SRI Addendum - Uplands Soil Characterization Report

Coleman Oil Company Facility
3 East Chehalis Street
Wenatchee, Washington

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

March 6, 2019

Prepared by:

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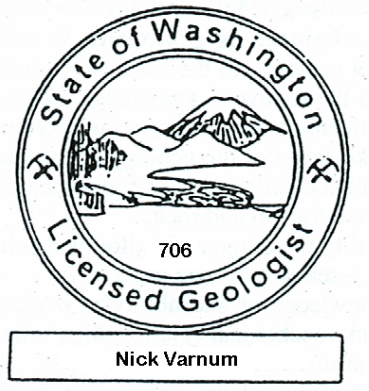

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Table of Contents

Figures

Tables

Appendices

Acronyms

AIA	Additional Interim Action
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and total xylenes
COC	Chemical of Concern
Coleman Oil	Coleman Oil Company
CUL	cleanup level
CVB	Control Valve Building
DRPH	diesel range petroleum hydrocarbons
Ecology	Washington Department of Ecology
EDB	1,2-dibromoethane
EDC	1,2-dichloroethane
EPA	Environmental Protection Agency
gpm	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
MTCA	Model Toxics Control Act
ORPH	oil range petroleum hydrocarbons
OWS	oil water separator
PID	photoionization detector
SAP	Sampling and Analysis Plan
R99	R99 Renewable Diesel

1.0 INTRODUCTION

HydroCon Environmental, LLC (HydroCon), has prepared this report on behalf of Coleman Oil Company (Coleman Oil) to characterize the nature and extent of soil contamination near monitoring well MW13 that was discovered during subsurface investigations related to the Supplemental Remedial Investigation (SRI) performed at the site. This contamination is a separate issue than the R99 Renewable Diesel (R99) release and requires further characterization to identify the source and the extent of subsurface impact.

This addendum has been prepared to supplement 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 the Washington State Department of Ecology (Ecology) with an effective date of September 18, 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 Coleman Oil Property and adjacent properties where hazardous substances have come to be located in soil, groundwater, and surface water at concentrations exceeding applicable cleanup levels (herein referred to as the Site) as a result of releases at the Coleman Oil Property.

HydroCon prepared an SRI Addendum - Additional Upland Soil and River Sediment Characterization Work Plan dated December 12, 2018 (HydroCon 2018e) to assess the source and the nature and extent of soil contamination near MW13 and further assess the extent of diesel contamination in Columbia River sediment in the observed Sheen Discharge Area. Supporting documentation is found in the attachments to the SRI Work Plan (HydroCon 2018a) and includes Standard Operating Procedures (SOPs) and field forms that will be used during the investigation.

Due to safety concerns for performing the sediment sampling (e.g., winter weather, road and river conditions), the soil investigation was performed independently of the sediment work. This report documents the results of the uplands soil characterization work.

2.0 BACKGROUND INFORMATION

The following section provides a summary of the Site location and description, geologic setting, historical land use, environmental history, and contaminants and media of concern at the Site. Most of the information provided below is summarized from the SRI Work Plan (HydroCon 2018a) and the Draft SRI Report (HydroCon 2018b).

2.1 Site Description

The Site is located at 3 Chehalis Street in Wenatchee, Washington. The Site is located nearly adjacent to the west side of the Columbia River. Land use near the Site is primarily industrial (Figure 1).

2.2 Site History

This section provides a brief Site history, focusing on the discovery of a release of diesel in March 2017. Additional site history is documented in the SRI Report.

The Site has been in operation as a bulk fuel facility since 1921. Coleman Services IV, LLC purchased the property in January 2007 and Coleman Oil has operated the facility since that time.

A petroleum sheen was discovered on the west side of the Columbia River approximately 300 feet north of the Site on March 17, 2017. Subsequent pipeline tightness testing revealed that two underground pipelines could not hold pressure and review of Coleman Oil inventory records indicated that the release was most likely from the R99 fuel line.

Subsequent testing included the installation of groundwater monitoring wells, soil borings, and test pits in different phases between March and September 2017 by Farallon (2017) and March and April 2018 by HydroCon (2018b) (Figure 2). This testing indicated soil and groundwater had been impacted at concentrations above MTCA Method A cleanup levels, including impacts to soil and groundwater and sediment near the location of the sheen.

2.3 Remedial Measures

Several remedial measures have taken place at the site since the discovery of the release.

- Pads and booms have been placed on the Columbia River in the observed sheen discharge area to recover product since discovery of the release. This practice continues today.

- From April 12, 2017 to June 19, 2017 a remedial excavation was performed on the Coleman Oil facility near the point of the R99 release. Approximately 741 tons of petroleum contaminated soil was removed for offsite disposal.
- Sumps were placed in the remedial excavation backfill. Pumps were placed in the sumps to recover product and maintain a cone of depression to minimize product migration. Effluent from the sumps was routed to an oil/water separator and settling tanks prior to treatment using granular activated carbon (GAC). The treated water was disposed under permit into the City of Wenatchee's sanitary sewer system.
- Prior to this investigation a total of 38 monitoring and recovery wells (MW-1 through MW32, MW01S, MW03S, BH-1 through BH-3, and RW-1) have been installed at the site. Product recovery via skimming using a peristaltic pump and new tubing and/or passive recovery using hydrophobic socks is ongoing.
- Product recovery pumps have been installed in 9 wells with persistent measurable LNAPL or high concentrations of DRPH in soil and/or groundwater (MW09R, MW10R, MW17, MW24, MW28, MW29, MW30, MW32, and BH-1). These wells are connected with underground piping for pressurized air to operate the pumps, conduit for electrical control and effluent piping to collect the recovered groundwater and product. The modified remediation system now consists of three separate zones that pump LNAPL and contaminated groundwater into an associated OWS. These zones include the MW09R zone (MW09R, MW17, and MW32); the MW10R zone (W10R, MW24, and MW28); and the BH-1 zone (BH-1, MW29, and MW30). The expanded remediation system began pumping on November 2, 2018.

As of early June 2018, a total of 413.2 gallons of R99 had been recovered in liquid form, and an additional estimated 1984 gallons recovered through soil excavation. (HydroCon 2018f).

2.4 Geologic & Hydrogeologic Setting

The Site is located in the Wenatchee Valley approximately 100 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 Site slopes very gently to the north north-west parallel to the Columbia River.

The soils beneath the Site are consistent with ice-age alluvial deposits underlain by the Chumstick Formation bedrock. The alluvium consists primarily of silt and silty sand, with layers of clay, sand, gravel and cobbles. 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. 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 a previous remedial excavation (Farallon 2017) and has been backfilled with construction and other debris.

Groundwater flow is generally parallel with the top of the Chumstick formation. The groundwater flow direction and the dip of the sandstone surface are both to the north, northeast except in the region between the Site and the Columbia River where both are more to the east.

2.5 Purpose and Scope

Results of the SRI have revealed that a source of contamination other than R99 is present at the Site near monitoring well MW13 with elevated concentrations of GRPH, DRPH, and benzene above their respective MTCA Method A cleanup level in both soil and groundwater. The source of the contamination is unknown. Monitoring well MW13 is located north of the Control Valve Building and within the footprint of the former Tank Farm B. In addition, two sediment samples collected in the observed Sheen Discharge Area (SS01 and SS02) have DRPH concentrations that exceed the Sediment Cleanup Objective (SCO) of 340 mg/kg. Ecology has requested that the lateral and vertical extent of the DRPH be defined near these sampling locations.

Due to safety concerns for performing the sediment sampling (e.g., winter weather, road and river conditions), the soil investigation was performed independently of the sediment work. This report documents the results of the uplands soil characterization work.

2.6 Objectives and Approach

This Addendum describes field work to advance exploratory test pits and temporary soil borings in the vicinity of monitoring well MW13, sample collections and laboratory analytical results for those samples. As stated above, this report documents the soil characterization portion of the SRI Addendum. Further characterization of Columbia River sediments in the observed sheen discharge area will be done later this year as part of the SRI addendum and will be reported under a separate cover.

During previous sampling events, elevated concentration of GRPH and benzene were detected in soil and groundwater samples near MW13. The well is located within the footprint of the former Tank Farm B and adjacent to (north) and down-gradient of the Control Valve Building that housed pumps used to load fuel into the storage tanks. As identified in the SRI Report (HydroCon 2018b), further investigation in this area is necessary to assess the nature and extent of the GRPH/DRPH/benzene impacts to the subsurface. Even though each borings

described in this addendum was advanced to bedrock, this investigation primarily focused on the extent of contamination within the vadose zone to identify the source(s) and assist in remedy selection.

Also, as part of the field work, but not related to the uplands investigation, monitoring well BH-1 was deepened and constructed with a larger diameter monitoring well to enhance the ability to extract petroleum contaminated groundwater and LNAPL (if present) in this area of the site.

2.7 Planning and Permitting

This section describes the coordination and implementation of the fieldwork performed during the SRI Addendum Uplands Soil Characterization portion of the Investigation. Work was performed in general accordance to the approved SRI Addendum - Additional Upland Soil and River Sediment Characterization Work Plan (HydroCon 2018e) and SRI SAP and QAPP (HydroCon 2018a).

2.7.1 Permits

No permits were necessary for the collection of soil samples from temporary borings or exploratory test pits at the Site.

2.7.2 Health and Safety Plan

HydroCon updated the 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 work attire consisting of hard hats, safety glasses, hearing protection, protective gloves, and protective boots.

2.7.3 Underground Utility Locates

Prior to the commencement of the subsurface activities, a public utility notification was requested through the Washington One Call Service. Locate ticket number 18517129 was refreshed with ticket number 18453939. Utilities Plus (private contractor) provided on site clearance of boreholes and exploratory test pits on January 7, 2019.

2.8 Demolition of the Control Valve Building

On January 7 2019, the Control Valve Building (CVB) was demolished by Clarke Construction utilizing heavy equipment (John Deere 130G trackhoe). All piping, pumps, containment structures, etc. in the CVB were removed from the site. The pumps were retained for future use. All other solid waste generated during the demolition was disposed at the Wenatchee Regional landfill.

Prior to demolition the area inside the CVB was inspected. The pumps had been removed prior to the arrival of the demolition crew and all stored remediation system materials were moved to a new location onsite. The demolition crew reported that the concrete pad was stained in various locations across the entire pad and left over absorbent material was observed on or near the areas where staining was observed. The concrete floor was in good to fair condition. However, the pads that the pumps were mounted on appeared to be precast and placed on an existing slab. The seams were not sealed to the existing slab. Joints approximately ¼-inch in width were filled with sand and/or fine grit. Any liquid spilled in this building had the potential to migrate to the subsurface through these joints.

3.0 FIELDWORK

This section documents the field work performed during the characterization of uplands soil near MW13.

3.1 Exploratory Test Pits

At the completion of demolition of the CVB, HydroCon utilized Clarke Construction to excavate 6 exploratory test pits (TP01 through TP06) to assess shallow soil quality near the former building. Photographs of the test pits advanced under the former CVB are included in Appendix A. HydroCon utilized field screening methods described in greater detail in Section 4.2 to assess the extent of shallow soil contamination. A John Deere 130G trackhoe was used to excavate the test pits down to an intended 4 feet below ground surface (bgs). However, two of the test pits (TP05 and TP06) encountered a large boulder and were terminated at 2 feet bgs.

Soil samples were collected at approximate 2 foot intervals and examined for lithologic composition and field screening parameters. Soil samples were placed into laboratory prepared glass jars and then placed into an ice filled cooler. Selected soil samples were submitted for laboratory analysis. Information collected during the exploratory test pitting was placed on the attached Test Pit logs (Appendix B).

3.2 Temporary Soil Borings

On January 8-10, 2019, HydroCon directed the advancement of 10 temporary soil borings (HC03 through HC12) using the Sonic drilling method described in the SAP attached to the SRI Work Plan (HydroCon 2018a). Each temporary boring was advanced to bedrock (Chumstick Formation).

The sonic drilling method was selected due to the presence of cobbles and large boulders in the shallow soil underlying the site. The drilling was 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 was then driven to override the core barrel, resulting in a continuously cased borehole. Soil within the core barrel was then extruded in a new plastic sleeve which was observed by the geologist. This process was repeated to the target depth of the soil boring. Upon completion, the borings were backfilled with hydrated bentonite.

3.3 Field Screening

Each sample collected from the trackhoe bucket or sonic 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 has determined that a value of 2 ppm or greater may indicate the presence of organic vapors originating from contaminants at the Site. Boring and test pit logs detailing the lithology, field screening results, and sample depths are included in Appendix B.

3.4 Soil Sampling

The selected soil samples were removed from the excavation bucket (test pits) or plastic sleeve (temporary borings) 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. Boring and test pit logs detailing the lithology, field screening results, and sample depths were developed for each test pit and temporary boring. Selected soil samples (up to three per boring and one from each test pit) were submitted to the laboratory based on sampling objectives (i.e., depth and soil type) and field screening results.

Soil samples were analyzed using all of the following laboratory methods:

- DRPH and ORPH by Northwest Method NWTPH-Dx
- GRPH by Northwest Method NWTPH-Gx
- BTEX and VOCs by EPA Method 8260C

3.5 Deepening BH-1

Existing monitoring well BH-1 was overdrilled using the sonic drilling method. Prior to drilling the pump and ancillary piping and wiring were temporarily removed to allow drill rig access. The well materials from BH-1 were removed by advancing six inch diameter steel drilling casing over the entire length of the existing well. Following the advancement of the six inch casing an eight inch steel casing was advanced to the target completion depth of 40 feet bgs. Once the eight inch casing was set the six inch casing was removed along with the former well

material. Once the PVC well material was removed, a core barrel sampler was used to clean out any remaining well materials from the former borehole. Once the boring was clean of debris the boring was advanced and sampled to the new design depth using the same drilling techniques used to advance a new boring.

A new well (BH01R) was completed in the borehole. The well was constructed with 25 feet of 4-inch diameter 0.010-inch slotted PVC well screen and a bottom slip cap. Clean 10-20 graded silica sand was used as a filter pack in the annular space. Hydrated bentonite was used as a seal. The bentonite was placed from the top of the sand pack to approximately 1 foot below the ground surface. A vault has been installed at this well location. Monitoring well construction details are documented in the boring logs and summarized on Table 1.

