matrix: Water</b>		<b>Batch: 8041230</b>			
Benzene	ND	---	0.200	ug/L	1	04/30/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	

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Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0907 - 050818 0221**

**ANALYTICAL SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW05-W (A8D0907-05)</b>		<b>Matrix: Water</b>		<b>Batch: 8041230</b>				
Xylenes, total	ND	---	1.50	ug/L	1	04/30/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 100 %	Limits: 80-120 %		1	04/30/18	EPA 8260C	
Toluene-d8 (Surr)		100 %	80-120 %		1	04/30/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		105 %	80-120 %		1	04/30/18	EPA 8260C	
<b>MW06-W (A8D0907-06RE1)</b>		<b>Matrix: Water</b>		<b>Batch: 8050336</b>				
<b>Benzene</b>	<b>0.560</b>	---	<b>0.200</b>	ug/L	1	05/01/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
<b>Xylenes, total</b>	<b>2.19</b>	---	<b>1.50</b>	ug/L	1	05/01/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 99 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
Toluene-d8 (Surr)		100 %	80-120 %		1	05/01/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		103 %	80-120 %		1	05/01/18	EPA 8260C	
<b>MW07-W (A8D0907-07)</b>		<b>Matrix: Water</b>		<b>Batch: 8041230</b>				
Benzene	ND	---	0.200	ug/L	1	04/30/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Xylenes, total	ND	---	1.50	ug/L	1	04/30/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 101 %	Limits: 80-120 %		1	04/30/18	EPA 8260C	
Toluene-d8 (Surr)		100 %	80-120 %		1	04/30/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		100 %	80-120 %		1	04/30/18	EPA 8260C	
<b>MW08-W (A8D0907-08)</b>		<b>Matrix: Water</b>		<b>Batch: 8041230</b>				
<b>Benzene</b>	<b>0.641</b>	---	<b>0.200</b>	ug/L	1	04/30/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
<b>Xylenes, total</b>	<b>4.67</b>	---	<b>1.50</b>	ug/L	1	04/30/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 99 %	Limits: 80-120 %		1	04/30/18	EPA 8260C	
Toluene-d8 (Surr)		99 %	80-120 %		1	04/30/18	EPA 8260C	

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**ANALYTICAL SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW08-W (A8D0907-08)</b>			<b>Matrix: Water</b>		<b>Batch: 8041230</b>			
Surrogate: 4-Bromofluorobenzene (Surr)		Recovery: 100 %	Limits: 80-120 %		1	04/30/18	EPA 8260C	
<b>MW09-W (A8D0907-09RE1)</b>			<b>Matrix: Water</b>		<b>Batch: 8050336</b>			
<b>Benzene</b>	<b>2.73</b>	---	<b>0.200</b>	ug/L	1	05/01/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
<b>Ethylbenzene</b>	<b>9.95</b>	---	<b>0.500</b>	ug/L	1	05/01/18	EPA 8260C	
<b>Xylenes, total</b>	<b>20.4</b>	---	<b>1.50</b>	ug/L	1	05/01/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 100 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
Toluene-d8 (Surr)		100 %	80-120 %		1	05/01/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		99 %	80-120 %		1	05/01/18	EPA 8260C	
<b>MW10-W (A8D0907-10)</b>			<b>Matrix: Water</b>		<b>Batch: 8041230</b>			
<b>Benzene</b>	<b>0.219</b>	---	<b>0.200</b>	ug/L	1	04/30/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
<b>Ethylbenzene</b>	<b>3.52</b>	---	<b>0.500</b>	ug/L	1	04/30/18	EPA 8260C	
<b>Xylenes, total</b>	<b>5.95</b>	---	<b>1.50</b>	ug/L	1	04/30/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 99 %	Limits: 80-120 %		1	04/30/18	EPA 8260C	
Toluene-d8 (Surr)		99 %	80-120 %		1	04/30/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		101 %	80-120 %		1	04/30/18	EPA 8260C	
<b>MW11-W (A8D0907-11)</b>			<b>Matrix: Water</b>		<b>Batch: 8041230</b>			
<b>Benzene</b>	<b>ND</b>	---	<b>0.200</b>	ug/L	1	04/30/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
<b>Ethylbenzene</b>	<b>0.560</b>	---	<b>0.500</b>	ug/L	1	04/30/18	EPA 8260C	
<b>Xylenes, total</b>	<b>2.27</b>	---	<b>1.50</b>	ug/L	1	04/30/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 98 %	Limits: 80-120 %		1	04/30/18	EPA 8260C	
Toluene-d8 (Surr)		100 %	80-120 %		1	04/30/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		102 %	80-120 %		1	04/30/18	EPA 8260C	
<b>MW12-W (A8D0907-12)</b>			<b>Matrix: Water</b>		<b>Batch: 8041230</b>			

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**ANALYTICAL SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW12-W (A8D0907-12)</b>		<b>Matrix: Water</b>		<b>Batch: 8041230</b>				
Benzene	ND	---	0.200	ug/L	1	04/30/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Xylenes, total	ND	---	1.50	ug/L	1	04/30/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 101 %	Limits: 80-120 %		1	04/30/18	EPA 8260C	
Toluene-d8 (Surr)		101 %	80-120 %		1	04/30/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		103 %	80-120 %		1	04/30/18	EPA 8260C	

<b>MW13-W (A8D0907-13)</b>		<b>Matrix: Water</b>		<b>Batch: 8041255</b>				
<b>Benzene</b>	<b>1500</b>	---	<b>2.00</b>	ug/L	10	05/01/18	EPA 8260C	
<b>Ethylbenzene</b>	<b>627</b>	---	<b>5.00</b>	ug/L	10	05/01/18	EPA 8260C	
<b>Xylenes, total</b>	<b>3780</b>	---	<b>15.0</b>	ug/L	10	05/01/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 108 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
Toluene-d8 (Surr)		95 %	80-120 %		1	05/01/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		92 %	80-120 %		1	05/01/18	EPA 8260C	

<b>MW13-W (A8D0907-13RE1)</b>		<b>Matrix: Water</b>		<b>Batch: 8050333</b>				
<b>Toluene</b>	<b>4710</b>	---	<b>100</b>	ug/L	100	05/01/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 110 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
Toluene-d8 (Surr)		99 %	80-120 %		1	05/01/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		95 %	80-120 %		1	05/01/18	EPA 8260C	

<b>MW16-W (A8D0907-15)</b>		<b>Matrix: Water</b>		<b>Batch: 8041255</b>				
Benzene	ND	---	0.200	ug/L	1	05/01/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Xylenes, total	ND	---	1.50	ug/L	1	05/01/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 107 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
Toluene-d8 (Surr)		99 %	80-120 %		1	05/01/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		96 %	80-120 %		1	05/01/18	EPA 8260C	

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Lisa Domenighini, Client Services Manager



**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0907 - 050818 0221**

**ANALYTICAL SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW19-W (A8D0907-17RE1)</b>			<b>Matrix: Water</b>		<b>Batch: 8050380</b>			
Benzene	ND	---	0.200	ug/L	1	05/02/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	05/02/18	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	05/02/18	EPA 8260C	
Xylenes, total	ND	---	1.50	ug/L	1	05/02/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 100 %	Limits: 80-120 %		1	05/02/18	EPA 8260C	
Toluene-d8 (Surr)		101 %	80-120 %		1	05/02/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		102 %	80-120 %		1	05/02/18	EPA 8260C	
<b>MW20-W (A8D0907-18)</b>			<b>Matrix: Water</b>		<b>Batch: 8041255</b>			
Benzene	ND	---	0.200	ug/L	1	05/01/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
<b>Ethylbenzene</b>	<b>1.56</b>	---	<b>0.500</b>	ug/L	1	05/01/18	EPA 8260C	
<b>Xylenes, total</b>	<b>5.44</b>	---	<b>1.50</b>	ug/L	1	05/01/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 108 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
Toluene-d8 (Surr)		98 %	80-120 %		1	05/01/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		95 %	80-120 %		1	05/01/18	EPA 8260C	
<b>MW21-W (A8D0907-19RE1)</b>			<b>Matrix: Water</b>		<b>Batch: 8050333</b>			
Benzene	ND	---	0.200	ug/L	1	05/01/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
<b>Ethylbenzene</b>	<b>0.835</b>	---	<b>0.500</b>	ug/L	1	05/01/18	EPA 8260C	
<b>Xylenes, total</b>	<b>1.82</b>	---	<b>1.50</b>	ug/L	1	05/01/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 109 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
Toluene-d8 (Surr)		98 %	80-120 %		1	05/01/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		94 %	80-120 %		1	05/01/18	EPA 8260C	
<b>MW22-W (A8D0907-20RE1)</b>			<b>Matrix: Water</b>		<b>Batch: 8050333</b>			
<b>Benzene</b>	<b>118</b>	---	<b>1.00</b>	ug/L	5	05/01/18	EPA 8260C	
<b>Toluene</b>	<b>28.8</b>	---	<b>5.00</b>	ug/L	5	05/01/18	EPA 8260C	

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Lisa Domenighini, Client Services Manager



**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0907 - 050818 0221**

**ANALYTICAL SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW22-W (A8D0907-20RE1)</b>			<b>Matrix: Water</b>		<b>Batch: 8050333</b>			
Ethylbenzene	102	---	2.50	ug/L	5	05/01/18	EPA 8260C	
Xylenes, total	196	---	7.50	ug/L	5	05/01/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 110 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
Toluene-d8 (Surr)		98 %	80-120 %		1	05/01/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		93 %	80-120 %		1	05/01/18	EPA 8260C	

<b>MW23-W (A8D0907-21)</b>			<b>Matrix: Water</b>		<b>Batch: 8050336</b>			
Benzene	ND	---	0.200	ug/L	1	05/01/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Xylenes, total	ND	---	1.50	ug/L	1	05/01/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 102 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
Toluene-d8 (Surr)		102 %	80-120 %		1	05/01/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		104 %	80-120 %		1	05/01/18	EPA 8260C	

<b>BH01-W (A8D0907-22)</b>			<b>Matrix: Water</b>		<b>Batch: 8050336</b>			
Benzene	0.671	---	0.200	ug/L	1	05/01/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Ethylbenzene	5.55	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Xylenes, total	12.5	---	1.50	ug/L	1	05/01/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 102 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
Toluene-d8 (Surr)		101 %	80-120 %		1	05/01/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		101 %	80-120 %		1	05/01/18	EPA 8260C	

<b>BH02-W (A8D0907-23)</b>			<b>Matrix: Water</b>		<b>Batch: 8050336</b>			
Benzene	ND	---	0.200	ug/L	1	05/01/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Xylenes, total	ND	---	1.50	ug/L	1	05/01/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 102 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	

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Lisa Domenighini, Client Services Manager





<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**ANALYTICAL SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>BH02-W (A8D0907-23)</b>		<b>Matrix: Water</b>		<b>Batch: 8050336</b>				
Surrogate: Toluene-d8 (Surr)		Recovery: 100 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		102 %	80-120 %		1	05/01/18	EPA 8260C	
<b>BH03-W (A8D0907-24)</b>		<b>Matrix: Water</b>		<b>Batch: 8050336</b>				
Benzene	ND	---	0.200	ug/L	1	05/01/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Xylenes, total	ND	---	1.50	ug/L	1	05/01/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 101 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
Toluene-d8 (Surr)		102 %	80-120 %		1	05/01/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		104 %	80-120 %		1	05/01/18	EPA 8260C	
<b>RW01-W (A8D0907-25)</b>		<b>Matrix: Water</b>		<b>Batch: 8041257</b>				
Benzene	ND	---	0.200	ug/L	1	05/01/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Xylenes, total	ND	---	1.50	ug/L	1	05/01/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 112 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
Toluene-d8 (Surr)		99 %	80-120 %		1	05/01/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		98 %	80-120 %		1	05/01/18	EPA 8260C	
<b>MW103-W (A8D0907-27)</b>		<b>Matrix: Water</b>		<b>Batch: 8050336</b>				
<b>Benzene</b>	<b>122</b>	---	<b>2.00</b>	ug/L	10	05/01/18	EPA 8260C	
<b>Toluene</b>	<b>31.4</b>	---	<b>10.0</b>	ug/L	10	05/01/18	EPA 8260C	
<b>Ethylbenzene</b>	<b>109</b>	---	<b>5.00</b>	ug/L	10	05/01/18	EPA 8260C	
<b>Xylenes, total</b>	<b>223</b>	---	<b>15.0</b>	ug/L	10	05/01/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 101 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
Toluene-d8 (Surr)		104 %	80-120 %		1	05/01/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		104 %	80-120 %		1	05/01/18	EPA 8260C	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**ANALYTICAL SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>BLANK (A8D0907-28)</b>		<b>Matrix: Water</b>		<b>Batch: 8041255</b>				
Benzene	ND	---	0.200	ug/L	1	04/30/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Xylenes, total	ND	---	1.50	ug/L	1	04/30/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 106 %	Limits: 80-120 %		1	04/30/18	EPA 8260C	
Toluene-d8 (Surr)		98 %	80-120 %		1	04/30/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		97 %	80-120 %		1	04/30/18	EPA 8260C	



**HydroCon LLC**  
314 W 15th Street Suite 300  
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Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0907 - 050818 0221**

**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW3S-W (A8D0907-03)</b>		<b>Matrix: Water</b>		<b>Batch: 8041230</b>				
Acetone	ND	---	20.0	ug/L	1	04/30/18	EPA 8260C	
Acrylonitrile	ND	---	2.00	ug/L	1	04/30/18	EPA 8260C	
Benzene	ND	---	0.200	ug/L	1	04/30/18	EPA 8260C	
Bromobenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Bromochloromethane	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Bromodichloromethane	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Bromoform	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Bromomethane	ND	---	5.00	ug/L	1	04/30/18	EPA 8260C	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	04/30/18	EPA 8260C	
n-Butylbenzene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
sec-Butylbenzene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
tert-Butylbenzene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Carbon disulfide	ND	---	10.0	ug/L	1	04/30/18	EPA 8260C	
Carbon tetrachloride	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Chlorobenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Chloroethane	ND	---	5.00	ug/L	1	04/30/18	EPA 8260C	
Chloroform	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Chloromethane	ND	---	5.00	ug/L	1	04/30/18	EPA 8260C	
2-Chlorotoluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
4-Chlorotoluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Dibromochloromethane	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	04/30/18	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Dibromomethane	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	

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Lisa Domenighini, Client Services Manager



**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0907 - 050818 0221**

**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW3S-W (A8D0907-03)</b>		<b>Matrix: Water</b>		<b>Batch: 8041230</b>				
1,1-Dichloroethene	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	04/30/18	EPA 8260C	
2-Hexanone	ND	---	10.0	ug/L	1	04/30/18	EPA 8260C	
Isopropylbenzene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Methylene chloride	ND	---	3.00	ug/L	1	04/30/18	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	04/30/18	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Naphthalene	ND	---	2.00	ug/L	1	04/30/18	EPA 8260C	
n-Propylbenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Styrene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	04/30/18	EPA 8260C	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	04/30/18	EPA 8260C	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	04/30/18	EPA 8260C	

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Lisa Domenighini, Client Services Manager



HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Report ID:  
A8D0907 - 050818 0221

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW3S-W (A8D0907-03)</b>			<b>Matrix: Water</b>		<b>Batch: 8041230</b>			
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Vinyl chloride	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
m,p-Xylene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
o-Xylene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 100 %	Limits: 80-120 %		1	04/30/18	EPA 8260C	
Toluene-d8 (Surr)		100 %	80-120 %		1	04/30/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		103 %	80-120 %		1	04/30/18	EPA 8260C	
<b>MW14-W (A8D0907-14)</b>			<b>Matrix: Water</b>		<b>Batch: 8041255</b>			
Acetone	ND	---	20.0	ug/L	1	04/30/18	EPA 8260C	
Acrylonitrile	ND	---	110	ug/L	1	04/30/18	EPA 8260C	R-02
<b>Benzene</b>	<b>13.1</b>	---	<b>0.200</b>	ug/L	1	04/30/18	EPA 8260C	
Bromobenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Bromochloromethane	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Bromodichloromethane	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Bromoform	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Bromomethane	ND	---	5.00	ug/L	1	04/30/18	EPA 8260C	
2-Butanone (MEK)	ND	---	85.0	ug/L	1	04/30/18	EPA 8260C	R-02
n-Butylbenzene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
<b>sec-Butylbenzene</b>	<b>4.24</b>	---	<b>1.00</b>	ug/L	1	04/30/18	EPA 8260C	
tert-Butylbenzene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Carbon disulfide	ND	---	10.0	ug/L	1	04/30/18	EPA 8260C	
Carbon tetrachloride	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Chlorobenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Chloroethane	ND	---	5.00	ug/L	1	04/30/18	EPA 8260C	
Chloroform	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Chloromethane	ND	---	5.00	ug/L	1	04/30/18	EPA 8260C	
2-Chlorotoluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	

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Lisa Domenighini, Client Services Manager



**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0907 - 050818 0221**

**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW14-W (A8D0907-14)</b>		<b>Matrix: Water</b>		<b>Batch: 8041255</b>				
4-Chlorotoluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Dibromochloromethane	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	04/30/18	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Dibromomethane	ND	---	1.30	ug/L	1	04/30/18	EPA 8260C	R-02
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
<b>Ethylbenzene</b>	<b>16.1</b>	---	<b>0.500</b>	ug/L	1	04/30/18	EPA 8260C	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	04/30/18	EPA 8260C	
2-Hexanone	ND	---	10.0	ug/L	1	04/30/18	EPA 8260C	
<b>Isopropylbenzene</b>	<b>11.0</b>	---	<b>1.00</b>	ug/L	1	04/30/18	EPA 8260C	
<b>4-Isopropyltoluene</b>	<b>1.87</b>	---	<b>1.00</b>	ug/L	1	04/30/18	EPA 8260C	
Methylene chloride	ND	---	3.00	ug/L	1	04/30/18	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	04/30/18	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
<b>Naphthalene</b>	<b>3.21</b>	---	<b>2.00</b>	ug/L	1	04/30/18	EPA 8260C	
<b>n-Propylbenzene</b>	<b>8.50</b>	---	<b>0.500</b>	ug/L	1	04/30/18	EPA 8260C	

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Lisa Domenighini, Client Services Manager



**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0907 - 050818 0221**

**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW14-W (A8D0907-14)</b>		<b>Matrix: Water</b>		<b>Batch: 8041255</b>				
Styrene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	04/30/18	EPA 8260C	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	04/30/18	EPA 8260C	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	04/30/18	EPA 8260C	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
Vinyl chloride	ND	---	0.400	ug/L	1	04/30/18	EPA 8260C	
m,p-Xylene	ND	---	1.00	ug/L	1	04/30/18	EPA 8260C	
o-Xylene	ND	---	0.500	ug/L	1	04/30/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 98 %	Limits: 80-120 %		1	04/30/18	EPA 8260C	
Toluene-d8 (Surr)		104 %	80-120 %		1	04/30/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		92 %	80-120 %		1	04/30/18	EPA 8260C	

<b>MW17-W (A8D0907-16)</b>		<b>Matrix: Water</b>		<b>Batch: 8041255</b>				
Acetone	ND	---	20.0	ug/L	1	05/01/18	EPA 8260C	
Acrylonitrile	ND	---	43.0	ug/L	1	05/01/18	EPA 8260C	R-02
<b>Benzene</b>	<b>1.23</b>	---	<b>0.200</b>	ug/L	1	05/01/18	EPA 8260C	
Bromobenzene	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Bromochloromethane	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Bromodichloromethane	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Bromoform	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Bromomethane	ND	---	5.00	ug/L	1	05/01/18	EPA 8260C	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW17-W (A8D0907-16)</b>		<b>Matrix: Water</b>		<b>Batch: 8041255</b>				
2-Butanone (MEK)	ND	---	44.0	ug/L	1	05/01/18	EPA 8260C	R-02
<b>n-Butylbenzene</b>	<b>1.54</b>	---	<b>1.00</b>	ug/L	1	05/01/18	EPA 8260C	<b>M-02</b>
<b>sec-Butylbenzene</b>	<b>1.71</b>	---	<b>1.00</b>	ug/L	1	05/01/18	EPA 8260C	
tert-Butylbenzene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Carbon disulfide	ND	---	10.0	ug/L	1	05/01/18	EPA 8260C	
Carbon tetrachloride	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Chlorobenzene	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Chloroethane	ND	---	5.00	ug/L	1	05/01/18	EPA 8260C	
Chloroform	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Chloromethane	ND	---	5.00	ug/L	1	05/01/18	EPA 8260C	
2-Chlorotoluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
4-Chlorotoluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Dibromochloromethane	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	05/01/18	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Dibromomethane	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	

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Lisa Domenighini, Client Services Manager





<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW17-W (A8D0907-16)</b>		<b>Matrix: Water</b>		<b>Batch: 8041255</b>				
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
<b>Ethylbenzene</b>	<b>1.62</b>	---	<b>0.500</b>	ug/L	1	05/01/18	EPA 8260C	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	05/01/18	EPA 8260C	
2-Hexanone	ND	---	10.0	ug/L	1	05/01/18	EPA 8260C	
<b>Isopropylbenzene</b>	<b>3.43</b>	---	<b>1.00</b>	ug/L	1	05/01/18	EPA 8260C	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Methylene chloride	ND	---	3.00	ug/L	1	05/01/18	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	05/01/18	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
<b>Naphthalene</b>	<b>4.72</b>	---	<b>2.00</b>	ug/L	1	05/01/18	EPA 8260C	
<b>n-Propylbenzene</b>	<b>6.48</b>	---	<b>0.500</b>	ug/L	1	05/01/18	EPA 8260C	
Styrene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	05/01/18	EPA 8260C	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	05/01/18	EPA 8260C	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	05/01/18	EPA 8260C	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
<b>1,2,4-Trimethylbenzene</b>	<b>20.5</b>	---	<b>1.00</b>	ug/L	1	05/01/18	EPA 8260C	
<b>1,3,5-Trimethylbenzene</b>	<b>2.21</b>	---	<b>1.00</b>	ug/L	1	05/01/18	EPA 8260C	
Vinyl chloride	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
<b>m,p-Xylene</b>	<b>6.38</b>	---	<b>1.00</b>	ug/L	1	05/01/18	EPA 8260C	
<b>o-Xylene</b>	<b>1.28</b>	---	<b>0.500</b>	ug/L	1	05/01/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 98 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
Toluene-d8 (Surr)		100 %	80-120 %		1	05/01/18	EPA 8260C	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW17-W (A8D0907-16)</b>			<b>Matrix: Water</b>		<b>Batch: 8041255</b>			
Surrogate: 4-Bromofluorobenzene (Surr)		Recovery: 96 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
<b>MW102-W (A8D0907-26)</b>			<b>Matrix: Water</b>		<b>Batch: 8050336</b>			
Acetone	ND	---	20.0	ug/L	1	05/01/18	EPA 8260C	
Acrylonitrile	ND	---	78.0	ug/L	1	05/01/18	EPA 8260C	R-02
<b>Benzene</b>	<b>1.21</b>	---	<b>0.200</b>	ug/L	1	05/01/18	EPA 8260C	
Bromobenzene	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Bromochloromethane	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Bromodichloromethane	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Bromoform	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Bromomethane	ND	---	5.00	ug/L	1	05/01/18	EPA 8260C	
2-Butanone (MEK)	ND	---	70.0	ug/L	1	05/01/18	EPA 8260C	R-02
<b>n-Butylbenzene</b>	<b>1.98</b>	---	<b>1.00</b>	ug/L	1	05/01/18	EPA 8260C	<b>M-02</b>
<b>sec-Butylbenzene</b>	<b>2.15</b>	---	<b>1.00</b>	ug/L	1	05/01/18	EPA 8260C	
tert-Butylbenzene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Carbon disulfide	ND	---	10.0	ug/L	1	05/01/18	EPA 8260C	
Carbon tetrachloride	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Chlorobenzene	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Chloroethane	ND	---	5.00	ug/L	1	05/01/18	EPA 8260C	
Chloroform	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Chloromethane	ND	---	5.00	ug/L	1	05/01/18	EPA 8260C	
2-Chlorotoluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
4-Chlorotoluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Dibromochloromethane	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	05/01/18	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Dibromomethane	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	

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Lisa Domenighini, Client Services Manager



**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0907 - 050818 0221**

**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW102-W (A8D0907-26)</b>		<b>Matrix: Water</b>		<b>Batch: 8050336</b>				
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
<b>Ethylbenzene</b>	<b>1.69</b>	---	<b>0.500</b>	ug/L	1	05/01/18	EPA 8260C	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	05/01/18	EPA 8260C	
2-Hexanone	ND	---	10.0	ug/L	1	05/01/18	EPA 8260C	
<b>Isopropylbenzene</b>	<b>3.74</b>	---	<b>1.00</b>	ug/L	1	05/01/18	EPA 8260C	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
Methylene chloride	ND	---	3.00	ug/L	1	05/01/18	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	05/01/18	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
<b>Naphthalene</b>	<b>6.02</b>	---	<b>2.00</b>	ug/L	1	05/01/18	EPA 8260C	
<b>n-Propylbenzene</b>	<b>7.22</b>	---	<b>0.500</b>	ug/L	1	05/01/18	EPA 8260C	
Styrene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	05/01/18	EPA 8260C	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	05/01/18	EPA 8260C	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	

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<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**ANALYTICAL SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW102-W (A8D0907-26)</b>		<b>Matrix: Water</b>		<b>Batch: 8050336</b>				
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	05/01/18	EPA 8260C	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	05/01/18	EPA 8260C	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	05/01/18	EPA 8260C	
<b>1,2,4-Trimethylbenzene</b>	<b>22.5</b>	---	<b>1.00</b>	ug/L	1	05/01/18	EPA 8260C	
<b>1,3,5-Trimethylbenzene</b>	<b>2.47</b>	---	<b>1.00</b>	ug/L	1	05/01/18	EPA 8260C	
Vinyl chloride	ND	---	0.400	ug/L	1	05/01/18	EPA 8260C	
<b>m,p-Xylene</b>	<b>6.57</b>	---	<b>1.00</b>	ug/L	1	05/01/18	EPA 8260C	
<b>o-Xylene</b>	<b>1.58</b>	---	<b>0.500</b>	ug/L	1	05/01/18	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 102 %	Limits: 80-120 %		1	05/01/18	EPA 8260C	
Toluene-d8 (Surr)		107 %	80-120 %		1	05/01/18	EPA 8260C	
4-Bromofluorobenzene (Surr)		105 %	80-120 %		1	05/01/18	EPA 8260C	



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**ANALYTICAL SAMPLE RESULTS**

**Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW21-W (A8D0907-19)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				<b>Q-22</b>
Acenaphthene	0.193	---	0.0935	ug/L	1	05/03/18	EPA 8270D (SIM)	
Acenaphthylene	ND	---	0.0935	ug/L	1	05/03/18	EPA 8270D (SIM)	
<b>Anthracene</b>	<b>0.145</b>	---	<b>0.0935</b>	ug/L	1	05/03/18	EPA 8270D (SIM)	
Benz(a)anthracene	ND	---	0.0935	ug/L	1	05/03/18	EPA 8270D (SIM)	
Benzo(a)pyrene	ND	---	0.0935	ug/L	1	05/03/18	EPA 8270D (SIM)	
Benzo(b)fluoranthene	ND	---	0.0935	ug/L	1	05/03/18	EPA 8270D (SIM)	
Benzo(k)fluoranthene	ND	---	0.0935	ug/L	1	05/03/18	EPA 8270D (SIM)	
Benzo(g,h,i)perylene	ND	---	0.0935	ug/L	1	05/03/18	EPA 8270D (SIM)	
Chrysene	ND	---	0.0935	ug/L	1	05/03/18	EPA 8270D (SIM)	
Dibenz(a,h)anthracene	ND	---	0.0935	ug/L	1	05/03/18	EPA 8270D (SIM)	
<b>Dibenzofuran</b>	<b>0.103</b>	---	<b>0.0935</b>	ug/L	1	05/03/18	EPA 8270D (SIM)	
Fluoranthene	ND	---	0.0935	ug/L	1	05/03/18	EPA 8270D (SIM)	
<b>Fluorene</b>	<b>0.144</b>	---	<b>0.0935</b>	ug/L	1	05/03/18	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	---	0.0935	ug/L	1	05/03/18	EPA 8270D (SIM)	
<b>1-Methylnaphthalene</b>	<b>1.48</b>	---	<b>0.187</b>	ug/L	1	05/03/18	EPA 8270D (SIM)	
<b>2-Methylnaphthalene</b>	<b>0.494</b>	---	<b>0.187</b>	ug/L	1	05/03/18	EPA 8270D (SIM)	
<b>Naphthalene</b>	<b>1.16</b>	---	<b>0.187</b>	ug/L	1	05/03/18	EPA 8270D (SIM)	<b>M-02</b>
Phenanthrene	ND	---	0.0935	ug/L	1	05/03/18	EPA 8270D (SIM)	
Pyrene	ND	---	0.0935	ug/L	1	05/03/18	EPA 8270D (SIM)	

<b>MW22-W (A8D0907-20)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				<b>Q-22</b>
Acenaphthylene	ND	---	12.3	ug/L	1	05/03/18	EPA 8270D (SIM)	R-02
<b>Anthracene</b>	<b>8.48</b>	---	<b>0.0943</b>	ug/L	1	05/03/18	EPA 8270D (SIM)	
<b>Benz(a)anthracene</b>	<b>0.284</b>	---	<b>0.0943</b>	ug/L	1	05/03/18	EPA 8270D (SIM)	<b>M-05</b>
Benzo(a)pyrene	ND	---	0.0943	ug/L	1	05/03/18	EPA 8270D (SIM)	
Benzo(b)fluoranthene	ND	---	0.0943	ug/L	1	05/03/18	EPA 8270D (SIM)	
Benzo(k)fluoranthene	ND	---	0.0943	ug/L	1	05/03/18	EPA 8270D (SIM)	
Benzo(g,h,i)perylene	ND	---	0.0943	ug/L	1	05/03/18	EPA 8270D (SIM)	
<b>Chrysene</b>	<b>0.243</b>	---	<b>0.0943</b>	ug/L	1	05/03/18	EPA 8270D (SIM)	<b>M-05</b>
Dibenz(a,h)anthracene	ND	---	0.0943	ug/L	1	05/03/18	EPA 8270D (SIM)	

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<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**ANALYTICAL SAMPLE RESULTS**

**Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW22-W (A8D0907-20)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				<b>Q-22</b>
Dibenzofuran	8.55	---	0.0943	ug/L	1	05/03/18	EPA 8270D (SIM)	
Fluoranthene	3.20	---	0.0943	ug/L	1	05/03/18	EPA 8270D (SIM)	
Fluorene	36.7	---	0.0943	ug/L	1	05/03/18	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	---	0.0943	ug/L	1	05/03/18	EPA 8270D (SIM)	
Phenanthrene	36.6	---	0.0943	ug/L	1	05/03/18	EPA 8270D (SIM)	
Pyrene	4.30	---	0.0943	ug/L	1	05/03/18	EPA 8270D (SIM)	
<b>MW22-W (A8D0907-20RE1)</b>		<b>Matrix: Water</b>		<b>Batch: 8050406</b>				<b>Q-22</b>
Acenaphthene	113	---	9.43	ug/L	100	05/03/18	EPA 8270D (SIM)	
1-Methylnaphthalene	298	---	18.9	ug/L	100	05/03/18	EPA 8270D (SIM)	
2-Methylnaphthalene	210	---	18.9	ug/L	100	05/03/18	EPA 8270D (SIM)	
Naphthalene	692	---	18.9	ug/L	100	05/03/18	EPA 8270D (SIM)	
<b>MW103-W (A8D0907-27)</b>		<b>Matrix: Water</b>		<b>Batch: 8050343</b>				<b>Q-22</b>
Acenaphthylene	ND	---	11.6	ug/L	1	05/02/18	EPA 8270D (SIM)	R-02
Anthracene	8.98	---	0.0943	ug/L	1	05/02/18	EPA 8270D (SIM)	
Benz(a)anthracene	0.294	---	0.0943	ug/L	1	05/02/18	EPA 8270D (SIM)	M-05
Benzo(a)pyrene	ND	---	0.0943	ug/L	1	05/02/18	EPA 8270D (SIM)	
Benzo(b)fluoranthene	ND	---	0.0943	ug/L	1	05/02/18	EPA 8270D (SIM)	
Benzo(k)fluoranthene	ND	---	0.0943	ug/L	1	05/02/18	EPA 8270D (SIM)	
Benzo(g,h,i)perylene	ND	---	0.0943	ug/L	1	05/02/18	EPA 8270D (SIM)	
Chrysene	0.250	---	0.0943	ug/L	1	05/02/18	EPA 8270D (SIM)	M-05
Dibenz(a,h)anthracene	ND	---	0.0943	ug/L	1	05/02/18	EPA 8270D (SIM)	
Dibenzofuran	8.15	---	0.0943	ug/L	1	05/02/18	EPA 8270D (SIM)	
Fluoranthene	3.25	---	0.0943	ug/L	1	05/02/18	EPA 8270D (SIM)	
Fluorene	33.7	---	0.0943	ug/L	1	05/02/18	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	---	0.0943	ug/L	1	05/02/18	EPA 8270D (SIM)	
Pyrene	4.47	---	0.0943	ug/L	1	05/02/18	EPA 8270D (SIM)	
<b>MW103-W (A8D0907-27RE1)</b>		<b>Matrix: Water</b>		<b>Batch: 8050343</b>				<b>Q-22</b>

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Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0907 - 050818 0221**

**ANALYTICAL SAMPLE RESULTS**

**Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW103-W (A8D0907-27RE1)</b>		<b>Matrix: Water</b>		<b>Batch: 8050343</b>				<b>Q-22</b>
Acenaphthene	105	---	4.72	ug/L	50	05/03/18	EPA 8270D (SIM)	
1-Methylnaphthalene	274	---	9.43	ug/L	50	05/03/18	EPA 8270D (SIM)	
2-Methylnaphthalene	200	---	9.43	ug/L	50	05/03/18	EPA 8270D (SIM)	
Naphthalene	681	---	9.43	ug/L	50	05/03/18	EPA 8270D (SIM)	
Phenanthrene	41.4	---	4.72	ug/L	50	05/03/18	EPA 8270D (SIM)	

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**ANALYTICAL SAMPLE RESULTS**

**Total Metals by EPA 200.8 (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>MW1S-W (A8D0907-01)</b>		<b>Matrix: Water</b>						
<u>Batch: 8050348</u>								
Lead	ND	---	0.200	ug/L	1	05/02/18	EPA 200.8	
<b>MW06-W (A8D0907-06)</b>		<b>Matrix: Water</b>						
<u>Batch: 8050348</u>								
Lead	0.357	---	0.200	ug/L	1	05/02/18	EPA 200.8	
<b>MW13-W (A8D0907-13)</b>		<b>Matrix: Water</b>						
<u>Batch: 8050348</u>								
Lead	0.446	---	0.200	ug/L	1	05/02/18	EPA 200.8	
<b>MW22-W (A8D0907-20)</b>		<b>Matrix: Water</b>						
<u>Batch: 8050348</u>								
Lead	ND	---	0.200	ug/L	1	05/02/18	EPA 200.8	
<b>MW23-W (A8D0907-21)</b>		<b>Matrix: Water</b>						
<u>Batch: 8050348</u>								
Lead	ND	---	0.200	ug/L	1	05/02/18	EPA 200.8	
<b>MW103-W (A8D0907-27)</b>		<b>Matrix: Water</b>						
<u>Batch: 8050348</u>								
Lead	ND	---	0.200	ug/L	1	05/02/18	EPA 200.8	





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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
<b>Batch 8050343 - EPA 3510C (Fuels/Acid Ext.)</b>						<b>Water</b>						
<b>Blank (8050343-BLK1)</b>		Prepared: 05/01/18 09:32 Analyzed: 05/01/18 21:39										
<b>NWTPH-Dx</b>												
Diesel	ND	---	182	ug/L	1	---	---	---	---	---	---	
Oil	ND	---	364	ug/L	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 105 % Limits: 50-150 % Dilution: 1x</i>										
<b>LCS (8050343-BS1)</b>		Prepared: 05/01/18 09:32 Analyzed: 05/01/18 22:02										
<b>NWTPH-Dx</b>												
Diesel	833	---	200	ug/L	1	1250	---	67	58-115%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 100 % Limits: 50-150 % Dilution: 1x</i>										
<b>LCS Dup (8050343-BSD1)</b>		Prepared: 05/01/18 09:32 Analyzed: 05/01/18 22:24 <b>Q-19</b>										
<b>NWTPH-Dx</b>												
Diesel	941	---	200	ug/L	1	1250	---	75	58-115%	12	20%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 108 % Limits: 50-150 % Dilution: 1x</i>										
<b>Batch 8050406 - EPA 3510C (Fuels/Acid Ext.)</b>						<b>Water</b>						
<b>Blank (8050406-BLK1)</b>		Prepared: 05/02/18 13:43 Analyzed: 05/02/18 22:18										
<b>NWTPH-Dx</b>												
Diesel	ND	---	182	ug/L	1	---	---	---	---	---	---	
Oil	ND	---	364	ug/L	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 102 % Limits: 50-150 % Dilution: 1x</i>										
<b>LCS (8050406-BS1)</b>		Prepared: 05/02/18 13:43 Analyzed: 05/02/18 22:41										
<b>NWTPH-Dx</b>												
Diesel	1250	---	200	ug/L	1	1250	---	100	58-115%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 102 % Limits: 50-150 % Dilution: 1x</i>										
<b>LCS Dup (8050406-BSD1)</b>		Prepared: 05/02/18 13:43 Analyzed: 05/02/18 23:04 <b>Q-19</b>										
<b>NWTPH-Dx</b>												
Diesel	1250	---	200	ug/L	1	1250	---	100	58-115%	0.08	20%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 104 % Limits: 50-150 % Dilution: 1x</i>										