At the conclusion of well development the pump was installed in the well with the pump intake placed at a depth of approximately 33 feet bgs and reactivated.

3.6 Well Development

Monitoring well BH01R was developed by surging and pumping techniques. A clean submersible impellor pump attached to a new length of LDPE tubing was used to surge and bail turbid water from the well. The pump was lowered and raised inside the saturated interval of the well. The pump was lowered near the bottom of the well and turned on to purge turbid water. This process was repeated until no further improvement in water clarity was observed. Approximately 3 casing volumes was removed from the well. Well development details are documented on a *Well Development Form* which is included in Appendix C.

3.7 Decontamination Procedures

All drilling and sampling tools were decontaminated between boring locations using a hot water pressure washer. All solid and liquid investigation–derived waste generated during purging and decontamination was placed in a labeled 55-gallon drum and transported to the onsite remediation system for treatment.

3.8 Surveying

Elandsen Inc. performed the surveying at the site. HydroCon requested that the elevation of the ground surface be surveyed at each temporary boring and test pit location. The vertical and horizontal coordinates of the borings and test pits 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 survey data are included on the test pit and temporary boring logs in Appendix B.

3.9 Management of Investigation Derived Waste

Soil from drill cuttings and water generated during drilling, decontamination, and well development were placed in separate labeled 55-gallon drums. The drums were staged at the Site pending waste profiling. Water generated from well development was temporarily contained in labeled drums and transported to the water treatment area. Water generated by the drilling contractor (from decontamination) was temporarily contained in the contractor's utility trailer and then emptied at the completion of drilling. All water was pumped into the Site's water treatment system for later discharge, under an agreement with the City, into the City of Wenatchee's sanitary sewer system. The 4 drums of soil that were generated during drilling activities were placed in Coleman Oil's drum storage area. These drums, along with other drums of petroleum contaminated solid waste, will be transported in batches to the Wenatchee Waste Management regional facility under the existing Coleman oil petroleum contaminated soil waste profile.

4.0 RESULTS OF INVESTIGATION

This section summarizes subsurface conditions, field screening results, and analytical results.

4.1 Subsurface Conditions

The soil beneath the surface in the uplands area includes alluvial deposits consisting primarily of sand, silt, and gravel. Boulders were encountered during test pitting and drilling. 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 13 feet bgs at HC05 and HC06. It should be noted that the investigation area includes a portion of the former remedial excavation area performed in 2017 where 741.43 tons of petroleum contaminated soil was removed and transported offsite for disposal as well as the location of former Tank Farm B. Fill soil in the form of sand and gravel fill from 2017 remedial excavations was encountered in 3 borings (HC10 through HC12) at depths ranging from ground surface to the top of bedrock (13 to 14 feet bgs).

Bedrock (Chumstick Formation) was encountered at every boring except HC09 (which was only drilled to 5' bgs). The upper portion of the Chumstick appeared weathered and consists of mudstone and sandstone. The mudstone is commonly friable with planar fractures, waxy texture, and has local organic inclusions. The sandstone is fine to medium grained, moderately cemented, friable, and massive.

Water was encountered in every temporary boring except HC09 at a depth ranging from 7.5 feet to 12 feet bgs.

4.1.1 Refinement of Geologic Interpretation in Uplands Area

HydroCon updated cross section C to C' (which includes the uplands area of the site where the focus of this investigation was on) to include data obtained from the new borings. The cross section location map and cross section C to C' are included on Figures 3 and 4, respectively (cross sections A-A' and B-B' can be found in HydroCon 2018c). The ground surface is relatively flat in the north-south direction while the top of the Chumstick Formation generally slopes to the north between MW12 and MW16 (approximately 390 feet) with a drop in elevation of 9 feet. Localized depressions in the top of the Chumstick are present in the vicinity of monitoring wells MW03S and MW14. Detailed descriptions of the subsurface soil are included in the attached boring logs (Appendix B).

Figure 4 includes a refinement of the top of the Chumstick Formation based on the new borings. The stratigraphy of the new wells did not significantly change the understanding of the top of the Chumstick Formation at the site.

4.2 Field Screening Results

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. Results are summarized below.

Field Screening Results

Test Pit/Boring ID	Hydrocarbon Odor	PID Readings >2 ppmv @ depth (feet)
TP01	Strong Odor @ 1'-4'	1005 @ 3' 845 @ 4'
TP02	Slight odor @ 2'	9.6 @ 2' 0.0 @ 4'
TP04	Strong odor @ 1'-4'	165 @ 2' 618 @ 4'
TP05	Slight Odor @ 2'	4.4 @ 2'
HC03	Strong odor @ 10'	460 @ 10'
HC04	Slight to Strong odor @ 7'-9'	34-196 @ 7'-9'
HC05	Strong odor @ 12'	110 @ 12'
HC06	Slight to Strong odor @ 9'-12'	28-447 @ 9'-12'
HC07	Strong odor @ 3'-7.5'	264 @ 3' 335 @ 5' 514 @ 7.5'
HC08	Strong odor @ 9'	620 @ 9'
HC09	Strong odor @ 2'	705 @ 2'
HC10	Moderate odor @ 10'	56 @ 10'
HC11	Strong odor @ 11'-12'	656-284 @ 11'-12'
HC12	Strong odor @ 12'	347 @ 12'

Field Screening Results
(continued)

MW13	Organic Decay Odor @ 3' Strong Odor @ 5' Strong Odor @ 7' Strong Odor @ 9' Strong Odor @ 10' Strong Odor @ 12' No Odor @ 19	5.4 @ 3' 468 @ 5' 627 @ 7' 1,417 @ 9' 1,271 @ 10' 50 @ 12' <2.0 @ 19

4.3 Soil Analytical Results

Soil analytical results are reported in milligrams per kilogram (mg/kg) which is equivalent to parts per million (ppm), and are summarized in Table 2 and Figure 6. The laboratory report and chain-of-custody documentation are included in Appendix D.

A summary of the soil analytical results in each test pit, temporary boring, and monitoring well BH01R is provided below.

4.3.1 Test Pits

TP01 – HydroCon collected a sample from 2 feet bgs (TP01-2). GRPH (4,970 mg/kg), DRPH (3,510 mg/kg), ORPH (1,850 mg/kg), benzene (0.328 mg/kg), toluene (0.408 mg/kg), ethylbenzene (40.5 mg/kg), and total xylenes (343 mg/kg) were detected in the sample above their respective MRL. The concentration of GRPH, DRPH, benzene, ethylbenzene, and total xylenes exceed their respective MTCA Method A CULs.

TP02 – HydroCon collected a sample from 2 feet bgs (TP02-2). ORPH (1,250 mg/kg) was the only analyte detected in the sample above the MRL. The concentration of ORPH is below the MTCA Method A CUL of 2,000 mg/kg.

TP03 – HydroCon collected a sample from 4 feet bgs (TP03-4). DRPH (119 mg/kg) was detected in the sample above their respective MRL. The concentration of GRPH exceeds the MTCA Method A CUL.

TP04 – HydroCon collected a sample from 2 feet bgs (TP04-2). GRPH (47.6 mg/kg) and ORPH (4,270 mg/kg), ethylbenzene (0.263 mg/kg) and total xylenes (1.66 mg/kg) were detected in the sample above their respective MRL. The concentration of GRPH and ORPH exceed the MTCA Method A CUL.

TP05 – HydroCon collected a sample from 2 feet bgs (TP05-2). DRPH (270 mg/kg) was the only analyte in the sample detected above the MRL. The concentration of DRPH is below the MTCA Method A CUL of 2,000 mg/kg.

TP06 – HydroCon collected a sample from 2 feet bgs (TP06-2). DRPH (580 mg/kg), ORPH (61.1 mg/kg), and toluene (0.643 mg/kg) were detected in the sample at concentrations below their respective MTCA Method A CULs.

4.3.2 Temporary Borings

HC03 – Three samples were submitted for analysis from the boring at depths of 7, 10, and 15 feet bgs. There was no detection of any COC in the samples collected at 7 and 15 feet bgs. GRPH (3,550 mg/kg) and DRPH (3,240 mg/kg) were detected in the sample collected from 10 feet bgs at concentrations that exceed their respective MTCA Method A CULs.

HC04 – Three samples were submitted for analysis from the boring at depths of 7, 9, 12 feet bgs. GRPH (up to 1,070 mg/kg), DRPH (up to 6,400 mg/kg) and total xylenes (up to 10.2 mg/kg) were detected in the samples collected at 7 and 9 feet bgs. ORPH (4,640 mg/kg) was detected in the sample collected at 7 feet bgs. The concentration of GRPH and ORPH exceeds their respective MTCA Method A cleanup level in the HC04-07 sample. The concentration of GRPH, DRPH, and total xylenes exceeds their respective MTCA Method A CULs in the HC04-09 sample. There was no detection of any COC in the sample collected at 12 feet bgs.

HC05 – Three samples were submitted for analysis from the boring at depths of 10, 12, and 15 feet bgs. DRPH (130 mg/kg) and ORPH (62.9 mg/kg) were detected in the sample collected at 10 feet bgs. GRPH (101 mg/kg), DRPH (2,210 mg/kg), and ORPH (316 mg/kg) were detected in the sample collected at 12 feet bgs. GRPH (55.4 mg/kg) was detected in the sample collected from 15 feet bgs. The concentration of GRPH and DRPH in the sample collected at 12 feet bgs exceeded their respective MTCA Method A CULs. The concentration of GRPH in the sample collected at 15 feet bgs exceeded the MTCA Method A CUL.

HC06 – Three samples were submitted for analysis from the boring at depths of 9, 12, and 15 feet bgs. GRPH (17.6 mg/kg) and DRPH (1,750 mg/kg) were detected in the sample collected at 9 feet bgs. GRPH (1,900 mg/kg), DRPH (5,560 mg/kg), and total xylenes (53.6 mg/kg) were detected in the sample collected at 12 feet bgs at concentrations that exceed their respective MTCA Method A CULs. There was no detection of any COC in the sample collected at 15 feet bgs.

HC07 - Three samples were submitted for analysis from the boring at depths of 3, 5, and 15 feet bgs. GRPH (up to 1,270 mg/kg), DRPH (up to 2,740 mg/kg), benzene (up to 0.159

mg/kg), ethylbenzene (up to 0.373 mg/kg), and total xylenes (up to 3.53 mg/kg) were detected in the samples collected at 3 and 5 feet bgs. The concentration of GRPH in the samples collected from 3 and 5 feet bgs and the concentration of DRPH collected at 5 feet bgs exceed their respective MTCA Method A CULs. There was no detection of any COC in the sample collected at 15 feet bgs.

HC08 – Three samples were submitted for analysis from the boring at depths of 4, 9, and 12 feet bgs. GRPH (1,260 mg/kg) and DRPH (9,150 mg/kg) were detected in the sample collected at 9 feet bgs at concentrations that exceed their respective MTCA Method A CULs. There was no detection of any COC in the samples collected at 4 and 15 feet bgs.

HC09 – One sample was submitted for analysis from the boring at a depth of 2 feet bgs. GRPH (12,200 mg/kg), DRPH (3,320 mg/kg), benzene (2.35 mg/kg), toluene (9.46 mg/kg), ethylbenzene (41.4 mg/kg), and total xylenes (307 mg/kg) were detected in the sample. The concentration of GRPH, DRPH, benzene, toluene, ethylbenzene, and total xylenes exceeds their respective MTCA Method A CULs.

HC10 – Three samples were submitted for analysis from the boring at depths of 5, 12, and 15 feet bgs. There was no detection of any COC in the sample collected at 5 feet bgs. GRPH (17.6 mg/kg) and DRPH (84.5 mg/kg) were detected in the sample collected from 12 feet bgs. ORPH (51.1 mg/kg) was detected in the sample collected from 15 feet bgs. None of the detected analytes was above their respective MTCA Method A CULs.

HC11 – Three samples were submitted for analysis from the boring at depths of 6, 11, and 15 feet bgs. DRPH (45 mg/kg) and ORPH (1,110 mg/kg) were detected in the sample collected at 6 feet bgs. GRPH (1,520 mg/kg), DRPH (6,760 mg/kg), ORPH (1,740 mg/kg), benzene (1.12 mg/kg), ethylbenzene (0.567 mg/kg), and total xylenes (34.2 mg/kg) were detected in the sample collected at 11 feet bgs. The concentration of GRPH, DRPH, benzene, and total xylenes exceed their respective MTCA Method A CULs in the sample collected at 11 feet bgs. There was no detection of any COC in the sample collected at 15 feet bgs.

HC12 - Three samples were submitted for analysis from the boring at depths of 8, 12, and 15 feet bgs. GRPH (627 mg/kg) was detected in the sample collected at 8 feet bgs. GRPH (1,190 mg/kg), DRPH (3,790 mg/kg), ethylbenzene (0.0458 mg/kg), and total xylenes (2.80 mg/kg) were detected in the sample collected from 12 feet bgs. The concentration of GRPH in the samples collected from 8 and 12 feet bgs and the concentration of DRPH in the sample collected at 12 feet bgs exceeded their respective MTCA Method A CULs. There was no detection of any COC in the sample collected at 15 feet bgs.

4.3.3 Monitoring Well BH01R

BH01R – Two samples were submitted for analysis from the boring at depths of 32 and 37 feet bgs. DRPH (73.5 mg/kg) and ORPH (125 mg/kg) were detected in the sample collected at 32 feet bgs. GRPH (108 mg/kg) and DRPH (400 mg/kg) were detected in the sample collected at 37 feet bgs. The concentration of GRPH in the sample collected at 37 feet bgs exceeds the MTCA Method A CUL.

4.4 Data Quality Review

Laboratory testing of soil resulted in two laboratory reports including Apex Labs Work Orders A8H328 and A8H0529. The data review reports are included in Appendix E. 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

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 as intended. The data review report identifies all data qualifiers and the reasons for qualification. Aside from the data quality issues identified above, the data quality review identified no concerns with respect of the quality of usability of the data presented herein.

5.0 DISCUSSION

This section provides a discussion of the results of the investigation and known areas of contamination unrelated to the R99 release.

5.1 Sources of Petroleum Hydrocarbon Contamination Other Than R99 in the Uplands Area

Elevated concentrations of GRPH, DRPH, ORPH, and BTEX have been detected in soil and groundwater samples collected in the Uplands area near monitoring well MW13 during subsurface investigations and quarterly groundwater monitoring at the site. Considering that the site has been used as a bulk fuel facility for over 100 years, there are several possible sources that may have contributed to this contamination including two tank farms (Tank Farm A and former Tank Farm B); the CVB; the two former above ground pumps located east of the CVB; the underground piping associated with the two former above ground pumps; and the USTs, ancillary piping, and dispensers located east and south of Tank Farm A. Most of these features are shown on Figure 2.

Other potential sources of petroleum contamination in the Uplands include historic features that are no longer present at the site including the former warehouse building located north of former Tank Farm B; the former storage building; the former truck loading rack; and the former dry well. Many of these features were removed during the remedial excavation performed in 2017 in response to the R99 release.

The primary area of contamination in the Uplands area appears to be concentrated near MW13. Removal of the CVB was done to remove the equipment and structure of one of the suspected sources as well as provide drill rig and excavator access. Six test pits (TP01 through TP06) were performed to assess shallow soil conditions under and around the former CVB followed by drilling ten temporary borings (HC03 through HC12) to delineate the lateral extent of contamination near MW13/CVB/former Tank Farm B. Continuous soil samples were collected to assess subsurface geology, perform field screening for the presence of petroleum contamination, and collect soil samples.

Soil analytical results indicated that GRPH, DRPH, ORPH, and BTEX were detected in samples collected under and near the CVB and former Tank Farm B. These two former site features appear to be two of the primary sources of contamination in the Uplands area. The extent of this contamination in the unsaturated (vadose) zone is discussed in detail in Section 5.2.

Known sources of petroleum contamination in the Uplands area unrelated to the R99 release are summarized below.

5.1.1 2010 Gasoline Release

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 2017). Subsequent inspection of AST 15A and associated piping revealed gasoline leaking from a fill valve and flowing onto the concrete floor surface in the AST 15A valve control box on the southeast 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 2). NRCES excavated approximately 6 cubic yards of gasoline contaminated soil for offsite disposal from this area to a depth of approximately 2 feet below ground surface (bgs) using hand tools. Confirmation soil samples collected from the excavation sidewalls and 1 foot below the base of the excavation contained GRPH and BTEX at concentrations exceeding their respective MTCA Method A cleanup levels.

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 GRPH and BTEX in soil decreased significantly with distance both laterally and vertically from the spill area. The extent of GRPH and BTEX contaminated soil appears to be limited to the area near the point of release.

5.1.2 2013 Gasoline Release

On May 30, 2013, another gasoline spill occurred at the Site. The UST at the southeastern portion of the Site that supplied fuel to the retail sales card lock was being filled. 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 contaminated soil was

removed from around the UST. The final excavation was 21 feet long by 18 feet wide, and extended to a depth of 12 feet bgs (Figure 2). The excavation exposed a portion of the UST. Confirmation soil samples collected from the final limits of the excavation confirmed removal of petroleum-impacted soil to concentrations less than MTCA Method A cleanup levels.

Ecology (2015) issued a No Further Action (NFA) determination for the Property in a letter dated March 13, 2015. The NFA 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 (2010 gasoline release area).

5.1.3 Drum Spill

In September 2018 a release of gasoline and diesel fuel occurred from a leaking drum that was being stored in a temporary drum storage area located northeast of Tank Farm A. Remedial excavation began immediately after observing stained soil underlying the drum. Due to the presence of a large boulder larger excavation equipment was needed to advance the remedial excavation. The excavation was advanced down to the soil/water interface (approximately 8 feet bgs). The final dimensions of the remedial excavation measured 12 feet by 14 feet with a total depth of 8 feet bgs. A total of 16.83 tons of PCS was removed from the site.

Confirmation soil samples were collected from the sidewalls and floor of the excavation. Analytical results indicated that lateral extent of soil contamination was removed from the ground surface down the groundwater interface. The floor sample collected at the groundwater interface had GRPH (789 mg/kg) and DRPH (8,570 mg/kg) concentrations that exceed their respective MTCA Method A cleanup levels. No further remedial excavation was attempted due to the presence of Tank Farm A and the large boulder.

5.2 Extent of Soil Contamination

Based on the results of this investigation and previous investigations, the extent of soil contamination in the unsaturated (vadose) zone in the Uplands area from sources other than the 2017 R99 release appears to be concentrated under the former CVB and Tank Farm B areas. The approximate extent of soil contamination within the vadose zone in this area is shown on Figure 6. This area is approximately 30 feet wide by 65 feet long. Contamination in this area is expected to extend from near ground surface down to the depth of seasonal low groundwater level which is approximately 8 to 12 feet bgs in this area of the site. GRPH, DRPH, ORPH, and BTEX contaminated soil is observed further downgradient at depth at or below the water. This zone of contamination is referred to as the smear zone and appears to

comingle with R99 and possibly other products (i.e. gasoline and oil) as it gets closer to the Columbia River.

5.3 Remedial Options

Removal of soil by excavation in the area shown on Figure 6 to a depth of 8 feet would generate approximately 578 cubic yards of soil. This would remove the majority of the source of contamination that is affecting groundwater in this area of the site. Excavation is not the only remedial action that can remove the contamination (soil vapor extraction is another remedial option) but it is the fastest and most thorough method of cleanup. Cleanup of soil in the saturated zone downgradient of this source area would require an alternative remedial method (e.g., injection or natural attenuation) as it would not be economically feasible to remove 8 feet or more of overburden to access the contaminated soil within the smear zone. Cleanup options and estimated costs for each technology will be provided in the feasibility study.

6.0 QUALIFICATIONS

HydroCon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. HydroCon makes no warranties, either expressed or implied, regarding the findings, conclusions or recommendations. Please note that HydroCon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report.

Findings and conclusions resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this monitoring. Subsurface conditions may vary from those encountered at specific sampling locations or during other surveys, tests, assessments, investigations, or exploratory services; the data, interpretations and findings are based solely upon data obtained at the time and within the scope of these services.

This report is intended for the sole use of **Coleman Oil Company** to meet the requirements of Exhibit B – Scope of Work and Schedule of the Agreed Order. This report may not be used or relied upon by any other party without the written consent of HydroCon. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document or the findings, conclusions, or recommendations is at the risk of said user.

The conclusions presented in this report are, in part, based upon subsurface sampling performed at selected locations and depths. There may be conditions between borings or samples that differ significantly from those presented in this report and which cannot be predicted by this study.

7.0 REFERENCES

HydroCon, LLC. 2018a. *Supplemental Remedial Investigation Work Plan. Coleman Oil R99 Renewable Diesel Spill, Wenatchee, Washington*. Prepared for Coleman Oil Company, LLC. March 15.

———. 2018b. *Supplemental Remedial Investigation Report. Coleman Oil R99 Renewable Diesel Spill, Wenatchee, Washington*. Prepared for Coleman Oil Company, LLC. August 8, Revised October 9.

———. 2018c. *Additional Interim Action Work Plan Addendum #2. Coleman Oil R99 Renewable Diesel Spill, Wenatchee, Washington*. Prepared for Coleman Oil Company, LLC. July 26.

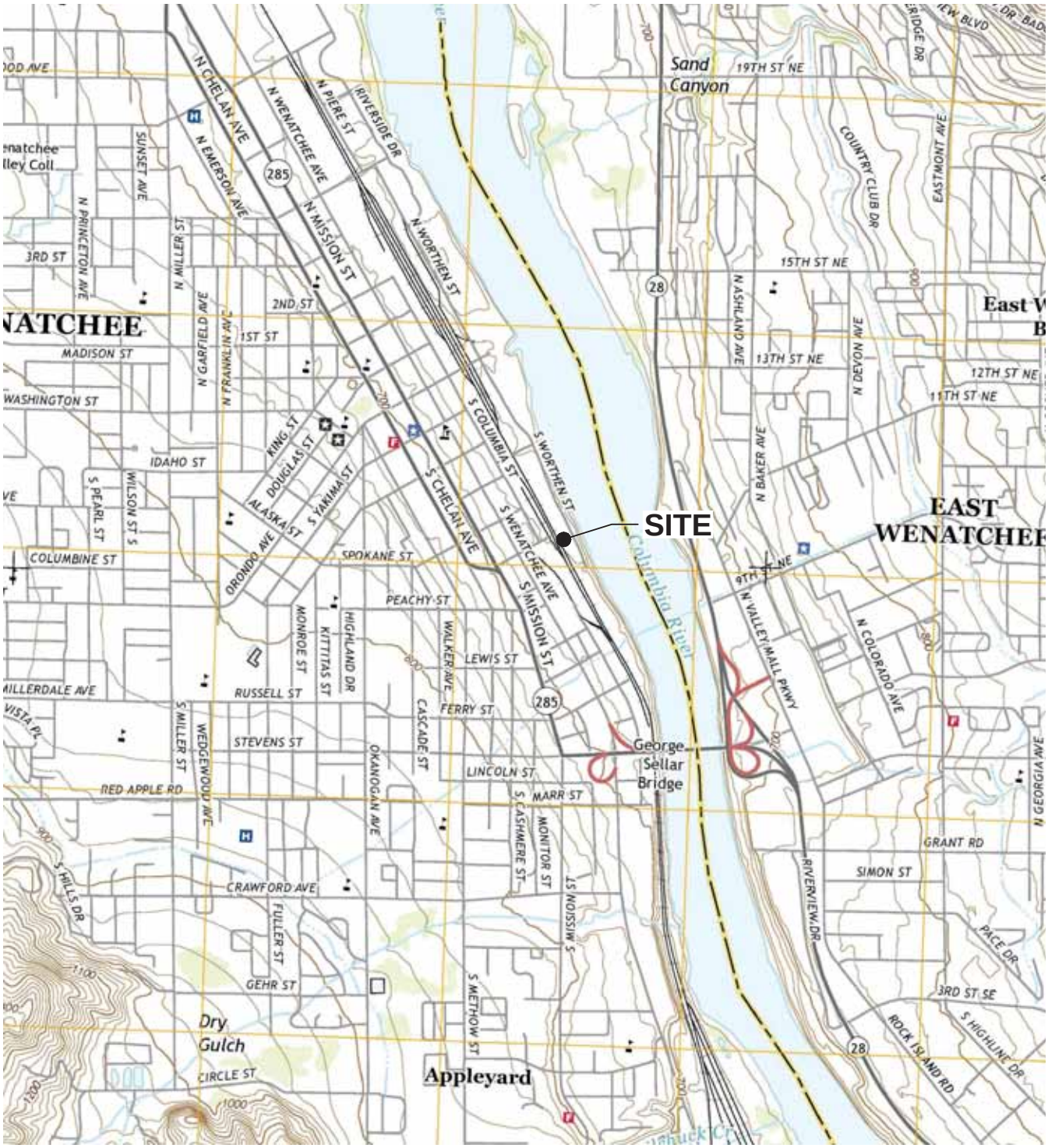
———. 2018d. *Aquifer Testing at Coleman Oil Facility, Wenatchee, Washington*. Prepared for Coleman Oil Company, LLC March 16.

———. 2018e. *SRI Addendum - Additional Upland Soil and River Sediment Characterization Work Plan, Wenatchee, Washington.* Prepared for Coleman Oil Company, LLC. December 12.

———. 2018f. *Product Recovery at Coleman Oil Site. Wenatchee, Washington*. Prepared for Coleman Oil Company, LLC. June 26.

Farallon Consulting, L.L.C.. 2017. *Supplemental Data Summary Report*. Prepared for Coleman Oil Company. October 18.

FIGURES



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

0 2000 4000
SCALE IN FEET
1" = 2000'

N
W E
S

HydroCon
510 Allen St. Suite B Kelso, Wa 98626, Ph(360)-703-6086

DATE: 2-20-19
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.

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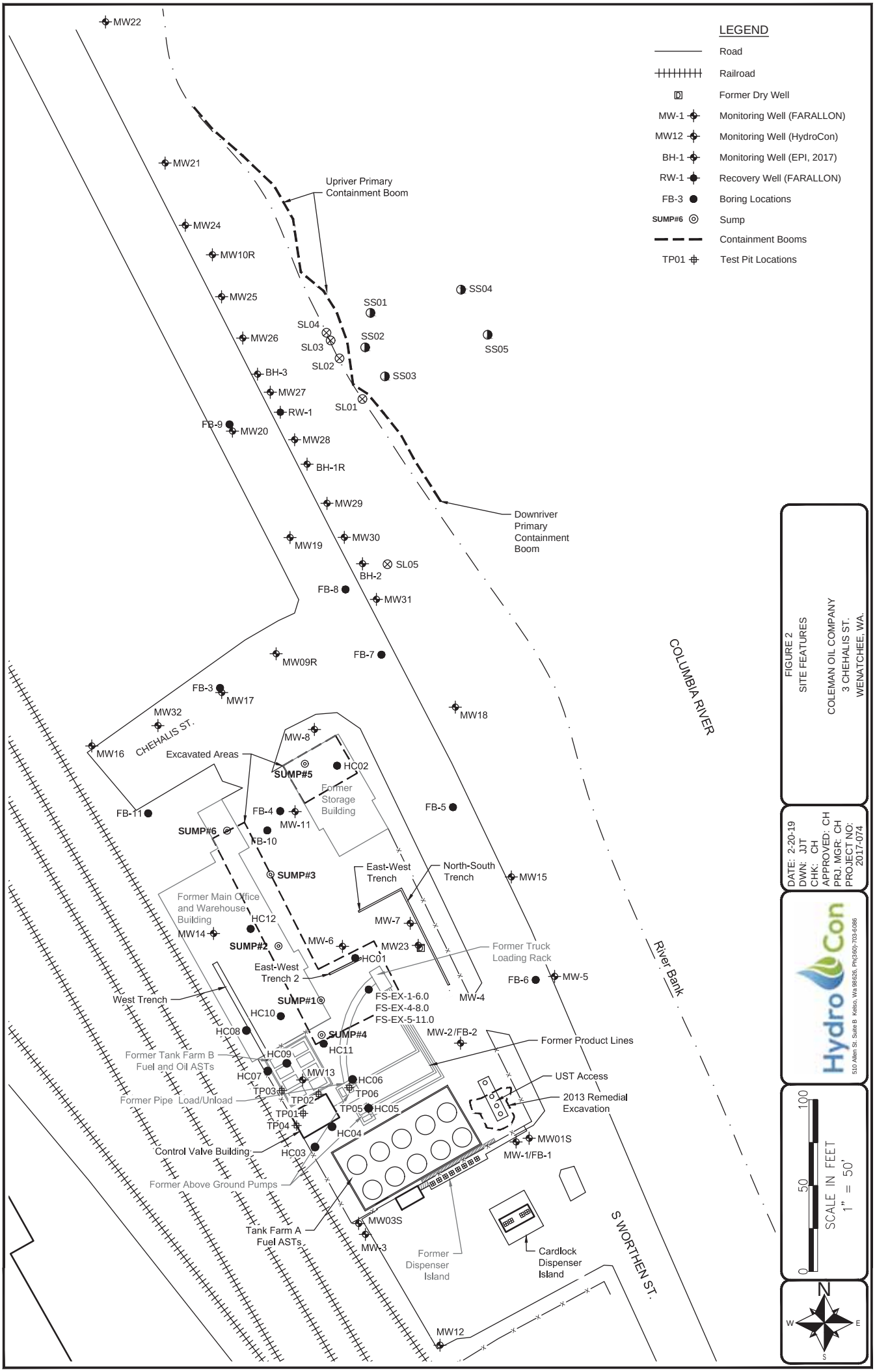