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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
<b>Batch 8050449 - EPA 3510C (Fuels/Acid Ext.)</b>						<b>Water</b>						
<b>Blank (8050449-BLK1)</b>		Prepared: 05/03/18 13:06 Analyzed: 05/03/18 20:53										
<b>NWTPH-Dx</b>												
Diesel	ND	---	182	ug/L	1	---	---	---	---	---	---	---
Oil	ND	---	364	ug/L	1	---	---	---	---	---	---	---
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 96 % Limits: 50-150 % Dilution: 1x</i>										
<b>LCS (8050449-BS1)</b>		Prepared: 05/03/18 13:06 Analyzed: 05/03/18 21:16										
<b>NWTPH-Dx</b>												
Diesel	1130	---	200	ug/L	1	1250	---	91	58-115%	---	---	---
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 99 % Limits: 50-150 % Dilution: 1x</i>										
<b>LCS Dup (8050449-BSD1)</b>		Prepared: 05/03/18 13:06 Analyzed: 05/03/18 21:39 <b>Q-19</b>										
<b>NWTPH-Dx</b>												
Diesel	1180	---	200	ug/L	1	1250	---	94	58-115%	4	20%	---
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 98 % Limits: 50-150 % Dilution: 1x</i>										



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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
<b>Batch 8041230 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8041230-BLK1)</b>		Prepared: 04/30/18 09:08 Analyzed: 04/30/18 10:33										
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	ND	---	100	ug/L	1	---	---	---	---	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 95 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>90 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>LCS (8041230-BS2)</b>		Prepared: 04/30/18 09:08 Analyzed: 04/30/18 10:05										
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	488	---	100	ug/L	1	500	---	98	80-120%	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 98 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>96 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>Duplicate (8041230-DUP1)</b>		Prepared: 04/30/18 10:27 Analyzed: 04/30/18 14:21										
<b>QC Source Sample: MW1S-W (A8D0907-01)</b>												
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	<b>193</b>	---	100	ug/L	1	---	<b>188</b>	---	---	3	30%	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>95 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>Duplicate (8041230-DUP2)</b>		Prepared: 04/30/18 10:27 Analyzed: 04/30/18 18:08										
<b>QC Source Sample: MW06-W (A8D0907-06)</b>												
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	ND	---	1000	ug/L	10	---	<b>623</b>	---	---	***	30%	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 107 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>94 %</i>		<i>50-150 %</i>		<i>"</i>						



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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
<b>Batch 8041255 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8041255-BLK1)</b>		Prepared: 04/30/18 15:23 Analyzed: 04/30/18 17:28										
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	ND	---	100	ug/L	1	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 101 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>LCS (8041255-BS2)</b>		Prepared: 04/30/18 15:23 Analyzed: 04/30/18 17:01										
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	466	---	100	ug/L	1	500	---	93	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 107 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>107 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>Duplicate (8041255-DUP1)</b>		Prepared: 04/30/18 15:23 Analyzed: 05/01/18 02:54										
<b>QC Source Sample: MW13-W (A8D0907-13)</b>												
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	<b>39000</b>	---	1000	ug/L	10	---	<b>40900</b>	---	---	5	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 113 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>105 %</i>		<i>50-150 %</i>		<i>"</i>						



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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	RPD RPD	Notes
<b>Batch 8041257 - EPA 5030B</b>						<b>Water</b>				
<b>Blank (8041257-BLK1)</b>		Prepared: 04/30/18 16:15 Analyzed: 04/30/18 18:04								
<b>NWTPH-Gx (MS)</b>										
Gasoline Range Organics	ND	---	100	ug/L	1	---	---	---	---	---
Surr: 4-Bromofluorobenzene (Sur)	Recovery: 107 %		Limits: 50-150 %		Dilution: 1x					
1,4-Difluorobenzene (Sur)	110 %		50-150 %		"					
<b>LCS (8041257-BS2)</b>		Prepared: 04/30/18 16:15 Analyzed: 04/30/18 17:09								
<b>NWTPH-Gx (MS)</b>										
Gasoline Range Organics	498	---	100	ug/L	1	500	---	100	80-120%	---
Surr: 4-Bromofluorobenzene (Sur)	Recovery: 103 %		Limits: 50-150 %		Dilution: 1x					
1,4-Difluorobenzene (Sur)	106 %		50-150 %		"					
<b>Duplicate (8041257-DUP1)</b>		Prepared: 04/30/18 17:58 Analyzed: 04/30/18 21:13								
<b>QC Source Sample: Non-SDG (A8D0780-16)</b>										
<b>NWTPH-Gx (MS)</b>										
Gasoline Range Organics	ND	---	5000	ug/L	50	---	ND	---	---	30%
Surr: 4-Bromofluorobenzene (Sur)	Recovery: 107 %		Limits: 50-150 %		Dilution: 1x					
1,4-Difluorobenzene (Sur)	110 %		50-150 %		"					
<b>Duplicate (8041257-DUP2)</b>		Prepared: 04/30/18 17:58 Analyzed: 05/01/18 01:43								
<b>QC Source Sample: RWO1-W (A8D0907-25)</b>										
<b>NWTPH-Gx (MS)</b>										
Gasoline Range Organics	ND	---	100	ug/L	1	---	ND	---	---	30%
Surr: 4-Bromofluorobenzene (Sur)	Recovery: 110 %		Limits: 50-150 %		Dilution: 1x					
1,4-Difluorobenzene (Sur)	111 %		50-150 %		"					



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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	% REC Limits	RPD RPD	RPD Limit	Notes
<b>Batch 8050333 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8050333-BLK1)</b>			Prepared: 05/01/18 09:12 Analyzed: 05/01/18 11:50									
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	ND	---	100	ug/L	1	---	---	---	---	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 99 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>105 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>LCS (8050333-BS3)</b>			Prepared: 05/01/18 09:12 Analyzed: 05/01/18 11:23									
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	454	---	100	ug/L	1	500	---	91	80-120%	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>107 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>Duplicate (8050333-DUP1)</b>			Prepared: 05/01/18 11:45 Analyzed: 05/01/18 12:44									
<b>QC Source Sample: Non-SDG (A8D0931-01)</b>												
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	ND	---	1000	ug/L	10	---	ND	---	---	---	30%	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 98 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>107 %</i>		<i>50-150 %</i>		<i>"</i>						



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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	RPD RPD	Notes	
<b>Batch 8050336 - EPA 5030B</b>						<b>Water</b>					
<b>Blank (8050336-BLK1)</b>		Prepared: 05/01/18 10:22 Analyzed: 05/01/18 11:47									
<b>NWTPH-Gx (MS)</b>											
Gasoline Range Organics	ND	---	100	ug/L	1	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 103 %		Limits: 50-150 %		Dilution: 1x					
1,4-Difluorobenzene (Sur)		94 %		50-150 %		"					
<b>LCS (8050336-BS2)</b>		Prepared: 05/01/18 10:22 Analyzed: 05/01/18 11:18									
<b>NWTPH-Gx (MS)</b>											
Gasoline Range Organics	493	---	100	ug/L	1	500	---	99	80-120%	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 106 %		Limits: 50-150 %		Dilution: 1x					
1,4-Difluorobenzene (Sur)		100 %		50-150 %		"					
<b>Duplicate (8050336-DUP1)</b>		Prepared: 05/01/18 11:07 Analyzed: 05/01/18 15:06									
<b>QC Source Sample: MW23-W (A8D0907-21)</b>											
<b>NWTPH-Gx (MS)</b>											
Gasoline Range Organics	ND	---	100	ug/L	1	---	ND	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 98 %		Limits: 50-150 %		Dilution: 1x					
1,4-Difluorobenzene (Sur)		92 %		50-150 %		"					
<b>Duplicate (8050336-DUP2)</b>		Prepared: 05/01/18 11:07 Analyzed: 05/01/18 20:46									
<b>QC Source Sample: Non-SDG (A8D0344-23)</b>											
<b>NWTPH-Gx (MS)</b>											
Gasoline Range Organics	<b>2550</b>	---	100	ug/L	1	---	<b>2740</b>	---	---	7 30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 99 %		Limits: 50-150 %		Dilution: 1x					
1,4-Difluorobenzene (Sur)		78 %		50-150 %		"					



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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
<b>Batch 8050380 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8050380-BLK1)</b>		Prepared: 05/02/18 09:54 Analyzed: 05/02/18 11:19										
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	ND	---	100	ug/L	1	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 105 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>92 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>LCS (8050380-BS2)</b>		Prepared: 05/02/18 09:54 Analyzed: 05/02/18 10:50										
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	482	---	100	ug/L	1	500	---	96	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 102 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>97 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>Duplicate (8050380-DUP1)</b>		Prepared: 05/02/18 11:08 Analyzed: 05/02/18 21:45										
<b>QC Source Sample: Non-SDG (A8E0053-03)</b>												
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	<b>118000</b>	---	10000	ug/L	100	---	<b>121000</b>	---	---	3	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 102 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>91 %</i>		<i>50-150 %</i>		<i>"</i>						





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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041230 - EPA 5030B</b>												
<b>Water</b>												
<b>Blank (8041230-BLK1)</b>			Prepared: 04/30/18 09:08 Analyzed: 04/30/18 10:33									
<b>EPA 8260C</b>												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	---
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Xylenes, total	ND	---	1.50	ug/L	1	---	---	---	---	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>104 %</i>		<i>80-120 %</i>		<i>"</i>					

<b>LCS (8041230-BS1)</b>			Prepared: 04/30/18 09:08 Analyzed: 04/30/18 09:37									
<b>EPA 8260C</b>												
Benzene	19.7	---	0.200	ug/L	1	20.0	---	98	80-120%	---	---	---
Toluene	19.1	---	1.00	ug/L	1	20.0	---	95	80-120%	---	---	---
Ethylbenzene	20.1	---	0.500	ug/L	1	20.0	---	100	80-120%	---	---	---
Xylenes, total	63.8	---	1.50	ug/L	1	60.0	---	106	80-120%	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>		<i>80-120 %</i>		<i>"</i>					

<b>Duplicate (8041230-DUP1)</b>			Prepared: 04/30/18 10:27 Analyzed: 04/30/18 14:21									
<b>QC Source Sample: MW1S-W (A8D0907-01)</b>												
<b>EPA 8260C</b>												
Benzene	<b>0.414</b>	---	0.200	ug/L	1	---	<b>0.420</b>	---	---	1	30%	---
Toluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	---
Ethylbenzene	<b>5.78</b>	---	0.500	ug/L	1	---	<b>5.80</b>	---	---	0.3	30%	---
Xylenes, total	<b>9.43</b>	---	1.50	ug/L	1	---	<b>9.48</b>	---	---	0.5	30%	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>102 %</i>		<i>80-120 %</i>		<i>"</i>					

<b>Duplicate (8041230-DUP2)</b>			Prepared: 04/30/18 10:27 Analyzed: 04/30/18 18:08									
<b>QC Source Sample: MW06-W (A8D0907-06)</b>												
<b>EPA 8260C</b>												

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Client Services Manager



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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041230 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (8041230-DUP2)</b>			Prepared: 04/30/18 10:27 Analyzed: 04/30/18 18:08									
<b>QC Source Sample: MW06-W (A8D0907-06)</b>												
Benzene	ND	---	2.00	ug/L	10	---	ND	---	---	---	30%	
Toluene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
Xylenes, total	ND	---	15.0	ug/L	10	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>						

<b>Matrix Spike (8041230-MS1)</b>						Prepared: 04/30/18 10:27 Analyzed: 04/30/18 19:04						
<b>QC Source Sample: MW09-W (A8D0907-09)</b>												
<b>EPA 8260C</b>												
Benzene	210	---	2.00	ug/L	10	200	2.49	104	79-120%	---	---	
Toluene	200	---	10.0	ug/L	10	200	ND	100	80-121%	---	---	
Ethylbenzene	228	---	5.00	ug/L	10	200	9.99	109	79-121%	---	---	
Xylenes, total	717	---	15.0	ug/L	10	600	16.6	117	79-121%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041255 - EPA 5030B</b>												
<b>Water</b>												
<b>Blank (8041255-BLK1)</b>			Prepared: 04/30/18 15:23 Analyzed: 04/30/18 17:28									
<b>EPA 8260C</b>												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Xylenes, total	ND	---	1.50	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 106 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		99 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		96 %		80-120 %		"						

<b>LCS (8041255-BS1)</b>			Prepared: 04/30/18 15:23 Analyzed: 04/30/18 16:33									
<b>EPA 8260C</b>												
Benzene	20.6	---	0.200	ug/L	1	20.0	---	103	80-120%	---	---	
Toluene	18.7	---	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
Ethylbenzene	19.3	---	0.500	ug/L	1	20.0	---	97	80-120%	---	---	
Xylenes, total	58.0	---	1.50	ug/L	1	60.0	---	97	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 106 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		80-120 %		"						

<b>Duplicate (8041255-DUP1)</b>			Prepared: 04/30/18 15:23 Analyzed: 05/01/18 02:54									
<b>QC Source Sample: MW13-W (A8D0907-13)</b>												
<b>EPA 8260C</b>												
Benzene	<b>1430</b>	---	2.00	ug/L	10	---	<b>1500</b>	---	---	5	30%	
Toluene	<b>3370</b>	---	10.0	ug/L	10	---	<b>3430</b>	---	---	2	30%	E
Ethylbenzene	<b>608</b>	---	5.00	ug/L	10	---	<b>627</b>	---	---	3	30%	
Xylenes, total	<b>3700</b>	---	15.0	ug/L	10	---	<b>3780</b>	---	---	2	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 107 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		97 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		93 %		80-120 %		"						

<b>Matrix Spike (8041255-MS1)</b>			Prepared: 04/30/18 15:23 Analyzed: 05/01/18 03:48									
<b>QC Source Sample: MW21-W (A8D0907-19)</b>												
<b>EPA 8260C</b>												

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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041255 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (8041255-MS1)</b>		Prepared: 04/30/18 15:23 Analyzed: 05/01/18 03:48										
<b>QC Source Sample: MW21-W (A8D0907-19)</b>												
Benzene	22.3	---	0.200	ug/L	1	20.0	0.204	110	79-120%	---	---	
Toluene	19.6	---	1.00	ug/L	1	20.0	0.846	94	80-121%	---	---	
Ethylbenzene	21.0	---	0.500	ug/L	1	20.0	1.07	100	79-121%	---	---	
Xylenes, total	63.6	---	1.50	ug/L	1	60.0	2.82	101	79-121%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 108 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>"</i>						



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041257 - EPA 5030B</b>												
<b>Water</b>												
<b>Blank (8041257-BLK1)</b>			Prepared: 04/30/18 16:15 Analyzed: 04/30/18 18:04									
<b>EPA 8260C</b>												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	---
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Xylenes, total	ND	---	1.50	ug/L	1	---	---	---	---	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 109 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>		<i>80-120 %</i>		<i>"</i>					

<b>LCS (8041257-BS3)</b>			Prepared: 04/30/18 16:15 Analyzed: 04/30/18 17:37									
<b>EPA 8260C</b>												
Benzene	19.0	---	0.200	ug/L	1	20.0	---	95	80-120%	---	---	---
Toluene	17.6	---	1.00	ug/L	1	20.0	---	88	80-120%	---	---	---
Ethylbenzene	17.8	---	0.500	ug/L	1	20.0	---	89	80-120%	---	---	---
Xylenes, total	52.0	---	1.50	ug/L	1	60.0	---	87	80-120%	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 105 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>96 %</i>		<i>80-120 %</i>		<i>"</i>					

<b>Duplicate (8041257-DUP1)</b>			Prepared: 04/30/18 17:58 Analyzed: 04/30/18 21:13									
<b>QC Source Sample: Non-SDG (A8D0780-16)</b>												
<b>EPA 8260C</b>												
Benzene	<b>13.8</b>	---	10.0	ug/L	50	---	<b>13.2</b>	---	---	4	30%	---
Toluene	ND	---	50.0	ug/L	50	---	<b>49.0</b>	---	---	***	30%	---
Ethylbenzene	ND	---	25.0	ug/L	50	---	ND	---	---	---	30%	---
Xylenes, total	ND	---	75.0	ug/L	50	---	ND	---	---	---	30%	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 109 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>		<i>80-120 %</i>		<i>"</i>					

<b>Duplicate (8041257-DUP2)</b>			Prepared: 04/30/18 17:58 Analyzed: 05/01/18 01:43									
<b>QC Source Sample: RWO1-W (A8D0907-25)</b>												
<b>EPA 8260C</b>												

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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041257 - EPA 5030B</b>												
<b>Water</b>												
<b>Duplicate (8041257-DUP2)</b>			Prepared: 04/30/18 17:58 Analyzed: 05/01/18 01:43									
<b>QC Source Sample: RW01-W (A8D0907-25)</b>												
Benzene	ND	---	0.200	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Xylenes, total	ND	---	1.50	ug/L	1	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 111 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						

<b>Matrix Spike (8041257-MS1)</b>			Prepared: 04/30/18 17:58 Analyzed: 04/30/18 22:34									
<b>QC Source Sample: Non-SDG (A8D0780-23)</b>												
<b>EPA 8260C</b>												
Benzene	185	---	2.00	ug/L	10	200	ND	93	79-120%	---	---	
Toluene	179	---	10.0	ug/L	10	200	ND	90	80-121%	---	---	
Ethylbenzene	183	---	5.00	ug/L	10	200	ND	91	79-121%	---	---	
Xylenes, total	529	---	15.0	ug/L	10	600	ND	88	79-121%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>"</i>						



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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
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**Batch 8050333 - EPA 5030B**

**Water**

**Blank (8050333-BLK1)** Prepared: 05/01/18 09:12 Analyzed: 05/01/18 11:50

<b>EPA 8260C</b>												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	---
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Xylenes, total	ND	---	1.50	ug/L	1	---	---	---	---	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>"</i>						

**LCS (8050333-BS2)** Prepared: 05/01/18 09:12 Analyzed: 05/01/18 10:56

<b>EPA 8260C</b>												
Benzene	21.9	---	0.200	ug/L	1	20.0	---	109	80-120%	---	---	---
Toluene	19.8	---	1.00	ug/L	1	20.0	---	99	80-120%	---	---	---
Ethylbenzene	20.5	---	0.500	ug/L	1	20.0	---	103	80-120%	---	---	---
Xylenes, total	61.3	---	1.50	ug/L	1	60.0	---	102	80-120%	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 109 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						

**Duplicate (8050333-DUP1)** Prepared: 05/01/18 11:45 Analyzed: 05/01/18 12:44

<b>QC Source Sample: Non-SDG (A8D0931-01)</b>												
<b>EPA 8260C</b>												
Benzene	ND	---	2.00	ug/L	10	---	ND	---	---	---	---	30%
Toluene	ND	---	10.0	ug/L	10	---	ND	---	---	---	---	30%
Ethylbenzene	ND	---	5.00	ug/L	10	---	ND	---	---	---	---	30%
Xylenes, total	ND	---	15.0	ug/L	10	---	ND	---	---	---	---	30%
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 110 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>94 %</i>		<i>80-120 %</i>		<i>"</i>						

**Matrix Spike (8050333-MS1)** Prepared: 05/01/18 11:45 Analyzed: 05/01/18 18:08

<b>QC Source Sample: Non-SDG (A8E0015-01)</b>												
<b>EPA 8260C</b>												

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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050333 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (8050333-MS1)</b>			Prepared: 05/01/18 11:45 Analyzed: 05/01/18 18:08									
<b>QC Source Sample: Non-SDG (A8E0015-01)</b>												
Benzene	21.7	---	0.200	ug/L	1	20.0	ND	109	79-120%	---	---	
Toluene	19.1	---	1.00	ug/L	1	20.0	ND	95	80-121%	---	---	
Ethylbenzene	19.4	---	0.500	ug/L	1	20.0	ND	97	79-121%	---	---	
Xylenes, total	57.2	---	1.50	ug/L	1	60.0	ND	95	79-121%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 108 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						





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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050336 - EPA 5030B</b>												
<b>Water</b>												
<b>Blank (8050336-BLK1)</b>			Prepared: 05/01/18 10:22 Analyzed: 05/01/18 11:47									
<b>EPA 8260C</b>												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	---
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Xylenes, total	ND	---	1.50	ug/L	1	---	---	---	---	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>105 %</i>		<i>80-120 %</i>		<i>"</i>					

<b>LCS (8050336-BS1)</b>			Prepared: 05/01/18 10:22 Analyzed: 05/01/18 10:50									
<b>EPA 8260C</b>												
Benzene	19.9	---	0.200	ug/L	1	20.0	---	100	80-120%	---	---	---
Toluene	19.8	---	1.00	ug/L	1	20.0	---	99	80-120%	---	---	---
Ethylbenzene	21.2	---	0.500	ug/L	1	20.0	---	106	80-120%	---	---	---
Xylenes, total	67.1	---	1.50	ug/L	1	60.0	---	112	80-120%	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>		<i>80-120 %</i>		<i>"</i>					

<b>Duplicate (8050336-DUP1)</b>			Prepared: 05/01/18 11:07 Analyzed: 05/01/18 15:06									
<b>QC Source Sample: MW23-W (A8D0907-21)</b>												
<b>EPA 8260C</b>												
Benzene	ND	---	0.200	ug/L	1	---	ND	---	---	---	---	30%
Toluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	---	30%
Ethylbenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	---	30%
Xylenes, total	ND	---	1.50	ug/L	1	---	ND	---	---	---	---	30%
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>102 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>		<i>80-120 %</i>		<i>"</i>					

<b>Duplicate (8050336-DUP2)</b>			Prepared: 05/01/18 11:07 Analyzed: 05/01/18 20:46									
<b>QC Source Sample: Non-SDG (A8D0344-23)</b>												
<b>EPA 8260C</b>												

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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050336 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (8050336-DUP2)</b>			Prepared: 05/01/18 11:07			Analyzed: 05/01/18 20:46						
<b>QC Source Sample: Non-SDG (A8D0344-23)</b>												
Benzene	58.0	---	0.200	ug/L	1	---	61.0	---	---	5	30%	
Toluene	53.7	---	1.00	ug/L	1	---	58.8	---	---	9	30%	
Ethylbenzene	66.3	---	0.500	ug/L	1	---	73.6	---	---	10	30%	
Xylenes, total	82.5	---	1.50	ug/L	1	---	90.9	---	---	10	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 100 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		103 %		80-120 %		"						

<b>Matrix Spike (8050336-MS1)</b>						Prepared: 05/01/18 11:07 Analyzed: 05/01/18 18:53						
<b>QC Source Sample: Non-SDG (A8D0910-01)</b>												
<b>EPA 8260C</b>												
Benzene	21.8	---	0.200	ug/L	1	20.0	ND	109	79-120%	---	---	
Toluene	20.7	---	1.00	ug/L	1	20.0	ND	103	80-121%	---	---	
Ethylbenzene	21.4	---	0.500	ug/L	1	20.0	ND	107	79-121%	---	---	
Xylenes, total	66.7	---	1.50	ug/L	1	60.0	ND	111	79-121%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 100 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		100 %		80-120 %		"						



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050380 - EPA 5030B</b>												
<b>Water</b>												
<b>Blank (8050380-BLK1)</b>			Prepared: 05/02/18 09:54 Analyzed: 05/02/18 11:19									
<b>EPA 8260C</b>												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	---
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Xylenes, total	ND	---	1.50	ug/L	1	---	---	---	---	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>						

<b>LCS (8050380-BS1)</b>			Prepared: 05/02/18 09:54 Analyzed: 05/02/18 10:22									
<b>EPA 8260C</b>												
Benzene	17.9	---	0.200	ug/L	1	20.0	---	90	80-120%	---	---	---
Toluene	17.4	---	1.00	ug/L	1	20.0	---	87	80-120%	---	---	---
Ethylbenzene	17.7	---	0.500	ug/L	1	20.0	---	88	80-120%	---	---	---
Xylenes, total	55.6	---	1.50	ug/L	1	60.0	---	93	80-120%	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						

<b>Duplicate (8050380-DUP1)</b>			Prepared: 05/02/18 11:08 Analyzed: 05/02/18 21:45									
<b>QC Source Sample: Non-SDG (A8E0053-03)</b>												
<b>EPA 8260C</b>												
Benzene	<b>14700</b>	---	20.0	ug/L	100	---	<b>15100</b>	---	---	2	30%	---
Toluene	<b>4940</b>	---	100	ug/L	100	---	<b>5040</b>	---	---	2	30%	---
Ethylbenzene	<b>982</b>	---	50.0	ug/L	100	---	<b>1030</b>	---	---	5	30%	---
Xylenes, total	<b>3060</b>	---	150	ug/L	100	---	<b>3140</b>	---	---	2	30%	---
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 95 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>						

<b>Matrix Spike (8050380-MS1)</b>			Prepared: 05/02/18 11:08 Analyzed: 05/02/18 16:32									
<b>QC Source Sample: Non-SDG (A8E0058-01)</b>												
<b>EPA 8260C</b>												

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050380 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (8050380-MS1)</b>		Prepared: 05/02/18 11:08		Analyzed: 05/02/18 16:32								
<b>QC Source Sample: Non-SDG (A8E0058-01)</b>												
Benzene	19.9	---	0.200	ug/L	1	20.0	ND	99	79-120%	---	---	
Toluene	19.9	---	1.00	ug/L	1	20.0	ND	99	80-121%	---	---	
Ethylbenzene	21.5	---	0.500	ug/L	1	20.0	ND	107	79-121%	---	---	
Xylenes, total	68.9	---	1.50	ug/L	1	60.0	ND	115	79-121%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>"</i>						



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041230 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8041230-BLK1)</b>		Prepared: 04/30/18 09:08		Analyzed: 04/30/18 10:33								
<b>EPA 8260C</b>												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	---
Acrylonitrile	ND	---	2.00	ug/L	1	---	---	---	---	---	---	---
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	---
Bromobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Bromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Bromodichloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Bromoform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Bromomethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	---
2-Butanone (MEK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	---
n-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
sec-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
tert-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Carbon disulfide	ND	---	10.0	ug/L	1	---	---	---	---	---	---	---
Carbon tetrachloride	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Chlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Chloroethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	---
Chloroform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Chloromethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	---
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
4-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Dibromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Dibromomethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
1,1-Dichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---
1,1-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041230 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8041230-BLK1)</b>	Prepared: 04/30/18 09:08					Analyzed: 04/30/18 10:33						
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	---	3.00	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.400	ug/L	1	---	---	---	---	---	---	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041230 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8041230-BLK1)</b>		Prepared: 04/30/18 09:08		Analyzed: 04/30/18 10:33								
m,p-Xylene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>104 %</i>		<i>80-120 %</i>		<i>"</i>						
<b>LCS (8041230-BS1)</b>						Prepared: 04/30/18 09:08 Analyzed: 04/30/18 09:37						
<b>EPA 8260C</b>												
Acetone	35.1	---	20.0	ug/L	1	40.0	---	88	80-120%	---	---	
Acrylonitrile	19.5	---	2.00	ug/L	1	20.0	---	98	80-120%	---	---	
Benzene	19.7	---	0.200	ug/L	1	20.0	---	98	80-120%	---	---	
Bromobenzene	19.9	---	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
Bromochloromethane	18.1	---	1.00	ug/L	1	20.0	---	90	80-120%	---	---	
Bromodichloromethane	19.5	---	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
Bromoform	20.5	---	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
Bromomethane	15.0	---	5.00	ug/L	1	20.0	---	<b>75</b>	<b>80-120%</b>	---	---	E-05, Q-55
2-Butanone (MEK)	38.7	---	10.0	ug/L	1	40.0	---	97	80-120%	---	---	
n-Butylbenzene	22.5	---	1.00	ug/L	1	20.0	---	112	80-120%	---	---	
sec-Butylbenzene	22.0	---	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
tert-Butylbenzene	21.3	---	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
Carbon disulfide	19.9	---	10.0	ug/L	1	20.0	---	100	80-120%	---	---	
Carbon tetrachloride	19.0	---	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
Chlorobenzene	19.8	---	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Chloroethane	21.0	---	5.00	ug/L	1	20.0	---	105	80-120%	---	---	
Chloroform	19.2	---	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
Chloromethane	14.9	---	5.00	ug/L	1	20.0	---	<b>75</b>	<b>80-120%</b>	---	---	Q-55
2-Chlorotoluene	21.3	---	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
4-Chlorotoluene	20.9	---	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
Dibromochloromethane	21.3	---	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
1,2-Dibromo-3-chloropropane	20.8	---	5.00	ug/L	1	20.0	---	104	80-120%	---	---	
1,2-Dibromoethane (EDB)	20.7	---	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
Dibromomethane	18.9	---	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
1,2-Dichlorobenzene	20.4	---	0.500	ug/L	1	20.0	---	102	80-120%	---	---	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041230 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (8041230-BS1)</b>	Prepared: 04/30/18 09:08					Analyzed: 04/30/18 09:37						
1,3-Dichlorobenzene	20.8	---	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
1,4-Dichlorobenzene	19.7	---	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Dichlorodifluoromethane	17.2	---	1.00	ug/L	1	20.0	---	86	80-120%	---	---	
1,1-Dichloroethane	19.0	---	0.400	ug/L	1	20.0	---	95	80-120%	---	---	
1,2-Dichloroethane (EDC)	18.3	---	0.400	ug/L	1	20.0	---	91	80-120%	---	---	
1,1-Dichloroethene	19.4	---	0.400	ug/L	1	20.0	---	97	80-120%	---	---	
cis-1,2-Dichloroethene	19.7	---	0.400	ug/L	1	20.0	---	99	80-120%	---	---	
trans-1,2-Dichloroethene	19.6	---	0.400	ug/L	1	20.0	---	98	80-120%	---	---	
1,2-Dichloropropane	19.3	---	0.500	ug/L	1	20.0	---	96	80-120%	---	---	
1,3-Dichloropropane	19.8	---	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
2,2-Dichloropropane	20.7	---	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
1,1-Dichloropropene	19.8	---	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
cis-1,3-Dichloropropene	21.8	---	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
trans-1,3-Dichloropropene	21.9	---	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
Ethylbenzene	20.1	---	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
Hexachlorobutadiene	20.2	---	5.00	ug/L	1	20.0	---	101	80-120%	---	---	
2-Hexanone	41.1	---	10.0	ug/L	1	40.0	---	103	80-120%	---	---	
Isopropylbenzene	22.1	---	1.00	ug/L	1	20.0	---	111	80-120%	---	---	
4-Isopropyltoluene	22.9	---	1.00	ug/L	1	20.0	---	114	80-120%	---	---	
Methylene chloride	18.5	---	3.00	ug/L	1	20.0	---	93	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	40.9	---	10.0	ug/L	1	40.0	---	102	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	20.1	---	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
Naphthalene	20.7	---	2.00	ug/L	1	20.0	---	104	80-120%	---	---	
n-Propylbenzene	20.6	---	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Styrene	22.9	---	1.00	ug/L	1	20.0	---	114	80-120%	---	---	
1,1,1,2-Tetrachloroethane	21.2	---	0.400	ug/L	1	20.0	---	106	80-120%	---	---	
1,1,2,2-Tetrachloroethane	20.4	---	0.500	ug/L	1	20.0	---	102	80-120%	---	---	
Tetrachloroethene (PCE)	19.8	---	0.400	ug/L	1	20.0	---	99	80-120%	---	---	
Toluene	19.1	---	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
1,2,3-Trichlorobenzene	19.8	---	2.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,2,4-Trichlorobenzene	21.3	---	2.00	ug/L	1	20.0	---	106	80-120%	---	---	
1,1,1-Trichloroethane	19.2	---	0.400	ug/L	1	20.0	---	96	80-120%	---	---	

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Lisa Domenighini, Client Services Manager





<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041230 - EPA 5030B</b>												
<b>Water</b>												
<b>LCS (8041230-BS1)</b>												
			Prepared: 04/30/18 09:08	Analyzed: 04/30/18 09:37								
1,1,2-Trichloroethane	19.6	---	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Trichloroethene (TCE)	20.0	---	0.400	ug/L	1	20.0	---	100	80-120%	---	---	
Trichlorofluoromethane	18.7	---	2.00	ug/L	1	20.0	---	94	80-120%	---	---	
1,2,3-Trichloropropane	19.4	---	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
1,2,4-Trimethylbenzene	22.0	---	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
1,3,5-Trimethylbenzene	21.5	---	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
Vinyl chloride	19.5	---	0.400	ug/L	1	20.0	---	97	80-120%	---	---	
m,p-Xylene	42.2	---	1.00	ug/L	1	40.0	---	106	80-120%	---	---	
o-Xylene	21.6	---	0.500	ug/L	1	20.0	---	108	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						

<b>Duplicate (8041230-DUP1)</b>												
			Prepared: 04/30/18 10:27	Analyzed: 04/30/18 14:21								
<b>QC Source Sample: MW1S-W (A8D0907-01)</b>												
<b>EPA 8260C</b>												
Acetone	ND	---	20.0	ug/L	1	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
Benzene	<b>0.414</b>	---	0.200	ug/L	1	---	<b>0.420</b>	---	---	1	30%	
Bromobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromoform	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromomethane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	1.00	ug/L	1	---	<b>0.566</b>	---	---	***	30%	
tert-Butylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Chloroethane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
Chloroform	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041230 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (8041230-DUP1)</b>			Prepared: 04/30/18 10:27 Analyzed: 04/30/18 14:21									
<b>QC Source Sample: MW1S-W (A8D0907-01)</b>												
Chloromethane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Dibromomethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Ethylbenzene	<b>5.78</b>	---	0.500	ug/L	1	---	<b>5.80</b>	---	---	0.3	30%	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Hexanone	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	1.00	ug/L	1	---	<b>0.716</b>	---	---	***	30%	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Methylene chloride	ND	---	3.00	ug/L	1	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	<b>1.14</b>	---	1.00	ug/L	1	---	<b>1.09</b>	---	---	4	30%	
Naphthalene	ND	---	2.00	ug/L	1	---	<b>1.90</b>	---	---	***	30%	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041230 - EPA 5030B</b>												
<b>Water</b>												
<b>Duplicate (8041230-DUP1)</b>			Prepared: 04/30/18 10:27 Analyzed: 04/30/18 14:21									
<b>QC Source Sample: MW1S-W (A8D0907-01)</b>												
n-Propylbenzene	1.24	---	0.500	ug/L	1	---	1.28	---	---	4	30%	
Styrene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	8.13	---	1.00	ug/L	1	---	8.19	---	---	0.7	30%	
1,3,5-Trimethylbenzene	1.30	---	1.00	ug/L	1	---	1.30	---	---	0.5	30%	
Vinyl chloride	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
m,p-Xylene	9.12	---	1.00	ug/L	1	---	9.18	---	---	0.7	30%	
o-Xylene	ND	---	0.500	ug/L	1	---	0.297	---	---	***	30%	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 99 % Limits: 80-120 % Dilution: 1x  
 Toluene-d8 (Surr) 100 % 80-120 % "  
 4-Bromofluorobenzene (Surr) 102 % 80-120 % "

**Duplicate (8041230-DUP2)** Prepared: 04/30/18 10:27 Analyzed: 04/30/18 18:08

**QC Source Sample: MW06-W (A8D0907-06)**

**EPA 8260C**

Acetone	ND	---	200	ug/L	10	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	20.0	ug/L	10	---	ND	---	---	---	30%	
Benzene	ND	---	2.00	ug/L	10	---	ND	---	---	---	30%	
Bromobenzene	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Bromoform	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041230 - EPA 5030B</b>												
<b>Water</b>												
<b>Duplicate (8041230-DUP2)</b>			Prepared: 04/30/18 10:27 Analyzed: 04/30/18 18:08									
<b>QC Source Sample: MW06-W (A8D0907-06)</b>												
Bromomethane	ND	---	50.0	ug/L	10	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	100	ug/L	10	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	100	ug/L	10	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
Chloroethane	ND	---	50.0	ug/L	10	---	ND	---	---	---	30%	
Chloroform	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Chloromethane	ND	---	50.0	ug/L	10	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	50.0	ug/L	10	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
Dibromomethane	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041230 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (8041230-DUP2)</b>			Prepared: 04/30/18 10:27 Analyzed: 04/30/18 18:08									
<b>QC Source Sample: MW06-W (A8D0907-06)</b>												
Ethylbenzene	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	50.0	ug/L	10	---	ND	---	---	---	30%	
2-Hexanone	ND	---	100	ug/L	10	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Methylene chloride	ND	---	30.0	ug/L	10	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	100	ug/L	10	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Naphthalene	ND	---	20.0	ug/L	10	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
Styrene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
Toluene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	20.0	ug/L	10	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	20.0	ug/L	10	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	20.0	ug/L	10	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
o-Xylene	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 100 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		102 %		80-120 %		"						

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Lisa Domenighini, Client Services Manager



**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0907 - 050818 0221**

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041230 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (8041230-MS1)</b>			Prepared: 04/30/18 10:27 Analyzed: 04/30/18 19:04									
<b>QC Source Sample: MW09-W (A8D0907-09)</b>												
<b>EPA 8260C</b>												
Acetone	422	---	200	ug/L	10	400	ND	105	39-160%	---	---	
Acrylonitrile	188	---	20.0	ug/L	10	200	ND	94	63-135%	---	---	
Benzene	210	---	2.00	ug/L	10	200	2.49	104	79-120%	---	---	
Bromobenzene	205	---	5.00	ug/L	10	200	ND	103	80-120%	---	---	
Bromochloromethane	195	---	10.0	ug/L	10	200	ND	98	78-123%	---	---	
Bromodichloromethane	224	---	10.0	ug/L	10	200	ND	112	79-125%	---	---	
Bromoform	228	---	10.0	ug/L	10	200	ND	114	66-130%	---	---	
Bromomethane	155	---	50.0	ug/L	10	200	ND	78	53-141%	---	---	E-05, Q-54c
2-Butanone (MEK)	421	---	100	ug/L	10	400	ND	105	56-143%	---	---	
n-Butylbenzene	250	---	10.0	ug/L	10	200	ND	125	75-128%	---	---	
sec-Butylbenzene	237	---	10.0	ug/L	10	200	ND	118	77-126%	---	---	
tert-Butylbenzene	240	---	10.0	ug/L	10	200	ND	120	78-124%	---	---	
Carbon disulfide	204	---	100	ug/L	10	200	ND	102	64-133%	---	---	
Carbon tetrachloride	237	---	10.0	ug/L	10	200	ND	119	72-136%	---	---	
Chlorobenzene	211	---	5.00	ug/L	10	200	ND	105	80-120%	---	---	
Chloroethane	201	---	50.0	ug/L	10	200	ND	101	60-138%	---	---	
Chloroform	218	---	10.0	ug/L	10	200	ND	109	79-124%	---	---	
Chloromethane	144	---	50.0	ug/L	10	200	ND	72	50-139%	---	---	Q-54c
2-Chlorotoluene	216	---	10.0	ug/L	10	200	ND	108	79-122%	---	---	
4-Chlorotoluene	221	---	10.0	ug/L	10	200	ND	110	78-122%	---	---	
Dibromochloromethane	232	---	10.0	ug/L	10	200	ND	116	74-126%	---	---	
1,2-Dibromo-3-chloropropane	229	---	50.0	ug/L	10	200	ND	114	62-128%	---	---	
1,2-Dibromoethane (EDB)	221	---	5.00	ug/L	10	200	ND	111	77-121%	---	---	
Dibromomethane	212	---	10.0	ug/L	10	200	ND	106	79-123%	---	---	
1,2-Dichlorobenzene	213	---	5.00	ug/L	10	200	ND	107	80-120%	---	---	
1,3-Dichlorobenzene	215	---	5.00	ug/L	10	200	ND	108	80-120%	---	---	
1,4-Dichlorobenzene	204	---	5.00	ug/L	10	200	ND	102	79-120%	---	---	
Dichlorodifluoromethane	201	---	10.0	ug/L	10	200	ND	101	32-152%	---	---	
1,1-Dichloroethane	205	---	4.00	ug/L	10	200	ND	102	77-125%	---	---	
1,2-Dichloroethane (EDC)	223	---	4.00	ug/L	10	200	ND	112	73-128%	---	---	
1,1-Dichloroethene	215	---	4.00	ug/L	10	200	ND	107	71-131%	---	---	