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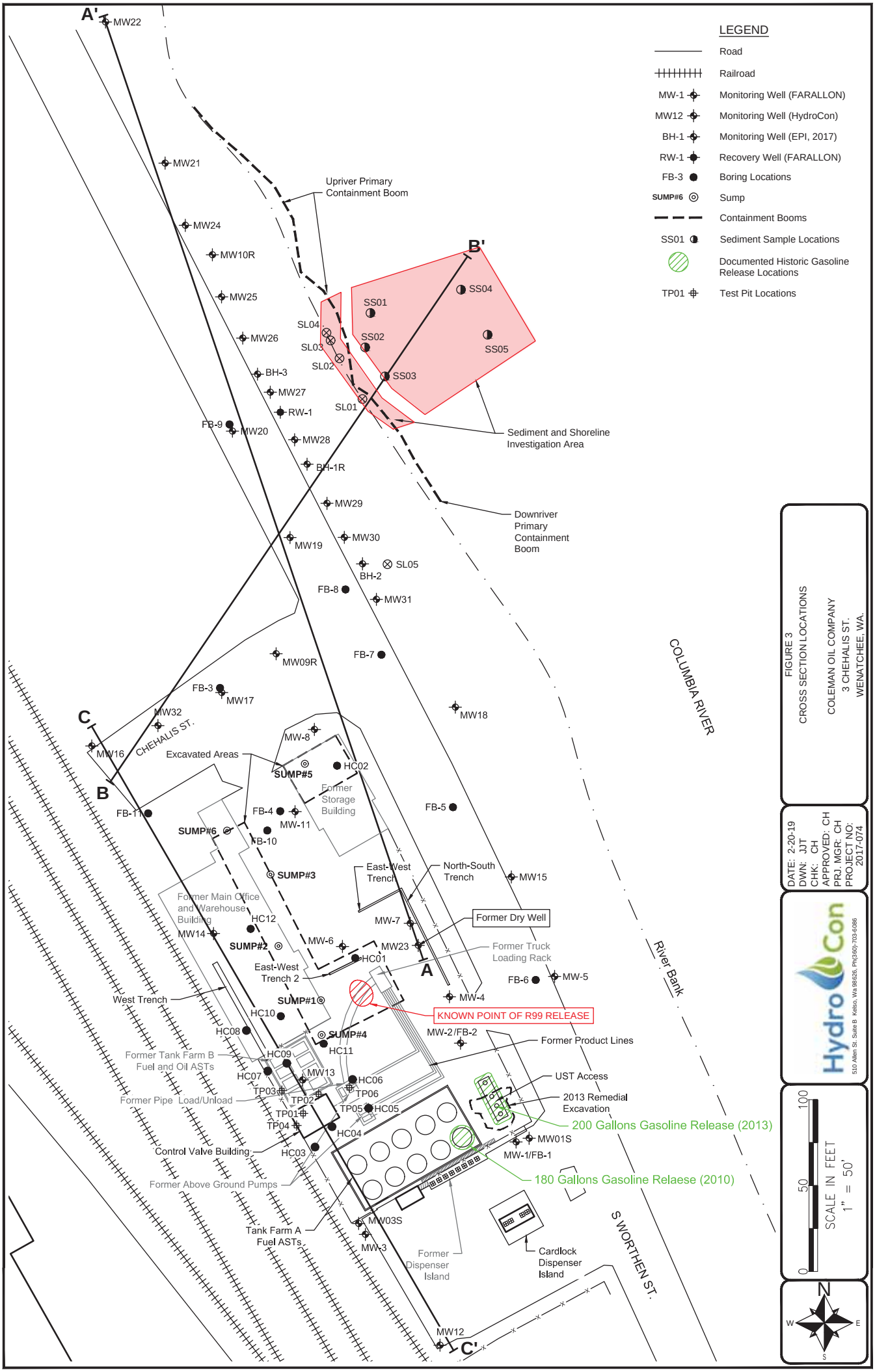

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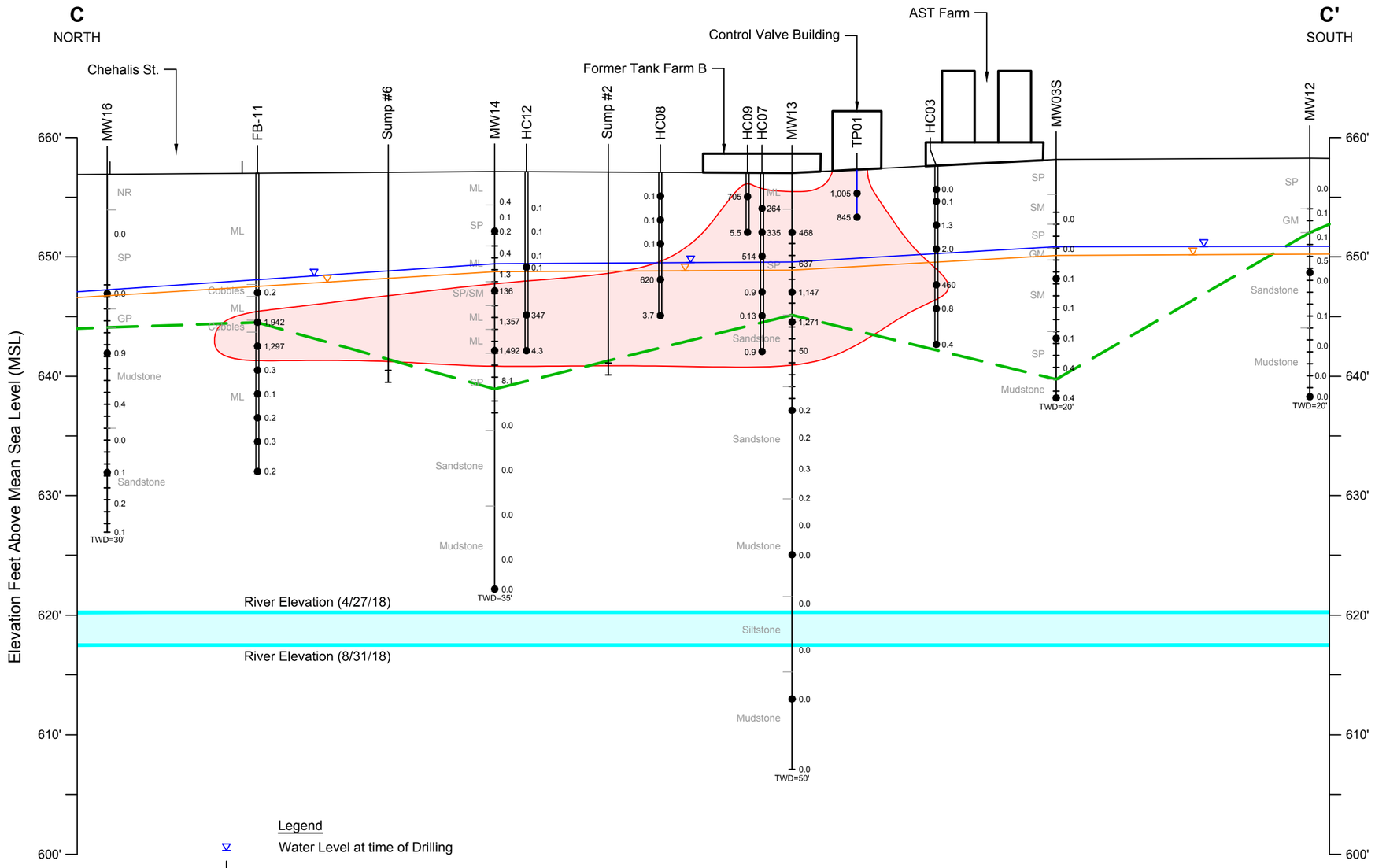

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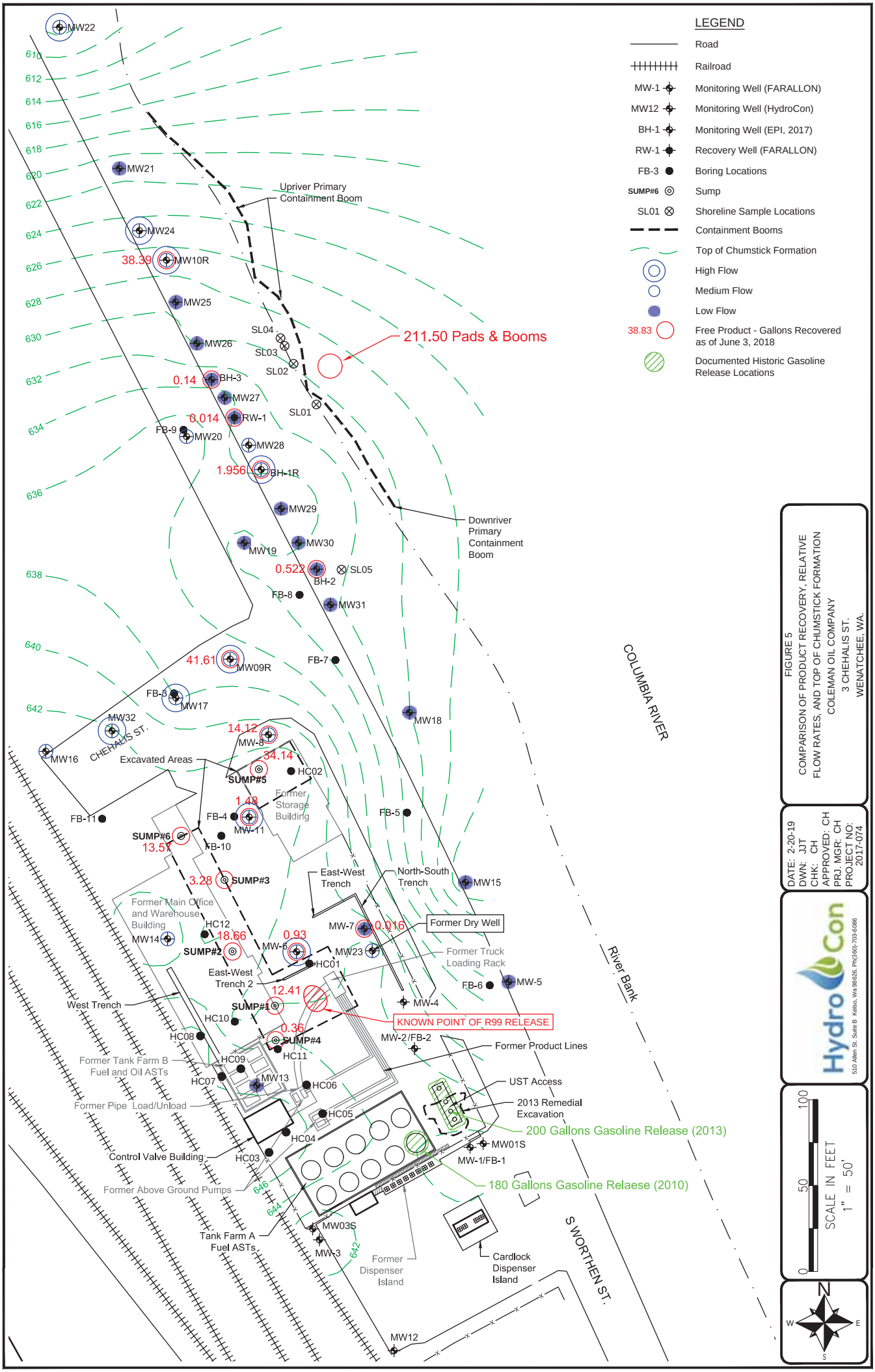
LEGEND
Road
Railroad
MW-1 Monitoring Well (FARALLON)
MW12 Monitoring Well (HydroCon)
BH-1 Monitoring Well (EPI, 2017)
RW-1 Recovery Well (FARALLON)
FB-3 Boring Locations
SUMP#6 Sump
SL01 Shoreline Sample Locations
Containment Booms
Top of Chumstick Formation
High Flow
Medium Flow
Low Flow
38.83 Free Product - Gallons Recovered as of June 3, 2018
Documented Historic Gasoline Release Locations
MW22
MW21
MW24
38.39
MW10R
MW25
MW26
SL04
SL03
SL02
SL01
211.50 Pads & Booms
0.14
BH-3
MW27
0.014
RW-1
FB-9
MW20
MW28
1.956
BH-1R
MW29
MW19
MW30
0.522
BH-2
SL05
FB-8
MW31
41.61
MW09R
FB-7
FB-3
MW17
MW32
MW16
CHEHALIS ST.
14.12
MW-8
34.14
HC02
SUMP#5
Excavated Areas
Former Storage Building
1.48
MW-11
FB-4
FB-11
SUMP#6
13.51
FB-10
3.28
SUMP#3
East-West Trench
North-South Trench
MW15
Former Main Office and Warehouse Building
HC12
MW14
18.66
SUMP#2
MW-6
0.93
MW-7
0.016
Former Dry Well
MW23
HC01
Former Truck Loading Rack
East-West Trench 2
12.41
SUMP#1
West Trench
HC10
HC08
0.36
SUMP#4
HC11
FB-6
MW-5
MW-4
KNOWN POINT OF R99 RELEASE
MW-2/FB-2
Former Product Lines
Former Tank Farm B Fuel and Oil ASTs
HC09
HC07
MW13
HC06
UST Access
Former Pipe Load/Unload
HC05
2013 Remedial Excavation
HC04
200 Gallons Gasoline Release (2013)
Control Valve Building
HC03
MW01S
MW-1/FB-1
Former Above Ground Pumps
180 Gallons Gasoline Relaese (2010)
MW03S
Tank Farm A Fuel ASTs
MW-3
Former Dispenser Island
Cardlock Dispenser Island
MW12
COLUMBIA RIVER
River Bank
S WORTHEN ST.
610
612
614
616
618
620
622
624
626
628
630
632
634
636
638
640
642
644
646
FIGURE 5
COMPARISON OF PRODUCT RECOVERY, RELATIVE FLOW RATES, AND TOP OF CHUMSTICK FORMATION
COLEMAN OIL COMPANY
3 CHEHALIS ST.
WENATCHEE, WA.
DATE: 2-20-19
DWN: JJT
CHK: CH
APPROVED: CH
PRJ. MGR: CH
PROJECT NO: 2017-074
HydroCon
510 Allen St. Suite B Kelso, Wa 98626, PH:(360)-703-6066
SCALE IN FEET
1" = 50'
0
50
100
N
W
E
S
C:\Users\Josh\Desktop\Autocad Files\Hydrocon-Autocad\2017-074 Coleman Oil\2019\Jan 2019\2017-074_BM-0108I9.dwg

Field ID	Sample Depth (feet)	Date	Soil Analytical Results (mg/kg) GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
WA MTCA Method A			**30/100**	**2,000**	**2,000**	**0.3**	**7**	**6**	**9**
Benzene (Non Detect)			**100**						
Benzene (Detect)			**30**						
Test Pits									
TP01	2	1/7/2019	**4,970**	**3,510**	1,850	**0.328**	0.408	**40.5**	**343**
TP02	2	1/7/2019	<6.06	<99.8	1,250	<0.0121	<0.0606	<0.0303	<0.0910
TP03	4	1/7/2019	**47.6**	119	<50.0	<0.0125	<0.0636	<0.0311	<0.0934
TP04	2	1/7/2019	<5.93	<560	**4,270**	<0.0138	<0.0690	0.263	1.66
TP05	2	1/7/2019	<5.93	270	<50.0	<0.0119	<0.0596	<0.0297	<0.0890
TP06	2	1/7/2019	<6.43	580	61.1	<0.0129	0.0643	<0.0321	<0.0964
Temporary Soil Borings									
HC03	7	1/8/2019	<5.02	<25.0	<50.0	<0.0100	<0.0502	<0.0251	<0.0754
HC03	10	1/8/2019	**3,550**	**3,240**	<216	<0.179	<0.895	<0.447	<1.34
HC03	15	1/8/2019	<5.08	<25.0	<50.0	<0.0102	<0.0508	<0.0254	<0.0762
HC04	7	1/8/2019	**152**	631	**4,640**	<0.0105	<0.0527	<0.0264	1.40
HCO4	9	1/8/2019	**1,070**	**6,400**	<869	<0.203	<1.01	<0.507	**10.2**
HC04	12	1/8/2019	<4.98	<25.0	<50.0	<0.00996	<0.0498	<0.0249	<0.0747
HC05	10	1/8/2019	<5.63	130	62.9	<0.0113	<0.0563	<0.0281	<0.0844
HC05	12	1/8/2019	**101**	**2,210**	316	<0.0107	<0.0537	<0.0269	<0.0806
HC05	15	1/8/2019	**55.4**	<25.0	<50.0	<0.0109	<0.0547	<0.0274	<0.0821
HC06	9	1/8/2019	17.6	1,750	<50.0	<0.00987	<0.0494	<0.0247	<0.0740
HC06	12	1/8/2019	**1,900**	**5,560**	<416	<0.0414	<0.207	0.968	**53.6**
HC06	15	1/8/2019	<5.28	<25.0	<50.0	<0.0106	<0.0528	<0.0264	<0.0792
HC07	3	1/9/2018	**712**	1,780	<50.0	0.0913	<0.207	0.373	2.17
HC07	5	1/9/2018	**1,270**	**2,740**	<50.0	0.159	<0.185	0.367	3.53
HC07	15	1/9/2018	<4.92	<25.0	<50.0	<0.00983	<0.0492	<0.0246	<0.0737
HC08	4	1/9/2019	<4.43	<25.0	<50.0	<0.00887	<0.0443	<0.0222	<0.0665
HC08	9	1/9/2019	**1,260**	**9,150**	<230	<0.112	<0.562	<0.281	<0.843
HC08	12	1/9/2019	<5.35	<25.0	<50.0	<0.0107	<0.0535	<0.0267	<0.0802
HC09	2	1/9/2019	**12,200**	**3,320**	515	**2.35**	**9.46**	**41.4**	**307**
HC10	5	1/9/2019	<4.92	<25.0	<50.0	<0.00984	<0.0492	<0.0246	<0.0738
HC10	12	1/9/2019	17.6	84.5	<50.0	<0.0117	<0.0584	<0.0292	<0.0876
HC10	15	1/9/2019	<6.88	<25.0	51.7	<0.0138	<0.0688	<0.0344	<0.103
HC11	6	1/9/2019	<4.94	45.0	1,110	<0.00987	<0.0494	<0.0247	<0.0741
HC11	11	1/9/2019	**1,520**	**6,760**	1,740	**1.12**	<0.214	0.567	**34.2**
HC11	15	1/9/2019	<4.95	<25.0	<50.0	<0.00990	<0.0495	<0.0248	<0.0743
HC12	8	1/9/2019	**627**	<25.0	<50.0	<0.0231	<0.115	<0.0577	<0.173
HC12	12	1/9/2019	**1,190**	**3,790**	<439	<0.0113	<0.0567	0.0458	2.80
HC12	15	1/9/2019	<5.16	<25.0	<50.0	<0.0103	<0.0516	<0.0258	<0.0774

Notes

Red denotes concentration in excess of MTCA Method Cleanup Level for Soil.

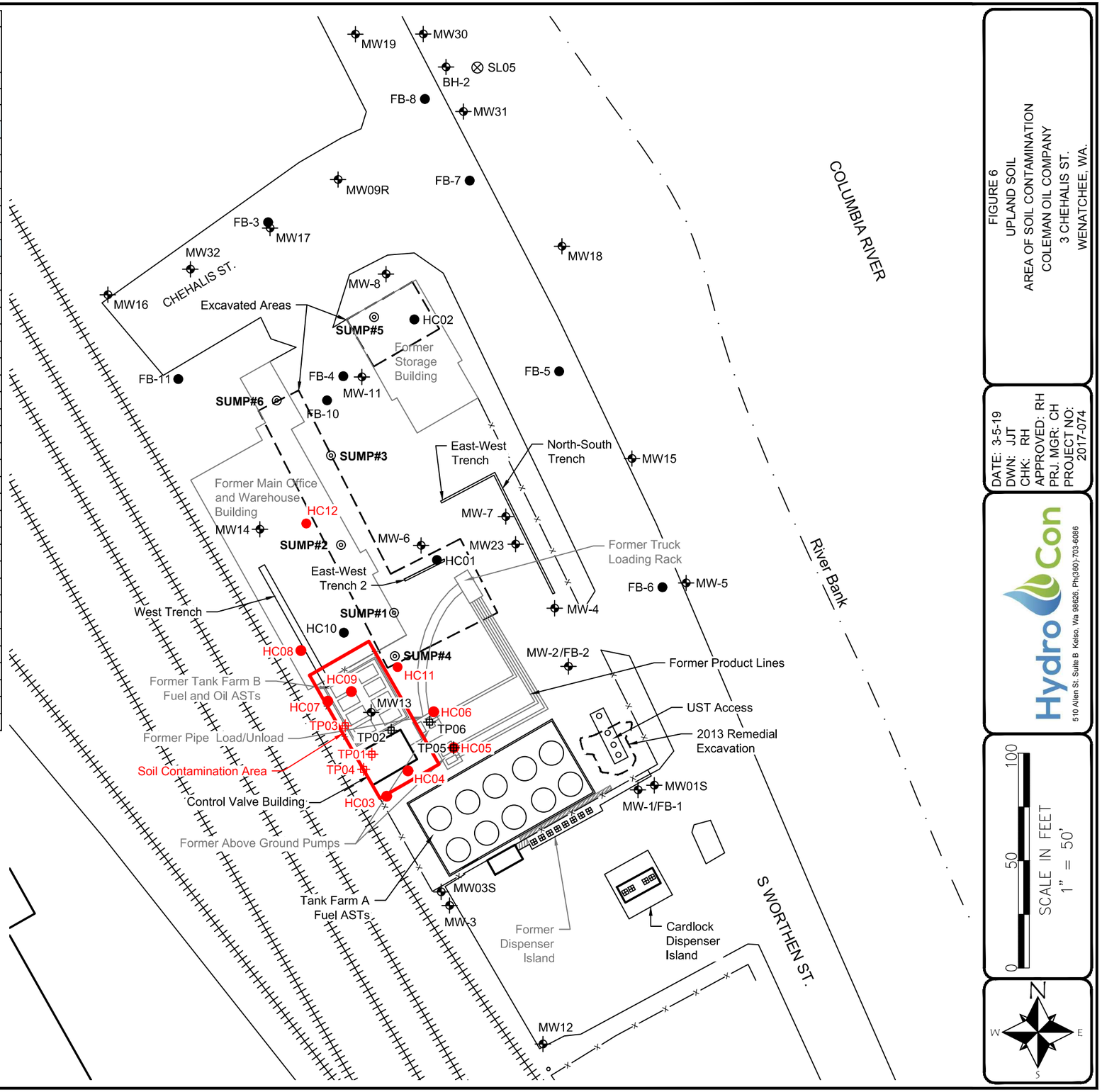

FIGURE 6
UPLAND SOIL
AREA OF SOIL CONTAMINATION
COLEMAN OIL COMPANY
3 CHEHALIS ST.
WENATCHEE, WA.

DATE: 3-5-19
DWN: JJT
CHK: RH
APPROVED: RH
PRJ. MGR: CH
PROJECT NO: 2017-074

HydroCon
510 Allen St. Suite B Kelso, Wa 98626, Ph(360)-703-6086

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TABLES

Table 1

Well Construction Details
Coleman Oil Site
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[1])
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
MW09R	8/15/2018	HydroCon	Sonic	35.00	32.60	4	PVC	0.01	25	0.45	8.59-33.59	653.55
MW-10	4/14/2017	Farallon	Air Rotary	30.20	30.00	2	PVC	0.02	16	-	14-30	645.80
MW10R	8/16/2018	HydroCon	Sonic	35.00	33.59	4	PVC	0.01	20	0.45	14.64-34.64	644.30
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
MW24	8/6/2018	HydroCon	Sonic	35.00	34.25	4	PVC	0.01	20	0.45	14.17-34.17	644.38
MW25	8/7/2018	HydroCon	Sonic	35.00	32.96	4	PVC	0.01	20	0.45	12.81-32.81	645.57
MW26	8/8/2018	HydroCon	Sonic	35.00	32.52	4	PVC	0.01	20	0.45	13.54-33.54	646.65
MW27	8/9/2018	HydroCon	Sonic	40.00	38.74	4	PVC	0.01	25	0.45	13.56-38.56	649.00
MW28	8/10/2018	HydroCon	Sonic	40.00	38.74	4	PVC	0.01	25	0.45	13.62-38.62	650.64
MW29	8/13/2018	HydroCon	Sonic	40.00	39.11	4	PVC	0.01	25	0.45	14.05-39.05	652.34
MW30	8/14/2018	HydroCon	Sonic	40.00	39.79	4	PVC	0.01	25	0.45	14.67-39.67	652.83
MW31	8/15/2018	HydroCon	Sonic	40.00	39.28	4	PVC	0.01	25	0.45	14.11-39.11	653.97
MW32	8/17/2018	HydroCon	Sonic	35.00	34.02	4	PVC	0.01	25	0.45	8.95-33.95	655.83
BH-1	3/25/2017	EPI	Air Rotary	30.00	30.00	2	PVC	0.01	10	-	20-30	652.17
BH01R	1/27/2019	HydroCon	Sonic	40.00	39.97	4	PVC	0.01	25	0.45	14.52-39.52	651.03
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[1] = Elevation is relative to NGVD88