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Lisa Domenighini, Client Services Manager



**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0907 - 050818 0221**

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC % REC	Limit	RPD	RPD Limit	Notes
<b>Batch 8041230 - EPA 5030B</b>												
<b>Water</b>												
<b>Matrix Spike (8041230-MS1)</b>			Prepared: 04/30/18 10:27 Analyzed: 04/30/18 19:04									
<b>QC Source Sample: MW09-W (A8D0907-09)</b>												
cis-1,2-Dichloroethene	212	---	4.00	ug/L	10	200	ND	106	78-123%	---	---	
trans-1,2-Dichloroethene	216	---	4.00	ug/L	10	200	ND	108	75-124%	---	---	
1,2-Dichloropropane	196	---	5.00	ug/L	10	200	ND	98	78-122%	---	---	
1,3-Dichloropropane	207	---	10.0	ug/L	10	200	ND	103	80-120%	---	---	
2,2-Dichloropropane	204	---	10.0	ug/L	10	200	ND	102	60-139%	---	---	
1,1-Dichloropropene	227	---	10.0	ug/L	10	200	ND	114	79-125%	---	---	
cis-1,3-Dichloropropene	220	---	10.0	ug/L	10	200	ND	110	75-124%	---	---	
trans-1,3-Dichloropropene	235	---	10.0	ug/L	10	200	ND	117	73-127%	---	---	
Ethylbenzene	228	---	5.00	ug/L	10	200	9.99	109	79-121%	---	---	
Hexachlorobutadiene	230	---	50.0	ug/L	10	200	ND	115	66-134%	---	---	
2-Hexanone	441	---	100	ug/L	10	400	ND	110	57-139%	---	---	
Isopropylbenzene	244	---	10.0	ug/L	10	200	ND	122	72-131%	---	---	
4-Isopropyltoluene	253	---	10.0	ug/L	10	200	ND	127	77-127%	---	---	
Methylene chloride	190	---	30.0	ug/L	10	200	ND	95	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	441	---	100	ug/L	10	400	ND	110	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	212	---	10.0	ug/L	10	200	ND	106	71-124%	---	---	
Naphthalene	242	---	20.0	ug/L	10	200	ND	121	61-128%	---	---	
n-Propylbenzene	228	---	5.00	ug/L	10	200	11.5	108	76-126%	---	---	
Styrene	237	---	10.0	ug/L	10	200	ND	119	78-123%	---	---	
1,1,1,2-Tetrachloroethane	236	---	4.00	ug/L	10	200	ND	118	78-124%	---	---	
1,1,2,2-Tetrachloroethane	206	---	5.00	ug/L	10	200	ND	103	71-121%	---	---	
Tetrachloroethene (PCE)	214	---	4.00	ug/L	10	200	ND	107	74-129%	---	---	
Toluene	200	---	10.0	ug/L	10	200	ND	100	80-121%	---	---	
1,2,3-Trichlorobenzene	219	---	20.0	ug/L	10	200	ND	110	69-129%	---	---	
1,2,4-Trichlorobenzene	225	---	20.0	ug/L	10	200	ND	113	69-130%	---	---	
1,1,1-Trichloroethane	234	---	4.00	ug/L	10	200	ND	117	74-131%	---	---	
1,1,2-Trichloroethane	208	---	5.00	ug/L	10	200	ND	104	80-120%	---	---	
Trichloroethene (TCE)	215	---	4.00	ug/L	10	200	ND	108	79-123%	---	---	
Trichlorofluoromethane	246	---	20.0	ug/L	10	200	ND	123	65-141%	---	---	
1,2,3-Trichloropropane	211	---	10.0	ug/L	10	200	ND	106	73-122%	---	---	
1,2,4-Trimethylbenzene	290	---	10.0	ug/L	10	200	51.5	119	76-124%	---	---	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041230 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (8041230-MS1)</b>		Prepared: 04/30/18 10:27 Analyzed: 04/30/18 19:04										
<b>QC Source Sample: MW09-W (A8D0907-09)</b>												
1,3,5-Trimethylbenzene	257	---	10.0	ug/L	10	200	19.9	119	75-124%	---	---	
Vinyl chloride	193	---	4.00	ug/L	10	200	ND	96	58-137%	---	---	
m,p-Xylene	474	---	10.0	ug/L	10	400	10.3	116	80-121%	---	---	
o-Xylene	243	---	5.00	ug/L	10	200	6.38	118	78-122%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						





<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041255 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8041255-BLK1)</b>		Prepared: 04/30/18 15:23			Analyzed: 04/30/18 17:28							
<b>EPA 8260C</b>												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	---
Acrylonitrile	ND	---	2.00	ug/L	1	---	---	---	---	---	---	---
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	---
Bromobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Bromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Bromodichloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Bromoform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Bromomethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	---
2-Butanone (MEK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	---
n-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
sec-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
tert-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Carbon disulfide	ND	---	10.0	ug/L	1	---	---	---	---	---	---	---
Carbon tetrachloride	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Chlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Chloroethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	---
Chloroform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Chloromethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	---
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
4-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Dibromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Dibromomethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
1,1-Dichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---
1,1-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041255 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8041255-BLK1)</b>	Prepared: 04/30/18 15:23					Analyzed: 04/30/18 17:28						
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---
1,2-Dichloropropane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
1,3-Dichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
2,2-Dichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
1,1-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Hexachlorobutadiene	ND	---	5.00	ug/L	1	---	---	---	---	---	---	---
2-Hexanone	ND	---	10.0	ug/L	1	---	---	---	---	---	---	---
Isopropylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
4-Isopropyltoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Methylene chloride	ND	---	3.00	ug/L	1	---	---	---	---	---	---	---
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	---
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Naphthalene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	---
n-Propylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Styrene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---
Tetrahydrofuran	ND	---	10.0	ug/L	1	---	---	---	---	---	---	---
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	---
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	---
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---
Trichlorofluoromethane	ND	---	2.00	ug/L	1	---	---	---	---	---	---	---
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041255 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8041255-BLK1)</b>		Prepared: 04/30/18 15:23			Analyzed: 04/30/18 17:28							
Vinyl chloride	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>"</i>						

<b>LCS (8041255-BS1)</b>		Prepared: 04/30/18 15:23			Analyzed: 04/30/18 16:33							
<b>EPA 8260C</b>												
Acetone	38.3	---	20.0	ug/L	1	40.0	---	96	80-120%	---	---	
Acrylonitrile	19.9	---	2.00	ug/L	1	20.0	---	99	80-120%	---	---	
Benzene	20.6	---	0.200	ug/L	1	20.0	---	103	80-120%	---	---	
Bromobenzene	18.8	---	0.500	ug/L	1	20.0	---	94	80-120%	---	---	
Bromochloromethane	22.0	---	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
Bromodichloromethane	21.1	---	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
Bromoform	21.5	---	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
Bromomethane	39.0	---	5.00	ug/L	1	20.0	---	<b>195</b>	<b>80-120%</b>	---	---	E-05, Q-56
2-Butanone (MEK)	38.1	---	10.0	ug/L	1	40.0	---	95	80-120%	---	---	
n-Butylbenzene	18.8	---	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
sec-Butylbenzene	18.2	---	1.00	ug/L	1	20.0	---	91	80-120%	---	---	
tert-Butylbenzene	17.2	---	1.00	ug/L	1	20.0	---	86	80-120%	---	---	
Carbon disulfide	19.5	---	10.0	ug/L	1	20.0	---	98	80-120%	---	---	
Carbon tetrachloride	20.7	---	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
Chlorobenzene	18.6	---	0.500	ug/L	1	20.0	---	93	80-120%	---	---	
Chloroethane	23.0	---	5.00	ug/L	1	20.0	---	115	80-120%	---	---	
Chloroform	20.6	---	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
Chloromethane	18.5	---	5.00	ug/L	1	20.0	---	93	80-120%	---	---	
2-Chlorotoluene	17.9	---	1.00	ug/L	1	20.0	---	90	80-120%	---	---	
4-Chlorotoluene	18.2	---	1.00	ug/L	1	20.0	---	91	80-120%	---	---	
Dibromochloromethane	19.8	---	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,2-Dibromo-3-chloropropane	19.8	---	5.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,2-Dibromoethane (EDB)	19.2	---	0.500	ug/L	1	20.0	---	96	80-120%	---	---	
Dibromomethane	22.2	---	1.00	ug/L	1	20.0	---	111	80-120%	---	---	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041255 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (8041255-BS1)</b>	Prepared: 04/30/18 15:23 Analyzed: 04/30/18 16:33											
1,2-Dichlorobenzene	18.8	---	0.500	ug/L	1	20.0	---	94	80-120%	---	---	
1,3-Dichlorobenzene	18.5	---	0.500	ug/L	1	20.0	---	93	80-120%	---	---	
1,4-Dichlorobenzene	18.5	---	0.500	ug/L	1	20.0	---	93	80-120%	---	---	
Dichlorodifluoromethane	20.7	---	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
1,1-Dichloroethane	21.1	---	0.400	ug/L	1	20.0	---	105	80-120%	---	---	
1,2-Dichloroethane (EDC)	20.2	---	0.400	ug/L	1	20.0	---	101	80-120%	---	---	
1,1-Dichloroethene	20.3	---	0.400	ug/L	1	20.0	---	101	80-120%	---	---	
cis-1,2-Dichloroethene	20.5	---	0.400	ug/L	1	20.0	---	103	80-120%	---	---	
trans-1,2-Dichloroethene	20.3	---	0.400	ug/L	1	20.0	---	101	80-120%	---	---	
1,2-Dichloropropane	21.1	---	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
1,3-Dichloropropane	18.9	---	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
2,2-Dichloropropane	19.8	---	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,1-Dichloropropene	19.9	---	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
cis-1,3-Dichloropropene	18.8	---	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
trans-1,3-Dichloropropene	17.8	---	1.00	ug/L	1	20.0	---	89	80-120%	---	---	
Ethylbenzene	19.3	---	0.500	ug/L	1	20.0	---	97	80-120%	---	---	
Hexachlorobutadiene	18.0	---	5.00	ug/L	1	20.0	---	90	80-120%	---	---	
2-Hexanone	34.5	---	10.0	ug/L	1	40.0	---	86	80-120%	---	---	
Isopropylbenzene	18.8	---	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
4-Isopropyltoluene	17.8	---	1.00	ug/L	1	20.0	---	89	80-120%	---	---	
Methylene chloride	20.8	---	3.00	ug/L	1	20.0	---	104	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	34.6	---	10.0	ug/L	1	40.0	---	87	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	18.8	---	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
Naphthalene	18.3	---	2.00	ug/L	1	20.0	---	92	80-120%	---	---	
n-Propylbenzene	19.2	---	0.500	ug/L	1	20.0	---	96	80-120%	---	---	
Styrene	18.8	---	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
1,1,1,2-Tetrachloroethane	19.2	---	0.400	ug/L	1	20.0	---	96	80-120%	---	---	
1,1,2,2-Tetrachloroethane	20.1	---	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
Tetrachloroethene (PCE)	18.3	---	0.400	ug/L	1	20.0	---	91	80-120%	---	---	
Tetrahydrofuran	18.3	---	10.0	ug/L	1	20.0	---	92	80-120%	---	---	
Toluene	18.7	---	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
1,2,3-Trichlorobenzene	18.0	---	2.00	ug/L	1	20.0	---	90	80-120%	---	---	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041255 - EPA 5030B</b>												
<b>Water</b>												
<b>LCS (8041255-BS1)</b>												
			Prepared: 04/30/18 15:23			Analyzed: 04/30/18 16:33						
1,2,4-Trichlorobenzene	17.9	---	2.00	ug/L	1	20.0	---	89	80-120%	---	---	
1,1,1-Trichloroethane	19.9	---	0.400	ug/L	1	20.0	---	99	80-120%	---	---	
1,1,2-Trichloroethane	19.1	---	0.500	ug/L	1	20.0	---	96	80-120%	---	---	
Trichloroethene (TCE)	19.0	---	0.400	ug/L	1	20.0	---	95	80-120%	---	---	
Trichlorofluoromethane	28.1	---	2.00	ug/L	1	20.0	---	<b>140</b>	<b>80-120%</b>	---	---	Q-56
1,2,3-Trichloropropane	19.5	---	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
1,2,4-Trimethylbenzene	18.5	---	1.00	ug/L	1	20.0	---	93	80-120%	---	---	
1,3,5-Trimethylbenzene	18.6	---	1.00	ug/L	1	20.0	---	93	80-120%	---	---	
Vinyl chloride	22.6	---	0.400	ug/L	1	20.0	---	113	80-120%	---	---	
m,p-Xylene	39.0	---	1.00	ug/L	1	40.0	---	97	80-120%	---	---	
o-Xylene	19.0	---	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						

<b>Duplicate (8041255-DUP1)</b>												
			Prepared: 04/30/18 15:23			Analyzed: 05/01/18 02:54						
<b>QC Source Sample: MW13-W (A8D0907-13)</b>												
<b>EPA 8260C</b>												
Acetone	ND	---	200	ug/L	10	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	112	ug/L	10	---	<b>121</b>	---	---	---	30%	R-02
Benzene	<b>1430</b>	---	2.00	ug/L	10	---	<b>1500</b>	---	---	5	30%	
Bromobenzene	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Bromoform	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Bromomethane	ND	---	50.0	ug/L	10	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	100	ug/L	10	---	<b>102</b>	---	---	---	30%	
n-Butylbenzene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	100	ug/L	10	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	

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Lisa Domenighini, Client Services Manager



HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Report ID:  
A8D0907 - 050818 0221

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041255 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (8041255-DUP1)</b>		Prepared: 04/30/18 15:23 Analyzed: 05/01/18 02:54										
<b>QC Source Sample: MW13-W (A8D0907-13)</b>												
Chloroethane	ND	---	50.0	ug/L	10	---	ND	---	---	---	30%	
Chloroform	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Chloromethane	ND	---	50.0	ug/L	10	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	50.0	ug/L	10	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
Dibromomethane	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Ethylbenzene	<b>608</b>	---	5.00	ug/L	10	---	<b>627</b>	---	---	3	30%	
Hexachlorobutadiene	ND	---	50.0	ug/L	10	---	ND	---	---	---	30%	
2-Hexanone	ND	---	100	ug/L	10	---	ND	---	---	---	30%	
Isopropylbenzene	<b>23.7</b>	---	10.0	ug/L	10	---	<b>24.3</b>	---	---	2	30%	
4-Isopropyltoluene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Methylene chloride	ND	---	30.0	ug/L	10	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	100	ug/L	10	---	ND	---	---	---	30%	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041255 - EPA 5030B</b>												
<b>Water</b>												
<b>Duplicate (8041255-DUP1)</b>			Prepared: 04/30/18 15:23 Analyzed: 05/01/18 02:54									
<b>QC Source Sample: MW13-W (A8D0907-13)</b>												
Methyl tert-butyl ether (MTBE)	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
Naphthalene	<b>61.8</b>	---	20.0	ug/L	10	---	<b>64.4</b>	---	---	4	30%	
n-Propylbenzene	<b>30.5</b>	---	5.00	ug/L	10	---	<b>32.9</b>	---	---	8	30%	
Styrene	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
Tetrahydrofuran	ND	---	100	ug/L	10	---	ND	---	---	---	30%	
Toluene	<b>3370</b>	---	10.0	ug/L	10	---	<b>3430</b>	---	---	2	30%	E
1,2,3-Trichlorobenzene	ND	---	20.0	ug/L	10	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	20.0	ug/L	10	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	5.00	ug/L	10	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	20.0	ug/L	10	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	10.0	ug/L	10	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	<b>245</b>	---	10.0	ug/L	10	---	<b>254</b>	---	---	4	30%	
1,3,5-Trimethylbenzene	<b>46.7</b>	---	10.0	ug/L	10	---	<b>49.1</b>	---	---	5	30%	
Vinyl chloride	ND	---	4.00	ug/L	10	---	ND	---	---	---	30%	
m,p-Xylene	<b>2440</b>	---	10.0	ug/L	10	---	<b>2490</b>	---	---	2	30%	
o-Xylene	<b>1260</b>	---	5.00	ug/L	10	---	<b>1280</b>	---	---	2	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>97 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>93 %</i>		<i>80-120 %</i>		<i>"</i>						

<b>Matrix Spike (8041255-MS1)</b>			Prepared: 04/30/18 15:23 Analyzed: 05/01/18 03:48									
<b>QC Source Sample: MW21-W (A8D0907-19)</b>												
<b>EPA 8260C</b>												
Acetone	45.2	---	20.0	ug/L	1	40.0	ND	113	39-160%	---	---	
Acrylonitrile	21.1	---	2.00	ug/L	1	20.0	ND	105	63-135%	---	---	
Benzene	22.3	---	0.200	ug/L	1	20.0	0.204	110	79-120%	---	---	

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Lisa Domenighini, Client Services Manager



**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0907 - 050818 0221**

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041255 - EPA 5030B</b>												
<b>Water</b>												
<b>Matrix Spike (8041255-MS1)</b>			Prepared: 04/30/18 15:23 Analyzed: 05/01/18 03:48									
<b>QC Source Sample: MW21-W (A8D0907-19)</b>												
Bromobenzene	18.7	---	0.500	ug/L	1	20.0	ND	94	80-120%	---	---	
Bromochloromethane	24.2	---	1.00	ug/L	1	20.0	ND	121	78-123%	---	---	
Bromodichloromethane	21.4	---	1.00	ug/L	1	20.0	ND	107	79-125%	---	---	
Bromoform	20.8	---	1.00	ug/L	1	20.0	ND	104	66-130%	---	---	
Bromomethane	42.7	---	5.00	ug/L	1	20.0	ND	<b>214</b>	<b>53-141%</b>	---	---	E-05, Q-54a
2-Butanone (MEK)	42.3	---	10.0	ug/L	1	40.0	ND	106	56-143%	---	---	
n-Butylbenzene	22.1	---	1.00	ug/L	1	20.0	2.97	96	75-128%	---	---	
sec-Butylbenzene	20.3	---	1.00	ug/L	1	20.0	1.91	92	77-126%	---	---	
tert-Butylbenzene	17.6	---	1.00	ug/L	1	20.0	ND	88	78-124%	---	---	
Carbon disulfide	21.8	---	10.0	ug/L	1	20.0	ND	109	64-133%	---	---	
Carbon tetrachloride	22.5	---	1.00	ug/L	1	20.0	ND	113	72-136%	---	---	
Chlorobenzene	19.6	---	0.500	ug/L	1	20.0	ND	98	80-120%	---	---	
Chloroethane	27.3	---	5.00	ug/L	1	20.0	ND	136	60-138%	---	---	
Chloroform	21.7	---	1.00	ug/L	1	20.0	ND	108	79-124%	---	---	
Chloromethane	21.2	---	5.00	ug/L	1	20.0	ND	106	50-139%	---	---	
2-Chlorotoluene	18.2	---	1.00	ug/L	1	20.0	ND	91	79-122%	---	---	
4-Chlorotoluene	18.0	---	1.00	ug/L	1	20.0	ND	90	78-122%	---	---	
Dibromochloromethane	19.9	---	1.00	ug/L	1	20.0	ND	100	74-126%	---	---	
1,2-Dibromo-3-chloropropane	17.8	---	5.00	ug/L	1	20.0	ND	89	62-128%	---	---	
1,2-Dibromoethane (EDB)	19.6	---	0.500	ug/L	1	20.0	ND	98	77-121%	---	---	
Dibromomethane	23.9	---	1.00	ug/L	1	20.0	ND	120	79-123%	---	---	
1,2-Dichlorobenzene	19.0	---	0.500	ug/L	1	20.0	ND	95	80-120%	---	---	
1,3-Dichlorobenzene	18.8	---	0.500	ug/L	1	20.0	ND	94	80-120%	---	---	
1,4-Dichlorobenzene	18.6	---	0.500	ug/L	1	20.0	ND	93	79-120%	---	---	
Dichlorodifluoromethane	23.5	---	1.00	ug/L	1	20.0	ND	118	32-152%	---	---	
1,1-Dichloroethane	22.0	---	0.400	ug/L	1	20.0	ND	110	77-125%	---	---	
1,2-Dichloroethane (EDC)	21.5	---	0.400	ug/L	1	20.0	ND	108	73-128%	---	---	
1,1-Dichloroethene	22.7	---	0.400	ug/L	1	20.0	ND	113	71-131%	---	---	
cis-1,2-Dichloroethene	22.1	---	0.400	ug/L	1	20.0	ND	110	78-123%	---	---	
trans-1,2-Dichloroethene	22.1	---	0.400	ug/L	1	20.0	ND	110	75-124%	---	---	
1,2-Dichloropropane	22.4	---	0.500	ug/L	1	20.0	ND	112	78-122%	---	---	
1,3-Dichloropropane	19.6	---	1.00	ug/L	1	20.0	ND	98	80-120%	---	---	

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Lisa Domenighini, Client Services Manager





<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041255 - EPA 5030B</b>												
<b>Water</b>												
<b>Matrix Spike (8041255-MS1)</b>			Prepared: 04/30/18 15:23 Analyzed: 05/01/18 03:48									
<b>QC Source Sample: MW21-W (A8D0907-19)</b>												
2,2-Dichloropropane	15.3	---	1.00	ug/L	1	20.0	ND	76	60-139%	---	---	
1,1-Dichloropropene	21.9	---	1.00	ug/L	1	20.0	ND	110	79-125%	---	---	
cis-1,3-Dichloropropene	17.5	---	1.00	ug/L	1	20.0	ND	87	75-124%	---	---	
trans-1,3-Dichloropropene	16.7	---	1.00	ug/L	1	20.0	ND	84	73-127%	---	---	
Ethylbenzene	21.0	---	0.500	ug/L	1	20.0	1.07	100	79-121%	---	---	
Hexachlorobutadiene	17.0	---	5.00	ug/L	1	20.0	ND	85	66-134%	---	---	
2-Hexanone	34.4	---	10.0	ug/L	1	40.0	ND	86	57-139%	---	---	
Isopropylbenzene	21.1	---	1.00	ug/L	1	20.0	1.57	98	72-131%	---	---	
4-Isopropyltoluene	19.7	---	1.00	ug/L	1	20.0	ND	98	77-127%	---	---	
Methylene chloride	22.4	---	3.00	ug/L	1	20.0	ND	112	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	35.8	---	10.0	ug/L	1	40.0	ND	90	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	19.1	---	1.00	ug/L	1	20.0	ND	96	71-124%	---	---	
Naphthalene	20.0	---	2.00	ug/L	1	20.0	1.29	93	61-128%	---	---	
n-Propylbenzene	23.4	---	0.500	ug/L	1	20.0	4.03	97	76-126%	---	---	
Styrene	18.9	---	1.00	ug/L	1	20.0	ND	95	78-123%	---	---	
1,1,1,2-Tetrachloroethane	19.9	---	0.400	ug/L	1	20.0	ND	99	78-124%	---	---	
1,1,2,2-Tetrachloroethane	21.0	---	0.500	ug/L	1	20.0	ND	105	71-121%	---	---	
Tetrachloroethene (PCE)	19.1	---	0.400	ug/L	1	20.0	ND	95	74-129%	---	---	
Tetrahydrofuran	19.2	---	10.0	ug/L	1	20.0	ND	96	57-133%	---	---	
Toluene	19.6	---	1.00	ug/L	1	20.0	0.846	94	80-121%	---	---	
1,2,3-Trichlorobenzene	18.3	---	2.00	ug/L	1	20.0	ND	91	69-129%	---	---	
1,2,4-Trichlorobenzene	17.8	---	2.00	ug/L	1	20.0	ND	89	69-130%	---	---	
1,1,1-Trichloroethane	21.4	---	0.400	ug/L	1	20.0	ND	107	74-131%	---	---	
1,1,2-Trichloroethane	21.8	---	0.500	ug/L	1	20.0	ND	109	80-120%	---	---	
Trichloroethene (TCE)	20.7	---	0.400	ug/L	1	20.0	ND	103	79-123%	---	---	
Trichlorofluoromethane	33.0	---	2.00	ug/L	1	20.0	ND	<b>165</b>	<b>65-141%</b>	---	---	Q-54
1,2,3-Trichloropropane	19.4	---	1.00	ug/L	1	20.0	ND	97	73-122%	---	---	
1,2,4-Trimethylbenzene	36.3	---	1.00	ug/L	1	20.0	18.7	88	76-124%	---	---	
1,3,5-Trimethylbenzene	21.3	---	1.00	ug/L	1	20.0	2.99	92	75-124%	---	---	
Vinyl chloride	25.6	---	0.400	ug/L	1	20.0	ND	128	58-137%	---	---	
m,p-Xylene	42.7	---	1.00	ug/L	1	40.0	1.60	103	80-121%	---	---	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041255 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (8041255-MS1)</b>		Prepared: 04/30/18 15:23 Analyzed: 05/01/18 03:48										
<b>QC Source Sample: MW21-W (A8D0907-19)</b>												
o-Xylene	20.9	---	0.500	ug/L	1	20.0	1.22	98	78-122%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 108 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>"</i>						



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050336 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8050336-BLK1)</b>		Prepared: 05/01/18 10:22 Analyzed: 05/01/18 11:47										
<b>EPA 8260C</b>												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	---
Acrylonitrile	ND	---	2.00	ug/L	1	---	---	---	---	---	---	---
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	---
Bromobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Bromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Bromodichloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Bromoform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Bromomethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	---
2-Butanone (MEK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	---
n-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
sec-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
tert-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Carbon disulfide	ND	---	10.0	ug/L	1	---	---	---	---	---	---	---
Carbon tetrachloride	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Chlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Chloroethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	---
Chloroform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Chloromethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	---
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
4-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Dibromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Dibromomethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
1,1-Dichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---
1,1-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050336 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8050336-BLK1)</b>	Prepared: 05/01/18 10:22					Analyzed: 05/01/18 11:47						
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	---	3.00	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.400	ug/L	1	---	---	---	---	---	---	

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<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050336 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8050336-BLK1)</b>		Prepared: 05/01/18 10:22		Analyzed: 05/01/18 11:47								
m,p-Xylene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Xylenes, total	ND	---	1.50	ug/L	1	---	---	---	---	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>105 %</i>		<i>80-120 %</i>		<i>"</i>						
<b>LCS (8050336-BS1)</b>						Prepared: 05/01/18 10:22 Analyzed: 05/01/18 10:50						
<b>EPA 8260C</b>												
Acetone	41.2	---	20.0	ug/L	1	40.0	---	103	80-120%	---	---	
Acrylonitrile	19.0	---	2.00	ug/L	1	20.0	---	95	80-120%	---	---	
Benzene	19.9	---	0.200	ug/L	1	20.0	---	100	80-120%	---	---	
Bromobenzene	20.2	---	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
Bromochloromethane	19.3	---	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
Bromodichloromethane	22.3	---	1.00	ug/L	1	20.0	---	111	80-120%	---	---	
Bromoform	22.4	---	1.00	ug/L	1	20.0	---	112	80-120%	---	---	
Bromomethane	15.4	---	5.00	ug/L	1	20.0	---	77	<b>80-120%</b>	---	---	E-05, Q-55
2-Butanone (MEK)	43.4	---	10.0	ug/L	1	40.0	---	108	80-120%	---	---	
n-Butylbenzene	23.3	---	1.00	ug/L	1	20.0	---	117	80-120%	---	---	
sec-Butylbenzene	22.7	---	1.00	ug/L	1	20.0	---	114	80-120%	---	---	
tert-Butylbenzene	23.3	---	1.00	ug/L	1	20.0	---	116	80-120%	---	---	
Carbon disulfide	19.6	---	10.0	ug/L	1	20.0	---	98	80-120%	---	---	
Carbon tetrachloride	22.7	---	1.00	ug/L	1	20.0	---	114	80-120%	---	---	
Chlorobenzene	20.6	---	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Chloroethane	19.5	---	5.00	ug/L	1	20.0	---	98	80-120%	---	---	
Chloroform	21.5	---	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
Chloromethane	14.4	---	5.00	ug/L	1	20.0	---	72	<b>80-120%</b>	---	---	Q-55
2-Chlorotoluene	21.6	---	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
4-Chlorotoluene	21.7	---	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
Dibromochloromethane	23.5	---	1.00	ug/L	1	20.0	---	118	80-120%	---	---	
1,2-Dibromo-3-chloropropane	21.9	---	5.00	ug/L	1	20.0	---	110	80-120%	---	---	
1,2-Dibromoethane (EDB)	22.1	---	0.500	ug/L	1	20.0	---	110	80-120%	---	---	
Dibromomethane	20.8	---	1.00	ug/L	1	20.0	---	104	80-120%	---	---	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050336 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (8050336-BS1)</b>			Prepared: 05/01/18 10:22		Analyzed: 05/01/18 10:50							
1,2-Dichlorobenzene	20.4	---	0.500	ug/L	1	20.0	---	102	80-120%	---	---	
1,3-Dichlorobenzene	21.2	---	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
1,4-Dichlorobenzene	19.9	---	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
Dichlorodifluoromethane	18.6	---	1.00	ug/L	1	20.0	---	93	80-120%	---	---	
1,1-Dichloroethane	20.0	---	0.400	ug/L	1	20.0	---	100	80-120%	---	---	
1,2-Dichloroethane (EDC)	21.8	---	0.400	ug/L	1	20.0	---	109	80-120%	---	---	
1,1-Dichloroethene	20.8	---	0.400	ug/L	1	20.0	---	104	80-120%	---	---	
cis-1,2-Dichloroethene	21.1	---	0.400	ug/L	1	20.0	---	105	80-120%	---	---	
trans-1,2-Dichloroethene	20.8	---	0.400	ug/L	1	20.0	---	104	80-120%	---	---	
1,2-Dichloropropane	20.5	---	0.500	ug/L	1	20.0	---	102	80-120%	---	---	
1,3-Dichloropropane	20.7	---	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
2,2-Dichloropropane	23.3	---	1.00	ug/L	1	20.0	---	117	80-120%	---	---	
1,1-Dichloropropene	21.9	---	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
cis-1,3-Dichloropropene	23.0	---	1.00	ug/L	1	20.0	---	115	80-120%	---	---	
trans-1,3-Dichloropropene	24.0	---	1.00	ug/L	1	20.0	---	120	80-120%	---	---	
Ethylbenzene	21.2	---	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
Hexachlorobutadiene	21.0	---	5.00	ug/L	1	20.0	---	105	80-120%	---	---	
2-Hexanone	43.5	---	10.0	ug/L	1	40.0	---	109	80-120%	---	---	
Isopropylbenzene	23.1	---	1.00	ug/L	1	20.0	---	116	80-120%	---	---	
4-Isopropyltoluene	23.9	---	1.00	ug/L	1	20.0	---	120	80-120%	---	---	
Methylene chloride	18.7	---	3.00	ug/L	1	20.0	---	94	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	43.3	---	10.0	ug/L	1	40.0	---	108	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	21.4	---	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
Naphthalene	21.3	---	2.00	ug/L	1	20.0	---	107	80-120%	---	---	
n-Propylbenzene	21.2	---	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
Styrene	23.3	---	1.00	ug/L	1	20.0	---	117	80-120%	---	---	
1,1,1,2-Tetrachloroethane	23.0	---	0.400	ug/L	1	20.0	---	115	80-120%	---	---	
1,1,2,2-Tetrachloroethane	20.7	---	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Tetrachloroethene (PCE)	20.9	---	0.400	ug/L	1	20.0	---	105	80-120%	---	---	
Toluene	19.8	---	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,2,3-Trichlorobenzene	20.7	---	2.00	ug/L	1	20.0	---	103	80-120%	---	---	
1,2,4-Trichlorobenzene	21.2	---	2.00	ug/L	1	20.0	---	106	80-120%	---	---	

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Lisa Domenighini, Client Services Manager



HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Report ID:  
A8D0907 - 050818 0221

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050336 - EPA 5030B</b>												
<b>Water</b>												
<b>LCS (8050336-BS1)</b>												
			Prepared: 05/01/18 10:22			Analyzed: 05/01/18 10:50						
1,1,1-Trichloroethane	22.6	---	0.400	ug/L	1	20.0	---	113	80-120%	---	---	
1,1,2-Trichloroethane	19.9	---	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Trichloroethene (TCE)	21.6	---	0.400	ug/L	1	20.0	---	108	80-120%	---	---	
Trichlorofluoromethane	23.3	---	2.00	ug/L	1	20.0	---	116	80-120%	---	---	
1,2,3-Trichloropropane	21.0	---	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
1,2,4-Trimethylbenzene	23.1	---	1.00	ug/L	1	20.0	---	116	80-120%	---	---	
1,3,5-Trimethylbenzene	22.6	---	1.00	ug/L	1	20.0	---	113	80-120%	---	---	
Vinyl chloride	18.7	---	0.400	ug/L	1	20.0	---	94	80-120%	---	---	
m,p-Xylene	44.5	---	1.00	ug/L	1	40.0	---	111	80-120%	---	---	
o-Xylene	22.6	---	0.500	ug/L	1	20.0	---	113	80-120%	---	---	
Xylenes, total	67.1	---	1.50	ug/L	1	60.0	---	112	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr) Recovery: 99 % Limits: 80-120 % Dilution: 1x												
Toluene-d8 (Surr) 99 % 80-120 % "												
4-Bromofluorobenzene (Surr) 98 % 80-120 % "												

<b>Duplicate (8050336-DUP1)</b>												
			Prepared: 05/01/18 11:07			Analyzed: 05/01/18 15:06						
<b>QC Source Sample: MW23-W (A8D0907-21)</b>												
<b>EPA 8260C</b>												
Acetone	ND	---	20.0	ug/L	1	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
Benzene	ND	---	0.200	ug/L	1	---	ND	---	---	---	30%	
Bromobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromoform	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromomethane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	

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Lisa Domenighini, Client Services Manager



HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Report ID:  
A8D0907 - 050818 0221

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050336 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (8050336-DUP1)</b>			Prepared: 05/01/18 11:07 Analyzed: 05/01/18 15:06									
<b>QC Source Sample: MW23-W (A8D0907-21)</b>												
Chloroethane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
Chloroform	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Chloromethane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Dibromomethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Hexanone	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Methylene chloride	ND	---	3.00	ug/L	1	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	

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Lisa Domenighini, Client Services Manager





<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050336 - EPA 5030B</b>												
<b>Water</b>												
<b>Duplicate (8050336-DUP1)</b>			Prepared: 05/01/18 11:07 Analyzed: 05/01/18 15:06									
<b>QC Source Sample: MW23-W (A8D0907-21)</b>												
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Naphthalene	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Styrene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
o-Xylene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Xylenes, total	ND	---	1.50	ug/L	1	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr) Recovery: 102 % Limits: 80-120 % Dilution: 1x												
Toluene-d8 (Surr) 102 % 80-120 % "												
4-Bromofluorobenzene (Surr) 101 % 80-120 % "												

<b>Duplicate (8050336-DUP2)</b>			Prepared: 05/01/18 11:07 Analyzed: 05/01/18 20:46									
<b>QC Source Sample: Non-SDG (A8D0344-23)</b>												
<b>EPA 8260C</b>												
Acetone	<b>150</b>	---	20.0	ug/L	1	---	<b>162</b>	---	---	8	30%	
Acrylonitrile	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
Benzene	<b>58.0</b>	---	0.200	ug/L	1	---	<b>61.0</b>	---	---	5	30%	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050336 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (8050336-DUP2)</b>			Prepared: 05/01/18 11:07 Analyzed: 05/01/18 20:46									
<b>QC Source Sample: Non-SDG (A8D0344-23)</b>												
Bromobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromoform	24.1	---	1.00	ug/L	1	---	24.6	---	---	2	30%	
Bromomethane	25.3	---	5.00	ug/L	1	---	21.6	---	---	16	30%	
2-Butanone (MEK)	100	---	10.0	ug/L	1	---	110	---	---	9	30%	
n-Butylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
Carbon tetrachloride	63.1	---	1.00	ug/L	1	---	70.1	---	---	10	30%	
Chlorobenzene	82.6	---	0.500	ug/L	1	---	88.3	---	---	7	30%	
Chloroethane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
Chloroform	84.0	---	1.00	ug/L	1	---	87.0	---	---	4	30%	
Chloromethane	23.4	---	5.00	ug/L	1	---	24.6	---	---	5	30%	
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Dibromochloromethane	74.2	---	1.00	ug/L	1	---	74.7	---	---	0.6	30%	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Dibromomethane	101	---	1.00	ug/L	1	---	102	---	---	1	30%	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	71.4	---	0.500	ug/L	1	---	77.0	---	---	8	30%	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethane	51.3	---	0.400	ug/L	1	---	55.6	---	---	8	30%	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethene	87.8	---	0.400	ug/L	1	---	92.3	---	---	5	30%	
cis-1,2-Dichloroethene	45.8	---	0.400	ug/L	1	---	47.2	---	---	3	30%	
trans-1,2-Dichloroethene	31.9	---	0.400	ug/L	1	---	32.6	---	---	2	30%	
1,2-Dichloropropane	131	---	0.500	ug/L	1	---	136	---	---	4	30%	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	