bgs = below ground surface

PVC = polyvinyl chloride

Replaced by well on the next line

Table 2
Test Pit and Temporary Boring 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
WA MTCA Method A Cleanup Level for Soil			**30/100**	**2,000**	**2,000**	**0.3**	**7**	**6**	**9**
Benzene (Non Detect)			**100**						
Benzene (Detect)			**30**						
Field ID	**Sample Depth (feet)**	**Date**							
Test Pits									
TP01-02	2	1/7/2019	**4,970**	**3,510**	1,850	**0.328**	0.408	**40.5**	**343**
TP02-02	2	1/7/2019	<6.06	<99.8	1,250	<0.0121	<0.0606	<0.0303	<0.0910
TP03-04	4	1/7/2019	<6.23	119	<50.0	<0.0125	<0.0636	<0.0311	<0.0934
TP04-02	2	1/7/2019	**47.6**	<560	**4,270**	<0.0138	<0.0690	0.263	1.66
TP05-02	2	1/7/2019	<5.93	270	<50.0	<0.0119	<0.0596	<0.0297	<0.0890
TP06-02	2	1/7/2019	<6.43	580	61.1	<0.0129	0.0643	<0.0321	<0.0964
Temporary Soil Borings									
HC03-07	7	1/8/2019	<5.02	<25.0	<50.0	<0.0100	<0.0502	<0.0251	<0.0754
HC03-10	10	1/8/2019	**3,550**	**3,240**	<216	<0.179	<0.895	<0.447	<1.34
HC03-15	15	1/8/2019	<5.08	<25.0	<50.0	<0.0102	<0.0508	<0.0254	<0.0762
HC04-07	7	1/8/2019	**152**	631	**4,640**	<0.0105	<0.0527	<0.0264	1.40
HCO4-09	9	1/8/2019	**1,070**	**6,400**	<869	<0.203	<1.01	<0.507	**10.2**
HC04-12	12	1/8/2019	<4.98	<25.0	<50.0	<0.00996	<0.0498	<0.0249	<0.0747
HC05-10	10	1/8/2019	<5.63	130	62.9	<0.0113	<0.0563	<0.0281	<0.0844
HC05-12	12	1/8/2019	**101**	**2,210**	316	<0.0107	<0.0537	<0.0269	<0.0806
HC05-15	15	1/8/2019	**55.4**	<25.0	<50.0	<0.0109	<0.0547	<0.0274	<0.0821
HC06-09	9	1/8/2019	17.6	1,750	<50.0	<0.00987	<0.0494	<0.0247	<0.0740
HC06-12	12	1/8/2019	**1,900**	**5,560**	<416	<0.0414	<0.207	0.968	**53.6**
HC06-15	15	1/8/2019	<5.28	<25.0	<50.0	<0.0106	<0.0528	<0.0264	<0.0792
HC07-03	3	1/9/2018	**712**	1,780	<50.0	0.0913	<0.207	0.373	2.17
HC07-05	5	1/9/2018	**1,270**	**2,740**	<50.0	0.159	<0.185	0.367	3.53
HC07-15	15	1/9/2018	<4.92	<25.0	<50.0	<0.00983	<0.0492	<0.0246	<0.0737
HC08-04	4	1/9/2019	<4.43	<25.0	<50.0	<0.00887	<0.0443	<0.0222	<0.0665
HC08-09	9	1/9/2019	**1,260**	**9,150**	<230	<0.112	<0.562	<0.281	<0.843
HC08-12	12	1/9/2019	<5.35	<25.0	<50.0	<0.0107	<0.0535	<0.0267	<0.0802
HC09-02	2	1/9/2019	**12,200**	**3,320**	515	**2.35**	**9.46**	**41.4**	**307**
HC10-05	5	1/9/2019	<4.92	<25.0	<50.0	<0.00984	<0.0492	<0.0246	<0.0738
HC10-12	12	1/9/2019	17.6	84.5	<50.0	<0.0117	<0.0584	<0.0292	<0.0876
HC10-15	15	1/9/2019	<6.88	<25.0	51.7	<0.0138	<0.0688	<0.0344	<0.103
HC11-06	6	1/9/2019	<4.94	45.0	1,110	<0.00987	<0.0494	<0.0247	<0.0741
HC11-11	11	1/9/2019	**1,520**	**6,760**	1,740	**1.12**	<0.214	0.567	**34.2**
HC11-15	15	1/9/2019	<4.95	<25.0	<50.0	<0.00990	<0.0495	<0.0248	<0.0743
HC12-08	8	1/9/2019	**627**	<25.0	<50.0	<0.0231	<0.115	<0.0577	<0.173
HC12-12	12	1/9/2019	**1,190**	**3,790**	<439	<0.0113	<0.0567	0.0458	2.80
HC12-15	15	1/9/2019	<5.16	<25.0	<50.0	<0.0103	<0.0516	<0.0258	<0.0774
Monitoring Well BH01R									
BH-1R-32	32	1/10/2019	<5.77	73.5	125	<0.0115	<0.0577	<0.0288	<0.0865
BH-1R-37	37	1/10/2019	**108**	400	<50.0	<0.0101	<0.0507	<0.0253	<0.0760

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

APPENDIX A

PHOTOGRAPHS

PHOTO 1
Former CVB Location

PHOTO 2
TP01 Location

PHOTO 3
TP02 Location

C:\Users\Josh\Desktop\Autocad Files\Hydrocon-Autocad\2017-074 Coleman Oil\2019\Jan 2019\2017-074_PP-013119.dwg

HydroCon

DATE: 1-31-19
DWN: JJT
CHK: RH
APPROVED: CH
PRJ. MGR: CH
PROJECT NO: 2017-074

PHOTOPLATE 1
SITE PHOTOGRAPHS

COLEMAN OIL COMPANY
3 CHEHALIS ST.
WENATCHEE, WA.

PHOTO 4
TP03 Location

PHOTO 5
TP04 Location

PHOTO 6
TP05/HC05 Location

HydroCon

DATE: 1-31-19
DWN: JJT
CHK: RH
APPROVED: CH
PRJ. MGR: CH
PROJECT NO: 2017-074

PHOTOPLATE 2
SITE PHOTOGRAPHS

COLEMAN OIL COMPANY
3 CHEHALIS ST.
WENATCHEE, WA.

C:\Users\Josh\Desktop\Autocad Files\Hydrocon-Autocad\2017-074 Coleman Oil\2019\Jan 2019\2017-074_PP-013119.dwg

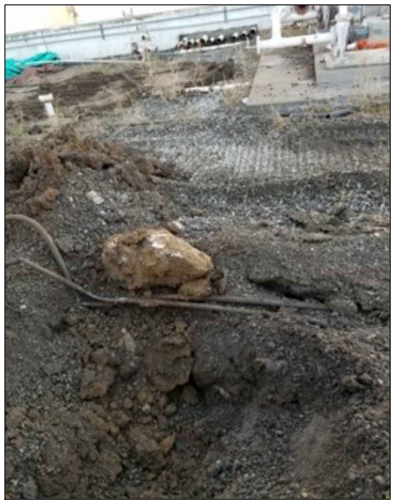

PHOTO 7
TP06/HC06 Location

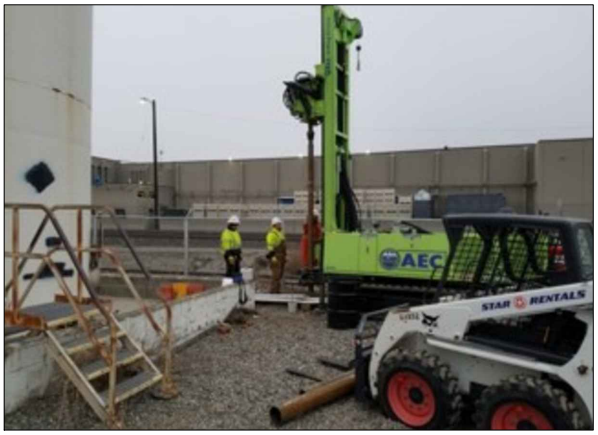

PHOTO 8
HC03 Location

PHOTO 9
HC04 Location

HydroCon

DATE: 1-31-19
DWN: JJT
CHK: RH
APPROVED: CH
PRJ. MGR: CH
PROJECT NO: 2017-074

PHOTOPLATE 3
SITE PHOTOGRAPHS

COLEMAN OIL COMPANY
3 CHEHALIS ST.
WENATCHEE, WA.

PHOTO 10
HC07 and HC08 Locations
HC07 in foreground.

PHOTO 11
HC09 Location

PHOTO 12
HC10 Location

HydroCon

DATE: 1-31-19
DWN: JJT
CHK: RH
APPROVED: CH
PRJ. MGR: CH
PROJECT NO: 2017-074

PHOTOPLATE 4
SITE PHOTOGRAPHS

COLEMAN OIL COMPANY
3 CHEHALIS ST.
WENATCHEE, WA.

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PHOTO 13
HC11 Location

PHOTO 14
HC12 Location

PHOTO 15
BH-1R Location

C:\Users\Josh\Desktop\Autocad Files\Hydrocon-Autocad\2017-074 Coleman Oil\2019\Jan 2019\2017-074_PP-013119.dwg

Hydro Con

DATE: 1-31-19
DWN: JJT
CHK: RH
APPROVED: CH
PRJ. MGR: CH
PROJECT NO: 2017-074

PHOTOPLATE 5
SITE PHOTOGRAPHS

COLEMAN OIL COMPANY
3 CHEHALIS ST.
WENATCHEE, WA.

APPENDIX B

BORING AND TEST PIT LOGS

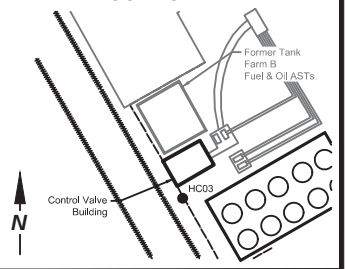
Hydro Con

314 West 15th Street, Suite 300
Vancouver, WA. 98660
Phone: 360-703-6079

WELL/BORING NUMBER HC03

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface	0							
Sandy Silt (ML), Reddish brown (7.5YR 5-6), 60% non plastic silt, 20% fine sand, and 20% subrounded gravel and cobbles up to 4" in diameter, dry, no hydrocarbon odor.					0			
					0.1			
Sandy Gravel (GP), Yellowish brown (7.5 YR 7/1), 55% subrounded gravel and cobbles up to 4" in diameter with 40% fine sand, and 5% nonplastic silt, dry, no hydrocarbon odor.	5				1.3			
Silty Sand (SM), Reddish brown (7.5YR 5/6), 70% medium to fine sand, 20% subrounded gravel up to 3" in diameter, and 10% non plastic silt, dry becomes wet at 9.5', strong hydrocarbon odor at 10'.				HC03-07	2.0			
					2.7			
	10			HC03-10	460			
Sandstone, Light gray (N5), medium to fine grained, massive, friable, moderatly cemented, dry, no hydrocarbon odor. **Chumstick formation.**					0.8			
					0.8			
					0.4			
End of boring at 15' bgs.	15			HC03-15	0.4			
Boring backfilled with bentonite upon completion.	20							
	25							
	30							

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

DRILLING CONTRACTOR: AEC
DRILLING METHOD: Sonic
BOREHOLE DIAMETER: 4 Inch
SAMPLING METHOD: Core Barrel
WELL TAG ID: --

CASING ELEVATION: --
GROUND SURFACE ELEVATION: 658.03'
NORTHING: 152718.87
EASTING: 1771784.61

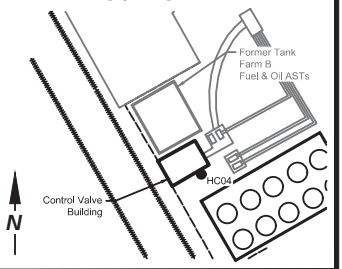
HydroCon

314 West 15th Street, Suite 300
Vancouver, WA. 98660
Phone: 360-703-6079

WELL/BORING NUMBER HC04

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface	0							
Sandy Silt (ML), Reddish brown (7.5YR 5-6), 60% non plastic silt, 20% fine sand, and 20% subrounded gravel and cobbles up to 4" in diameter, dry, no hydrocarbon odor.					0			
					0			
Sandy Gravel (GP), Yellowish brown (7.5 YR 7/1), 55% subrounded gravel and cobbles up to 4" in diameter with 40% fine sand, and 5% nonplastic silt, dry, no hydrocarbon odor.					0.1			
	5				0.1			
					0.1			
Silty Sand (SM), Reddish brown (7.5YR 5/6), 70% medium to fine sand, 20% subrounded gravel up to 3" in diameter, and 10% non plastic silt, dry becomes wet at 9', strong hydrocarbon odor at 9'. Color change to gray at 7' and black at 9'.				HC04-07	34			
				HC04-09	196			
	10				2.5			
Sandstone, Light gray (N5), medium to fine grained, massive, friable, moderatly cemented, dry, no hydrocarbon odor. **Chumstick formation.**				HC04-12	0.6			
End of boring at 12' bgs.								
Boring backfilled with bentonite upon completion.	15							
	20							
	25							
	30							

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

DRILLING CONTRACTOR: AEC
DRILLING METHOD: Sonic
BOREHOLE DIAMETER: 4 Inch
SAMPLING METHOD: Core Barrel
WELL TAG ID: --

CASING ELEVATION: --
GROUND SURFACE ELEVATION: 657.65'
NORTHING: 152732.47
EASTING: 1771798.03

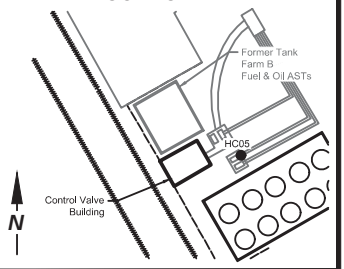
HydroCon

314 West 15th Street, Suite 300
Vancouver, WA. 98660
Phone: 360-703-6079

WELL/BORING NUMBER HC05

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface	0							
Sandy Silt (ML), Reddish brown (7.5YR 5-6), 60% non plastic silt, 20% fine sand, and 20% subrounded gravel and cobbles up to 4" in diameter, dry, no hydrocarbon odor.					0.1			
					0.2			
Sandy Gravel (GP), Yellowish brown (7.5 YR 7/1), 55% subrounded gravel and cobbles up to 4" in diameter with 40% fine sand, and 5% nonplastic silt, dry, no hydrocarbon odor.					0.1			
	5				0.1			
					0.1			
Silty Sand (SM), Reddish brown (7.5YR 5/6), 70% medium to fine sand, 20% subrounded gravel up to 3" in diameter, and 10% non plastic silt, dry becomes wet at 11.5', strong hydrocarbon odor at 12'. Color change to gray at 12'.					0.1			
					0.1			
	10			HC05-10	3.6			
					3.6			
				HC05-12	110			
					0.9			
Sandstone, Light gray (N5), medium to fine grained, massive, friable, moderatly cemented, dry, no hydrocarbon odor. **Chumstick formation.**								
	15			HC05-15	0.4			
End of boring at 15' bgs.								
Boring backfilled with bentonite upon completion.								
	20							
	25							
	30							

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

DRILLING CONTRACTOR: AEC
DRILLING METHOD: Sonic
BOREHOLE DIAMETER: 4 Inch
SAMPLING METHOD: Core Barrel
WELL TAG ID: --

CASING ELEVATION: --
GROUND SURFACE ELEVATION: 657.75'
NORTHING: 152743.24
EASTING: 1771819.32

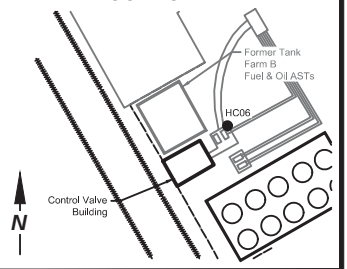
HydroCon

314 West 15th Street, Suite 300
Vancouver, WA. 98660
Phone: 360-703-6079

WELL/BORING NUMBER HC06

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface	0							
Sandy Silt (ML), Reddish brown (7.5YR 5-6), 60% non plastic silt, 20% fine sand, and 20% subrounded gravel and cobbles up to 4" in diameter, dry, no hydrocarbon odor.					0.1			
Sandy Gravel (GP), Yellowish brown (7.5 YR 7/1), 55% subrounded gravel and cobbles up to 4" in diameter with 40% fine sand, and 5% nonplastic silt, dry, no hydrocarbon odor.					0.1			
					0.1			
	5				0.1			
Silty Sand (SM), Reddish brown (7.5YR 5/6), 70% medium to fine sand, 20% subrounded gravel up to 3" in diameter, and 10% non plastic silt, dry becomes moist at 9' wet at 12', strong hydrocarbon odor at 12'. Color change to dark gray at 12'.					0.1			
					0.1			
					0.1			
				HC06-09	28			
	10				NA			
					NA			
				HC06-12	447			
Sandstone, Light gray (N5), medium to fine grained, massive, friable, moderatly cemented, dry, no hydrocarbon odor. **Chumstick formation.**					6.7			
	15			HC06-15	3			
End of boring at 15' bgs.								
Boring backfilled with bentonite upon completion.								
	20							
	25							
	30							

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

DRILLING CONTRACTOR: AEC
DRILLING METHOD: Sonic
BOREHOLE DIAMETER: 4 Inch
SAMPLING METHOD: Core Barrel
WELL TAG ID: --

CASING ELEVATION: --
GROUND SURFACE ELEVATION: 657.75'
NORTHING: 152759.98
EASTING: 1771809.98

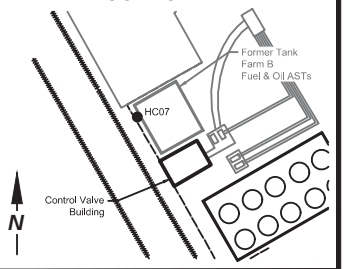
Hydro Con

314 West 15th Street, Suite 300
Vancouver, WA. 98660
Phone: 360-703-6079

WELL/BORING NUMBER HC07

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface	0							
Sandy Silt (ML), Reddish brown (7.5YR 5-6), 60% non plastic silt, 20% fine sand, and 20% subrounded gravel and cobbles up to 4" in diameter, dry, no hydrocarbon odor.					0.8			
				HC07-03	264			
Sandy Gravel (GP), Reddish brown (7.5 YR 5/6), 55% subrounded gravel and cobbles up to 4" in diameter with 40% fine sand, and 5% nonplastic silt, dry, no hydrocarbon odor.	5				335			
Silty Sand (SM), Gray, 70% medium to fine sand, 20% subrounded gravel up to 3" in diameter, and 10% non plastic silt, dry becomes moist to wet at 7.5', strong hydrocarbon odor. Color change to reddish brown at 9'. Petroleum contamination first observed at 3' bgs.				HC07-7.5	514			
					0.9			
	10				0.9			
Mudstone, Brownish gray, laminated, friable, planer fracturing, waxy, organic inclusions, dry, no hydrocarbon odor. **Chumstick formation**.					13			
Sandstone, Light gray (N5), medium to fine grained, massive, friable, moderatly cemented, dry, no hydrocarbon odor. **Chumstick formation.**					0.9			
	15			HC07-15	0.9			
End of boring at 15' bgs.								
Boring backfilled with bentonite upon completion.	20							
	25							
	30							

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

DRILLING CONTRACTOR: AEC
DRILLING METHOD: Sonic
BOREHOLE DIAMETER: 4 Inch
SAMPLING METHOD: Core Barrel
WELL TAG ID: --

CASING ELEVATION: --
GROUND SURFACE ELEVATION: 656.55'
NORTHING: 152764.91
EASTING: 1771760.65

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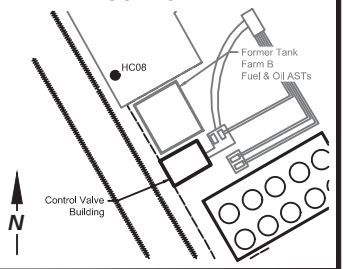
Phone: 360-703-6079

WELL/BORING NUMBER HC08

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface	0							
Sandy Gravel (GP), Reddish brown (7.5 YR 5/6), 55% subrounded gravel and cobbles up to 4" in diameter with 40% fine sand, and 5% nonplastic silt, dry, no hydrocarbon odor.					0.1			
					0.1			
Silty Sand (SM), Reddish brown (7.5YR 5/6), 70% medium to fine sand, 20% subrounded gravel up to 3" in diameter, and 10% non plastic silt, dry becomes wet at 9', strong hydrocarbon odor at 9' bgs. Color change to gray at 9'.				HC08-04	0.1			
	5				0.1			
					0.1			
					0.1			
				HC08-09	620			
Mudstone, Brownish gray, laminated, friable, planer fracturing, waxy, organic inclusions, dry, no hydrocarbon odor. **Chumstick formation**.	10				6.8			
				HC08-12	3.7			
End of boring at 12' bgs.								
Boring backfilled with bentonite upon completion.	15							
	20							
	25							
	30							

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

DRILLING CONTRACTOR: AEC
DRILLING METHOD: Sonic
BOREHOLE DIAMETER: 4 Inch
SAMPLING METHOD: Core Barrel
WELL TAG ID: --

CASING ELEVATION: --
GROUND SURFACE ELEVATION: 656.93'
NORTHING: 152788.48
EASTING: 1771748.18

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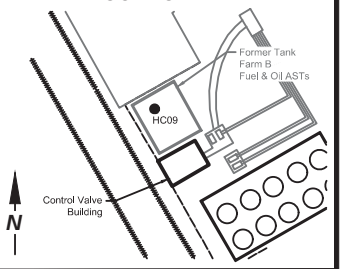
Phone: 360-703-6079

WELL/BORING NUMBER HC09

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface	0							
Sandy Gravel (GP), Gray, 55% subrounded gravel and cobbles up to 4" in diameter with 40% fine sand, and 5% nonplastic silt, dry, strong hydrocarbon odor. Petroleum contamination first observed at 1' bgs.				HC09-02	705			
Silty Sand (SM), Gray, 70% medium to fine sand, 20% subrounded gravel up to 3" in diameter, and 10% non plastic silt, dry.	5				5.5			
End of boring at 5' bgs.								
Boring backfilled with bentonite upon completion.	10							
	15							
	20							
	25							
	30							

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

DRILLING CONTRACTOR: AEC
DRILLING METHOD: Sonic
BOREHOLE DIAMETER: 4 Inch
SAMPLING METHOD: Core Barrel
WELL TAG ID: --

CASING ELEVATION: --
GROUND SURFACE ELEVATION: 657.56'
NORTHING: 152769.39
EASTING: 1771771.68

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314 West 15th Street, Suite 300
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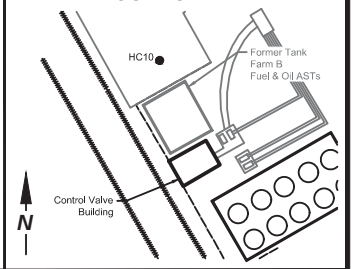
WELL/BORING NUMBER HC10

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface	0							
Sandy Gravel (GP), Reddish brown (7.5 YR 5/6), 55% subrounded gravel and cobbles up to 4" in diameter with 40% fine sand, and 5% nonplastic silt, dry, no hydrocarbon odor.					0.1			
					0.1			
					0.3			
Sand (SP), Yellowish brown (7.5YR 7/3), 85% medium to fine sand, 10% subrounded gravel up to 2" in diameter, and 5% non plastic silt, dry becomes moist at 9' wet at 12', moderate hydrocarbon odor at 12' bgs. Color change to gray at 9'. **Fill material**.	5			HC10-05	1.0			
					0.2			
					0.2			
					0.5			
					1.1			
	10				1.1			
				HC10-12	56			
Mudstone, Brownish gray, laminated, friable, planer fracturing, waxy, organic inclusions, dry, no hydrocarbon odor. **Chumstick formation**.					0.5			
	15			HC10-15	0.3			
End of boring at 15' bgs.								
Boring backfilled with bentonite upon completion.								
	20							
	25							
	30							

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

DRILLING CONTRACTOR: AEC
DRILLING METHOD: Sonic
BOREHOLE DIAMETER: 4 Inch
SAMPLING METHOD: Core Barrel
WELL TAG ID: --

CASING ELEVATION: --
GROUND SURFACE ELEVATION: 655.47'
NORTHING: 152796.81
EASTING: 1771768.22

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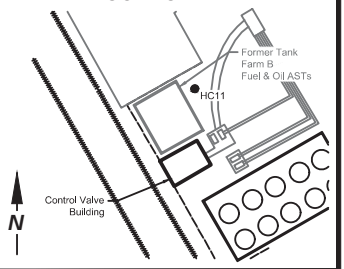
Phone: 360-703-6079

WELL/BORING NUMBER HC11

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface	0							
Sand (SP), Yellowish brown (7.5YR 7/3), 85% medium to fine sand, 10% subrounded gravel up to 2" in diameter, and 5% non plastic silt, dry. F**ill material**.	5			HC11-06	0.1 0.1 0.1 0.1 0.4 0.4 0.1			
Sandy Gravel (GP), 5/8" minus cushed rock from 9 to 10' bgs. **Fill Material.**	10				0.1 0.1			
Sand (SP), Yellowish brown (7.5YR 7/3), 85% medium to fine sand, 10% subrounded gravel up to 2" in diameter, and 5% non plastic silt, dry. F**ill material**.				HC11-11	656 284			
Sandstone, Brownish gray, 85% medium to fine sand, 10% subrounded gravel up to 2" diameter, 5% non plastic silt, wet, strong hydrocarbon odor. **Chumstick Formation.**	15			HC11-15	0.1 0.1			
End of boring at 15' bgs. Boring backfilled with bentonite upon completion.	20 25 30							**LEGEND:** FILTER PACK BENTONITE CEMENT GROUT CUTTINGS/BACKFILL WATER LEVEL DURING DRILLING WATER LEVEL AFTER DRILLING

DRILLING CONTRACTOR: AEC
DRILLING METHOD: Sonic
BOREHOLE DIAMETER: 4 Inch
SAMPLING METHOD: Core Barrel
WELL TAG ID: --

CASING ELEVATION: --
GROUND SURFACE ELEVATION: 657.77'
NORTHING: 152780.80
EASTING: 1771793.19

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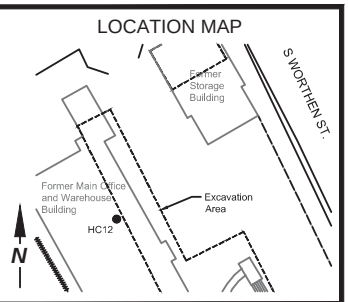
Phone: 360-703-6079

WELL/BORING NUMBER HC12

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface	0							
Sand (SP), Yellowish brown (7.5YR 7/3), 85% medium to fine sand, 10% subrounded gravel up to 2" in diameter, and 5% non plastic silt, dry becomes moist at 9' wet at 12', strong hydrocarbon odor at 12' bgs. **Fill material**.					0.1			
					0.1			
					0.1			
	5				0.1			
					0.1			
					0.1			
				HC12-08	0.1			
Sandstone boulder from 9 to 10.5' bgs.					0.1			
	10				0.1			
				HC12-12	347			
Sandstone, Light gray (N5), medium to fine grained, massive, friable, moderatly cemented, dry, no hydrocarbon odor. **Chumstick formation.**					12			
	15			HC12-15	4.3			
End of boring at 15' bgs.								
Boring backfilled with bentonite upon completion.								
	20							
	25							
	30							

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

DRILLING CONTRACTOR: AEC
DRILLING METHOD: Sonic
BOREHOLE DIAMETER: 4 Inch
SAMPLING METHOD: Core Barrel
WELL TAG ID: --

CASING ELEVATION: --
GROUND SURFACE ELEVATION: 657.60'
NORTHING: 152847.66
EASTING: 1771750.72

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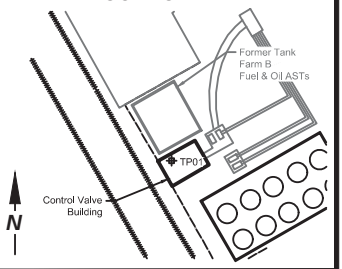
Phone: 360-703-6079

WELL/BORING NUMBER: TP01

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface. Petroleum contamination first observed at ground surface.	0							
Gravelly Sand (SP), Dark brown, 70% fine to medium sand, 25% subrounded gravel up to 2" in diameter, and 5% non plastic silt, dry, strong hydrocarbon odor, sheen visible on soil.				TP01-02	1005			
				TP01-04	845			
End of test pit at 4' bgs.	5							
Test pit was backfilled with excavated soil.	10							
	15							
	20							
	25							
	30							

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

DRILLING CONTRACTOR: Clark Construction
DRILLING METHOD: Excavator
BOREHOLE DIAMETER: 18 Inch
SAMPLING METHOD: Excavator Bucket
WELL TAG ID: --

CASING ELEVATION: --
GROUND SURFACE ELEVATION: 657.38'
NORTHING: 152740.23
EASTING: 1771781.26

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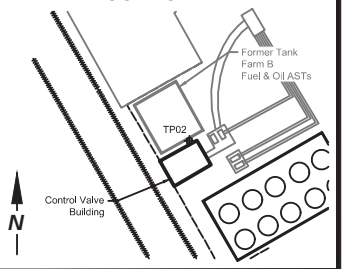
Phone: 360-703-6079