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**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0907 - 050818 0221**

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050336 - EPA 5030B</b>												
<b>Water</b>												
<b>Duplicate (8050336-DUP2)</b>			Prepared: 05/01/18 11:07 Analyzed: 05/01/18 20:46									
<b>QC Source Sample: Non-SDG (A8D0344-23)</b>												
2,2-Dichloropropane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	<b>105</b>	---	1.00	ug/L	1	---	<b>107</b>	---	---	2	30%	
trans-1,3-Dichloropropene	<b>47.2</b>	---	1.00	ug/L	1	---	<b>48.2</b>	---	---	2	30%	
Ethylbenzene	<b>66.3</b>	---	0.500	ug/L	1	---	<b>73.6</b>	---	---	10	30%	
Hexachlorobutadiene	<b>34.5</b>	---	5.00	ug/L	1	---	<b>36.3</b>	---	---	5	30%	
2-Hexanone	<b>167</b>	---	10.0	ug/L	1	---	<b>184</b>	---	---	10	30%	
Isopropylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Methylene chloride	<b>73.5</b>	---	3.00	ug/L	1	---	<b>75.7</b>	---	---	3	30%	
4-Methyl-2-pentanone (MiBK)	<b>146</b>	---	10.0	ug/L	1	---	<b>159</b>	---	---	8	30%	
Methyl tert-butyl ether (MTBE)	<b>87.4</b>	---	1.00	ug/L	1	---	<b>88.8</b>	---	---	2	30%	
Naphthalene	<b>73.6</b>	---	2.00	ug/L	1	---	<b>76.2</b>	---	---	3	30%	
n-Propylbenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Styrene	<b>47.3</b>	---	1.00	ug/L	1	---	<b>51.6</b>	---	---	9	30%	
1,1,1,2-Tetrachloroethane	<b>46.3</b>	---	0.400	ug/L	1	---	<b>49.5</b>	---	---	7	30%	
1,1,2,2-Tetrachloroethane	<b>111</b>	---	0.500	ug/L	1	---	<b>118</b>	---	---	6	30%	
Tetrachloroethene (PCE)	<b>47.5</b>	---	0.400	ug/L	1	---	<b>53.3</b>	---	---	12	30%	
Toluene	<b>53.7</b>	---	1.00	ug/L	1	---	<b>58.8</b>	---	---	9	30%	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	<b>26.2</b>	---	0.400	ug/L	1	---	<b>28.3</b>	---	---	8	30%	
1,1,2-Trichloroethane	<b>88.2</b>	---	0.500	ug/L	1	---	<b>90.3</b>	---	---	2	30%	
Trichloroethene (TCE)	<b>65.5</b>	---	0.400	ug/L	1	---	<b>67.8</b>	---	---	3	30%	
Trichlorofluoromethane	<b>56.6</b>	---	2.00	ug/L	1	---	<b>62.3</b>	---	---	10	30%	
1,2,3-Trichloropropane	<b>42.7</b>	---	1.00	ug/L	1	---	<b>44.6</b>	---	---	4	30%	
1,2,4-Trimethylbenzene	<b>76.9</b>	---	1.00	ug/L	1	---	<b>83.9</b>	---	---	9	30%	
1,3,5-Trimethylbenzene	<b>58.1</b>	---	1.00	ug/L	1	---	<b>63.5</b>	---	---	9	30%	
Vinyl chloride	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
m,p-Xylene	<b>18.5</b>	---	1.00	ug/L	1	---	<b>20.3</b>	---	---	9	30%	
o-Xylene	<b>64.0</b>	---	0.500	ug/L	1	---	<b>70.6</b>	---	---	10	30%	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050336 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (8050336-DUP2)</b>			Prepared: 05/01/18 11:07 Analyzed: 05/01/18 20:46									
<b>QC Source Sample: Non-SDG (A8D0344-23)</b>												
Xylenes, total	82.5	---	1.50	ug/L	1	---	90.9	---	---	10	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>		<i>80-120 %</i>		<i>"</i>					

<b>Matrix Spike (8050336-MS1)</b>			Prepared: 05/01/18 11:07 Analyzed: 05/01/18 18:53									
<b>QC Source Sample: Non-SDG (A8D0910-01)</b>												
<b>EPA 8260C</b>												
Acetone	44.3	---	20.0	ug/L	1	40.0	ND	111	39-160%	---	---	
Acrylonitrile	21.4	---	2.00	ug/L	1	20.0	ND	107	63-135%	---	---	
Benzene	21.8	---	0.200	ug/L	1	20.0	ND	109	79-120%	---	---	
Bromobenzene	21.4	---	0.500	ug/L	1	20.0	ND	107	80-120%	---	---	
Bromochloromethane	20.1	---	1.00	ug/L	1	20.0	ND	100	78-123%	---	---	
Bromodichloromethane	20.4	---	1.00	ug/L	1	20.0	ND	102	79-125%	---	---	
Bromoform	20.2	---	1.00	ug/L	1	20.0	ND	101	66-130%	---	---	
Bromomethane	15.9	---	5.00	ug/L	1	20.0	ND	80	53-141%	---	---	E-05, Q-54b
2-Butanone (MEK)	44.4	---	10.0	ug/L	1	40.0	ND	111	56-143%	---	---	
n-Butylbenzene	23.5	---	1.00	ug/L	1	20.0	ND	117	75-128%	---	---	
sec-Butylbenzene	23.8	---	1.00	ug/L	1	20.0	ND	119	77-126%	---	---	
tert-Butylbenzene	22.7	---	1.00	ug/L	1	20.0	ND	114	78-124%	---	---	
Carbon disulfide	22.5	---	10.0	ug/L	1	20.0	ND	112	64-133%	---	---	
Carbon tetrachloride	19.9	---	1.00	ug/L	1	20.0	ND	100	72-136%	---	---	
Chlorobenzene	20.9	---	0.500	ug/L	1	20.0	ND	104	80-120%	---	---	
Chloroethane	23.4	---	5.00	ug/L	1	20.0	ND	117	60-138%	---	---	
Chloroform	20.0	---	1.00	ug/L	1	20.0	ND	100	79-124%	---	---	
Chloromethane	13.6	---	5.00	ug/L	1	20.0	ND	68	50-139%	---	---	Q-54d
2-Chlorotoluene	22.7	---	1.00	ug/L	1	20.0	ND	114	79-122%	---	---	
4-Chlorotoluene	22.1	---	1.00	ug/L	1	20.0	ND	110	78-122%	---	---	
Dibromochloromethane	21.5	---	1.00	ug/L	1	20.0	ND	108	74-126%	---	---	
1,2-Dibromo-3-chloropropane	21.6	---	5.00	ug/L	1	20.0	ND	108	62-128%	---	---	
1,2-Dibromoethane (EDB)	21.7	---	0.500	ug/L	1	20.0	ND	108	77-121%	---	---	
Dibromomethane	20.1	---	1.00	ug/L	1	20.0	ND	101	79-123%	---	---	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050336 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (8050336-MS1)</b>			Prepared: 05/01/18 11:07 Analyzed: 05/01/18 18:53									
<b>QC Source Sample: Non-SDG (A8D0910-01)</b>												
1,2-Dichlorobenzene	21.2	---	0.500	ug/L	1	20.0	ND	106	80-120%	---	---	
1,3-Dichlorobenzene	21.6	---	0.500	ug/L	1	20.0	ND	108	80-120%	---	---	
1,4-Dichlorobenzene	20.2	---	0.500	ug/L	1	20.0	ND	101	79-120%	---	---	
Dichlorodifluoromethane	18.7	---	1.00	ug/L	1	20.0	ND	94	32-152%	---	---	
1,1-Dichloroethane	21.1	---	0.400	ug/L	1	20.0	ND	106	77-125%	---	---	
1,2-Dichloroethane (EDC)	19.1	---	0.400	ug/L	1	20.0	ND	95	73-128%	---	---	
1,1-Dichloroethene	21.7	---	0.400	ug/L	1	20.0	ND	108	71-131%	---	---	
cis-1,2-Dichloroethene	21.3	---	0.400	ug/L	1	20.0	ND	107	78-123%	---	---	
trans-1,2-Dichloroethene	22.0	---	0.400	ug/L	1	20.0	ND	110	75-124%	---	---	
1,2-Dichloropropane	21.4	---	0.500	ug/L	1	20.0	ND	107	78-122%	---	---	
1,3-Dichloropropane	21.4	---	1.00	ug/L	1	20.0	ND	107	80-120%	---	---	
2,2-Dichloropropane	18.3	---	1.00	ug/L	1	20.0	ND	91	60-139%	---	---	
1,1-Dichloropropene	22.2	---	1.00	ug/L	1	20.0	ND	111	79-125%	---	---	
cis-1,3-Dichloropropene	22.1	---	1.00	ug/L	1	20.0	ND	111	75-124%	---	---	
trans-1,3-Dichloropropene	21.9	---	1.00	ug/L	1	20.0	ND	109	73-127%	---	---	
Ethylbenzene	21.4	---	0.500	ug/L	1	20.0	ND	107	79-121%	---	---	
Hexachlorobutadiene	20.6	---	5.00	ug/L	1	20.0	ND	103	66-134%	---	---	
2-Hexanone	45.7	---	10.0	ug/L	1	40.0	ND	114	57-139%	---	---	
Isopropylbenzene	23.2	---	1.00	ug/L	1	20.0	ND	116	72-131%	---	---	
4-Isopropyltoluene	24.3	---	1.00	ug/L	1	20.0	ND	122	77-127%	---	---	
Methylene chloride	20.1	---	3.00	ug/L	1	20.0	ND	101	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	47.0	---	10.0	ug/L	1	40.0	ND	118	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	21.3	---	1.00	ug/L	1	20.0	ND	106	71-124%	---	---	
Naphthalene	22.6	---	2.00	ug/L	1	20.0	ND	113	61-128%	---	---	
n-Propylbenzene	22.4	---	0.500	ug/L	1	20.0	ND	112	76-126%	---	---	
Styrene	23.6	---	1.00	ug/L	1	20.0	ND	118	78-123%	---	---	
1,1,1,2-Tetrachloroethane	21.4	---	0.400	ug/L	1	20.0	ND	107	78-124%	---	---	
1,1,1,2,2-Tetrachloroethane	22.1	---	0.500	ug/L	1	20.0	ND	111	71-121%	---	---	
Tetrachloroethene (PCE)	21.2	---	0.400	ug/L	1	20.0	ND	106	74-129%	---	---	
Toluene	20.7	---	1.00	ug/L	1	20.0	ND	103	80-121%	---	---	
1,2,3-Trichlorobenzene	21.4	---	2.00	ug/L	1	20.0	ND	107	69-129%	---	---	

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050336 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (8050336-MS1)</b>			Prepared: 05/01/18 11:07 Analyzed: 05/01/18 18:53									
<b>QC Source Sample: Non-SDG (A8D0910-01)</b>												
1,2,4-Trichlorobenzene	21.1	---	2.00	ug/L	1	20.0	ND	106	69-130%	---	---	
1,1,1-Trichloroethane	20.4	---	0.400	ug/L	1	20.0	ND	102	74-131%	---	---	
1,1,2-Trichloroethane	20.6	---	0.500	ug/L	1	20.0	ND	103	80-120%	---	---	
Trichloroethene (TCE)	21.6	---	0.400	ug/L	1	20.0	ND	108	79-123%	---	---	
Trichlorofluoromethane	19.0	---	2.00	ug/L	1	20.0	ND	95	65-141%	---	---	
1,2,3-Trichloropropane	20.6	---	1.00	ug/L	1	20.0	ND	103	73-122%	---	---	
1,2,4-Trimethylbenzene	23.4	---	1.00	ug/L	1	20.0	ND	117	76-124%	---	---	
1,3,5-Trimethylbenzene	23.2	---	1.00	ug/L	1	20.0	ND	116	75-124%	---	---	
Vinyl chloride	23.8	---	0.400	ug/L	1	20.0	ND	119	58-137%	---	---	
m,p-Xylene	44.2	---	1.00	ug/L	1	40.0	ND	110	80-121%	---	---	
o-Xylene	22.5	---	0.500	ug/L	1	20.0	ND	113	78-122%	---	---	
Xylenes, total	66.7	---	1.50	ug/L	1	60.0	ND	111	79-121%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>		<i>80-120 %</i>		<i>"</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>		<i>80-120 %</i>		<i>"</i>					



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050343 - EPA 3510C (Fuels/Acid Ext.)</b>						<b>Water</b>						
<b>Blank (8050343-BLK2)</b>	Prepared: 05/01/18 09:32 Analyzed: 05/02/18 19:14										<b>Q-22</b>	
<b>EPA 8270D (SIM)</b>												
Acenaphthene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	0.182	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	0.182	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	0.182	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050406 - EPA 3510C (Fuels/Acid Ext.)</b>						<b>Water</b>						
<b>Blank (8050406-BLK2)</b>	Prepared: 05/02/18 13:43 Analyzed: 05/03/18 12:14					<b>Q-22</b>						
<b>EPA 8270D (SIM)</b>												
Acenaphthene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	0.182	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	0.182	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	0.182	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	





<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Total Metals by EPA 200.8 (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050348 - EPA 3015A</b>						<b>Water</b>						
<b>Blank (8050348-BLK1)</b>		Prepared: 05/01/18 10:29 Analyzed: 05/02/18 16:10										
<u>EPA 200.8</u>												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	---
<b>LCS (8050348-BS1)</b>		Prepared: 05/01/18 10:29 Analyzed: 05/02/18 16:05										
<u>EPA 200.8</u>												
Lead	53.0	---	0.200	ug/L	1	55.6	---	95	85-115%	---	---	---
<b>Duplicate (8050348-DUP1)</b>		Prepared: 05/01/18 10:29 Analyzed: 05/02/18 16:35										
<u>QC Source Sample: Non-SDG (A8D0886-02)</u>												
<u>EPA 200.8</u>												
Lead	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	---
<b>Matrix Spike (8050348-MS1)</b>		Prepared: 05/01/18 10:29 Analyzed: 05/02/18 16:40										
<u>QC Source Sample: Non-SDG (A8D0886-02)</u>												
<u>EPA 200.8</u>												
Lead	53.1	---	0.200	ug/L	1	55.6	ND	96	70-130%	---	---	---
<b>Matrix Spike (8050348-MS2)</b>		Prepared: 05/01/18 10:29 Analyzed: 05/02/18 18:49										
<u>QC Source Sample: Non-SDG (A8D0931-01)</u>												
<u>EPA 200.8</u>												
Lead	58.9	---	0.200	ug/L	1	55.6	6.88	94	70-130%	---	---	---



HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Report ID:  
A8D0907 - 050818 0221

**SAMPLE PREPARATION INFORMATION**

**Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Prep: EPA 3510C (Fuels/Acid Ext.)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 8050343</u>							
A8D0907-22	Water	NWTPH-Dx	04/26/18 13:40	05/01/18 12:36	1060mL/5mL	1000mL/5mL	0.94
A8D0907-23	Water	NWTPH-Dx	04/24/18 15:10	05/01/18 12:36	1060mL/5mL	1000mL/5mL	0.94
A8D0907-24	Water	NWTPH-Dx	04/26/18 15:15	05/01/18 12:36	1060mL/5mL	1000mL/5mL	0.94
A8D0907-25	Water	NWTPH-Dx	04/26/18 14:30	05/01/18 12:36	1060mL/5mL	1000mL/5mL	0.94
A8D0907-26	Water	NWTPH-Dx	04/26/18 11:10	05/01/18 12:36	1060mL/5mL	1000mL/5mL	0.94
A8D0907-27	Water	NWTPH-Dx	04/26/18 19:35	05/01/18 12:36	1060mL/5mL	1000mL/5mL	0.94
A8D0907-28	Water	NWTPH-Dx	04/24/18 13:00	05/01/18 09:32	1060mL/5mL	1000mL/5mL	0.94
<u>Batch: 8050406</u>							
A8D0907-01	Water	NWTPH-Dx	04/24/18 17:05	05/02/18 13:43	1070mL/5mL	1000mL/5mL	0.94
A8D0907-02	Water	NWTPH-Dx	04/25/18 14:00	05/02/18 13:43	1070mL/5mL	1000mL/5mL	0.94
A8D0907-03	Water	NWTPH-Dx	04/25/18 09:00	05/02/18 13:43	1070mL/5mL	1000mL/5mL	0.94
A8D0907-04	Water	NWTPH-Dx	04/25/18 14:40	05/02/18 13:43	1070mL/5mL	1000mL/5mL	0.94
A8D0907-05	Water	NWTPH-Dx	04/24/18 13:40	05/02/18 13:43	1060mL/5mL	1000mL/5mL	0.94
A8D0907-06	Water	NWTPH-Dx	04/25/18 16:55	05/02/18 13:43	1070mL/5mL	1000mL/5mL	0.94
A8D0907-07	Water	NWTPH-Dx	04/25/18 15:20	05/02/18 13:43	1070mL/5mL	1000mL/5mL	0.94
A8D0907-08	Water	NWTPH-Dx	04/26/18 12:05	05/02/18 13:43	1070mL/5mL	1000mL/5mL	0.94
A8D0907-09	Water	NWTPH-Dx	04/26/18 18:45	05/02/18 13:43	1070mL/5mL	1000mL/5mL	0.94
A8D0907-10	Water	NWTPH-Dx	04/26/18 16:15	05/02/18 16:50	1060mL/5mL	1000mL/5mL	0.94
A8D0907-11	Water	NWTPH-Dx	04/26/18 10:20	05/02/18 16:50	1070mL/5mL	1000mL/5mL	0.94
A8D0907-12	Water	NWTPH-Dx	04/25/18 09:55	05/02/18 16:50	1060mL/5mL	1000mL/5mL	0.94
A8D0907-13	Water	NWTPH-Dx	04/25/18 10:50	05/02/18 16:50	1060mL/5mL	1000mL/5mL	0.94
A8D0907-14	Water	NWTPH-Dx	04/25/18 12:05	05/02/18 16:50	1070mL/5mL	1000mL/5mL	0.94
A8D0907-15	Water	NWTPH-Dx	04/26/18 09:20	05/02/18 16:50	1070mL/5mL	1000mL/5mL	0.94
A8D0907-16	Water	NWTPH-Dx	04/26/18 11:05	05/02/18 16:50	1060mL/5mL	1000mL/5mL	0.94
A8D0907-17	Water	NWTPH-Dx	04/26/18 13:00	05/02/18 16:50	1060mL/5mL	1000mL/5mL	0.94
A8D0907-18	Water	NWTPH-Dx	04/26/18 17:55	05/02/18 16:50	1060mL/5mL	1000mL/5mL	0.94
A8D0907-19	Water	NWTPH-Dx	04/26/18 17:05	05/02/18 16:50	1070mL/5mL	1000mL/5mL	0.94
A8D0907-20	Water	NWTPH-Dx	04/26/18 19:30	05/02/18 16:50	1060mL/5mL	1000mL/5mL	0.94
<u>Batch: 8050449</u>							
A8D0907-21	Water	NWTPH-Dx	04/25/18 16:05	05/03/18 13:06	1050mL/5mL	1000mL/5mL	0.95

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

Apex Laboratories

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Lisa Domenighini, Client Services Manager



HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Report ID:  
A8D0907 - 050818 0221

SAMPLE PREPARATION INFORMATION

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

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 8041230</b>							
A8D0907-01	Water	NWTPH-Gx (MS)	04/24/18 17:05	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-02	Water	NWTPH-Gx (MS)	04/25/18 14:00	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-03	Water	NWTPH-Gx (MS)	04/25/18 09:00	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-04	Water	NWTPH-Gx (MS)	04/25/18 14:40	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-05	Water	NWTPH-Gx (MS)	04/24/18 13:40	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-07	Water	NWTPH-Gx (MS)	04/25/18 15:20	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-08	Water	NWTPH-Gx (MS)	04/26/18 12:05	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-10	Water	NWTPH-Gx (MS)	04/26/18 16:15	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-11	Water	NWTPH-Gx (MS)	04/26/18 10:20	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-12	Water	NWTPH-Gx (MS)	04/25/18 09:55	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
<b>Batch: 8041255</b>							
A8D0907-13	Water	NWTPH-Gx (MS)	04/25/18 10:50	04/30/18 15:23	5mL/5mL	5mL/5mL	1.00
A8D0907-14	Water	NWTPH-Gx (MS)	04/25/18 12:05	04/30/18 15:23	5mL/5mL	5mL/5mL	1.00
A8D0907-15	Water	NWTPH-Gx (MS)	04/26/18 09:20	04/30/18 15:23	5mL/5mL	5mL/5mL	1.00
A8D0907-16	Water	NWTPH-Gx (MS)	04/26/18 11:05	04/30/18 15:23	5mL/5mL	5mL/5mL	1.00
A8D0907-18	Water	NWTPH-Gx (MS)	04/26/18 17:55	04/30/18 15:23	5mL/5mL	5mL/5mL	1.00
A8D0907-28	Water	NWTPH-Gx (MS)	04/24/18 13:00	04/30/18 15:23	5mL/5mL	5mL/5mL	1.00
<b>Batch: 8041257</b>							
A8D0907-25	Water	NWTPH-Gx (MS)	04/26/18 14:30	04/30/18 17:58	5mL/5mL	5mL/5mL	1.00
<b>Batch: 8050333</b>							
A8D0907-19RE1	Water	NWTPH-Gx (MS)	04/26/18 17:05	05/01/18 11:45	5mL/5mL	5mL/5mL	1.00
A8D0907-20RE1	Water	NWTPH-Gx (MS)	04/26/18 19:30	05/01/18 11:45	5mL/5mL	5mL/5mL	1.00
<b>Batch: 8050336</b>							
A8D0907-06RE1	Water	NWTPH-Gx (MS)	04/25/18 16:55	05/01/18 11:07	5mL/5mL	5mL/5mL	1.00
A8D0907-09RE1	Water	NWTPH-Gx (MS)	04/26/18 18:45	05/01/18 11:07	5mL/5mL	5mL/5mL	1.00
A8D0907-21	Water	NWTPH-Gx (MS)	04/25/18 16:05	05/01/18 11:07	5mL/5mL	5mL/5mL	1.00
A8D0907-22	Water	NWTPH-Gx (MS)	04/26/18 13:40	05/01/18 11:07	5mL/5mL	5mL/5mL	1.00
A8D0907-23	Water	NWTPH-Gx (MS)	04/24/18 15:10	05/01/18 11:07	5mL/5mL	5mL/5mL	1.00
A8D0907-24	Water	NWTPH-Gx (MS)	04/26/18 15:15	05/01/18 11:07	5mL/5mL	5mL/5mL	1.00
A8D0907-26	Water	NWTPH-Gx (MS)	04/26/18 11:10	05/01/18 11:07	5mL/5mL	5mL/5mL	1.00
A8D0907-27	Water	NWTPH-Gx (MS)	04/26/18 19:35	05/01/18 11:07	5mL/5mL	5mL/5mL	1.00



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**SAMPLE PREPARATION INFORMATION**

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

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 8050380</u>							
A8D0907-17RE1	Water	NWTPH-Gx (MS)	04/26/18 13:00	05/02/18 11:08	5mL/5mL	5mL/5mL	1.00

**BTEX Compounds by EPA 8260C**

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 8041230</u>							
A8D0907-01	Water	EPA 8260C	04/24/18 17:05	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-02	Water	EPA 8260C	04/25/18 14:00	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-04	Water	EPA 8260C	04/25/18 14:40	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-05	Water	EPA 8260C	04/24/18 13:40	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-07	Water	EPA 8260C	04/25/18 15:20	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-08	Water	EPA 8260C	04/26/18 12:05	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-10	Water	EPA 8260C	04/26/18 16:15	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-11	Water	EPA 8260C	04/26/18 10:20	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
A8D0907-12	Water	EPA 8260C	04/25/18 09:55	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
<u>Batch: 8041255</u>							
A8D0907-13	Water	EPA 8260C	04/25/18 10:50	04/30/18 15:23	5mL/5mL	5mL/5mL	1.00
A8D0907-15	Water	EPA 8260C	04/26/18 09:20	04/30/18 15:23	5mL/5mL	5mL/5mL	1.00
A8D0907-18	Water	EPA 8260C	04/26/18 17:55	04/30/18 15:23	5mL/5mL	5mL/5mL	1.00
A8D0907-28	Water	EPA 8260C	04/24/18 13:00	04/30/18 15:23	5mL/5mL	5mL/5mL	1.00
<u>Batch: 8041257</u>							
A8D0907-25	Water	EPA 8260C	04/26/18 14:30	04/30/18 17:58	5mL/5mL	5mL/5mL	1.00
<u>Batch: 8050333</u>							
A8D0907-13RE1	Water	EPA 8260C	04/25/18 10:50	05/01/18 11:45	5mL/5mL	5mL/5mL	1.00
A8D0907-19RE1	Water	EPA 8260C	04/26/18 17:05	05/01/18 11:45	5mL/5mL	5mL/5mL	1.00
A8D0907-20RE1	Water	EPA 8260C	04/26/18 19:30	05/01/18 11:45	5mL/5mL	5mL/5mL	1.00
<u>Batch: 8050336</u>							
A8D0907-06RE1	Water	EPA 8260C	04/25/18 16:55	05/01/18 11:07	5mL/5mL	5mL/5mL	1.00
A8D0907-09RE1	Water	EPA 8260C	04/26/18 18:45	05/01/18 11:07	5mL/5mL	5mL/5mL	1.00

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Lisa Domenighini, Client Services Manager



**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0907 - 050818 0221**

**SAMPLE PREPARATION INFORMATION**

**BTEX Compounds by EPA 8260C**

Prep: **EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A8D0907-21	Water	EPA 8260C	04/25/18 16:05	05/01/18 11:07	5mL/5mL	5mL/5mL	1.00
A8D0907-22	Water	EPA 8260C	04/26/18 13:40	05/01/18 11:07	5mL/5mL	5mL/5mL	1.00
A8D0907-23	Water	EPA 8260C	04/24/18 15:10	05/01/18 11:07	5mL/5mL	5mL/5mL	1.00
A8D0907-24	Water	EPA 8260C	04/26/18 15:15	05/01/18 11:07	5mL/5mL	5mL/5mL	1.00
A8D0907-27	Water	EPA 8260C	04/26/18 19:35	05/01/18 11:07	5mL/5mL	5mL/5mL	1.00
<b>Batch: 8050380</b>							
A8D0907-17RE1	Water	EPA 8260C	04/26/18 13:00	05/02/18 11:08	5mL/5mL	5mL/5mL	1.00

**Volatile Organic Compounds by EPA 8260C**

Prep: **EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 8041230</b>							
A8D0907-03	Water	EPA 8260C	04/25/18 09:00	04/30/18 10:27	5mL/5mL	5mL/5mL	1.00
<b>Batch: 8041255</b>							
A8D0907-14	Water	EPA 8260C	04/25/18 12:05	04/30/18 15:23	5mL/5mL	5mL/5mL	1.00
A8D0907-16	Water	EPA 8260C	04/26/18 11:05	04/30/18 15:23	5mL/5mL	5mL/5mL	1.00
<b>Batch: 8050336</b>							
A8D0907-26	Water	EPA 8260C	04/26/18 11:10	05/01/18 11:07	5mL/5mL	5mL/5mL	1.00

**Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Prep: **EPA 3510C (Fuels/Acid Ext.)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 8050343</b>							
A8D0907-27	Water	EPA 8270D (SIM)	04/26/18 19:35	05/01/18 12:36	1060mL/5mL	1000mL/2mL	2.36
A8D0907-27RE1	Water	EPA 8270D (SIM)	04/26/18 19:35	05/01/18 12:36	1060mL/5mL	1000mL/2mL	2.36
<b>Batch: 8050406</b>							
A8D0907-19	Water	EPA 8270D (SIM)	04/26/18 17:05	05/02/18 16:50	1070mL/5mL	1000mL/2mL	2.34
A8D0907-20	Water	EPA 8270D (SIM)	04/26/18 19:30	05/02/18 16:50	1060mL/5mL	1000mL/2mL	2.36
A8D0907-20RE1	Water	EPA 8270D (SIM)	04/26/18 19:30	05/02/18 16:50	1060mL/5mL	1000mL/2mL	2.36

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<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**SAMPLE PREPARATION INFORMATION**

**Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Prep: EPA 3510C (Fuels/Acid Ext.)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
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**Total Metals by EPA 200.8 (ICPMS)**

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 8050348</b>							
A8D0907-01	Water	EPA 200.8	04/24/18 17:05	05/01/18 10:29	45mL/50mL	45mL/50mL	1.00
A8D0907-06	Water	EPA 200.8	04/25/18 16:55	05/01/18 10:29	45mL/50mL	45mL/50mL	1.00
A8D0907-13	Water	EPA 200.8	04/25/18 10:50	05/01/18 10:29	45mL/50mL	45mL/50mL	1.00
A8D0907-20	Water	EPA 200.8	04/26/18 19:30	05/01/18 10:29	45mL/50mL	45mL/50mL	1.00
A8D0907-21	Water	EPA 200.8	04/25/18 16:05	05/01/18 10:29	45mL/50mL	45mL/50mL	1.00
A8D0907-27	Water	EPA 200.8	04/26/18 19:35	05/01/18 10:29	45mL/50mL	45mL/50mL	1.00



HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
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Project Manager: Craig Hultgren

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A8D0907 - 050818 0221

**QUALIFIER DEFINITIONS**

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

- E** Estimated Value. The result is above the calibration range of the instrument.
- E-05** Estimated Result. Initial Calibration Verification (ICV) failed high. No affect on non-detect results.
- F-11** The hydrocarbon pattern indicates possible weathered diesel, or a contribution from a related component.
- F-13** The chromatographic pattern does not resemble the fuel standard used for quantitation
- F-20** Result for Diesel is Estimated due to overlap from Gasoline Range Organics or other VOCs.
- M-02** Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.
- M-05** Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-22** Due to limited sample volume or hold time restraints, the NWTPh-Dx extract was used for the 8270 SIM PAH analysis. Therefore no PAH Surrogates and/or Batch QC results are available. Results are Estimated Values.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +20%. 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 8260C/8270D by +75%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by -3%. 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 8260C/8270D by -5%. 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 8260C/8270D 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 8260C, 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 8260C
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.



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**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

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.

**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 1/2 the Reporting Limit (RL).  
-For Blank hits falling between 1/2 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.

Apex Laboratories

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Lisa Domenighini, Client Services Manager





<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**REPORTING NOTES AND CONVENTIONS (Cont.):**

**Blanks (Cont.):**

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the blank 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

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**Apex Laboratories, LLC**

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503-718-2323  
**EPA ID: OR01039**

<b><u>HydroCon LLC</u></b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b><u>Coleman Wenatchee</u></b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0907 - 050818 0221</b>
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**LABORATORY ACCREDITATION INFORMATION**

**TNI Certification ID: OR100062 (Primary Accreditation) | EPA ID: OR01039**

All reported analytes 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	Cert?
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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.

Apex Laboratories

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Lisa Domenighini, Client Services Manager



HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Report ID:  
A8D0907 - 050818 0221

**CHAIN OF CUSTODY**

Lab # A8D0907 COC 1 of 3

PO#

Company: HydroCon Project Mgr: Craig Hultgren Project Name: Coleman Wenatchee Project # 2017-074  
Address: 314 W 15th Ave Suite 300 Vancouver WA 98660 Phone: (509) 573-9021 Fax: - Email: Craig.Hultgren@hydroconllc.com  
Sampled by: Chris Dostal

LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-CID	NWTPH-DX	NWTPH-GX	8260 VOCs Full List	8260 RBDM VOCs	8260 HVOCs	8260 BTEX VOCs	8270 SVOC	8270 SIM PAHs	8082 PCBs	600 TTO	R CRA Metals (8)	TCLP Metals (8)	Al, Sb, As, Ba, Be, Bi, Br, Cd, Cr, Cu, Fe, Hg, Mn, Ni, Pb, Se, Ag, Na, Ti, V, Zn	TOTAL DISS TCLP	1200-COLS	1200-Z
MW01S-W0418	4/24/18	14:05	PLU	5	X	X												Pb			
MW02L-W0418	4/25/18	14:00		4																	
MW03S-W0418	4/25/18	09:00		4			X														
MW04L-W0418	4/25/18	14:40		4																	
MW05S-W0418	4/26/18	13:10		4																	
MW06L-W0418	4/26/18	16:55		5																	
MW07S-W0418	4/25/18	15:20		4																	
MW08L-W0418	4/26/18	12:05		4																	
MW09L-W0418	4/26/18	12:45		4																	
MW10L-W0418	4/24/18	16:15		4																	

Normal Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle) 1 Day 2 Day 3 Day 4 DAY 5 DAY Other: \_\_\_\_\_

SPECIAL INSTRUCTIONS:

RECEIVED BY: \_\_\_\_\_ Date: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 RELINQUISHED BY: \_\_\_\_\_ Date: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Printed Name: Chris Dostal Time: 10:55 Printed Name: \_\_\_\_\_ Time: \_\_\_\_\_  
 Company: HydroCon Company: \_\_\_\_\_

Apex Laboratories

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*Chris Dostal*



HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Report ID:  
A8D0907 - 050818 0221

**CHAIN OF CUSTODY**

**APEX LABS**      Lab # A8D0907      COC # of 3

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Company: HydroCon      Project Mgr: Craig Hultgren      Project Name: Coleman Wenatchee      Project # 2017-074  
Address: 314 W 15th Ave Suite 300 Vancouver, WA 98660      Phone: (509) 980-8102      Email: craig.hultgren@hydroconllc.com  
Sampled by: Chris Dossel

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	ANALYSIS REQUEST		
					RCRA Metals (8)	TCLP Metals (8)	1200-Z
MW11 - W0418	4/25/18	0530	1				
MW12 - W0418	4/25/18	0855	1				
MW13 - W0418	4/25/18	1050	1				
MW14 - W0418	4/25/18	1205	1				
MW15 - W0418	4/26/18	0920	1				
MW17 - W0418	4/26/18	1105	1				
MW19 - W0418	4/26/18	1300	1				
MW20 - W0418	4/26/18	1505	1				
MW21 - W0418	4/26/18	1705	1				
MW22 - W0418	4/26/18	1930	1				

Site Location: OR (WA)      Other: \_\_\_\_\_

RELINQUISHED BY: Chris Dossel      Date: 4/26/18      Signature: [Signature]      Date: \_\_\_\_\_      Signature: \_\_\_\_\_  
Printed Name: Chris Dossel      Time: 10:55      Printed Name: \_\_\_\_\_      Time: \_\_\_\_\_      Printed Name: \_\_\_\_\_  
Company: HydroCon      Company: \_\_\_\_\_

RECEIVED BY: \_\_\_\_\_      Date: \_\_\_\_\_      Signature: \_\_\_\_\_      Date: \_\_\_\_\_  
Printed Name: \_\_\_\_\_      Time: \_\_\_\_\_      Printed Name: \_\_\_\_\_      Time: \_\_\_\_\_  
Company: \_\_\_\_\_      Company: \_\_\_\_\_

SPECIAL INSTRUCTIONS: \_\_\_\_\_

TAT Requested (circle): 1 Day      2 Day      3 Day      4 DAY      5 DAY      Other: \_\_\_\_\_

SAMPLES ARE HELD FOR 30 DAYS

Normal Turn Around Time (TAT) = 10 Business Days      YES      NO

*Chris Dossel*



HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Report ID:  
A8D0907 - 050818 0221

**CHAIN OF CUSTODY**

**APEX LABS** 12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-9333

Company: HydroCon Project Mgr: Craig Hultgren PO# \_\_\_\_\_

Address: 314 W 15th Ave Suite 300 Vancouver, WA 98660 Phone: (360) 472-7902 Fax: \_\_\_\_\_ Project Name: Coleman Oil Wenatchee Project # 2017-074

Sampled by: Chris Duschel Email: Craig.Hultgren@apexlabs.net

Site Location: OR (WA) Other: \_\_\_\_\_

LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWPH-HClD	NWPH-DX	NWPH-GX	8260 VOCs Full List	8260 RBDM VOCs	8260 HVOCs	8260 BTEX VOCs	8260 SVOC	8270 SIM PAHs	8082 PCBs	600 TTO	R CRA Metals (8)	TCLP Metals (8)	AL, Sb, As, Ba, Be, Cd, Cr, Co, Cu, Fe, Ni, Pb, Hg, Mg, Mn, Mo, Ni, K, Ag, Na, Ti, V, Zn	TOTAL DISS TCLP	1200-COLS	1200-Z	
MW123 - W0418	4/20/18	15:05	130	5	X	X																
51101 - W0418	4/24/18	15:10		4							X											
BH02 - W0418	4/25/18	15:10		4							X											
BH03 - W0418	4/25/18	15:15		4							X											
RW01 - W0418	4/24/18	14:40		4							X											
MW102 - W0418	4/24/18	11:0		4							X											
MW103 - W0418	4/24/18	15:35		5							X											
Blowk - 042418	4/24/18	15:00		4							X											

Normal Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day 2 Day 3 Day 4 DAY 5 DAY Other: \_\_\_\_\_

SPECIAL INSTRUCTIONS: \_\_\_\_\_

RECEIVED BY: \_\_\_\_\_ RECEIVED BY: \_\_\_\_\_

Signature: Chris Duschel Date: 4/26/18 Signature: Wald Date: 4/26/18

Printed Name: Chris Duschel Time: 10:55 Printed Name: Kenneth Time: 0:55

Company: HydroCon Company: Apex

*Chris Duschel*



HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Report ID:  
A8D0907 - 050818 0221

APEX LABS COOLER RECEIPT FORM

Client: HydroCon Element WO#: A8 D0907

Project/Project #: Coleman Oil Wenatchee / 2017-074

Delivery info:

Date/Time Received: 4/28/18 @ 10:55 By: MS

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

Cooler Inspection Inspected by: MS : 4/28/18 @

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 (deg. C)	<u>2.3</u>	<u>2.1</u>	<u>5.4</u>				

Received on Ice? (Y/N) (Y)

Temp. Blanks? (Y/N) (N)

Ice Type: (Gel/Real/Other) (Real)

Condition: good

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

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

Samples Inspection: Inspected by: MS : 4/30/18 @ 1120

All Samples Intact? Yes  No  Comments:

Bottle Labels/COCs agree? Yes  No  Comments:

Containers/Volumes Received Appropriate for Analysis? Yes  No  Comments:

Do VOA Vials have Visible Headspace? Yes  No  NA

Comments:

Water Samples: pH Checked and Appropriate (except VOAs): Yes  No  NA

Comments:

Additional Information:

Labeled by: JS Witness: MS Cooler Inspected by: MS See Project Contact Form: Y



Apex Laboratories, LLC

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323  
EPA ID: OR01039

Tuesday, May 8, 2018

Craig Hultgren  
HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

RE: A8D0914 - 2017-074

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 A8D0914, which was received by the laboratory on 4/28/2018 at 10:55:00AM.

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

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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.

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Apex Laboratories

A handwritten signature in black ink that reads "Lisa A. Domenighini".

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Lisa Domenighini, Client Services Manager



**Apex Laboratories, LLC**

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323  
EPA ID: OR01039

**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0914 - 050818 0317**

**ANALYTICAL REPORT FOR SAMPLES**

**SAMPLE INFORMATION**

<b>Client Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
SS01-13.97cm	A8D0914-01	Soil	04/23/18 10:25	04/28/18 10:55
SS02-11.75cm	A8D0914-02	Soil	04/23/18 09:45	04/28/18 10:55
SS03-13.97cm	A8D0914-03	Soil	04/23/18 08:40	04/28/18 10:55
SS04-11.82cm	A8D0914-04	Soil	04/23/18 12:15	04/28/18 10:55
SS05-13.97cm	A8D0914-05	Soil	04/23/18 12:45	04/28/18 10:55

Apex Laboratories

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Lisa Domenighini, Client Services Manager





**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0914 - 050818 0317**

**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
<b>SS01-13.97cm (A8D0914-01)</b>		<b>Matrix: Soil</b>		<b>Batch: 8050371</b>				
Diesel	848	---	52.5	mg/kg dry	1	05/02/18	NWTPH-Dx	F-13
Oil	392	---	105	mg/kg dry	1	05/02/18	NWTPH-Dx	F-03, Q-42
Surrogate: o-Terphenyl (Surr)		Recovery: 99 %	Limits: 50-150 %		1	05/02/18	NWTPH-Dx	
<b>SS02-11.75cm (A8D0914-02)</b>		<b>Matrix: Soil</b>		<b>Batch: 8050371</b>				
Diesel	473	---	36.7	mg/kg dry	1	05/02/18	NWTPH-Dx	F-13
Oil	175	---	73.4	mg/kg dry	1	05/02/18	NWTPH-Dx	F-03
Surrogate: o-Terphenyl (Surr)		Recovery: 98 %	Limits: 50-150 %		1	05/02/18	NWTPH-Dx	
<b>SS03-13.97cm (A8D0914-03)</b>		<b>Matrix: Soil</b>		<b>Batch: 8050371</b>				
Diesel	207	---	39.2	mg/kg dry	1	05/02/18	NWTPH-Dx	F-13
Oil	147	---	78.4	mg/kg dry	1	05/02/18	NWTPH-Dx	F-03
Surrogate: o-Terphenyl (Surr)		Recovery: 101 %	Limits: 50-150 %		1	05/02/18	NWTPH-Dx	
<b>SS04-11.82cm (A8D0914-04)</b>		<b>Matrix: Soil</b>		<b>Batch: 8050371</b>				
Diesel	ND	---	45.1	mg/kg dry	1	05/02/18	NWTPH-Dx	
Oil	90.6	---	90.3	mg/kg dry	1	05/02/18	NWTPH-Dx	F-17
Surrogate: o-Terphenyl (Surr)		Recovery: 92 %	Limits: 50-150 %		1	05/02/18	NWTPH-Dx	
<b>SS05-13.97cm (A8D0914-05)</b>		<b>Matrix: Soil</b>		<b>Batch: 8050371</b>				
Diesel	ND	---	38.1	mg/kg dry	1	05/02/18	NWTPH-Dx	
Oil	87.2	---	76.2	mg/kg dry	1	05/02/18	NWTPH-Dx	F-17
Surrogate: o-Terphenyl (Surr)		Recovery: 92 %	Limits: 50-150 %		1	05/02/18	NWTPH-Dx	

Apex Laboratories

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Lisa Domenighini, Client Services Manager



**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0914 - 050818 0317**

**ANALYTICAL SAMPLE RESULTS**

**Diesel and/or Oil Hydrocarbons by NWTPH-Dx with Acid/Silica Gel Cleanup**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>SS01-13.97cm (A8D0914-01)</b>		<b>Matrix: Soil</b>		<b>Batch: 8050423</b>				
Diesel	947	---	52.5	mg/kg dry	1	05/03/18	NWTPH-Dx/SG	F-13
Oil	ND	---	105	mg/kg dry	1	05/03/18	NWTPH-Dx/SG	Q-37
Surrogate: o-Terphenyl (Surr)		Recovery: 107 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx/SG
<b>SS02-11.75cm (A8D0914-02)</b>		<b>Matrix: Soil</b>		<b>Batch: 8050423</b>				
Diesel	526	---	36.7	mg/kg dry	1	05/03/18	NWTPH-Dx/SG	F-13
Oil	ND	---	73.4	mg/kg dry	1	05/03/18	NWTPH-Dx/SG	
Surrogate: o-Terphenyl (Surr)		Recovery: 103 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx/SG
<b>SS03-13.97cm (A8D0914-03)</b>		<b>Matrix: Soil</b>		<b>Batch: 8050423</b>				
Diesel	238	---	39.2	mg/kg dry	1	05/03/18	NWTPH-Dx/SG	F-13
Oil	ND	---	78.4	mg/kg dry	1	05/03/18	NWTPH-Dx/SG	
Surrogate: o-Terphenyl (Surr)		Recovery: 106 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx/SG
<b>SS04-11.82cm (A8D0914-04)</b>		<b>Matrix: Soil</b>		<b>Batch: 8050423</b>				
Diesel	ND	---	45.1	mg/kg dry	1	05/03/18	NWTPH-Dx/SG	
Oil	ND	---	90.3	mg/kg dry	1	05/03/18	NWTPH-Dx/SG	
Surrogate: o-Terphenyl (Surr)		Recovery: 100 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx/SG
<b>SS05-13.97cm (A8D0914-05)</b>		<b>Matrix: Soil</b>		<b>Batch: 8050423</b>				
Diesel	ND	---	38.1	mg/kg dry	1	05/03/18	NWTPH-Dx/SG	
Oil	ND	---	76.2	mg/kg dry	1	05/03/18	NWTPH-Dx/SG	
Surrogate: o-Terphenyl (Surr)		Recovery: 101 %		Limits: 50-150 %		1	05/03/18	NWTPH-Dx/SG

Apex Laboratories

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Lisa Domenighini, Client Services Manager



**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0914 - 050818 0317**

**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
<b>SS01-13.97cm (A8D0914-01RE1)</b>		<b>Matrix: Soil</b>		<b>Batch: 8050338</b>				
Gasoline Range Organics	ND	---	25.2	mg/kg dry	50	05/01/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 114 %	Limits: 50-150 %		1	05/01/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		104 %	50-150 %		1	05/01/18	NWTPH-Gx (MS)	
<b>SS02-11.75cm (A8D0914-02)</b>		<b>Matrix: Soil</b>		<b>Batch: 8041236</b>				
Gasoline Range Organics	ND	---	13.7	mg/kg dry	50	04/30/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 111 %	Limits: 50-150 %		1	04/30/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		101 %	50-150 %		1	04/30/18	NWTPH-Gx (MS)	
<b>SS03-13.97cm (A8D0914-03)</b>		<b>Matrix: Soil</b>		<b>Batch: 8041236</b>				
Gasoline Range Organics	ND	---	16.2	mg/kg dry	50	04/30/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 110 %	Limits: 50-150 %		1	04/30/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		101 %	50-150 %		1	04/30/18	NWTPH-Gx (MS)	
<b>SS04-11.82cm (A8D0914-04)</b>		<b>Matrix: Soil</b>		<b>Batch: 8041236</b>				
Gasoline Range Organics	ND	---	16.6	mg/kg dry	50	04/30/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 110 %	Limits: 50-150 %		1	04/30/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		100 %	50-150 %		1	04/30/18	NWTPH-Gx (MS)	
<b>SS05-13.97cm (A8D0914-05)</b>		<b>Matrix: Soil</b>		<b>Batch: 8041236</b>				
Gasoline Range Organics	ND	---	13.8	mg/kg dry	50	04/30/18	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 112 %	Limits: 50-150 %		1	04/30/18	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)		102 %	50-150 %		1	04/30/18	NWTPH-Gx (MS)	

Apex Laboratories

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0914 - 050818 0317</b>
---	--	--

**ANALYTICAL SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>SS01-13.97cm (A8D0914-01)</b>		<b>Matrix: Soil</b>		<b>Batch: 8041236</b>				
Benzene	ND	---	0.0503	mg/kg dry	50	04/30/18	5035A/8260C	
<b>Toluene</b>	<b>0.395</b>	---	0.252	mg/kg dry	50	04/30/18	5035A/8260C	
Ethylbenzene	ND	---	0.126	mg/kg dry	50	04/30/18	5035A/8260C	
Xylenes, total	ND	---	0.378	mg/kg dry	50	04/30/18	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 105 %	Limits: 80-120 %		1	04/30/18	5035A/8260C	
Toluene-d8 (Surr)		100 %	80-120 %		1	04/30/18	5035A/8260C	
4-Bromofluorobenzene (Surr)		97 %	80-120 %		1	04/30/18	5035A/8260C	

<b>SS02-11.75cm (A8D0914-02)</b>		<b>Matrix: Soil</b>		<b>Batch: 8041236</b>				
Benzene	ND	---	0.0274	mg/kg dry	50	04/30/18	5035A/8260C	
<b>Toluene</b>	<b>0.182</b>	---	0.137	mg/kg dry	50	04/30/18	5035A/8260C	
Ethylbenzene	ND	---	0.0684	mg/kg dry	50	04/30/18	5035A/8260C	
Xylenes, total	ND	---	0.205	mg/kg dry	50	04/30/18	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 106 %	Limits: 80-120 %		1	04/30/18	5035A/8260C	
Toluene-d8 (Surr)		100 %	80-120 %		1	04/30/18	5035A/8260C	
4-Bromofluorobenzene (Surr)		98 %	80-120 %		1	04/30/18	5035A/8260C	

<b>SS03-13.97cm (A8D0914-03)</b>		<b>Matrix: Soil</b>		<b>Batch: 8041236</b>				
Benzene	ND	---	0.0325	mg/kg dry	50	04/30/18	5035A/8260C	
Toluene	ND	---	0.162	mg/kg dry	50	04/30/18	5035A/8260C	
Ethylbenzene	ND	---	0.0811	mg/kg dry	50	04/30/18	5035A/8260C	
Xylenes, total	ND	---	0.243	mg/kg dry	50	04/30/18	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 106 %	Limits: 80-120 %		1	04/30/18	5035A/8260C	
Toluene-d8 (Surr)		100 %	80-120 %		1	04/30/18	5035A/8260C	
4-Bromofluorobenzene (Surr)		99 %	80-120 %		1	04/30/18	5035A/8260C	

<b>SS04-11.82cm (A8D0914-04)</b>		<b>Matrix: Soil</b>		<b>Batch: 8041236</b>				
Benzene	ND	---	0.0333	mg/kg dry	50	04/30/18	5035A/8260C	
Toluene	ND	---	0.166	mg/kg dry	50	04/30/18	5035A/8260C	
Ethylbenzene	ND	---	0.0832	mg/kg dry	50	04/30/18	5035A/8260C	

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Lisa Domenighini, Client Services Manager



**HydroCon LLC**  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0914 - 050818 0317**

**ANALYTICAL SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>SS04-11.82cm (A8D0914-04)</b>		<b>Matrix: Soil</b>		<b>Batch: 8041236</b>				
Xylenes, total	ND	---	0.250	mg/kg dry	50	04/30/18	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 106 %	Limits: 80-120 %		1	04/30/18	5035A/8260C	
Toluene-d8 (Surr)		100 %	80-120 %		1	04/30/18	5035A/8260C	
4-Bromofluorobenzene (Surr)		96 %	80-120 %		1	04/30/18	5035A/8260C	
<b>SS05-13.97cm (A8D0914-05)</b>		<b>Matrix: Soil</b>		<b>Batch: 8041236</b>				
Benzene	ND	---	0.0276	mg/kg dry	50	04/30/18	5035A/8260C	
Toluene	ND	---	0.138	mg/kg dry	50	04/30/18	5035A/8260C	
Ethylbenzene	ND	---	0.0690	mg/kg dry	50	04/30/18	5035A/8260C	
Xylenes, total	ND	---	0.207	mg/kg dry	50	04/30/18	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 107 %	Limits: 80-120 %		1	04/30/18	5035A/8260C	
Toluene-d8 (Surr)		100 %	80-120 %		1	04/30/18	5035A/8260C	
4-Bromofluorobenzene (Surr)		97 %	80-120 %		1	04/30/18	5035A/8260C	



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**ANALYTICAL SAMPLE RESULTS**

**Percent Dry Weight**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>SS01-13.97cm (A8D0914-01)</b>		<b>Matrix: Soil</b>		<b>Batch: 8050341</b>				
% Solids	35.3	---	1.00	% by Weight	1	05/02/18	EPA 8000C	
<b>SS02-11.75cm (A8D0914-02)</b>		<b>Matrix: Soil</b>		<b>Batch: 8050341</b>				
% Solids	52.3	---	1.00	% by Weight	1	05/02/18	EPA 8000C	
<b>SS03-13.97cm (A8D0914-03)</b>		<b>Matrix: Soil</b>		<b>Batch: 8050341</b>				
% Solids	50.3	---	1.00	% by Weight	1	05/02/18	EPA 8000C	
<b>SS04-11.82cm (A8D0914-04)</b>		<b>Matrix: Soil</b>		<b>Batch: 8050341</b>				
% Solids	44.1	---	1.00	% by Weight	1	05/02/18	EPA 8000C	
<b>SS05-13.97cm (A8D0914-05)</b>		<b>Matrix: Soil</b>		<b>Batch: 8050330</b>				
% Solids	51.8	---	1.00	% by Weight	1	05/01/18	EPA 8000C	



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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
<b>Batch 8050371 - EPA 3546 (Fuels)</b>						<b>Soil</b>						
<b>Blank (8050371-BLK1)</b>		Prepared: 05/01/18 18:13 Analyzed: 05/01/18 23:56										
<u>NWTPH-Dx</u>												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 91 % Limits: 50-150 % Dilution: 1x</i>										
<b>LCS (8050371-BS1)</b>		Prepared: 05/01/18 18:13 Analyzed: 05/02/18 00:19										
<u>NWTPH-Dx</u>												
Diesel	116	---	25.0	mg/kg wet	1	125	---	93	76-115%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 99 % Limits: 50-150 % Dilution: 1x</i>										
<b>Duplicate (8050371-DUP1)</b>		Prepared: 05/01/18 18:13 Analyzed: 05/02/18 01:04										
<u>QC Source Sample: SS01-13.97cm (A8D0914-01)</u>												
<u>NWTPH-Dx</u>												
Diesel	<b>1020</b>	---	52.6	mg/kg dry	1	---	<b>848</b>	---	---	19	30%	F-13
Oil	<b>655</b>	---	105	mg/kg dry	1	---	<b>392</b>	---	---	<b>50</b>	<b>30%</b>	F-03, Q-04
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 99 % Limits: 50-150 % Dilution: 1x</i>										



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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Diesel and/or Oil Hydrocarbons by NWTPH-Dx with Acid/Silica Gel Cleanup**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8050423 - EPA 3546 w/SG+Acid (NWTPH)</b>						<b>Soil</b>						
<b>Blank (8050423-BLK1)</b>		Prepared: 05/01/18 18:13 Analyzed: 05/03/18 20:53										
<u>NWTPH-Dx/SG</u>												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 103 % Limits: 50-150 % Dilution: 1x</i>										
<b>LCS (8050423-BS1)</b>		Prepared: 05/01/18 18:13 Analyzed: 05/03/18 21:16										
<u>NWTPH-Dx/SG</u>												
Diesel	124	---	25.0	mg/kg wet	1	125	---	100	76-115%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 110 % Limits: 50-150 % Dilution: 1x</i>										
<b>Duplicate (8050423-DUP1)</b>		Prepared: 05/01/18 18:13 Analyzed: 05/03/18 22:02										
<u>QC Source Sample: SS01-13.97cm (A8D0914-01)</u>												
<u>NWTPH-Dx/SG</u>												
Diesel	<b>1250</b>	---	52.6	mg/kg dry	1	---	<b>947</b>	---	---	27	30%	F-13
Oil	<b>120</b>	---	105	mg/kg dry	1	---	<b>89.1</b>	---	---	30	30%	F-03
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 108 % Limits: 50-150 % Dilution: 1x</i>										





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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	% REC Limits	RPD RPD	RPD Limit	Notes
<b>Batch 8041236 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8041236-BLK1)</b>		Prepared: 04/30/18 09:30 Analyzed: 04/30/18 11:46										
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 104 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		100 %		50-150 %		"						
<b>LCS (8041236-BS2)</b>		Prepared: 04/30/18 09:30 Analyzed: 04/30/18 11:19										
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	29.7	---	5.00	mg/kg wet	50	25.0	---	119	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 105 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		102 %		50-150 %		"						
<b>Duplicate (8041236-DUP1)</b>		Prepared: 04/26/18 17:00 Analyzed: 04/30/18 14:53										
<b>QC Source Sample: Non-SDG (A8D0902-01)</b>												
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	<b>509</b>	---	67.9	mg/kg dry	500	---	<b>547</b>	---	---	7	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 118 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		102 %		50-150 %		"						
<b>Duplicate (8041236-DUP2)</b>		Prepared: 04/30/18 15:00 Analyzed: 04/30/18 21:45										
<b>QC Source Sample: Non-SDG (A8D0927-06)</b>												
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	ND	---	6.86	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 109 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		103 %		50-150 %		"						



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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
<b>Batch 8050338 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8050338-BLK1)</b>		Prepared: 05/01/18 09:00 Analyzed: 05/01/18 11:20										
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 105 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		104 %		50-150 %		"						
<b>LCS (8050338-BS2)</b>		Prepared: 05/01/18 09:00 Analyzed: 05/01/18 10:54										
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	28.4	---	5.00	mg/kg wet	50	25.0	---	114	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 105 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		105 %		50-150 %		"						
<b>Duplicate (8050338-DUP1)</b>		Prepared: 04/25/18 09:15 Analyzed: 05/01/18 13:34										
<b>QC Source Sample: Non-SDG (A8D0863-01)</b>												
<b>NWTPH-Gx (MS)</b>												
Gasoline Range Organics	<b>278</b>	---	6.27	mg/kg dry	50	---	<b>301</b>	---	---	8	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 201 %		Limits: 50-150 %		Dilution: 1x						<b>S-03</b>
1,4-Difluorobenzene (Sur)		104 %		50-150 %		"						



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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041236 - EPA 5035A</b>						<b>Soil</b>						
<b>Blank (8041236-BLK1)</b>			Prepared: 04/30/18 09:30 Analyzed: 04/30/18 11:46									
<u>5035A/8260C</u>												
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	---
Toluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	---
Xylenes, total	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	---
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		102 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		80-120 %		"						
<b>LCS (8041236-BS1)</b>			Prepared: 04/30/18 09:30 Analyzed: 04/30/18 10:48									
<u>5035A/8260C</u>												
Benzene	1.11	---	0.0100	mg/kg wet	50	1.00	---	111	80-120%	---	---	---
Toluene	1.08	---	0.0500	mg/kg wet	50	1.00	---	108	80-120%	---	---	---
Ethylbenzene	1.04	---	0.0250	mg/kg wet	50	1.00	---	104	80-120%	---	---	---
Xylenes, total	3.13	---	0.0750	mg/kg wet	50	3.00	---	104	80-120%	---	---	---
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 104 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		102 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		80-120 %		"						
<b>Duplicate (8041236-DUP1)</b>			Prepared: 04/26/18 17:00 Analyzed: 04/30/18 14:53									
<b>QC Source Sample: Non-SDG (A8D0902-01)</b>												
<u>5035A/8260C</u>												
Benzene	ND	---	0.136	mg/kg dry	500	---	ND	---	---	---	30%	---
Toluene	ND	---	0.679	mg/kg dry	500	---	ND	---	---	---	30%	---
Ethylbenzene	ND	---	0.339	mg/kg dry	500	---	<b>0.190</b>	---	---	***	30%	---
Xylenes, total	<b>1.08</b>	---	1.02	mg/kg dry	500	---	<b>1.08</b>	---	---	0	30%	---
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 106 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		80-120 %		"						
<b>Duplicate (8041236-DUP2)</b>			Prepared: 04/30/18 15:00 Analyzed: 04/30/18 21:45									
<b>QC Source Sample: Non-SDG (A8D0927-06)</b>												
<u>5035A/8260C</u>												

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Lisa Domenighini, Client Services Manager



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**QUALITY CONTROL (QC) SAMPLE RESULTS**

**BTEX Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
<b>Batch 8041236 - EPA 5035A</b>						<b>Soil</b>						
<b>Duplicate (8041236-DUP2)</b>			Prepared: 04/30/18 15:00 Analyzed: 04/30/18 21:45									
<b>QC Source Sample: Non-SDG (A8D0927-06)</b>												
Benzene	ND	---	0.0137	mg/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	0.0686	mg/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.0343	mg/kg dry	50	---	ND	---	---	---	30%	
Xylenes, total	ND	---	0.103	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 108 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>80-120 %</i>		<i>"</i>						

<b>Matrix Spike (8041236-MS1)</b>						Prepared: 04/23/18 12:45 Analyzed: 04/30/18 19:04						
<b>QC Source Sample: SS05-13.97cm (A8D0914-05)</b>												
<b>5035A/8260C</b>												
Benzene	3.17	---	0.0276	mg/kg dry	50	2.76	ND	115	77-121%	---	---	
Toluene	2.91	---	0.138	mg/kg dry	50	2.76	ND	105	77-121%	---	---	
Ethylbenzene	2.78	---	0.0690	mg/kg dry	50	2.76	ND	101	76-122%	---	---	
Xylenes, total	8.25	---	0.207	mg/kg dry	50	8.28	ND	100	78-124%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						



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**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
<b>Batch 8050330 - Total Solids (Dry Weight)</b>						<b>Soil</b>						
<b>Duplicate (8050330-DUP1)</b>						Prepared: 05/01/18 05:51 Analyzed: 05/01/18 10:06						
<u>QC Source Sample: Non-SDG (A8D0780-22)</u>												
<u>EPA 8000C</u>												
% Solids	75.6	---	1.00	% by Weight	1	---	76.4	---	---	1	10%	
<b>Batch 8050341 - Total Solids (Dry Weight)</b>						<b>Soil</b>						
<b>Duplicate (8050341-DUP1)</b>						Prepared: 05/01/18 09:28 Analyzed: 05/02/18 08:28						
<u>QC Source Sample: Non-SDG (A8D0780-01)</u>												
<u>EPA 8000C</u>												
% Solids	70.1	---	1.00	% by Weight	1	---	70.2	---	---	0.2	10%	
<b>Duplicate (8050341-DUP2)</b>						Prepared: 05/01/18 09:28 Analyzed: 05/02/18 08:28						
<u>QC Source Sample: Non-SDG (A8D0863-01)</u>												
<u>EPA 8000C</u>												
% Solids	77.9	---	1.00	% by Weight	1	---	78.4	---	---	0.7	10%	
<b>Duplicate (8050341-DUP3)</b>						Prepared: 05/01/18 09:28 Analyzed: 05/02/18 08:28						
<u>QC Source Sample: Non-SDG (A8D0916-05)</u>												
<u>EPA 8000C</u>												
% Solids	93.7	---	1.00	% by Weight	1	---	93.8	---	---	0.09	10%	
<b>Duplicate (8050341-DUP4)</b>						Prepared: 05/01/18 09:28 Analyzed: 05/02/18 08:28						
<u>QC Source Sample: Non-SDG (A8D0935-04)</u>												
<u>EPA 8000C</u>												
% Solids	83.6	---	1.00	% by Weight	1	---	83.3	---	---	0.3	10%	
<b>Duplicate (8050341-DUP5)</b>						Prepared: 05/01/18 17:19 Analyzed: 05/02/18 08:28						
<u>QC Source Sample: Non-SDG (A8E0030-01)</u>												
<u>EPA 8000C</u>												
% Solids	85.9	---	1.00	% by Weight	1	---	85.2	---	---	0.8	10%	

Apex Laboratories

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Lisa Domenighini, Client Services Manager



**Apex Laboratories, LLC**

12232 S.W. Garden Place  
 Tigard, OR 97223  
 503-718-2323  
EPA ID: OR01039

<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0914 - 050818 0317</b>
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**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
<b>Batch 8050341 - Total Solids (Dry Weight)</b>						<b>Soil</b>						
<b>Duplicate (8050341-DUP6)</b>		Prepared: 05/01/18 18:59 Analyzed: 05/02/18 08:28										
<b>QC Source Sample: Non-SDG (A8E0038-02)</b>												
<b>EPA 8000C</b>												
% Solids	75.2	---	1.00	% by Weight	1	---	75.1	---	---	0.05	10%	

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HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Report ID:  
A8D0914 - 050818 0317

**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
<b>Batch: 8050371</b>							
A8D0914-01	Soil	NWTPH-Dx	04/23/18 10:25	05/01/18 18:13	10.79g/5mL	10g/5mL	0.93
A8D0914-02	Soil	NWTPH-Dx	04/23/18 09:45	05/01/18 18:13	10.41g/5mL	10g/5mL	0.96
A8D0914-03	Soil	NWTPH-Dx	04/23/18 08:40	05/01/18 18:13	10.14g/5mL	10g/5mL	0.99
A8D0914-04	Soil	NWTPH-Dx	04/23/18 12:15	05/01/18 18:13	10.05g/5mL	10g/5mL	1.00
A8D0914-05	Soil	NWTPH-Dx	04/23/18 12:45	05/01/18 18:13	10.13g/5mL	10g/5mL	0.99

**Diesel and/or Oil Hydrocarbons by NWTPH-Dx with Acid/Silica Gel Cleanup**

Prep: EPA 3546 w/SG+Acid (NWTPH)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 8050423</b>							
A8D0914-01	Soil	NWTPH-Dx/SG	04/23/18 10:25	05/01/18 18:13	10.79g/5mL	10g/5mL	0.93
A8D0914-02	Soil	NWTPH-Dx/SG	04/23/18 09:45	05/01/18 18:13	10.41g/5mL	10g/5mL	0.96
A8D0914-03	Soil	NWTPH-Dx/SG	04/23/18 08:40	05/01/18 18:13	10.14g/5mL	10g/5mL	0.99
A8D0914-04	Soil	NWTPH-Dx/SG	04/23/18 12:15	05/01/18 18:13	10.05g/5mL	10g/5mL	1.00
A8D0914-05	Soil	NWTPH-Dx/SG	04/23/18 12:45	05/01/18 18:13	10.13g/5mL	10g/5mL	0.99

**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
<b>Batch: 8041236</b>							
A8D0914-02	Soil	NWTPH-Gx (MS)	04/23/18 09:45	04/23/18 09:45	5.23g/5mL	5g/5mL	0.96
A8D0914-03	Soil	NWTPH-Gx (MS)	04/23/18 08:40	04/23/18 08:40	4.4g/5mL	5g/5mL	1.14
A8D0914-04	Soil	NWTPH-Gx (MS)	04/23/18 12:15	04/23/18 12:15	5.5g/5mL	5g/5mL	0.91
A8D0914-05	Soil	NWTPH-Gx (MS)	04/23/18 12:45	04/23/18 12:45	5.27g/5mL	5g/5mL	0.95
<b>Batch: 8050338</b>							
A8D0914-01RE1	Soil	NWTPH-Gx (MS)	04/23/18 10:25	04/23/18 10:25	4.43g/5mL	5g/5mL	1.13

**BTEX Compounds by EPA 8260C**

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Lisa Domenighini, Client Services Manager



<b>HydroCon LLC</b> 314 W 15th Street Suite 300 Vancouver, WA 98660	Project: <b>Coleman Wenatchee</b> Project Number: <b>2017-074</b> Project Manager: <b>Craig Hultgren</b>	Report ID: <b>A8D0914 - 050818 0317</b>
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**SAMPLE PREPARATION INFORMATION**

**BTEX Compounds by EPA 8260C**

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 8041236</u>							
A8D0914-01	Soil	5035A/8260C	04/23/18 10:25	04/23/18 10:25	4.43g/5mL	5g/5mL	1.13
A8D0914-02	Soil	5035A/8260C	04/23/18 09:45	04/23/18 09:45	5.23g/5mL	5g/5mL	0.96
A8D0914-03	Soil	5035A/8260C	04/23/18 08:40	04/23/18 08:40	4.4g/5mL	5g/5mL	1.14
A8D0914-04	Soil	5035A/8260C	04/23/18 12:15	04/23/18 12:15	5.5g/5mL	5g/5mL	0.91
A8D0914-05	Soil	5035A/8260C	04/23/18 12:45	04/23/18 12:45	5.27g/5mL	5g/5mL	0.95

**Percent Dry Weight**

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 8050330</u>							
A8D0914-05	Soil	EPA 8000C	04/23/18 12:45	05/01/18 05:51	1N/A/1N/A	1N/A/1N/A	NA
<u>Batch: 8050341</u>							
A8D0914-01	Soil	EPA 8000C	04/23/18 10:25	05/01/18 09:28	1N/A/1N/A	1N/A/1N/A	NA
A8D0914-02	Soil	EPA 8000C	04/23/18 09:45	05/01/18 09:28	1N/A/1N/A	1N/A/1N/A	NA
A8D0914-03	Soil	EPA 8000C	04/23/18 08:40	05/01/18 09:28	1N/A/1N/A	1N/A/1N/A	NA
A8D0914-04	Soil	EPA 8000C	04/23/18 12:15	05/01/18 09:28	1N/A/1N/A	1N/A/1N/A	NA





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Vancouver, WA 98660

Project: **Coleman Wenatchee**  
Project Number: **2017-074**  
Project Manager: **Craig Hultgren**

Report ID:  
**A8D0914 - 050818 0317**

## QUALIFIER DEFINITIONS

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

- 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.
- F-13** The chromatographic pattern does not resemble the fuel standard used for quantitation
- F-17** No fuel pattern detected. The Diesel result represents carbon range C12 to C24, and the Oil result represents >C24 to C40.
- Q-04** Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-37** Sample is non-homogenous. Sample results are less than MRL and duplicate results have hits greater than the MRL. See Duplicate results.
- 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.)
- S-03** Reextraction and analysis, or analysis of laboratory duplicate, confirms surrogate failure due to sample matrix effect.

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**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

**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.

**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 1/2 the Reporting Limit (RL).  
-For Blank hits falling between 1/2 the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.



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**REPORTING NOTES AND CONVENTIONS (Cont.):**

**Blanks (Cont.):**

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the blank 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.

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503-718-2323  
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**LABORATORY ACCREDITATION INFORMATION**

**TNI Certification ID: OR100062 (Primary Accreditation) | EPA ID: OR01039**

All reported analytes 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	Cert?
--------	----------	--------	---------	--------	-------

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.

Apex Laboratories

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HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Report ID:  
A8D0914 - 050818 0317

**CHAIN OF CUSTODY**

**APEX LABS**      12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Company: HydroCon      Project Mgr: Craig Hultgren      Project Name: Coleman Wenatchee      Project # 2017-074  
 Address: 314 W 15th Ave Suite 300 Vancouver WA 98660      Phone: 360448-2402      Fax:      Email: craig.hultgren@hydroconllc.com  
 Lab # A8D0914      PO#      coc 1 of 1

Sampled by: Chris Duschel

Site Location: OR (WA)      Other: \_\_\_\_\_

LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTRH-CID	NWTRH-DX	NWTRH-GX	8260 VOCs Full List	8260 RBDM VOCs	8260 HFOCs	8260 BTEX VOCs	8270 SVOC	8270 SIM PAHs	8082 PCBs	600 TTO	RCCA Metals (8)	TCLP Metals (8)	Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Fe, Mn, Ni, R, Se, Ag, Na, Ti, V, Zn	1200- Z	1200- COLS	1200- Z	
SS01-10.9 Fern	11/23/18	10:45	soil	3		X	X				X											
SS02-11.75 Fern		09:45																				
SS03-13.9 Fern		08:40																				
SS04-11.82 Fern		12:15																				
SS05-13.97 Fern		12:45																				

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

Normal Turn Around Time (TAT) = 10 Business Days      YES      NO

TAT Requested (circle):      1 Day      2 Day      3 Day      Other: \_\_\_\_\_

4 DAY      5 DAY

RECEIVED BY:      RECEIVED BY:      RECEIVED BY:

Signature: Chris Duschel      Date: 11/23/18      Signature: [Signature]      Date: 11/23/18      Signature: [Signature]      Date: \_\_\_\_\_

Printed Name: Chris Duschel      Time: 10:55      Printed Name: \_\_\_\_\_      Time: \_\_\_\_\_      Printed Name: \_\_\_\_\_      Time: \_\_\_\_\_

Company: HydroCon      Company: Apex      Company: \_\_\_\_\_

Apex Laboratories

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*Chris Duschel*



HydroCon LLC  
314 W 15th Street Suite 300  
Vancouver, WA 98660

Project: Coleman Wenatchee  
Project Number: 2017-074  
Project Manager: Craig Hultgren

Report ID:  
A8D0914 - 050818 0317

**APEX LABS COOLER RECEIPT FORM**

Client: HydroCon Element WO#: A8 D0914

Project/Project #: Coleman Oil Wenatchee / 2017-074

**Delivery info:**

Date/Time Received: 4/28/18 @ 10:55 By: MS

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

**Cooler Inspection** Inspected by: MS : 4/28/18 @ \_\_\_\_\_

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 (deg. C)	<u>2.3</u>	<u>2.1</u>	<u>5.4</u>				

Received on Ice?  (Y/N)

Temp. Blanks?  (Y/N)

Ice Type: (Gel/Recal/Other) Recal

Condition: good

Cooler out of temp?  Possible reason why: \_\_\_\_\_

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

**Samples Inspection:** Inspected by: MS : 4/28/18 @ 11:27 1400

All Samples Intact? Yes  No  Comments: \_\_\_\_\_

Bottle Labels/COCs agree? Yes  No  Comments: labs read SS01, SS02, SS03, SS04

w/t of 1220 + SS05, voas read SS01-14cm, SS02-12cm, SS03-14cm, SS04-12cm

Containers/Volumes Received Appropriate for Analysis? Yes  No  Comments: SS05-14cm

Do VOA Vials have Visible Headspace? Yes  No  NA

Comments: \_\_\_\_\_

Water Samples: pH Checked and Appropriate (except VOAs): Yes  No  NA

Comments: \_\_\_\_\_

**Additional Information:** \_\_\_\_\_

Labeled by: MS Witness: MS Cooler Inspected by: MS See Project Contact Form:

**Appendix I**  
**Data Validation Reports**

**TO:** Craig Hultgren, HydroCon  
**FROM:** Manon Tanner-Dave  
**DATE:** May 30, 2018 (revised September 11, 2018)  
**SUBJECT:** Laboratory Validation Report

---

**HydroCon TOC Site No.** 2017-048

**Sampling Event Type:** Soil Sampling

**Number of Samples:** 22

**Laboratory Work Order:** A8D0007

**Final Report Date & Time:** April 11, 2018

**Analysis & Method**

- Gasoline Range Hydrocarbon (NWTPH-Gx)
- Diesel Range Hydrocarbon without Silica Gel (NWTPH-Dx)
- Diesel Range Organics with Silica Gel (NWTPH-DxSG)
- Volatile Organic Compounds (EPA 8260C)
- BETX (8021B)
- Dissolved Lead (200.8)
- Sulfate (300.0)
- Other – Percent solids

**Data Package Completeness:**

Data package did not include a formal case narrative form. Data package included a cover letter; no issues were noted.

**EDD to Hardcopy Verification:**

An EDD was not provided.



**Technical Data Validation:**

- Holding Times & Sample Receipt
- Surrogate Compounds
- Associated Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- Associated Laboratory Duplicate
- Laboratory Control Sample/ Laboratory Control Sample Duplicates (LCS/LCSD)
- Method Blank
- Field Duplicates
- Target Analyte List
- Reporting Limits (MDL and MRL)
- Reported Results

**Holding Times & Sample Receipt:**

All holding times and sample receipt were acceptable.

**Surrogate Compounds:**

All surrogate percent recoveries (%R) were within laboratory limits, with the exceptions noted below:

The TPH-Gx surrogate recovery for samples MW23-08, MW23-22, and MW13-10 could not be accurately quantified due to interference from co-eluting organic compounds present in the sample extract. Surrogate recoveries from the BTEX analysis were evaluated and found to be within control limits; no qualifiers applied to the results.

**Associated Matrix Spike/Matrix Spike Duplicate (MS/MSD):**

Matrix spikes were analyzed at the appropriate frequency and all %R were within the acceptance criteria, with the exceptions noted below:

MS/MSD Compound	Percent Recovery		Control Limits	RPD	Associated Samples	Comments/Qualifiers
	MS	MSD				
MW99-15 (8040363-MS1)						
Acetone	86	--	36-164%	--	MW14-05 MW14-10 MW14-15 MW99-15	The daily continuing calibration verification %R for acetone associated with 8040363-MS1 (MW99-15) failed the ±20% criteria listed in EPA 8260C by -1%. The result was reported by the lab as an estimated value. Associated samples were non-detect for acetone and results were qualified as estimated (UJ-Cc).
1,1,2-Trichloroethane	154	--	78-121%	--		The MS %R was above the control limit. All results were non-detect; no qualifier applied to the results.

**Associated Laboratory Duplicate:**

Laboratory duplicates were analyzed at the appropriate frequency and all relative percent difference (RPD) were within the acceptance criteria, with the exceptions noted below:

The NWTPH-Gx laboratory duplicate associated with sample HC02-22 had an RPD outside of the control limit (30%) at 34%. Since the sample result and the duplicate results were both <5x the MRL and their absolute difference was <2x the MRL, no qualifiers were applied to the results.

**Laboratory Control Sample/Laboratory Control Sample Duplicates:**

LCS were analyzed at the appropriate frequency and all %R were within the acceptance criteria, with the exceptions noted below:

LCS/LCSD Compound	Percent Recovery		Control Limits	RPD	Associated Samples	Comments/Qualifiers
	LCS	LCSD				
LCS (8040363-BS1)						
Acetone	79	--	80-120%	--	MW14-05 MW14-10 MW14-15 MW99-15	The LCS %R was below the control limits; all associated results were non-detect and qualified as estimated (UJ-LCS).

**Method Blank:**

Method blanks were analyzed at the appropriate frequency and were non-detect (ND) for all target analytes.

**Field Duplicate(s):**

Relative percent differences (RPDs) between parent and field duplicate samples were acceptable.

Parent/field duplicate samples = MW14-15 and MW99-15.

RPDs between GRO and n-Butylbenzene were >50%. However, each sample had different dilution factors which caused the RPD outlier to be not applicable.

Analyte	Parent Sample	Duplicate Sample	RPD	Comments/Qualifiers
	MW14-15	MW99-15		
Diesel	447	328	30.7	
Oil	Non detect	Non detect	Not calculated	
GRO	465	787	51.4	Different dilution factors – RPD not applicable.
n-Butylbenzene	0.151	0.258	52.3	Different dilution factors – RPD not applicable.
4-Isopropyltoluene	0.0728	Non detect	Not calculated	
n-Propylbenzene	0.0525	Non detect	Not calculated	
% Solids	88.5	90.1	1.8	

**Target Analyte List:**

All requested analytes were present.

**Reporting Limits (MDL and MRL):**

Reporting limits were within the acceptance criteria, with the following exceptions noted below:

Select samples had elevated MRLs due to sample dilution as a result of high analyte concentrations or matrix interference issues. Results were reported from the dilution analyses, as applicable.

Select VOC analytes had elevated MRLs to account for interference from co-eluting organic compounds present in the sample. All associated results were non-detect.

## Reported Results:

All reported results are acceptable, with the exceptions noted below:

### Laboratory qualifiers for NWTPH-Dx, -Gx:

- (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.
  - J-Other qualify affected results.
- (F-11) The hydrocarbon pattern indicates possible weathered diesel, or a contribution from a related component.
  - J-Other qualify affected results.
- (F-13) The chromatographic pattern does not resemble the fuel standard used for quantitation.
  - J-Chrom qualify affected results.
- (F-15) Results for diesel are estimated due to overlap from the reported oil result.
  - J-Other qualify affected results.
- (F-16) Results for oil are estimated due to overlap from the reported diesel result.
  - J-Other qualify affected results.

## Lab Validation Assessment

Analytical results are usable to meet the project objectives.

## Data Quality Review Statement for Report

Aside from the data quality issues discussed above, the data quality review identified no concerns with respect to the quality or usability of the data presented herein.

The data meet the criteria outlined above, with the noted exceptions. Data were qualified matrix interference, compound identification issues, and/or LCS/CCV recoveries. No data were rejected and completeness was 100 percent. All results are usable for their intended purpose.

## Appendix A. Data Validation Qualifiers and Definitions

The following lists the data validation qualifier codes and their definitions that were assigned to analytical results in this data validation review process.

### Data Validation Qualifiers and Definitions:

- (R) The sample result is reject due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
  - (DNR) Do not report. A more appropriate result is reported from another analysis or dilution.
- 

## Appendix B. Data Validation Qualified Summary Table

### Laboratory qualifiers:

- (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.
- (F-11) The hydrocarbon pattern indicates possible weathered diesel, or a contribution from a related component.
- (F-13) The chromatographic pattern does not resemble the fuel standard used for quantitation.
- (F-15) Results for diesel are estimated due to overlap from the reported oil result.
- (F-16) Results for oil are estimated due to overlap from the reported diesel result.

### Validation qualifiers:

- (J) The result is an estimated quantity.
- (UJ) Estimated and not detected. The analyte is considered not detected at the reported value, and the associated numerical value is an estimated value.

### Reason codes:

- Cc = Calibration (continuing).
- Chrom = Chromatographic pattern doesn't match the pattern of the calibration standard.
- LCS = Laboratory control sample recovery.
- Other = Other, described in data validation report.

**Appendix B. Validator Qualified Data Summary Table**

Sample ID	Laboratory ID	Method	Parameter Name	Result Value	Result Units	Laboratory Qualifier	Validator Qualifier	Reason Code(s)
HC01-10	A8D0007-02	NWTPH-Dx	Diesel	4680	mg/kg	F-13	J	Chrom
HC01-22	A8D0007-04	NWTPH-Dx	Diesel	104	mg/kg	F-13, F-15	J	Chrom, Other
HC01-22	A8D0007-04	NWTPH-Dx	Oil	80.3	mg/kg	F-03, F-16	J	Other
HC01-34	A8D0007-05	NWTPH-Dx	Diesel	38.6	mg/kg	F-13	J	Chrom
HC02-22	A8D0007-08	NWTPH-Dx	Diesel	26.6	mg/kg	F-13	J	Chrom
MW23-05	A8D0007-09	NWTPH-Dx	Diesel	29.7	mg/kg	F-13	J	Chrom
MW23-08	A8D0007-10	NWTPH-Dx	Diesel	586	mg/kg	F-11, F-15	J	Other
MW23-08	A8D0007-10	NWTPH-Dx	Oil	112	mg/kg	F-16	J	Other
MW23-12	A8D0007-11	NWTPH-Dx	Diesel	63.3	mg/kg	F-11	J	Other
MW13-5	A8D0007-13	NWTPH-Dx	Diesel	1700	mg/kg	F-15	J	Other
MW13-5	A8D0007-13	NWTPH-Dx	Oil	5310	mg/kg	F-16	J	Other
MW13-10	A8D0007-14	NWTPH-Dx	Diesel	2290	mg/kg	F-13	J	Chrom
MW13-21	A8D0007-16	NWTPH-Dx	Diesel	90.9	mg/kg	F-13, F-15	J	Chrom, Other
MW13-21	A8D0007-16	NWTPH-Dx	Oil	209	mg/kg	F-03, F-16	J	Other
MW14-10	A8D0007-20	NWTPH-Dx	Diesel	50.2	mg/kg	F-13	J	Chrom
MW14-15	A8D0007-21	NWTPH-Dx	Diesel	447	mg/kg	F-13	J	Chrom
MW99-15	A8D0007-22	NWTPH-Dx	Diesel	328	mg/kg	F-13	J	Chrom
MW14-05	A8D0007-19	EPA 8260C	Acetone	<0.948	mg/kg		UJ	Cc, LCS

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Method</b>	<b>Parameter Name</b>	<b>Result Value</b>	<b>Result Units</b>	<b>Laboratory Qualifier</b>	<b>Validator Qualifier</b>	<b>Reason Code(s)</b>
MW14-10	A8D0007-20	EPA 8260C	Acetone	<0.971	mg/kg		UJ	Cc, LCS
MW14-15	A8D0007-21	EPA 8260C	Acetone	<1.02	mg/kg		UJ	Cc, LCS
MW99-15	A8D0007-22	EPA 8260C	Acetone	<4.06	mg/kg		UJ	Cc, LCS



**TO:** Craig Hultgren, HydroCon  
**FROM:** Manon Tanner-Dave  
**DATE:** May 30, 2018 (revised September 17, 2018)  
**SUBJECT:** Laboratory Validation Report

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**HydroCon TOC Site No.** 2017-074

**Sampling Event Type:** Soil Sampling

**Number of Samples:** 21

**Laboratory Work Order:** A8D0237

**Final Report Date & Time:** April 19, 2018

**Analysis & Method**

- Gasoline Range Hydrocarbon (NWTPH-Gx)
- Diesel Range Hydrocarbon without Silica Gel (NWTPH-Dx)
- Diesel Range Organics with Silica Gel (NWTPH-DxSG)
- Volatile Organic Compounds (EPA 8260C)
- BETX (8021B)
- Dissolved Lead (200.8)
- Sulfate (300.0)
- Other – Percent solids

**Data Package Completeness:**

Data package did not include a formal case narrative form. Data package included a cover letter; no issues were noted.

**EDD to Hardcopy Verification:**

An EDD was not provided.

**Technical Data Validation:**

- Holding Times & Sample Receipt
- Surrogate Compounds
- Associated Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- Associated Laboratory Duplicate
- Laboratory Control Sample/ Laboratory Control Sample Duplicates (LCS/LCSD)
- Method Blank
- Field Duplicates
- Target Analyte List
- Reporting Limits (MDL and MRL)
- Reported Results

**Holding Times & Sample Receipt:**

All holding times and sample receipt were acceptable, with the exceptions noted below:

Discrepancies were noted on the cooler receipt form that the collection times for samples MW17-30 and MW19-30 were different on the jars than what was noted on the chain of custody form. No impact to data quality.

**Surrogate Compounds:**

All surrogate percent recoveries (%R) were within laboratory limits, with the exceptions noted below:

Parent Sample	%R	%R (8260B)	Comments/Qualifiers
Compound Control Limits	50-150%	80-120%	
MW19-18			
4-Bromofluorobenzene (Surr)	295%	101%	TPH-Gx surrogate recovery cannot be accurately quantified due to interference from co-eluting organic compounds present in the sample extract. See 8260B results for accurate surrogate recovery. No qualifiers applied to the results.

**Associated Matrix Spike/Matrix Spike Duplicate (MS/MSD):**

Matrix spikes were analyzed at the appropriate frequency and all %R were within the acceptance criteria, with the exceptions noted below:

MS/MSD Compound	Percent Recovery		Control Limits	RPD	Associated Samples	Comments/Qualifiers
	MS	MSD				
MW3S-15 (8040599-MS1)						
Acetone	125%	NA	36-164%	NA	MW14-25 MW3S-15	Daily CCV recovery for this analyte failed the $\pm 20\%$ criteria listed in EPA 8260C by -14.1%. The results are reported as estimated values; UJ-Cc qualify results.
Acrylonitrile	139%	NA	65-134%	NA		Sample results were non-detect; no qualifiers applied to the results.
2-Butanone (MEK)	125%	NA	51-148%	NA		Daily CCV recovery for this analyte failed the $\pm 20\%$ criteria listed in EPA 8260C by -7.7%. The results are reported as estimated values; UJ-Cc qualify results.
Dichlorodifluoromethane	94%	NA	29-149%	NA		Daily CCV recovery for this analyte failed the $\pm 20\%$ criteria listed in EPA 8260C by -2.9%. The results are reported as estimated values; UJ-Cc qualify results.

**Associated Laboratory Duplicate:**

Laboratory duplicates were analyzed at the appropriate frequency and all relative percent difference (RPD) were within the acceptance criteria, with the exceptions noted below:

Parent Sample	Compound	RPD	Comments/Qualifiers
	Control Limit	30%	
MW17-25 (Batch 8040591)			J-REP qualify result in the parent and duplicate samples.
	NWTPH-Gx	33%	
	Ethylbenzene	45%	

**Laboratory Control Sample/Laboratory Control Sample Duplicates:**

LCS were analyzed at the appropriate frequency and all %R were within the acceptance criteria, with the exceptions noted below:

LCS/LCSD Compound	Percent Recovery		Control Limits	RPD	Associated Samples	Comments/Qualifiers
	LCS	LCSD				
LCS (8040599-BS1)						
Acetone	66%	NA	80-120%	NA	MW14-25 MW3S-15	Daily CCV/LCS recovery was below the $\pm 20\%$ criteria listed in EPA 8260C; all associated results were non-detect and qualified as estimated (UJ-LCS).
2-Butanone (MEK)	72%	NA		NA		
Dichlorodifluoromethane	77%	NA		NA		

**Method Blank:**

Method blanks were analyzed at the appropriate frequency and were non-detect (ND) for all target analytes.



**Field Duplicate(s):**

Not applicable.

**Target Analyte List:**

All requested analytes were present.

**Reporting Limits (MDL and MRL):**

Reporting limits were within the acceptance criteria, with the following exceptions noted below:

Select samples had elevated MRLs due to sample dilution as a result of high analyte concentrations or matrix interference issues. Results were reported from the dilution analyses, as applicable.

Select VOC analytes had elevated MRLs to account for interference from co-eluting organic compounds present in the sample. All associated results were non-detect.

## Reported Results:

All reported results are acceptable.

### Laboratory qualifiers for NWTPH-Dx, -Gx:

- (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.
  - J-Other qualify affected results.
- (F-13) The chromatographic pattern does not resemble the fuel standard used for quantitation.
  - J-Chrom qualify affected results.
- (F-15) Results for diesel are estimated due to overlap from the reported oil result.
  - J-Other qualify affected results.
- (F-16) Results for oil are estimated due to overlap from the reported diesel result.
  - J-Other qualify affected results.

## Lab Validation Assessment

Analytical results are usable to meet the project objectives.

## Data Quality Review Statement for Report

Aside from the data quality issues discussed above, the data quality review identified no concerns with respect to the quality or usability of the data presented herein.

The data meet the criteria outlined above, with the noted exceptions. Data were qualified matrix interference, compound identification issues, and/or LCS/CCV recoveries. No data were rejected and completeness was 100 percent. All results are usable for their intended purpose.

## Appendix A. Data Validation Qualifiers and Definitions

The following lists the data validation qualifier codes and their definitions that were assigned to analytical results in this data validation review process.

### Data Validation Qualifiers and Definitions:

- (R) The sample result is reject due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
  - (DNR) Do not report. A more appropriate result is reported from another analysis or dilution.
- 

## Appendix B. Data Validation Qualified Summary Table

### Laboratory qualifiers:

- (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.
- (F-13) The chromatographic pattern does not resemble the fuel standard used for quantitation.
- (F-15) Results for diesel are estimated due to overlap from the reported oil result.
- (F-16) Results for oil are estimated due to overlap from the reported diesel result.

### Validation qualifiers:

- (J) The result is an estimated quantity.
- (UJ) Estimated and not detected. The analyte is considered not detected at the reported value, and the associated numerical value is an estimated value.

### Reason codes:

- Cc = Calibration (continuing).
- Chrom = Chromatographic pattern doesn't match the pattern of the calibration standard.
- LCS = Laboratory control sample recovery.
- Other = Other, described in data validation report.
- REP = Precision (all replicates).



**Appendix B. Validator Qualified Data Summary Table**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Method</b>	<b>Parameter Name</b>	<b>Result Value</b>	<b>Result Units</b>	<b>Laboratory Qualifier</b>	<b>Validator Qualifier</b>	<b>Reason Code</b>
MW12-20	A8D0237-04	NWTPH-Dx	Diesel	42.5	mg/kg	F-13, F-15	J	Chrom, Other
MW12-20	A8D0237-04	NWTPH-Dx	Oil	66.7	mg/kg	F-03, F-16	J	Other
MW17-17	A8D0237-12	NWTPH-Dx	Diesel	1650	mg/kg	F-13, F-15	J	Chrom, Other
MW17-17	A8D0237-12	NWTPH-Dx	Oil	740	mg/kg	F-16	J	Other
MW19-18	A8D0237-17	NWTPH-Dx	Diesel	2010	mg/kg	F-13	J	Chrom
MW19-30	A8D0237-19	NWTPH-Dx	Diesel	167	mg/kg	F-13, F-15	J	Chrom, Other
MW19-30	A8D0237-19	NWTPH-Dx	Oil	284	mg/kg	F-03, F-16	J	Other
MW17-25	A8D0237-14	NWTPH-Gx	GRO	76.8	mg/kg		J	REP
MW17-25	8040591-DUP2	NWTPH-Gx	GRO	107	mg/kg		J	REP
MW17-25	A8D0237-14	BTEX	Ethylbenzene	0.0398	mg/kg		J	REP
MW17-25	8040591-DUP2	BTEX	Ethylbenzene	0.0631	mg/kg		J	REP
MW14-25	A8D0237-01	EPA 8260C	Acetone	<0.794	mg/kg		UJ	Cc, LCS
MW14-25	A8D0237-01	EPA 8260C	2-Butanone (MEK)	<0.397	mg/kg		UJ	Cc, LCS
MW14-25	A8D0237-01	EPA 8260C	Dichlorodifluoromethane	<0.0794	mg/kg		UJ	Cc, LCS
MW3S-15	A8D0237-06	EPA 8260C	Acetone	<0.910	mg/kg		UJ	Cc, LCS
MW3S-15	A8D0237-06	EPA 8260C	2-Butanone (MEK)	<2.27	mg/kg		UJ	Cc, LCS
MW3S-15	A8D0237-06	EPA 8260C	Dichlorodifluoromethane	<0.0910	mg/kg		UJ	Cc, LCS



**TO:** Craig Hultgren, HydroCon  
**FROM:** Manon Tanner-Dave  
**DATE:** May 31, 2018 (revised September 18, 2018)  
**SUBJECT:** Laboratory Validation Report

---

**HydroCon TOC Site No.** 2017-074

**Sampling Event Type:** Soil Sampling

**Number of Samples:** 5

**Laboratory Work Order:** A8D0535

**Final Report Date & Time:** April 22, 2018

**Analysis & Method**

- Gasoline Range Hydrocarbon (NWTPH-Gx)
- Diesel Range Hydrocarbon without Silica Gel (NWTPH-Dx)
- Diesel Range Organics with Silica Gel (NWTPH-DxSG)
- Volatile Organic Compounds (EPA 8260C)
- BETX (8021B)
- Dissolved Lead (200.8)
- Sulfate (300.0)
- Other – Percent solids

**Data Package Completeness:**

Data package was complete.

**EDD to Hardcopy Verification:**

An EDD was not provided.

**Technical Data Validation:**

- Holding Times & Sample Receipt
- Surrogate Compounds
- Associated Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- Associated Laboratory Duplicate
- Laboratory Control Sample/ Laboratory Control Sample Duplicates (LCS/LCSD)
- Method Blank
- Field Duplicates
- Target Analyte List
- Reporting Limits (MDL and MRL)
- Reported Results

**Holding Times & Sample Receipt:**

All holding times and sample receipt were acceptable.

**Surrogate Compounds:**

All surrogate percent recoveries (%R) were within laboratory limits, with the exceptions noted below:

Parent Sample	%R	%R (8260B)	Comments/Qualifiers
Compound Control Limits	50-150%	80-120%	
SL03-05 (A8D0535-03)			
4-Bromofluorobenzene (Surr)	165%	99%	TPH-Gx surrogate recovery cannot be accurately quantified due to interference from co-eluting organic compounds present in the sample extract. See 8260B results for accurate surrogate recovery. No qualifiers applied to the results.

The TPH-Dx surrogate recoveries for samples SL01-0.5, SL02-0.5, SL03-0.5, and SL04-0.5 were not available due to sample dilution required from high analyte concentration and/or matrix interference; results were qualified as estimated (J/UJ-Mi).

**Associated Matrix Spike/Matrix Spike Duplicate (MS/MSD):**

Not applicable.

**Associated Laboratory Duplicate:**

Laboratory duplicates were analyzed at the appropriate frequency and all relative percent difference (RPD) were within the acceptance criteria.

**Laboratory Control Sample/Laboratory Control Sample Duplicates:**

LCS were analyzed at the appropriate frequency and all %R were within the acceptance criteria.

**Method Blank:**

Method blanks were analyzed at the appropriate frequency and were non-detect (ND) for all target analytes.

**Field Duplicate(s):**

Not applicable.

**Target Analyte List:**

All requested analytes were present.

**Reporting Limits (MDL and MRL):**

Reporting limits were within the acceptance criteria, with the following exceptions noted below:

Select samples had elevated MRLs due to sample dilution as a result of high analyte concentrations or matrix interference issues. Results were reported from the dilution analyses, as applicable.

**Reported Results:**

All reported results are acceptable.

**Laboratory qualifiers for NWTPH-Dx:**

- (F-13) The chromatographic pattern does not resemble the fuel standard used for quantitation.
  - J-Chrom qualify affected results.

**Lab Validation Assessment**

Analytical results are usable to meet the project objectives.

## Data Quality Review Statement for Report

Aside from the data quality issues discussed above, the data quality review identified no concerns with respect to the quality or usability of the data presented herein.

The data meet the criteria outlined above, with the noted exceptions. Data were qualified due to matrix interference and/or compound identification issues. No data were rejected and completeness was 100 percent. All results are usable for their intended purpose.



## Appendix A. Data Validation Qualifiers and Definitions

The following lists the data validation qualifier codes and their definitions that were assigned to analytical results in this data validation review process.

### Data Validation Qualifiers and Definitions:

- (R) The sample result is reject due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
  - (DNR) Do not report. A more appropriate result is reported from another analysis or dilution.
- 

## Appendix B. Data Validation Qualified Summary Table

### Laboratory qualifiers:

- (F-13) The chromatographic pattern does not resemble the fuel standard used for quantitation.
- (S-01) Surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.

### Validation qualifiers:

- (J) The result is an estimated quantity.
- (UJ) Estimated and not detected. The analyte is considered not detected at the reported value, and the associated numerical value is an estimated value.

### Reason codes:

- Chrom = Chromatographic pattern doesn't match the pattern of the calibration standard.
- Mi = Matrix interference.

**Appendix B. Validator Qualified Data Summary Table**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Method</b>	<b>Parameter Name</b>	<b>Result Value</b>	<b>Result Units</b>	<b>Laboratory Qualifier</b>	<b>Validator Qualifier</b>	<b>Reason Code</b>
SL01-0.5	A8D0535-01	NWTPH-Dx	Diesel	39400	mg/kg	F-13, S-01	J	Chrom, Mi
SL02-0.5	A8D0535-02	NWTPH-Dx	Diesel	30400	mg/kg	F-13, S-01	J	Chrom, Mi
SL03-0.5	A8D0535-03	NWTPH-Dx	Diesel	21400	mg/kg	F-13, S-01	J	Chrom, Mi
SL04-0.5	A8D0535-04	NWTPH-Dx	Diesel	18100	mg/kg	F-13, S-01	J	Chrom, Mi
SL01-0.5	A8D0535-01	NWTPH-Dx	Oil	<2350	mg/kg	S-01	UJ	Mi
SL02-0.5	A8D0535-02	NWTPH-Dx	Oil	<2570	mg/kg	S-01	UJ	Mi
SL03-0.5	A8D0535-03	NWTPH-Dx	Oil	<2240	mg/kg	S-01	UJ	Mi
SL04-0.5	A8D0535-04	NWTPH-Dx	Oil	<2310	mg/kg	S-01	UJ	Mi



**TO:** Craig Hultgren, HydroCon  
**FROM:** Manon Tanner-Dave  
**DATE:** May 31, 2018 (revised September 19, 2018)  
**SUBJECT:** Laboratory Validation Report

---

**HydroCon TOC Site No.** 2017-074

**Sampling Event Type:** Soil Sampling

**Number of Samples:** 19

**Laboratory Work Order:** A8D0538

**Final Report Date & Time:** April 22, 2018

**Analysis & Method**

- Gasoline Range Hydrocarbon (NWTPH-Gx)
- Diesel Range Hydrocarbon without Silica Gel (NWTPH-Dx)
- Diesel Range Organics with Silica Gel (NWTPH-DxSG)
- Volatile Organic Compounds (EPA 8260C)
- BETX (8021B)
- Dissolved Lead (200.8)
- Sulfate (300.0)
- Other – Percent solids

**Data Package Completeness:**

Data package did not include a formal case narrative form. Data package included a cover letter; no issues were noted.

**EDD to Hardcopy Verification:**

An EDD was not provided.

**Technical Data Validation:**

- Holding Times & Sample Receipt
- Surrogate Compounds
- Associated Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- Associated Laboratory Duplicate
- Laboratory Control Sample/ Laboratory Control Sample Duplicates (LCS/LCSD)
- Method Blank
- Field Duplicates
- Target Analyte List
- Reporting Limits (MDL and MRL)
- Reported Results

**Holding Times & Sample Receipt:**

All holding times and sample receipt were acceptable, with the exceptions noted below:

The 4oz jar for sample MW15-10 was broken in the lab; 3/4 of the volume was salvaged.  
Discrepancies were noted in the cooler receipt form that the collection date for sample MW21-25 and the collection time for sample MW18-35 were different on the jars and VOAs than what was noted on the chain of custody form.

**Surrogate Compounds:**

All surrogate percent recoveries (%R) were within laboratory limits, with the exceptions noted below:

Parent Sample			
Compound	%R	%R (8260B)	Comments/Qualifiers
Control Limits	50-150%	80-120%	
MW22-40 (A8D0538-19)			
4-Bromofluorobenzene (Surr)	178%	108%	TPH-Gx surrogate recovery cannot be accurately quantified due to interference from co-eluting organic compounds present in the sample extract. See 8260B results for accurate surrogate recovery. No qualifiers applied to the results.

The TPH-Dx surrogate recovery for sample MW22-30 is not available due to sample dilution required from high analyte concentration and/or matrix interference; results were qualified as estimated (J/UJ-Mi).

**Associated Matrix Spike/Matrix Spike Duplicate (MS/MSD):**

Matrix spikes were analyzed at the appropriate frequency and all %R were within the acceptance criteria.

**Associated Laboratory Duplicate:**

Laboratory duplicates were analyzed at the appropriate frequency and all relative percent difference (RPD) were within the acceptance criteria, with the exceptions noted below:

Parent Sample	Compound	RPD	Comments/Qualifiers
	Control Limit	30%	
MW22-40 (8040912-DUP1)			
	NWTPH-Gx	150%	J-REP qualify result in the parent and duplicate samples.
	Benzene	39%	Parent sample result >5x RL, duplicate sample result <5x RL. Absolute difference <2x RL; no qualifiers applied to the results.
	Toluene	46%	Parent and duplicate sample results <5x RL. Absolute difference <2x RL; no qualifiers applied to the results.
	Ethylbenzene	33%	Parent and duplicate sample results <5x RL. Absolute difference <2x RL; no qualifiers applied to the results.
	Xylenes, total	47%	Parent sample results >5x RL, duplicate sample result <5x RL. Absolute difference >2x RL; J-REP qualify results.

**Laboratory Control Sample/Laboratory Control Sample Duplicates:**

LCS were analyzed at the appropriate frequency and all %R were within the acceptance criteria.

**Method Blank:**

Method blanks were analyzed at the appropriate frequency and were non-detect (ND) for all target analytes.



**Field Duplicate(s):**

Relative percent differences (RPDs) between parent and field duplicate samples were acceptable.

Parent/field duplicate samples = MW20-23.5 and MW100-23.5.

**Target Analyte List:**

All requested analytes were present.

**Reporting Limits (MDL and MRL):**

Reporting limits were within the acceptance criteria, with the following exceptions noted below:

Select samples had elevated MRLs due to sample dilution as a result of high analyte concentrations or matrix interference issues. Results were reported from the dilution analyses, as applicable.



**Reported Results:**

All reported results are acceptable.

**Laboratory qualifiers for NWTPH-Dx:**

- (F-11) The hydrocarbon pattern indicates possible weathered diesel, or a contribution from a related component.
  - J-Other qualify affected results.
- (F-13) The chromatographic pattern does not resemble the fuel standard used for quantitation.
  - J-Chrom qualify affected results.
- (F-24) The chromatographic pattern does not resemble the fuel standard used for quantitation. The Diesel result represents carbon range C12 to C24.
  - J-Chrom qualify affected results.
- (S-01) Surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
  - J/UJ-Mi qualify affected results.

**Lab Validation Assessment**

Analytical results are usable to meet the project objectives.

## Data Quality Review Statement for Report

Aside from the data quality issues discussed above, the data quality review identified no concerns with respect to the quality or usability of the data presented herein.

The data meet the criteria outlined above, with the noted exceptions. Data were qualified due to surrogate recoveries and/or laboratory duplicate RPDs. No data were rejected and completeness was 100 percent. All results are usable for their intended purpose.

## Appendix A. Data Validation Qualifiers and Definitions

The following lists the data validation qualifier codes and their definitions that were assigned to analytical results in this data validation review process.

### Data Validation Qualifiers and Definitions:

- (R) The sample result is reject due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
  - (DNR) Do not report. A more appropriate result is reported from another analysis or dilution.
- 

## Appendix B. Data Validation Qualified Summary Table

### Laboratory qualifiers:

- (F-11) The hydrocarbon pattern indicates possible weathered diesel, or a contribution from a related component.
- (F-13) The chromatographic pattern does not resemble the fuel standard used for quantitation.
- (F-24) The chromatographic pattern does not resemble the fuel standard used for quantitation. The Diesel result represents carbon range C12 to C24.
- (S-01) Surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.

### Validation qualifiers:

- (J) The result is an estimated quantity.
- (UJ) Estimated and not detected. The analyte is considered not detected at the reported value, and the associated numerical value is an estimated value.

### Reason codes:

- Chrom = Chromatographic pattern doesn't match the pattern of the calibration standard.
- Mi = Matrix interference.
- Other = Other, described in data validation report.
- REP = Precision (all replicates).

**Appendix B. Validator Qualified Data Summary Table**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Method</b>	<b>Parameter Name</b>	<b>Result Value</b>	<b>Result Units</b>	<b>Laboratory Qualifier</b>	<b>Validator Qualifier</b>	<b>Reason Code</b>
MW21-25	A8D0538-02	NWTPH-Dx	Diesel	47.2	mg/kg	F-11	J	Other
MW20-23.5	A8D0538-05	NWTPH-Dx	Diesel	72.9	mg/kg	F-13	J	Chrom
MW22-30	A8D0538-18	NWTPH-Dx	Diesel	45700	mg/kg	F-13, S-01	J	Mi
MW22-40	A8D0538-19	NWTPH-Dx	Diesel	52.5	mg/kg	F-24	J	Chrom
MW22-30	A8D0538-18	NWTPH-Dx	Oil	<8160	mg/kg	S-01	UJ	Mi
MW22-40	A8D0538-19	NWTPH-Gx	GRO	248	mg/kg		J	REP
MW22-40	8040912-DUP1	NWTPH-Gx	GRO	35.7	mg/kg		J	REP
MW22-40	A8D0538-19	EPA 8260C	Xylenes, total	0.696	mg/kg		J	REP
MW22-40	8040912-DUP1	EPA 8260C	Xylenes, total	0.430	mg/kg		J	REP



**TO:** Craig Hultgren, HydroCon  
**FROM:** Manon Tanner-Dave  
**DATE:** June 4, 2018 (revised September 20, 2018)  
**SUBJECT:** Laboratory Validation Report

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**HydroCon TOC Site No.** 2017-074

**Sampling Event Type:** Water Sampling

**Number of Samples:** 28

**Laboratory Work Order:** A8D0907

**Final Report Date & Time:** May 8, 2018

**Analysis & Method**

- Gasoline Range Hydrocarbon (NWTPH-Gx)
- Diesel Range Hydrocarbon without Silica Gel (NWTPH-Dx)
- Diesel Range Organics with Silica Gel (NWTPH-DxSG)
- Volatile Organic Compounds (EPA 8260C)
- BETX (8021B)
- Total Lead (200.8)
- Sulfate (300.0)
- Other – PAHs (EPA 8270D SIM)

**Data Package Completeness:**

Data package did not include a formal case narrative form. Data package included a cover letter; no issues were noted.

**EDD to Hardcopy Verification:**

An EDD was not provided.

**Technical Data Validation:**

- Holding Times & Sample Receipt
- Surrogate Compounds
- Associated Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- Associated Laboratory Duplicate
- Laboratory Control Sample/ Laboratory Control Sample Duplicates (LCS/LCSD)
- Method Blank
- Field Duplicates
- Target Analyte List
- Reporting Limits (MDL and MRL)
- Reported Results

**Holding Times & Sample Receipt:**

All holding times and sample receipt were acceptable.

**Surrogate Compounds:**

All surrogate percent recoveries (%R) were within laboratory limits.

**Associated Matrix Spike/Matrix Spike Duplicate (MS/MSD):**

Matrix spikes were analyzed at the appropriate frequency and all %R were within the acceptance criteria, with the exceptions noted below:

MS/MSD Compound	Percent Recovery		Control Limits	RPD	Associated Samples	Comments/Qualifiers
	MS	MSD				
MW09-W (8041230-MS1)						
Bromomethane	78%	--	53-141%	--	MW3S-W	Daily CCV recovery for this analyte failed the ±20% criteria listed in EPA 8260C/8270D by -5%. The results are reported as estimated values (UJ-Cc).
Chloromethane	25%	--	50-139%	--		
MW21-W (8041255-MS1)						
Bromomethane	214%	--	53-141%	--	MW14-W MW17-W	Daily CCV recovery for this analyte failed the ±20% criteria listed in EPA 8260C/8270D by +75%. The results are reported as estimated values (UJ-Cc).
Trichlorofluoromethane	165%	--	50-139%	--		

**Associated Laboratory Duplicate:**

Laboratory duplicates were analyzed at the appropriate frequency and all relative percent difference (RPD) were within the acceptance criteria.

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**Laboratory Control Sample/Laboratory Control Sample Duplicates:**

LCS were analyzed at the appropriate frequency and all %R were within the acceptance criteria, with the exceptions noted below:

LCS/LCSD Compound	Percent Recovery		Control Limits	RPD	Associated Samples	Comments/Qualifiers
	LCS	LCSD				
LCS (8041230-BS1)						All associated results were non-detect and qualified as estimated (UJ-LCS).
Bromomethane	75%	--	80-120%	--	MW3S-W	
Chloromethane	75%	--		--		
LCS (8041255-BS1)						
Bromomethane	195%	--	80-120%	--	MW14-W MW17-W	
Trichlorofluoromethane	140%	--		--		
LCS (8041230-BS1)						
Bromomethane	77%	--	80-120%	--	MW102-W	
Chloromethane	72%	--		--		



**Method Blank:**

Method blanks were analyzed at the appropriate frequency and were non-detect (ND) for all target analytes.



**Field Duplicate(s):**

Relative percent differences (RPDs) between parent and field duplicate samples were acceptable.

Analyte	Parent Sample	Duplicate Sample	RPD	Comments/Qualifiers
	MW17-W	MW102-W		
Diesel	1630	1650	1.2	
Oil	ND	ND	Not calculated	
GRO	2800	2650	5.5	
Benzene	1.23	1.21	1.6	
n-Butylbenzene	1.54	1.98	25	
sec-Butylbenzene	1.71	2.15	22.8	
Ethylbenzene	1.62	1.69	4.2	
Isopropylbenzene	3.43	3.74	8.6	
Naphthalene	4.72	6.02	24.2	
n-Propylbenzene	6.48	7.22	10.8	
1,2,4-Trimethylbenzene	20.5	22.5	9.3	
1,3,5-Trimethylbenzene	2.21	2.47	11.1	
m,p-Xylene	6.38	6.57	2.9	
o-Xylene	1.28	1.58	21	

Analyte	Parent Sample	Duplicate Sample	RPD	Comments/Qualifiers
	MW22-W	MW103-W		
Diesel	4690	4490	4.3	
Oil	ND	ND	Not calculated	
GRO	6960	6940	0.3	
Benzene	118	122	3.3	
Toluene	28.8	31.4	8.6	
Ethylbenzene	102	109	6.6	
Xylenes, total	196	223	12.9	
Anthracene	8.48	8.98	5.7	
Benz(a)anthracene	0.284	0.294	3.5	
Chrysene	0.243	0.25	2.8	
Dibenzofuran	8.55	8.15	4.8	
Fluoranthene	3.2	3.25	1.6	
Fluorene	36.7	33.7	8.5	
Phenanthrene	36.6	41.4	12.3	
Pyrene	4.3	4.47	3.9	
Acenaphthene	113	105	7.3	
1-Methylnaphthalene	298	274	8.4	
2-Methylnaphthalene	210	200	4.9	
Naphthalene	692	681	1.6	

**Target Analyte List:**

All requested analytes were present.



**Reporting Limits (MDL and MRL):**

Reporting limits were within the acceptance criteria, with the following exceptions noted below:

Select samples had elevated MRLs due to sample dilution as a result of high analyte concentrations or matrix interference issues. Results were reported from the dilution analyses, as applicable.

Select VOC and PAH analytes had elevated MRLs to account for interference from co-eluting organic compounds present in the sample. All associated results were non-detect.

## Reported Results:

All reported results are acceptable.

### Laboratory qualifiers for PAHs:

- (M-02) Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.
  - J/UJ-Mi qualify affected results.
- (M-05) Estimated result. Peak separation for structural isomers is insufficient for accurate quantification.
  - J/UJ-Other qualify affected results.
- (Q-22) Due to limited sample volume or hold time restraints, the NWTPH-Dx extract was used for the 8270 SIM PAH analysis. Therefore no PAH surrogates and/or Batch QC results are available. Results are estimated values.
  - J/UJ-SSR qualify affected results.
- (R-02) The reporting limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
  - J/UJ-Mi qualify affected results.

### Laboratory qualifiers for NWTPH-Dx:

- (F-11) The hydrocarbon pattern indicates possible weathered diesel, or a contribution from a related component.
  - J/UJ-Other qualify affected results.
- (F-13) The chromatographic pattern does not resemble the fuel standard used for quantitation.
  - J/UJ-Chrom qualify affected results.
- (F-20) Result for Diesel is estimated due to overlap from Gasoline Range Organics or other VOCs.
  - J/UJ-Mi qualify affected results.

### Laboratory qualifiers for BTEX:

- (M-02) Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.
  - J/UJ-Mi qualify affected results.

## Lab Validation Assessment

Analytical results are usable to meet the project objectives.

Note: All PAH results were qualified as estimated due to limited sample volume. The NWTPH-Dx extract was used for the PAH analysis; therefore, no PAH surrogates and/or Batch QC are available.

## Data Quality Review Statement for Report

Aside from the data quality issues discussed above, the data quality review identified no concerns with respect to the quality or usability of the data presented herein.

The data meet the criteria outlined above, with the noted exceptions. Data were qualified due to matrix interference, compound identification issues, and/or LCS/CCV recoveries. No data were rejected and completeness was 100 percent. All results are usable for their intended purpose.

## Appendix A. Data Validation Qualifiers and Definitions

The following lists the data validation qualifier codes and their definitions that were assigned to analytical results in this data validation review process.

### Data Validation Qualifiers and Definitions:

- (R) The sample result is reject due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
  - (DNR) Do not report. A more appropriate result is reported from another analysis or dilution.
- 

## Appendix B. Data Validation Qualified Summary Table

### Laboratory qualifiers:

- (F-11) The hydrocarbon pattern indicates possible weathered diesel, or a contribution from a related component.
- (F-13) The chromatographic pattern does not resemble the fuel standard used for quantitation.
- (F-20) Result for Diesel is estimated due to overlap from Gasoline Range Organics or other VOCs.
- (M-02) Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.
- (M-05) Estimated result. Peak separation for structural isomers is insufficient for accurate quantification.
- (Q-22) Due to limited sample volume or hold time restraints, the NWTPH-Dx extract was used for the 8270 SIM PAH analysis. Therefore no PAH surrogates and/or Batch QC results are available. Results are estimated values.
- (R-02) The reporting limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.

### Validation qualifiers:

- (J) The result is an estimated quantity.
- (UJ) Estimated and not detected. The analyte is considered not detected at the reported value, and the associated numerical value is an estimated value.

### Reason codes:

- Cc = Calibration (continuing).
- Chrom = Chromatographic pattern doesn't match the pattern of the calibration standard.
- LCS = Laboratory control sample recovery.
- Mi = Matrix interference.
- Other = Other, described in data validation report.
- SSR = Surrogate spike/labeled compound recovery.

**Appendix B. Validator Qualified Data Summary Table**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Method</b>	<b>Parameter Name</b>	<b>Result</b>	<b>Result Units</b>	<b>Laboratory Qualifier</b>	<b>Validator Qualifier</b>	<b>Reason Code</b>
MW1S-W	A8D0907-01	NWTPH-Dx	Diesel	<187	µg/L	F-11	UJ	Other
MW3S-W	A8D0907-03	NWTPH-Dx	Diesel	<187	µg/L	F-11	UJ	Other
MW06-W	A8D0907-06	NWTPH-Dx	Diesel	1620	µg/L	F-13	J	Chrom
MW07-W	A8D0907-07	NWTPH-Dx	Diesel	435	µg/L	F-11	J	Other
MW08-W	A8D0907-08	NWTPH-Dx	Diesel	1300	µg/L	F-13	J	Chrom
MW09-W	A8D0907-09	NWTPH-Dx	Diesel	2620	µg/L	F-13	J	Chrom
MW10-W	A8D0907-10	NWTPH-Dx	Diesel	1500	µg/L	F-13	J	Chrom
MW11-W	A8D0907-11	NWTPH-Dx	Diesel	1140	µg/L	F-13	J	Chrom
MW13-W	A8D0907-13	NWTPH-Dx	Diesel	1790	µg/L	F-11, F-20	J	Other, Mi
MW14-W	A8D0907-14	NWTPH-Dx	Diesel	900	µg/L	F-11, F-20	J	Other, Mi
MW16-W	A8D0907-15	NWTPH-Dx	Diesel	330	µg/L	F-11	J	Other
MW17-W	A8D0907-16	NWTPH-Dx	Diesel	1630	µg/L	F-13, F-20	J	Chrom, Mi
MW19-W	A8D0907-17	NWTPH-Dx	Diesel	979	µg/L	F-13	J	Chrom
MW20-W	A8D0907-18	NWTPH-Dx	Diesel	1320	µg/L	F-13	J	Chrom
MW21-W	A8D0907-19	NWTPH-Dx	Diesel	965	µg/L	F-13	J	Chrom
MW22-W	A8D0907-20	NWTPH-Dx	Diesel	4690	µg/L	F-13	J	Chrom
MW23-W	A8D0907-21	NWTPH-Dx	Diesel	419	µg/L	F-11	J	Other
BH01-W	A8D0907-22	NWTPH-Dx	Diesel	1390	µg/L	F-13	J	Chrom
BH02-W	A8D0907-23	NWTPH-Dx	Diesel	9360	µg/L	F-13	J	Chrom
BH03-W	A8D0907-24	NWTPH-Dx	Diesel	1130	µg/L	F-13	J	Chrom

MW102-W	A8D0907-26	NWTPH-Dx	Diesel	1650	µg/L	F-13	J	Chrom
MW103-W	A8D0907-27	NWTPH-Dx	Diesel	4490	µg/L	F-13	J	Chrom
MW17-W	A8D0907-16	EPA 8260C	n-Butylbenzene	1.54	µg/L	M-02	J	Mi
MW102-W	A8D0907-26	EPA 8260C	n-Butylbenzene	1.98	µg/L	M-02	J	Mi
MW3S-W	A8D0907-03	EPA 8260C	Bromomethane	<5.00	µg/L		UJ	LCS, Cc
MW3S-W	A8D0907-03	EPA 8260C	Chloromethane	<5.00	µg/L		UJ	LCS, Cc
MW14-W	A8D0907-14	EPA 8260C	Bromomethane	<5.00	µg/L		UJ	LCS, Cc
MW14-W	A8D0907-14	EPA 8260C	Trichlorofluoromethane	<2.00	µg/L		UJ	LCS, Cc
MW17-W	A8D0907-16	EPA 8260C	Bromomethane	<5.00	µg/L		UJ	LCS, Cc
MW17-W	A8D0907-16	EPA 8260C	Trichlorofluoromethane	<2.00	µg/L		UJ	LCS, Cc
MW102-W	A8D0907-26	EPA 8260C	Bromomethane	<5.00	µg/L		UJ	LCS
MW102-W	A8D0907-26	EPA 8260C	Chloromethane	<5.00	µg/L		UJ	LCS
MW21-W	A8D0907-19	EPA 8270D SIM	Acenaphthene	0.193	µg/L	Q-22	J	SSR
MW21-W	A8D0907-19	EPA 8270D SIM	Acenaphthylene	<0.0935	µg/L	Q-22	UJ	SSR
MW21-W	A8D0907-19	EPA 8270D SIM	Anthracene	0.145	µg/L	Q-22	J	SSR
MW21-W	A8D0907-19	EPA 8270D SIM	Benz(a)anthracene	<0.0935	µg/L	Q-22	UJ	SSR
MW21-W	A8D0907-19	EPA 8270D SIM	Benzo(a)pyrene	<0.0935	µg/L	Q-22	UJ	SSR
MW21-W	A8D0907-19	EPA 8270D SIM	Benzo(b)fluoranthene	<0.0935	µg/L	Q-22	UJ	SSR
MW21-W	A8D0907-19	EPA 8270D SIM	Benzo(k)fluoranthene	<0.0935	µg/L	Q-22	UJ	SSR
MW21-W	A8D0907-19	EPA 8270D SIM	Benzo(g,h,i)perylene	<0.0935	µg/L	Q-22	UJ	SSR
MW21-W	A8D0907-19	EPA 8270D SIM	Chrysene	<0.0935	µg/L	Q-22	UJ	SSR
MW21-W	A8D0907-19	EPA 8270D SIM	Dibenz(a,h)anthracene	<0.0935	µg/L	Q-22	UJ	SSR
MW21-W	A8D0907-19	EPA 8270D SIM	Dibenzofuran	0.103	µg/L	Q-22	J	SSR
MW21-W	A8D0907-19	EPA 8270D SIM	Fluoranthene	<0.0935	µg/L	Q-22	UJ	SSR



MW21-W	A8D0907-19	EPA 8270D SIM	Fluorene	0.144	µg/L	Q-22	J	SSR
MW21-W	A8D0907-19	EPA 8270D SIM	Indeno(1,2,3-cd)pyrene	<0.0935	µg/L	Q-22	UJ	SSR
MW21-W	A8D0907-19	EPA 8270D SIM	1-Methylnaphthalene	1.48	µg/L	Q-22	J	SSR
MW21-W	A8D0907-19	EPA 8270D SIM	2-Methylnaphthalene	0.494	µg/L	Q-22	J	SSR
MW21-W	A8D0907-19	EPA 8270D SIM	Naphthalene	1.16	µg/L	Q-22, M-02	J	SSR, Mi
MW21-W	A8D0907-19	EPA 8270D SIM	Phenanthrene	<0.0935	µg/L	Q-22	UJ	SSR
MW21-W	A8D0907-19	EPA 8270D SIM	Pyrene	<0.0935	µg/L	Q-22	UJ	SSR
MW22-W	A8D0907-20	EPA 8270D SIM	Acenaphthylene	<12.3	µg/L	Q-22, R-02	UJ	SSR, Mi
MW22-W	A8D0907-20	EPA 8270D SIM	Anthracene	8.48	µg/L	Q-22	J	SSR
MW22-W	A8D0907-20	EPA 8270D SIM	Benz(a)anthracene	0.284	µg/L	Q-22, M-05	J	SSR, Other
MW22-W	A8D0907-20	EPA 8270D SIM	Benzo(a)pyrene	<0.0943	µg/L	Q-22	UJ	SSR
MW22-W	A8D0907-20	EPA 8270D SIM	Benzo(b)fluoranthene	<0.0943	µg/L	Q-22	UJ	SSR
MW22-W	A8D0907-20	EPA 8270D SIM	Benzo(k)fluoranthene	<0.0943	µg/L	Q-22	UJ	SSR
MW22-W	A8D0907-20	EPA 8270D SIM	Benzo(g,h,i)perylene	<0.0943	µg/L	Q-22	UJ	SSR
MW22-W	A8D0907-20	EPA 8270D SIM	Chrysene	0.243	µg/L	Q-22, M-05	J	SSR, Other
MW22-W	A8D0907-20	EPA 8270D SIM	Dibenz(a,h)anthracene	<0.0943	µg/L	Q-22	UJ	SSR
MW22-W	A8D0907-20	EPA 8270D SIM	Dibenzofuran	8.55	µg/L	Q-22	J	SSR
MW22-W	A8D0907-20	EPA 8270D SIM	Fluoranthene	3.20	µg/L	Q-22	J	SSR
MW22-W	A8D0907-20	EPA 8270D SIM	Fluorene	36.7	µg/L	Q-22	J	SSR
MW22-W	A8D0907-20	EPA 8270D SIM	Indeno(1,2,3-cd)pyrene	<0.0943	µg/L	Q-22	UJ	SSR
MW22-W	A8D0907-20	EPA 8270D SIM	Phenanthrene	36.6	µg/L	Q-22	J	SSR
MW22-W	A8D0907-20	EPA 8270D SIM	Pyrene	4.30	µg/L	Q-22	J	SSR
MW22-W	A8D0907-20RE1	EPA 8270D SIM	Acenaphthene	113	µg/L	Q-22	J	SSR
MW22-W	A8D0907-20RE1	EPA 8270D SIM	1-Methylnaphthalene	298	µg/L	Q-22	J	SSR

MW22-W	A8D0907-20RE1	EPA 8270D SIM	2-Methylnaphthalene	210	µg/L	Q-22	J	SSR
MW22-W	A8D0907-20RE1	EPA 8270D SIM	Naphthalene	692	µg/L	Q-22	J	SSR
MW103-W	A8D0907-27	EPA 8270D SIM	Acenaphthylene	<11.6	µg/L	Q-22, R-02	UJ	SSR, Mi
MW103-W	A8D0907-27	EPA 8270D SIM	Anthracene	8.98	µg/L	Q-22	J	SSR
MW103-W	A8D0907-27	EPA 8270D SIM	Benz(a)anthracene	0.294	µg/L	Q-22, M-05	J	SSR, Other
MW103-W	A8D0907-27	EPA 8270D SIM	Benzo(a)pyrene	<0.0943	µg/L	Q-22	UJ	SSR
MW103-W	A8D0907-27	EPA 8270D SIM	Benzo(b)fluoranthene	<0.0943	µg/L	Q-22	UJ	SSR
MW103-W	A8D0907-27	EPA 8270D SIM	Benzo(k)fluoranthene	<0.0943	µg/L	Q-22	UJ	SSR
MW103-W	A8D0907-27	EPA 8270D SIM	Benzo(g,h,i)perylene	<0.0943	µg/L	Q-22	UJ	SSR
MW103-W	A8D0907-27	EPA 8270D SIM	Chrysene	0.250	µg/L	Q-22, M-05	J	SSR, Other
MW103-W	A8D0907-27	EPA 8270D SIM	Dibenz(a,h)anthracene	<0.0943	µg/L	Q-22	UJ	SSR
MW103-W	A8D0907-27	EPA 8270D SIM	Dibenzofuran	8.15	µg/L	Q-22	J	SSR
MW103-W	A8D0907-27	EPA 8270D SIM	Fluoranthene	3.25	µg/L	Q-22	J	SSR
MW103-W	A8D0907-27	EPA 8270D SIM	Fluorene	33.7	µg/L	Q-22	J	SSR
MW103-W	A8D0907-27	EPA 8270D SIM	Indeno(1,2,3-cd)pyrene	<0.0943	µg/L	Q-22	UJ	SSR
MW103-W	A8D0907-27	EPA 8270D SIM	Pyrene	4.47	µg/L	Q-22	J	SSR
MW103-W	A8D0907-27RE1	EPA 8270D SIM	Acenaphthene	105	µg/L	Q-22	J	SSR
MW103-W	A8D0907-27RE1	EPA 8270D SIM	1-Methylnaphthalene	274	µg/L	Q-22	J	SSR
MW103-W	A8D0907-27RE1	EPA 8270D SIM	2-Methylnaphthalene	200	µg/L	Q-22	J	SSR
MW103-W	A8D0907-27RE1	EPA 8270D SIM	Naphthalene	681	µg/L	Q-22	J	SSR
MW103-W	A8D0907-27RE1	EPA 8270D SIM	Phenanthrene	41.4	µg/L	Q-22	J	SSR



**TO:** Craig Hultgren, HydroCon  
**FROM:** Manon Tanner-Dave  
**DATE:** June 4, 2018 (revised September 21, 2018)  
**SUBJECT:** Laboratory Validation Report

---

**HydroCon TOC Site No.** 2017-074

**Sampling Event Type:** Soil Sampling

**Number of Samples:** 5

**Laboratory Work Order:** A8D0914

**Final Report Date & Time:** May 8, 2018

**Analysis & Method**

- Gasoline Range Hydrocarbon (NWTPH-Gx)
- Diesel Range Hydrocarbon without Silica Gel (NWTPH-Dx)
- Diesel Range Organics with Silica Gel (NWTPH-DxSG)
- Volatile Organic Compounds (EPA 8260C)
- BETX (8021B)
- Dissolved Lead (200.8)
- Sulfate (300.0)
- Other – Percent solids

**Data Package Completeness:**

Data package did not include a formal case narrative form. Data package included a cover letter; no issues were noted.

**EDD to Hardcopy Verification:**

An EDD was not provided.

**Technical Data Validation:**

- Holding Times & Sample Receipt
- Surrogate Compounds
- Associated Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- Associated Laboratory Duplicate
- Laboratory Control Sample/ Laboratory Control Sample Duplicates (LCS/LCSD)
- Method Blank
- Field Duplicates
- Target Analyte List
- Reporting Limits (MDL and MRL)
- Reported Results

**Holding Times & Sample Receipt:**

All holding times and sample receipt were acceptable, with the exceptions noted below:

Discrepancies were noted in the cooler receipt form that the sample IDs on the sample jars and their associated VOAs were different.

**Surrogate Compounds:**

All surrogate percent recoveries (%R) were within laboratory limits.

**Associated Matrix Spike/Matrix Spike Duplicate (MS/MSD):**

Matrix spikes were analyzed at the appropriate frequency and all %R were within the acceptance criteria.

**Associated Laboratory Duplicate:**

Laboratory duplicates were analyzed at the appropriate frequency and all relative percent difference (RPD) were within the acceptance criteria, with the exceptions noted below:

The Oil laboratory duplicate associated with sample SS01-13.97cm had an RPD outside of the control limit (30%) at 50%. The lab noted that the sample was non-homogenous; no qualifiers were applied to the results.

**Laboratory Control Sample/Laboratory Control Sample Duplicates:**

LCS were analyzed at the appropriate frequency and all %R were within the acceptance criteria.

**Method Blank:**

Method blanks were analyzed at the appropriate frequency and were non-detect (ND) for all target analytes.

**Field Duplicate(s):**

Not applicable.

**Target Analyte List:**

All requested analytes were present.

**Reporting Limits (MDL and MRL):**

Reporting limits were within the acceptance criteria, with the following exceptions noted below:

Select samples had elevated MRLs due to sample dilution as a result of high analyte concentrations or matrix interference issues. Results were reported from the dilution analyses, as applicable.

**Reported Results:**

All reported results are acceptable.

**Laboratory qualifiers for NWTPH-Dx:**

- (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.
  - J/UJ-Other qualify affected results.
- (F-13) The chromatographic pattern does not resemble the fuel standard used for quantitation.
  - J/UJ-Chrom qualify affected results.

**Lab Validation Assessment**

Analytical results are usable to meet the project objectives.



## Data Quality Review Statement for Report

Aside from the data quality issues discussed above, the data quality review identified no concerns with respect to the quality or usability of the data presented herein.

The data meet the criteria outlined above, with the noted exceptions. Data were qualified due to compound identification and/or matrix interference issues. No data were rejected and completeness was 100 percent. All results are usable for their intended purpose.

## Appendix A. Data Validation Qualifiers and Definitions

The following lists the data validation qualifier codes and their definitions that were assigned to analytical results in this data validation review process.

### Data Validation Qualifiers and Definitions:

- (R) The sample result is reject due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
  - (DNR) Do not report. A more appropriate result is reported from another analysis or dilution.
- 

## Appendix B. Data Validation Qualified Summary Table

### Laboratory qualifiers:

- (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.
- (F-13) The chromatographic pattern does not resemble the fuel standard used for quantitation.

### Validation qualifiers:

- (J) The result is an estimated quantity.

### Reason codes:

- Chrom = Chromatographic pattern doesn't match the pattern of the calibration standard.
- Other = Other, described in data validation report.

**Appendix B. Validator Qualified Data Summary Table**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Method</b>	<b>Parameter Name</b>	<b>Result</b>	<b>Result Units</b>	<b>Laboratory Qualifier</b>	<b>Validator Qualifier</b>	<b>Reason Code</b>
SS01-13.97cm	A8D0914-01	NWTPH-Dx	Diesel	848	mg/kg	F-13	J	Chrom
SS01-13.97cm	A8D0914-01	NWTPH-Dx	Oil	392	mg/kg	F-03	J	Other
SS02-11.75cm	A8D0914-02	NWTPH-Dx	Diesel	473	mg/kg	F-13	J	Chrom
SS02-11.75cm	A8D0914-02	NWTPH-Dx	Oil	175	mg/kg	F-03	J	Other
SS03-13.97cm	A8D0914-03	NWTPH-Dx	Diesel	207	mg/kg	F-13	J	Chrom
SS03-13.97cm	A8D0914-03	NWTPH-Dx	Oil	147	mg/kg	F-03	J	Other
SS01-13.97cm	A8D0914-01	NWTPH-Dx	Diesel w/ Acid/Silica Gel Cleanup	947	mg/kg	F-13	J	Chrom
SS02-11.75cm	A8D0914-02	NWTPH-Dx	Diesel w/ Acid/Silica Gel Cleanup	526	mg/kg	F-13	J	Chrom
SS03-13.97cm	A8D0914-03	NWTPH-Dx	Diesel w/ Acid/Silica Gel Cleanup	238	mg/kg	F-13	J	Chrom



**Appendix J**  
**Offsite Facility Reviews**

### Listed Facilities

Facility Name And Location	Estimated Distance/Direction/Gradient	Database Listings
Wenatchee Substation 514 Worthen St	Approximately 405' / North / Down-gradient	FINDS, ALLSITES, RCRA NONGEN/NLR, ECHO
Hamptons Auto Repair 601 S Wenatchee Ave	Approximately 659' / West / Cross-gradient	EDR HIST AUTO
Goodyear Tire Wenatchee 703 S Wenatchee Ave	Approximately 707' / Southwest / Up- gradient	ALLSITES, UST
Beryl A Comm 610 Wenatchee Ave	Approximately 739' /West / Cross to up- gradient	ALLSITES, UST, SWRCY
Dwight Cash Inc 600 S Wenatchee Ave	Approximately 753' /West / Cross-gradient	FINDS, ALLSITES, INACTIVE, DRYCLEANERS, RCRA NONGEN/NLR, ECHO
Jerrys Auto Parts 604 S Wenatchee Ave	Approximately 756' / West / Cross-gradient	ICR, FINDS, ALLSITES, UST, CSCSL, NFA
Dick's/Wolfe Service Inc 730 S Wenatchee Ave	Approximately 975' / Southwest / Up- gradient	FINDS, ALLSITES, CSCSL, UST, NFA, IRC
Chuck's Auto Repair 500 S Wenatchee Ave	Approximately 995' / Northwest / Cross to down-gradient	FINDS, ALLSITES, UST, CSCSL, NFA, IRC
BNSF Wenatchee Rail yard 409 S Columbia Street	Approximately 1110' / Northwest / Down to cross-gradient	FINDS, ALLSITES, CSCSL, LUST, SPILLS, HSL, NPDES, UST, IRC
Chevron 94484 759 S Wenatchee Ave	Approximately 1156' / Southwest / Up- gradient	ALLSITES, UST
UNOCAL Service Station 4942 405 S Wenatchee Ave	Approximately 1322' / Northwest / down to cross-gradient	FINDS, ALLSITES, VCP, UST, CSCSL, NFA

#### Wenatchee Substation

This facility was identified in the EDR report as being listed on multiple databases including FINDS, ALLSITES, RCRA NONGEN/NLR, and ECHO databases. This facility has continually operated as an electrical substation from at least the early 1900s to the present. A search of Ecology website and databases did not return any data for this site. However review of the Sanborn maps from 1921, 1928, 1947, and 1949 indicate an above ground storage tank labeled as "Gas Holder" and boilers powered by oil and coal fuel. The 1949 and 1958 Sanborn maps also show a gas tank and associated pump. The historic burning of coal oil and other fuel oils at this facility may be the source of the heavy oil found in MW22. **Based on the distance from the subject property, groundwater flow direction, and available information, this site represents a potential REC at this time.**

#### Hamptons Auto Repair

The site was identified in the EDR report as being listed on the EDR HIST AUTO database. The site operated as a auto repair facility from 2003 to 2010. A search of

Ecology website and databases did not return any data for this site. Based on the distance from the subject property, available information, and type of business this site does not represent a REC at this time.

#### Goodyear Tire Wenatchee

This facility was identified in the EDR report as being listed on two databases including ALLSITES and UST databases. This site had one UST that contained petroleum products that was removed in December of 1999. A search of Ecology website and databases did not return any data for this site. Based on the available information and location of this site, it does not represent a REC at this time.

#### Beryl A Comm

This facility was identified in the EDR report as being listed on multiple databases including ALLSITES, UST, and SWRCY databases. This site contained a UST for used automotive oil. The site is a drop off location for used motor oil from households. A search of Ecology website and databases did not return any data for this site. Based on the distance from the subject property, available information, and no reported releases this site does not represent a REC at this time.

#### Dwight Cash Inc

This facility was identified in the EDR report as being listed on multiple databases including FINDS, ALLSITES, INACTIVE, DRYCLEANERS, RCRA NONGEN/NLR, and ECHO. The site is an inactive dry cleaner site that operated in the 1990s. A search of Ecology website and databases did not return any data for this site. Based on the distance from the subject property, available information, and no reported releases this site does not represent a REC at this time.

#### Jerry's Auto Parts

This facility was identified in the EDR report as being listed on multiple databases including ICR, FINDS, ALLSITES, UST, CSCSL, and NFA databases. On 6/15/1992 five USTs were removed from the Jerry's auto parts facility. These USTs were installed in the 1930s and were last used in 1975. The tanks consisted of three waste oil tanks ranging in size from 100, 300, and 500 gallons and two 1,000 gallon tanks that reportedly contained gasoline. The tanks were removed and petroleum contaminated soil was observed and excavated to the extent feasible. A four inch thick layer of diesel contaminated soil was left in place and on 8/3/1992 the site was placed on the Leaking Underground Storage Tank (LUST) list with the Cleanup ID number 8437. Cleanup report documentation was available for review on the Ecology website. The Ecology cleanup site details sheet states that cleanup was completed at the site on 2/2/2002 and Ecology issued a determination of no further action (NFA) for the site on 2/7/2002. Based on the NFA determination from Ecology and the distance and location from the subject property, this site does not represent a REC at this time.

#### Dick's/Wolfe Service Inc

This facility was identified in the EDR report as being listed on multiple databases including FINDS, ALLSITES, CSCSL, UST, NFA, and IRC databases. This site contained a regulated UST for fueling and an auto repair facility. On 7/30/1993 the site was placed on the Leaking Underground Storage Tank (LUST) list for a confirmed diesel release to soil with the Cleanup ID number 9186. Cleanup report documentation was not available for review on the Ecology website. The Ecology cleanup site details sheet states that cleanup was completed at the site on 1/18/2006 and Ecology issued a determination of no further action (NFA) for the site on 1/18/2006. Based on the NFA determination from Ecology and the distance and location from the subject property, this site does not represent a REC at this time.

#### Chucks Auto Repair

This facility was identified in the EDR report as being listed on multiple databases including FINDS, ALLSITES, UST, CSCSL, NFA, and IRC databases. This site contained a regulated UST for fueling and an auto repair facility. On 3/5/1992 the site was placed on the Leaking Underground Storage Tank (LUST) list for a confirmed diesel release to soil with the Cleanup ID number 10113. Cleanup report documentation was not available for review on the Ecology website. The Ecology cleanup site details sheet states that cleanup was completed at the site on 12/4/2006 and Ecology issued a determination of no further action (NFA) for the site on 12/4/2006. Based on the NFA determination from Ecology and the distance and location from the subject property, this site does not represent a REC at this time.

#### BNSF Wenatchee Rail Yard

This facility was identified in the EDR report as being listed on multiple databases including FINDS, ALLSITES, CSCSL, LUST, SPILLS, HSL, NPDES, UST, and IRC databases. This site is an active rail yard and contains a regulated UST for fueling. . On 12/30/1991 the site was placed on the Leaking Underground Storage Tank (LUST) list for a confirmed diesel release to soil and groundwater with the Cleanup ID number 5820. Limited report documentation was available for review on the Ecology website. The Ecology cleanup site details sheet states that a diesel release has been confirmed to soil and groundwater from both diesel USTs. The site was placed on the Hazardous Site Listing/NPL list with a site rank of 5. Site ranks are determined by Ecology on a scale from 1 to 5 with 5 being the most hazardous to human health and the environment. The site is currently listed as awaiting clean up and currently groundwater monitoring is ongoing at the site. **Based on the distance and location from the subject property, and the nature of the release this site represents a potential REC at this time.**

#### Chevron 94484



This facility was identified in the EDR report as being listed on multiple databases including ALLSITES and UST databases. This site contained a regulated UST for fueling equipment. A search of Ecology website and databases did not return any data for this site. Based on the distance from the subject property, available information, and no reported releases this site does not represent a REC at this time.

UNOCAL Service Station 4942

This facility was identified in the EDR report as being listed on multiple databases including FINDS, ALLSITES, VCP, UST, CSCSL, and NFA databases. This site contained regulated USTs for fueling equipment. As detailed in the Remedial Soil Excavation report dated 2/9/2005, seven USTs were removed from the UNOCAL facility. Four of these USTs were installed in the late 1960s and were and were fiberglass construction. Each of these tanks were in good condition. The three other tanks appeared to be pre 1960s non UNICAL steel tanks. The tanks consisted of two 300 and one 1,000 gallons tanks that reportedly contained petroleum products. The tanks were removed and petroleum contaminated soil was observed and excavated. On 8/25/1991 the site was placed on the Hazardous Site Listings/NPL list with the Cleanup ID number 7013. Cleanup report documentation was available for review on the Ecology website. The Ecology cleanup site details sheet states that cleanup was completed at the site on 4/26/2005 and Ecology issued a determination of no further action (NFA) for the site on 4/26/2005. Based on the NFA determination from Ecology and the distance and location from the subject property, this site does not represent a REC at this time.

The remaining facilities listed in the database report do not appear to represent RECs to the site at this time based upon regulatory status, apparent topographic gradient, and/or distance from the site.

Unmapped facilities are those that do not contain sufficient address or location information to evaluate the facility listing locations relative to the site.

**Appendix K**  
**Apex Forensics - Characterization MW22-**  
**Product**

August 1, 2018

Craig Hultgren  
HydroCon LLC  
314 W 15<sup>th</sup> Street, Suite 300  
Vancouver, WA 98660

Dear Mr. Hultgren:

Included are the results from the characterization of the product sample MW22-Product for your Coleman Oil Wenatchee, #2017-074 project. The sample was submitted in good condition to Apex Forensics on April 14, 2018. The sample was assigned work order number A8D0623 and placed in a refrigerator maintained at 4°C until removed for sample processing. The focus of this investigation was to provide identification and characterization of the sample using the American Society for Testing and Materials (ASTM) Method D2887-14.

The ASTM Method 2887-14 was completed in order to determine the boiling range and chemical composition of the material present in the sample MW22-Product. An aliquot of the sample was diluted with carbon disulfide and analyzed using an Agilent 6890 Gas Chromatograph (GC) fitted with a Flame Ionization Detector (FID). The GC/FID trace generated for the sample is enclosed. GC/FID traces of the method blank associated with the analytical batch as well as reference standards are also provided.

The GC/FID traces of the sample yielded detailed information on the boiling range and general chemical composition of the material that elutes under the ASTM Method 2887-14 GC/FID conditions between 36°C and 545°C. A detailed summary characterizing the material identified in the sample MW22-Product is enclosed.

It was requested that we review the GC/FID trace generated in order to evaluate whether R-99 (biodiesel) was present in the sample MW22-Product. Comparison of the GC/FID trace generated for a standard of R-99 provided by Coleman Oil shows that R-99 was not present in the sample MW22-Product. Based on the GC/FID trace generated, the material present in the sample MW22-Product is indicative of coal tar or a coal tar-based material.

Please contact us if additional consultation is needed by our firm in the interpretation of the analytical results provided or if you would like to arrange for long term storage of the

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

Respectfully,



Kurt Johnson, Senior Chemist  
Director of Forensic Services  
Apex Laboratories, LLC

Enclosures

Date of Report: 08/01/18  
Date Received: 04/14/18  
Project: Coleman Oil Wenatchee, #2017-074, A8D0623  
Date Extracted: 04/24/18  
Date Analyzed: 04/24/18

**RESULTS FROM THE ANALYSIS OF THE PRODUCT SAMPLE  
FOR FORENSIC EVALUATION  
BY CAPILLARY GAS CHROMATOGRAPHY  
USING A FLAME IONIZATION DETECTOR (FID)**

Sample ID

GC Characterization

MW22-Product  
A8D0623-01

The GC trace using the flame ionization detector (FID) showed the presence of medium to high boiling compounds. The patterns displayed by these peaks are indicative of coal tar or a coal tar based material.

The medium to high boiling compounds appear as an irregular pattern of peaks on top of a slight hump or unresolved complex mixture (UCM). This material elutes from approximately  $n\text{-C}_{10}$  to  $n\text{-C}_{40}$ . This correlates with a temperature range of approximately 174°C to 522°C. Within this range, abundant peaks are present which are indicative of polycyclic aromatic hydrocarbons (PAHs).

The large peak seen near 25 minutes on the GC/FID trace is pentacosane, added as a quality assurance check for this GC analysis.

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

PO#

Company: HydroCon Project Mgr: Craig Hultgren Project Name: Coleman Oil Wamatchee Project # 2017-074  
 Address: \_\_\_\_\_ Phone: (360) 998-2402 Fax: \_\_\_\_\_ Email: Craig.hultgren@hydrocon.com

Sampled by: Chris Daschel

						ANALYSIS REQUEST																								
SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 VOCs Full List	8260 RBDM VOCs	8260 HVOCs	8260 BTEX VOCs	8270 SVOC	8270 SIM PAHs	8082 PCBs	600 TIO	RCRA Metals (8)	TCLP Metals (8)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Ti, V, Zn	TOTAL DISS TCLP	1200- COLS	1200-Z								
<u>MW22-product</u>		<u>7/13/18</u>	<u>0955</u>	<u>oil</u>	<u>2</u>																									

Normal Turn Around Time (TAT) = 10 Business Days  YES  NO

TAT Requested (circle): 1 Day, 2 Day, 3 Day, 4 DAY, 5 DAY, Other: \_\_\_\_\_

SPECIAL INSTRUCTIONS: For Kurt Johnson

**SAMPLES ARE HELD FOR 30 DAYS**

RELINQUISHED BY: Signature: _____ Date: <u>7/14/18</u>	RECEIVED BY: Signature: <u>(Signature)</u> Date: <u>7/14/18</u>	RELINQUISHED BY: Signature: _____ Date: _____	RECEIVED BY: Signature: _____ Date: _____
Printed Name: <u>Chris Daschel</u> Time: <u>1030</u>	Printed Name: <u>Sumner</u> Time: <u>1030</u>	Printed Name: _____ Time: _____	Printed Name: _____ Time: _____
Company: <u>HydroCon</u>	Company: <u>WSP</u>	Company: _____	Company: _____

**APEX LABS COOLER RECEIPT FORM**

Client: Hydrocon Element WO#: A8 DOE23

Project/Project #: Coleman Oil Wenatchee

**Delivery info:**

Date/Time Received: 4/14/18 @ 1030 By: [Signature]

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

**Cooler Inspection** Inspected by: [Signature] : 4/14/18 @ 1030

Chain of Custody Included? Yes  No  Custody Seals? Yes  No

Signed/Dated by Client? Yes  No

Signed/Dated by Apex? Yes  No

	<u>Cooler #1</u>	<u>Cooler #2</u>	<u>Cooler #3</u>	<u>Cooler #4</u>	<u>Cooler #5</u>	<u>Cooler #6</u>	<u>Cooler #7</u>
Temperature (deg. C)	<u>1.3</u>						
Received on Ice? (Y/N)	<u>(Y)</u>						
Temp. Blanks? (Y/N)	<u>(N)</u>						
Ice Type: (Gel/Real/Other)	<u>(Real)</u>						
Condition:	<u>good</u>						

Cooler out of temp? (Y/N) Possible reason why: (N)  
If some coolers are in temp and some out, were green dot applied to out of temperature samples? Yes/No/NA (NA)

**Samples Inspection:** Inspected by: AKC : 4/14/18 @ 1535

All Samples Intact? Yes  No  Comments: \_\_\_\_\_

Bottle Labels/COCs agree? Yes  No  Comments: \_\_\_\_\_

Containers/Volumes Received Appropriate for Analysis? Yes  No  Comments: \_\_\_\_\_

Do VOA Vials have Visible Headspace? Yes  No  NA

Comments: 22 HS

Water Samples: pH Checked and Appropriate (except VOAs): Yes  No  NA

Comments: \_\_\_\_\_

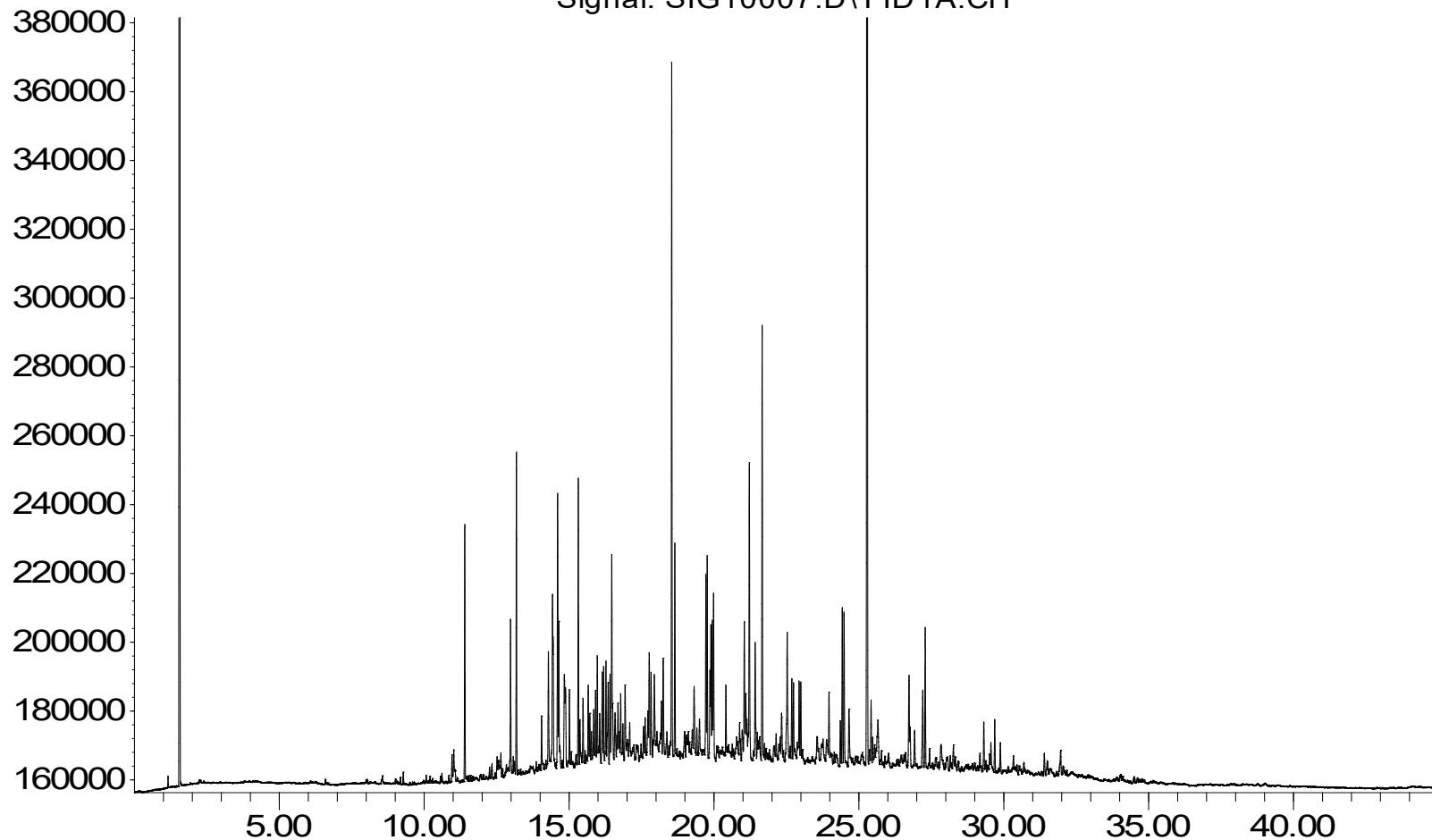
**Additional Information:** \_\_\_\_\_

Labeled by: AKC Witness: [Signature] Cooler Inspected by: AKC See Project Contact Form: Y

**Product Sample: MW22 Product (A8D0623-01)**  
**Hydrocon LLC - Coleman Wenatchee**  
**Date Analyzed: April 24, 2018**

Response\_

Signal: SIG10007.D\FID1A.CH



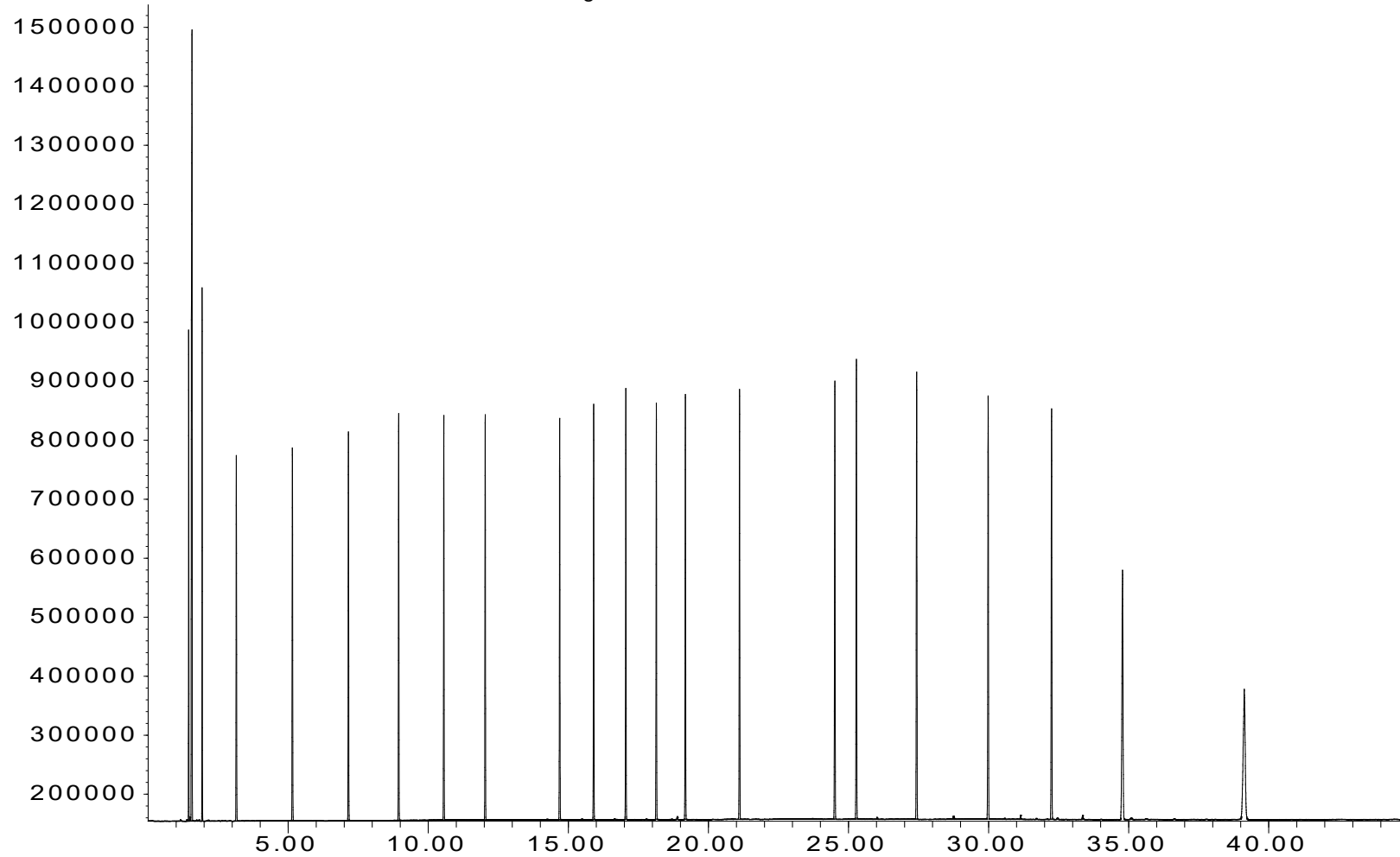
Time



**ASTM Reference Sample: 2887 Alk A**  
**Hydrocon LLC - Coleman Wenatchee**  
**Date Analyzed: April 24, 2018**

Response\_

Signal: SIG 10002.D\FID 1A.CH

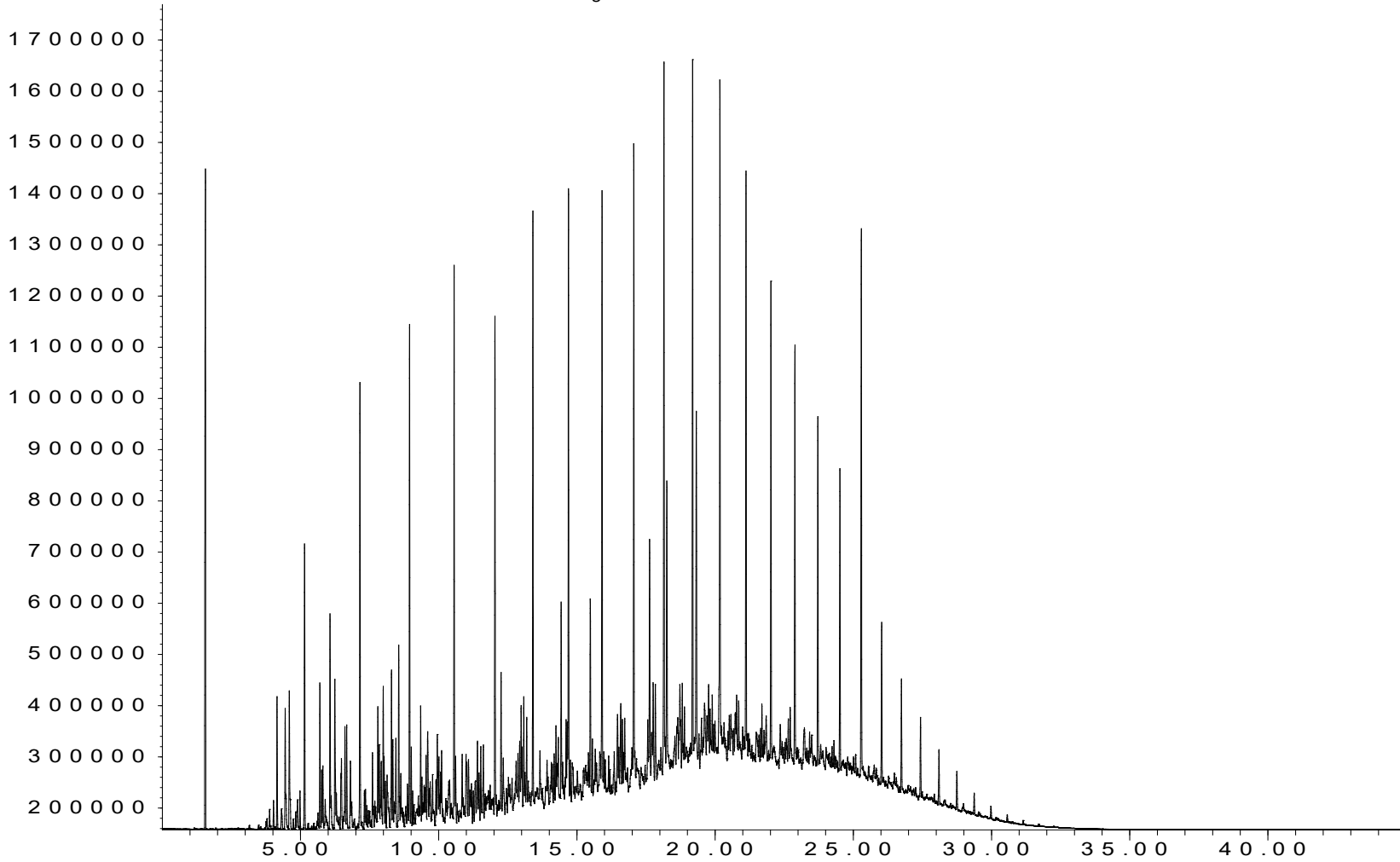


Time

**ASTM Reference Sample: 2887 Gas/Oil A**  
**Hydrocon LLC - Coleman Wenatchee**  
**Date Analyzed: April 24, 2018**

Response\_

Signal: SIG10003.D\FID1A.CH

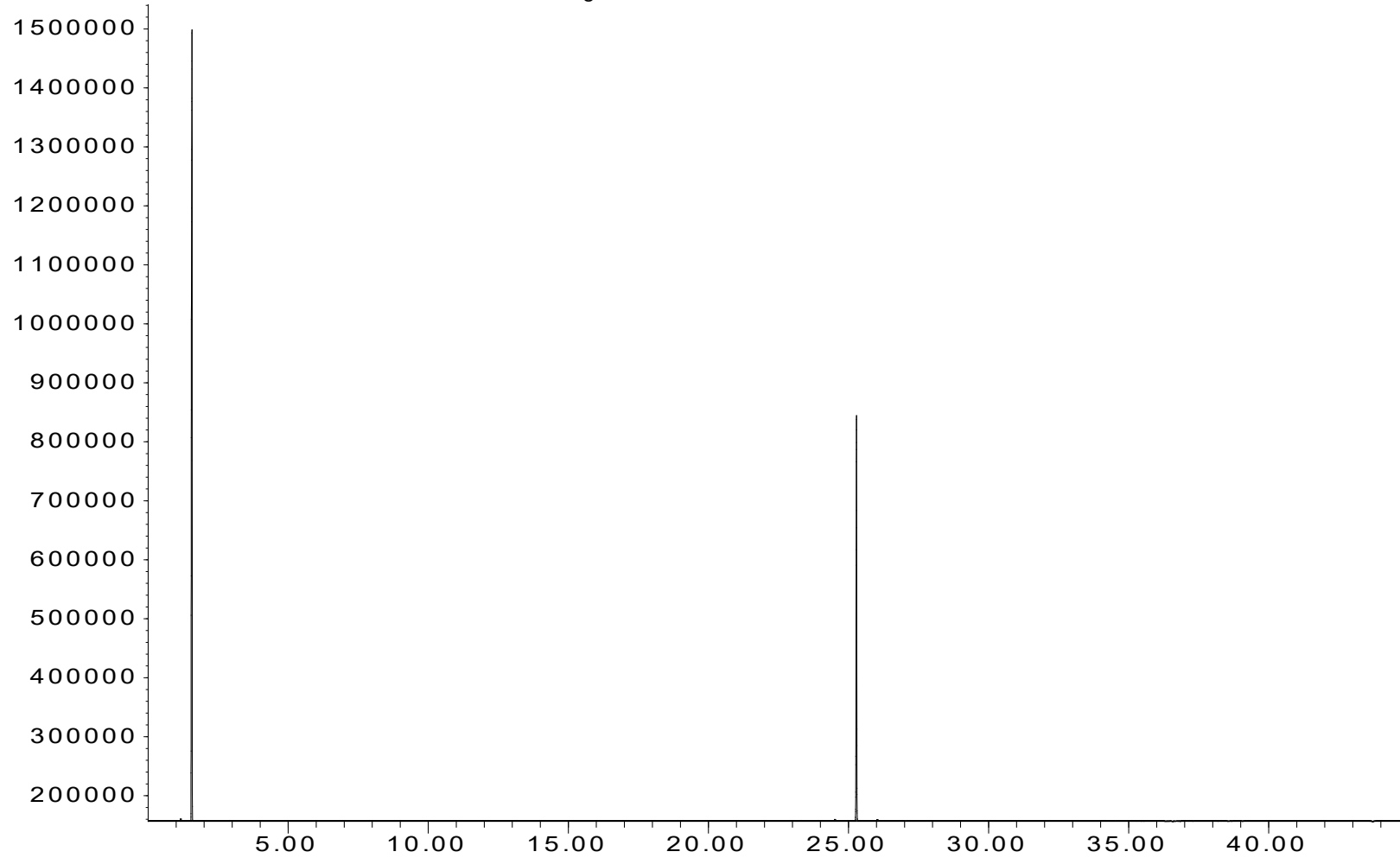


Time

**QC Sample: Method Blank**  
**Hydrocon LLC - Coleman Wenatchee**  
**Date Analyzed: April 24, 2018**

Response\_

Signal: SIG 10006.D\FID1A.CH



Time

**Appendix L**  
**Offsite Wells Logs**





**Appendix M**  
**Terrestrial Ecological Evaluation**

# Terrestrial Ecological Evaluation for Coleman Oil Company Wenatchee, Washington

Prepared for:  
HydroCon, LLC  
1339 Commerce Avenue, Suite 211  
Longview, WA 98632

Project # 112.01

Prepared by:  
Loowit Consulting Group, LLC  
312 Gray Road  
Castle Rock, WA 98611  
360.431.5118

September 10, 2018





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## SIGNATURE PAGE

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned:



---

Timothy J. Haderly, Principal Scientist/Owner  
Loowit Consulting Group, LLC

## LIST OF ACRONYMS

BAF	Bioaccumulation Factor
BTEX	Benzene, Toluene, Ethylbenzene, and Total Xylenes
CAP	Cleanup Action Plan
DRPH	Diesel Range Petroleum Hydrocarbons
GRPH	Gasoline Range Petroleum Hydrocarbons
MDL	Method Detection Limit
MTCA	Model Toxics Control Act
NFA	No Further Action
ORPH	Oil Range Petroleum Hydrocarbons
RCW	Revised Code of Washington
TEE	Terrestrial Ecological Evaluation
TPH	Total Petroleum Hydrocarbons
VCP	Voluntary Cleanup Program
WAC	Washington Administrative Code

## INTRODUCTION

### Purpose and Need

Loowit Consulting Group, LLC (LCG) was retained by HydroCon, LLC to conduct a Terrestrial Ecological Evaluation (TEE) at the Coleman Oil Company site located at 600 S Worthen St. in Wenatchee, Washington (Figure 1). On March 17, 2017, the Wenatchee Fire Department reported the presence of a sheen and petroleum odor on the Columbia River between Thurston and Chehalis Streets in Wenatchee, Washington. A subcontractor hired by Coleman Oil Company conducted a line tightness test on March 24, 2017 on underground pipe lines used to transfer fuel from ASTs at Tank Farm A to the truck loading rack on the property. Two of the fuel lines would not hold pressure: the R99 renewable diesel fuel line and the B75 biodiesel fuel line. A review of Coleman Oil inventory records indicated that the release was most likely from the R99 renewable diesel fuel line.

As part of an Agreed Order under the Washington State Model Toxics Control ACT (MTCA) WAC 173-340, Coleman Oil has conducted additional subsurface investigations to further define the extent of soil and groundwater contamination from the renewable diesel fuel spill. Under WAC 173-340, a TEE is required to evaluate threats to plants, soil biota, and wildlife from contaminated soils at a cleanup site.

### Site Description

The subject site consists of a single parcel that was operated as a bulk fuel terminal and commercial fueling facility until early 2018. The bulk fuel tanks have been removed while the commercial fueling station is still in operation. Site specifics include:

<u>Site Address:</u>	600 S Worthen St. Wenatchee, WA 98801 (Chelan County Assessor) or 3 Chehalis St, Wenatchee, WA 98801
<u>Current Owner:</u>	Coleman Services IV, LLC
<u>Tax Parcel Number:</u>	222011693005
<u>Legal Description:</u>	Section 11, Township 22 North, Range 20 East, W.M.
<u>Property Size:</u>	Approximately 1.27 acres
<u>Jurisdiction:</u>	City of Wenatchee

The subject site is situated between Chehalis Street to the north, Worthen Street to the east, and BNSF railroad to the west (Figure 2). To the east of Worthen St. is the Apple Capital Loop Trail, overhead electrical lines, a narrow vegetated riparian area, and a very steep slope to the Columbia River. Property east of the Apple Capital Loop Trail, including the vegetated riparian area, is owned by Chelan County PUD. Topography at the site is flat with stormwater directed to storm drains in the adjacent city streets.

## METHODS

### Desktop Review

Prior to visiting the subject site, LCG conducted a desktop review of readily available mapping resources and other pertinent information including:

- Chelan County GIS (<http://maps.co.chelan.wa.us/chelancountyGIS/>). This source provided parcel information, aerial photographs, physical attributes, and other information from the Chelan County Assessor.
- US Fish and Wildlife Service National Wetlands Inventory Wetlands Mapper (<https://www.fws.gov/wetlands/data/mapper.html>). This mapping source depicts wetlands and streams throughout the United States.
- US Department of Agriculture Natural Resources Conservation Service Web Soil Survey (<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>). This source depicts mapped soils including hydric soils throughout the United States.
- Washington Department of Natural Resources Forest Practices Application Mapping Tool (<https://fpamt.dnr.wa.gov/default.aspx>). This mapping source depicts streams and wetlands in Washington State.
- Washington Department of Fish and Wildlife Salmonscape (<http://apps.wdfw.wa.gov/salmonscape/map.html>). This mapping source depicts streams and fish distribution in Washington State.
- Washington Department of Fish and Wildlife Priority Habitat and Species (<http://apps.wdfw.wa.gov/phsontheweb/>). This mapping source depicts priority habitats and species throughout Washington State.

## TEE PROCESS

The MTCA TEE process is designed to identify sites which have the potential to impact ecological receptors from surface and/or shallow contaminated soils. A seven step process is used to complete the TEE process.

## Step 1 – Characterization of the Site

The Coleman Oil Company site has been properly characterized by the collection and analysis of groundwater samples, surface water samples, subsurface soil samples, shoreline soil samples, and sediment samples within and adjacent to the subject site (Figure 2). Results of these analyses indicate varying concentrations of:

- Gasoline Range Petroleum Hydrocarbons (GRPH)
- Diesel range petroleum hydrocarbons (DRPH)
- Oil Range Petroleum Hydrocarbons (ORPH)
- Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX)

## Step 2 – Evaluation of Exclusions

To determine if a site qualifies for exclusion, the site is evaluated against four exclusions listed below. The Coleman Oil Site in Wenatchee does not qualify for exclusion as summarized below:

**Exclusion #1:** Will all soil contamination be located at least 6 feet beneath the ground surface (conditional point of compliance)? **[NO]**

"Yes" to this question, the site qualifies for exclusion with institutional controls.

Will all soil contamination be located at least 15 feet beneath the ground surface? **[NO]**

"Yes" to this question, the site qualifies for exclusion, institutional controls not required.

**Exclusion #2:** Will all soil contamination be covered by buildings, paved roads, pavement, or other physical barriers that will prevent plants or wildlife from being exposed? **[NO]**

"Yes" to this question qualifies for exclusion, with institutional controls.

**Exclusion #3:** Is there less than 1.5 acres of contiguous undeveloped land on the site, or within 500 feet of any area of the site affected by hazardous substances other than those listed in WAC 173-340-7491(1)(c)(ii)? **[NO]**

**AND**

Is there less than 0.25 acres of contiguous undeveloped land on or within 500 feet of any area of the site affected by hazardous substances listed in WAC 173-340-7491(1)(c)(ii)? **[NO]**

(Must answer "yes" to both questions to qualify for this exclusion. Other factors decide whether you will need institutional controls at your site if you use the exclusion.)

**Exclusion #4:** Are concentrations of hazardous substances in the soil less than or equal to natural background concentrations of those substances at the point of compliance? **[NO]**

“Yes” to this question qualifies for exclusion, institutional controls not required.

### Step 3 – Select Evaluation Method

The TEE Form (Appendix A) is used to determine which evaluation method is most appropriate for the subject site.

### Step 4 – Conduct the TEE

This step in the process determines if the (1) the TEE process can be ended, (2) if a simplified TEE is required, or (3) a site-specific TEE is required. The simplified TEE for the Coleman Oil site in Wenatchee can be ended according to the results for Table 749-1 (Appendix B). A detailed summary of answers listed in Table 749-1 is included in the Results and Discussion section.

### Step 5 – Identify Areas of Potential Ecological Concern

Not required

### Step 6 – Conduct the Feasibility Study

Not required

### Step 7 – Document the Process

Not Required

## RESULTS and DISCUSSION

LCG conducted a TEE at the Coleman Oil site in Wenatchee, Washington as part of the requirements of MTCA in WAC 173-340. The Coleman Oil site is located adjacent to the Columbia River that has a narrow riparian area providing limited habitat to terrestrial wildlife. Based on a review of site conditions, conversations with Ecology staff, and putting the site through the TEE process; it was determined that the site does not qualify for an exclusion and a simplified TEE for the Coleman Oil site in Wenatchee can be ended according to the results for Table 749-1 (Appendix B).

### Table 749-1 Results

*Question #1* – This question assigns points for the size (acres) of “undeveloped” land on and within 500 feet of a project site. Undeveloped land means land that is not covered with buildings, roads, paved areas or other barriers preventing wildlife from feeding on plants, earthworms, insects or other food in or on the soil. The only areas qualifying as

undeveloped lands at the project site is the riparian area along the Columbia River. This area is comprised of approximately 1.47 acres (Figure 3) thereby receiving a score of 7 points.

*Question 2* – This question asks if the property is industrial or commercial. The subject site is classified as industrial property by the City of Wenatchee (2017),. The question does not make clear if the property is just the subject site or also includes the area within 500 feet of the subject site. Taking the more conservative approach, this question was assigned the lower score of 1 but an argument for a higher score of 3 could be made.

*Question #3* – This question assigns points for the quality of habitat. A score of 2 was assigned as the habitat in the riparian area is neither high quality or low quality given location in the landscape.

*Question 41* – This question asks if the undeveloped land is likely to attract wildlife. The answer is yes as birds and mammals can easily visit and utilize the riparian area along the Columbia River. A score of 1 point was assigned.

*Question 5* – This question asks if a list of soil contaminants are present. None of the listed contaminants have been identified so a score of 4 points was assigned.

*Question #* – This question adds the scores from questions #2 through #5 which is 8 points. If this score is higher than the score listed in Question #1 (7 points), the simplified terrestrial ecological evaluation may be ended under WAC 173-34-7492(2)(a)(ii). Eight points is higher than 7 points so the simplified TEE for the Coleman Oil site in Wenatchee can be ended.

## CONCLUSIONS

The simplified TEE for the Coleman Oil site in Wenatchee can be ended according to the results documented in Table 749-1 (Appendix A).

## LIMITATIONS

The findings and conclusions contained in this document were based on information and data available at the time this document was prepared and evaluated using standard Best Professional Judgement. LCG assumes no responsibility for the accuracy of information and data generated by others. Local, State, and Federal regulatory agencies may or may not agree with the findings and conclusions contained in this document.



## REFERENCES

Anderson, P., Meyer, S., Olson, P., Stockdale, E. 2016. Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State. Shorelands and Environmental Assistance Program Washington State Department of Ecology Olympia, Washington. Publication no. 16-06-029. October 2016 Final Review.

Chelan County GIS Maps.

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Revised Code of Washington (RCW) Chapter 70.105D.

Washington Administrative Code (WAC) Chapter 173-340.

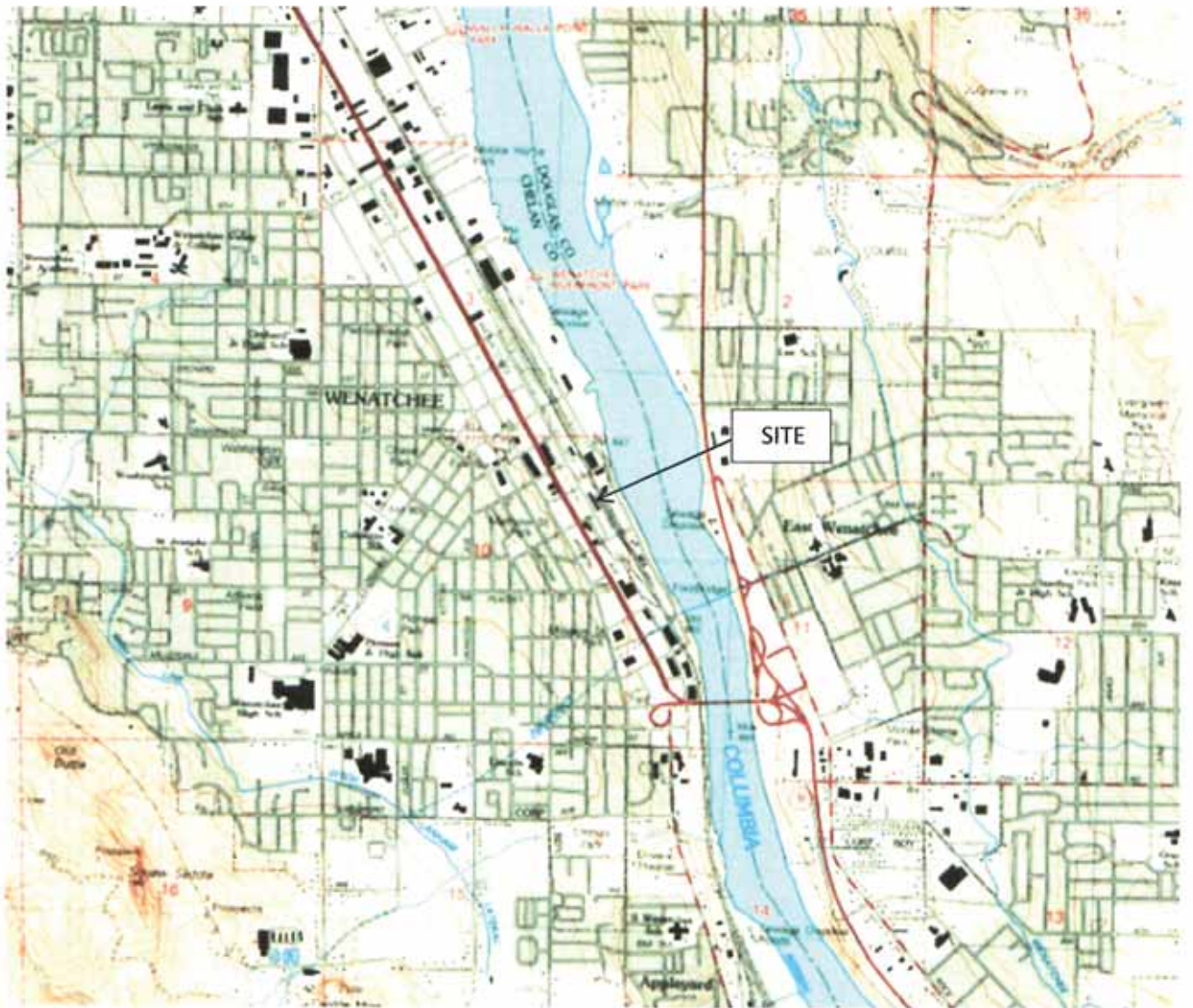
Wenatchee City Code. Title 12 – Environmental Protection.

## **FIGURES**

**Figure 1 – Site Location Map**

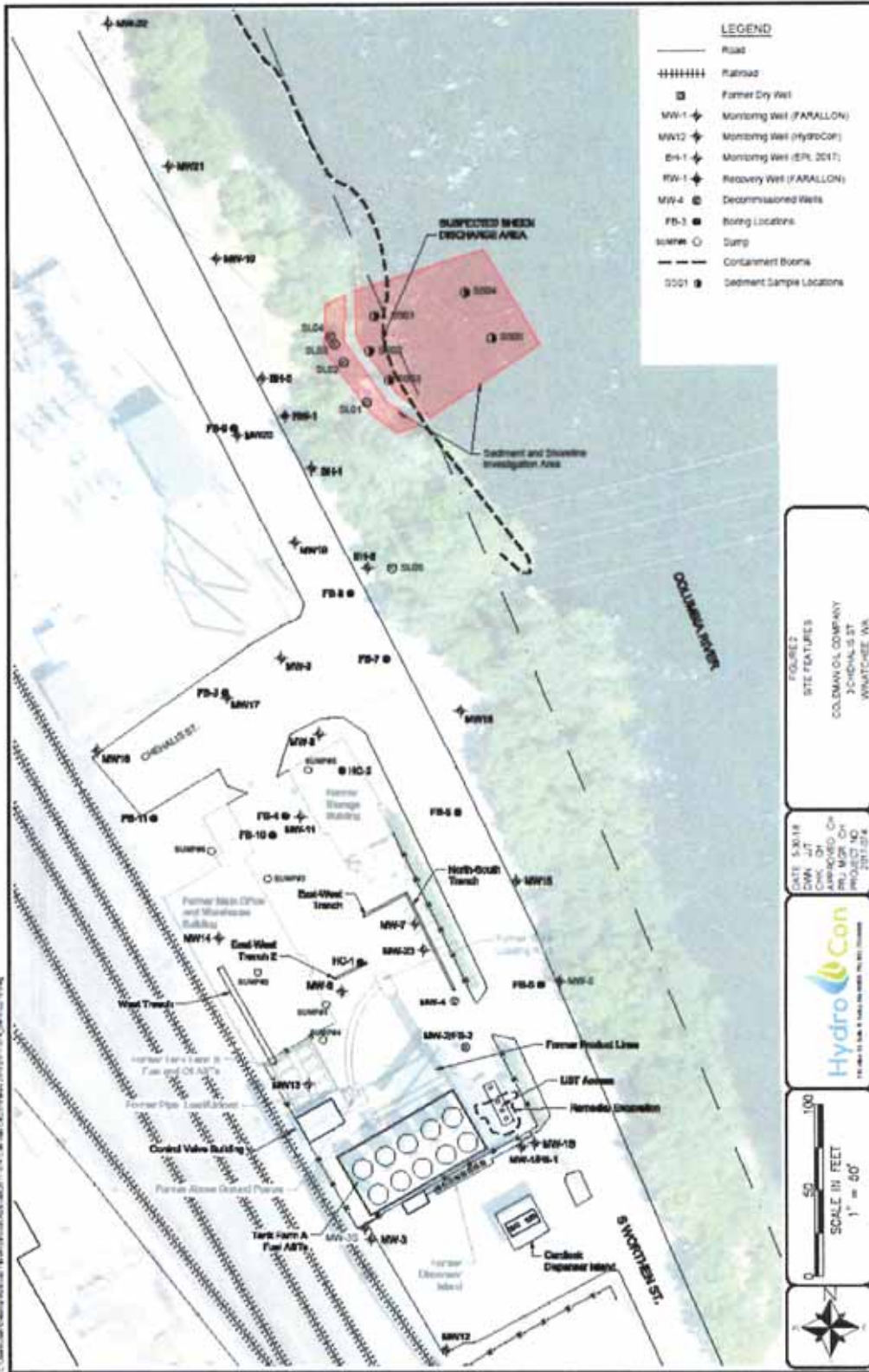
**Figure 2 – Site Map**

**Figure 3 – Riparian Areas (Undeveloped Lands)**



Loowit Consulting Group, LLC  
Natural Resources & Project  
Management  
360.431.5118

Figure 1  
Site Location Map



C:\Users\johndoe\Documents\Projects\HydroCon\2017-014\2018-05-20\2018-05-20\_014\_SiteMap\_180518.dwg

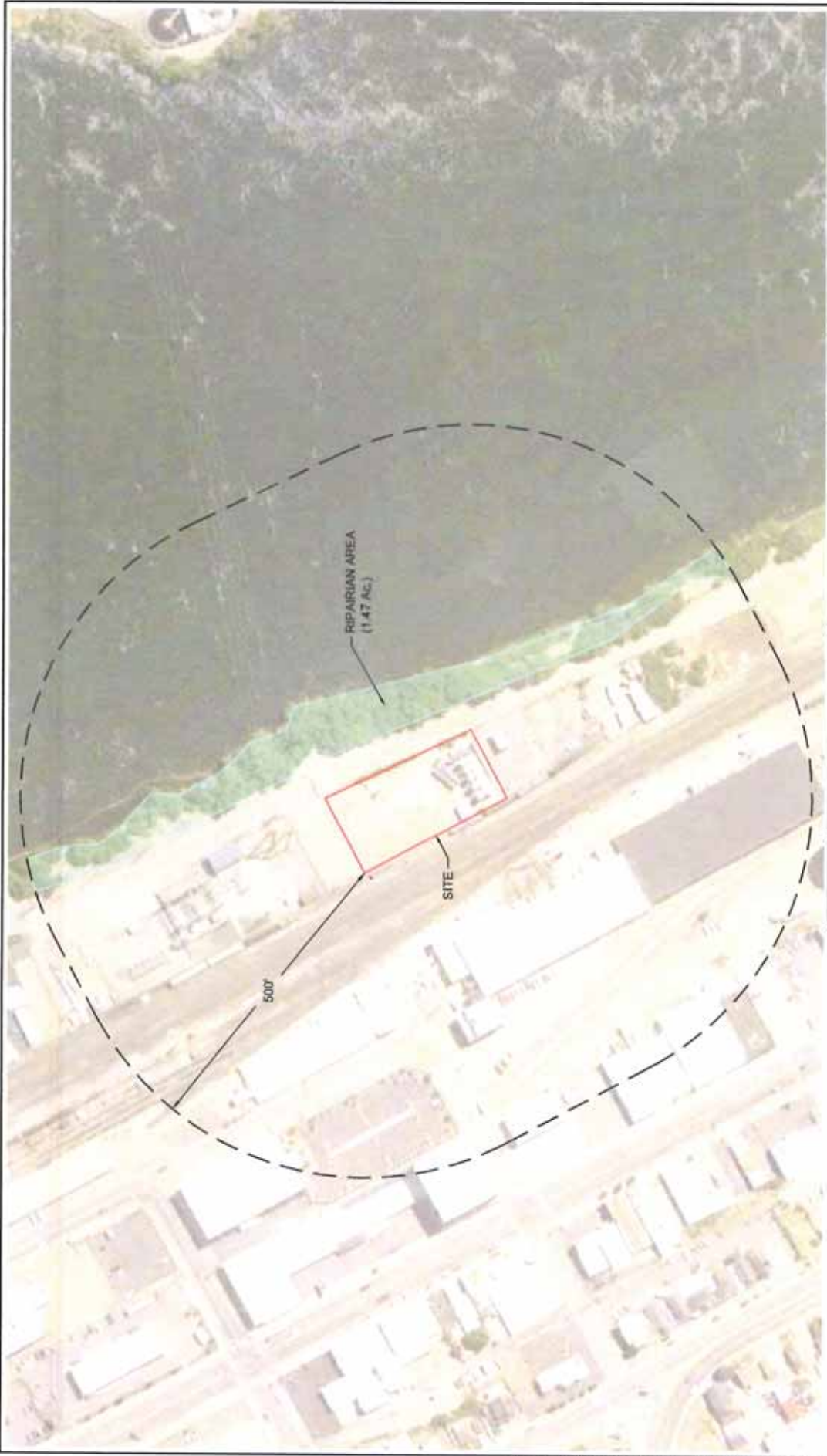


FIGURE 3  
 RIPARIAN AREA  
 COLEMAN OIL COMPANY  
 3 CHEHALIS ST.  
 WENATCHEE, WA.

DATE: 6-30-18  
 DWR: JTT  
 CHK: TH  
 APPROVED: TH  
 PRJ. MGR: CH  
 PROJECT NO:  
 2017-074



## **Appendix A**

### **Table 749-1**

**Table 749-1  
Simplified Terrestrial Ecological  
Evaluation - Exposure Analysis Procedure  
under WAC 173-340-7492 (2)(a)(ii).a**

1.47 acres	Estimate the area of contiguous (connected) undeveloped land on the site or within 500 feet of any area of the site to the nearest 1/2 acre (1/4 acre if the area is less than 0.5 acre). "Undeveloped land" means land that is not covered by existing buildings, roads, paved areas or other barriers that will prevent wildlife from feeding on plants, earthworms, insects or other food in or on the soil.	
7	1) From the table below, find the number of points corresponding to the area and enter this number in the box to the right.	
	Area (acres)	Points
	0.25 or less	4
	0.5	5
	1.0	6
	1.5	7
	2.0	8
	2.5	9
	3.0	10
3.5	11	
4.0 or more	12	
1	2) Is this an industrial or commercial property? See WAC 173-340-7492 (3)(c). If yes, enter a score of 3 in the box to the right. If no, enter a score of 1.	
2	3) Enter a score in the box to the right for the habitat quality of the site, using the rating system shown below <sup>b</sup> . (High = 1, Intermediate = 2, Low = 3)	
1	4) Is the undeveloped land likely to attract wildlife? If yes, enter a score of 1 in the box to the right. If no, enter a score of 2. See footnote c.	
4	5) Are there any of the following soil contaminants present: Chlorinated dibenzo-p-dioxins/dibenzofurans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, pentachlorobenzene? If yes, enter a score of 1 in the box to the right. If no, enter a score of 4.	
8	6) Add the numbers in the boxes on lines 2 through 5 and enter this number in the box to the right. If this number is larger than the number in the box on line 1, the simplified terrestrial ecological evaluation may be ended under WAC 173-340-7492 (2)(a)(ii).	

**Footnotes:**

**a** It is expected that this habitat evaluation will be undertaken by an experienced field biologist. If this is not the case, enter a conservative score (1) for questions 3 and 4.

**b** Habitat rating system. Rate the quality of the habitat as high, intermediate or low based on your professional judgment as a field biologist. The following are suggested factors to consider in making this evaluation:

Low: Early successional vegetative stands; vegetation predominantly noxious, nonnative, exotic plant species or weeds. Areas severely disturbed by human activity, including intensively cultivated croplands. Areas isolated from other habitat used by wildlife.

High: Area is ecologically significant for one or more of the following reasons: Late-successional native plant communities present; relatively high species diversity; used by an uncommon or rare species; priority habitat (as defined by the Washington department of fish and wildlife); part of a larger area of habitat where size or fragmentation may be important for the retention of some species.

Intermediate: Area does not rate as either high or low.

**c** Indicate "yes" if the area attracts wildlife or is likely to do so. Examples: Birds frequently visit the area to feed; evidence of high use by mammals (tracks, scat, etc.); habitat "island" in an industrial area; unusual features of an area that make it important for feeding animals; heavy use during seasonal migrations.

**APPENDIX N**

**Additional Interim Action #3 Work Plan**

**Soil and Sediment Sampling**

**Pending**