WELL/BORING NUMBER: TP02

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface	0							
Gravelly Sand (SP), Brown, 70% fine to medium sand, 25% subrounded gravel up to 2" in diameter, and 5% non plastic silt, dry, no hydrocarbon odor.				TP02-02	9.6			
				TP02-04	0			
End of test pit at 4' bgs.	5							
Test pit was backfilled with excavated soil.	10							
	15							
	20							
	25							
	30							

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

DRILLING CONTRACTOR: Clark Construction
DRILLING METHOD: Excavator
BOREHOLE DIAMETER: 18 Inch
SAMPLING METHOD: Excavator Bucket
WELL TAG ID: --

CASING ELEVATION: --
GROUND SURFACE ELEVATION: 657.62'
NORTHING: 152751.42
EASTING: 1771790.23

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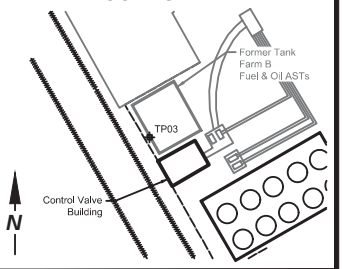
Phone: 360-703-6079

WELL/BORING NUMBER: TP03

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface	0							
Gravelly Sand (SP), Brown, 70% fine to medium sand, 25% subrounded gravel up to 2" in diameter, and 5% non plastic silt, dry, no hydrocarbon odor. No visual or olfactory indications of petroleum contamination.				TP03-02	0.2			
				TP03-04	0.9			
End of test pit at 4' bgs.	5							
Test pit was backfilled with excavated soil.	10							
	15							
	20							
	25							
	30							

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

DRILLING CONTRACTOR: Clark Construction
DRILLING METHOD: Excavator
BOREHOLE DIAMETER: 18 Inch
SAMPLING METHOD: Excavator Bucket
WELL TAG ID: --

CASING ELEVATION: --
GROUND SURFACE ELEVATION: 657.30'
NORTHING: 152753.48
EASTING: 1771768.86

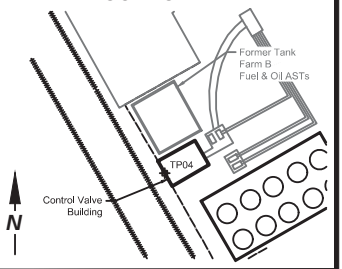
HydroCon

314 West 15th Street, Suite 300
Vancouver, WA. 98660
Phone: 360-703-6079

WELL/BORING NUMBER: TP04

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface. Petroleum contamination first observed at 0.5' bgs.	0							
Gravelly Sand (SP), Dark brown, 70% fine to medium sand, 25% subrounded gravel up to 2" in diameter, and 5% non plastic silt, dry, strong hydrocarbon odor.				TP04-02	165			
				TP04-04	618			
End of test pit at 4' bgs.	5							
Test pit was backfilled with excavated soil.	10							
	15							
	20							
	25							
	30							

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

DRILLING CONTRACTOR: Clark Construction
DRILLING METHOD: Excavator
BOREHOLE DIAMETER: 18 Inch
SAMPLING METHOD: Excavator Bucket
WELL TAG ID: --

CASING ELEVATION: --
GROUND SURFACE ELEVATION: 657.28'
NORTHING: 152733.20
EASTING: 1771777.44

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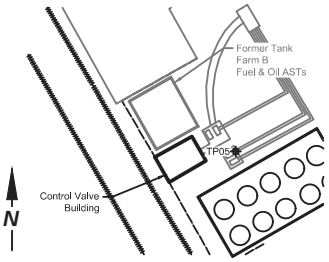
314 West 15th Street, Suite 300
Vancouver, WA. 98660
Phone: 360-703-6079

WELL/BORING NUMBER: TP05

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface	0							
Gravelly Sand (SP), Brown, 65% fine to medium sand, 25% subrounded gravel up to 2" in diameter, and 5% non plastic silt, dry, no hydrocarbon odor.				TP05-02	4.4			
End of test pit at 2' bgs.	5							
Test pit was backfilled with excavated soil.	10							
	15							
	20							
	25							
	30							

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

DRILLING CONTRACTOR: Clark Construction
DRILLING METHOD: Excavator
BOREHOLE DIAMETER: 18 Inch
SAMPLING METHOD: Excavator Bucket
WELL TAG ID: --

CASING ELEVATION: --
GROUND SURFACE ELEVATION: 657.75'
NORTHING: 152743.24
EASTING: 1771819.32

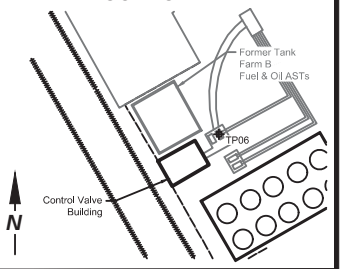
HydroCon

314 West 15th Street, Suite 300
Vancouver, WA. 98660
Phone: 360-703-6079

WELL/BORING NUMBER: TP06

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface	0							
Gravelly Sand (SP), Brown, 65% fine to medium sand, 25% subrounded gravel up to 2" in diameter, and 5% non plastic silt, dry, no hydrocarbon odor.				TP06-02	2.6			
Boulder at 2' bgs.								
End of test pit at 2' bgs.	5							
Test pit was backfilled with excavated soil.	10							
	15							
	20							
	25							
	30							

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

DRILLING CONTRACTOR: Clark Construction
DRILLING METHOD: Excavator
BOREHOLE DIAMETER: 18 Inch
SAMPLING METHOD: Excavator Bucket
WELL TAG ID: --

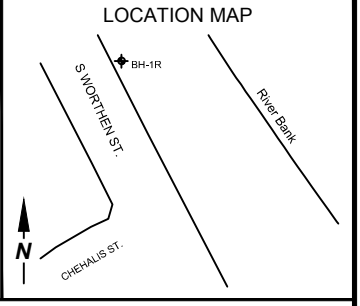
CASING ELEVATION: --
GROUND SURFACE ELEVATION: 657.67'
NORTHING: 152755.22
EASTING: 1771808.10

HydroCon
314 West 15th Street, Suite 300
Vancouver, WA. 98660
Phone: 360-703-6079

WELL/BORING NUMBER: BH01R

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 2017-074
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 1-27-19

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
Gravel at ground surface	0							
Over Drill existing well BH-01R to 30' bgs.	5							
	10							
	15							
BH-01R continues at 30' bgs.								
	30				0.1			
Mudstone, Dark brown, laminated, friable, planer fracturing, waxy, organic material, dry, no hydrocarbon odor.					0.1			
				BH01R-32	0.1			
Sandstone, Gray, medium to fine grained, massive, well cemented, micacious, dry, no hydrocarbon odor.					0.1			
					0.1			
	35				0.1			
Mudstone, Dark brown, laminated, friable, planer fracturing, waxy, organic material, dry, no hydrocarbon odor.					0.1			
				BH01R-37	0.1			
Sandstone, Gray, medium to fine grained, massive, well cemented, micacious, dry, no hydrocarbon odor.					0.1			
					0.1			
End of boring at 40.03' bgs.	40				0.1			

WELL CONSTRUCTION

Depths (feet bgs)

Borehole: 40'
Sump: 39.97 to 39.52
Screen: 39.52 to 14.52
Casing: 14.52 to 0
Backfill:
Sand Pack: 39.97 to 12.5
Bentonite: 12.5 to 3
Concrete:
Stabilizers:

MATERIALS USED

Casing: 4" PVC
Well Screen: 0.010 slot
End Cap: Flat sump
Sand Pack: 18 60lb bags10-20 Silica
Bentonite: 5 60lb bags
Concrete:
Monument: Vault
Well Cap: J-plug
Other:

LEGEND:

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

DRILLING CONTRACTOR: AEC
DRILLING METHOD: Sonic
BOREHOLE DIAMETER: 8 Inch
SAMPLING METHOD: Core Barrel
WELL TAG ID: BLN736

CASING ELEVATION: 651.03
GROUND SURFACE ELEVATION: 652.05
NORTHING: 153118.4
EASTING: 1771784.0

APPENDIX C

WELL DEVELOPMENT FORMS

HydroCon

WELL DEVELOPMENT

Well ID #: BH-1R
Date: 1-11-19
Time: 0800

Project name: Coleman 0.1
Project #: 2017-074
Engineer: RH

WELL INFORMATION

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

WELL MEASUREMENTS

Total well depth 40 ft o Clean bottom o Muddy bottom o Not measured
Depth to product - ft
Depth to water 25 ft
Casing volume 15 ft (H_2O) X 0.65 gpf = 9.75
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 o Peristaltic ✓ Submersible o Centrifugal o Other _____
Purge tubing o New LDPE ✓ New HDPE o New Teflon o Other _____
Bailer type o Disposable o Stainless o PVC o Other _____
Bailer cord used o Monofillament o Other _____
Purge start time 0810 Purge stop time 1000 Purge Rate (GPM) 1.0 to 0.5
Total Volume Purged (gallons) approx 30

FIELD PARAMETERS

Meters used o FlowThru Cell o Hach o Hanna o Other NR

Gallons	pH	Temp.	Conductivity	Turbidity	Dissolved Oxygen	ORP

NOTES/COMMENTS

Well was surged w/ the remediation pump. Initially a high sediment load that cleared up to clear in approx 30 min. Remediation pump continued to pump following development.

Engineer's Signature _____ Date 1-11-19

APPENDIX D

LABORATORY REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

Apex Laboratories, LLC

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Monday, January 21, 2019

Craig Hultgren
HydroCon LLC
314 W 15th Street Suite 300
Vancouver, WA 98660

RE: A9A0293 - Coleman Wenatchee - 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 A9A0293, which was received by the laboratory on 1/11/2019 at 10:20:00AM.

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, or by phone at 503-718-2323.

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

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	2.4 degC	Cooler #2	1.1 degC
Cooler #3	2.1 degC		

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

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

Apex Laboratories, LLC
12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HC03-07	A9A0293-01	Soil	01/08/19 09:20	01/11/19 10:20
HC03-10	A9A0293-02	Soil	01/08/19 09:30	01/11/19 10:20
HC03-15	A9A0293-03	Soil	01/08/19 09:40	01/11/19 10:20
HC04-07	A9A0293-04	Soil	01/08/19 10:50	01/11/19 10:20
HC04-09	A9A0293-05	Soil	01/08/19 10:55	01/11/19 10:20
HC04-12	A9A0293-06	Soil	01/08/19 11:00	01/11/19 10:20
HC05-10	A9A0293-07	Soil	01/08/19 11:30	01/11/19 10:20
HC05-12	A9A0293-08	Soil	01/08/19 11:40	01/11/19 10:20
HC05-15	A9A0293-09	Soil	01/08/19 11:45	01/11/19 10:20
HC06-09	A9A0293-10	Soil	01/08/19 12:15	01/11/19 10:20
HC06-12	A9A0293-11	Soil	01/08/19 12:20	01/11/19 10:20
HC06-15	A9A0293-12	Soil	01/08/19 12:25	01/11/19 10:20
HC07-03	A9A0293-13	Soil	01/09/19 08:40	01/11/19 10:20
HC07-05	A9A0293-14	Soil	01/09/19 08:45	01/11/19 10:20
HC07-15	A9A0293-15	Soil	01/09/19 08:55	01/11/19 10:20
HC08-04	A9A0293-16	Soil	01/09/19 09:35	01/11/19 10:20
HC08-09	A9A0293-17	Soil	01/09/19 09:40	01/11/19 10:20
HC08-12	A9A0293-18	Soil	01/09/19 09:45	01/11/19 10:20
HC09-02	A9A0293-19	Soil	01/09/19 10:15	01/11/19 10:20
HC10-05	A9A0293-20	Soil	01/09/19 10:40	01/11/19 10:20
HC10-12	A9A0293-21	Soil	01/09/19 10:50	01/11/19 10:20
HC10-15	A9A0293-22	Soil	01/09/19 10:55	01/11/19 10:20
HC11-06	A9A0293-23	Soil	01/09/19 11:20	01/11/19 10:20
HC11-11	A9A0293-24	Soil	01/09/19 11:25	01/11/19 10:20
HC11-15	A9A0293-25	Soil	01/09/19 11:30	01/11/19 10:20
HC12-08	A9A0293-26	Soil	01/09/19 13:10	01/11/19 10:20
HC12-12	A9A0293-27	Soil	01/09/19 13:15	01/11/19 10:20
HC12-15	A9A0293-28	Soil	01/09/19 13:20	01/11/19 10:20
BH-1R-32	A9A0293-29	Soil	01/10/19 13:10	01/11/19 10:20
BH-R-37	A9A0293-30	Soil	01/10/19 13:15	01/11/19 10:20

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Apex Laboratories, LLC
12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

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
HC03-07 (A9A0293-01)				**Matrix: Soil**		**Batch: 9010728**		
Diesel	ND	---	25.0	mg/kg dry	1	01/16/19	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	01/16/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 97 %*		*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Dx*	
HC03-10 (A9A0293-02RE1)				**Matrix: Soil**		**Batch: 9010728**		
Diesel	**3240**	---	108	mg/kg dry	5	01/16/19	NWTPH-Dx	**F-13**
Oil	ND	---	216	mg/kg dry	5	01/16/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 99 %*		*Limits: 50-150 %*	*5*	*01/16/19*	*NWTPH-Dx*	*S-05*
HC03-15 (A9A0293-03)				**Matrix: Soil**		**Batch: 9010728**		
Diesel	ND	---	25.0	mg/kg dry	1	01/16/19	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	01/16/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 93 %*		*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Dx*	
HC04-07 (A9A0293-04RE1)				**Matrix: Soil**		**Batch: 9010728**		
Diesel	**631**	---	518	mg/kg dry	25	01/16/19	NWTPH-Dx	**F-15**
Oil	**4640**	---	1040	mg/kg dry	25	01/16/19	NWTPH-Dx	**F-16**
Surrogate: o-Terphenyl (Surr)		*Recovery: %*		*Limits: 50-150 %*	*25*	*01/16/19*	*NWTPH-Dx*	*S-01*
HC04-09 (A9A0293-05)				**Matrix: Soil**		**Batch: 9010728**		
Diesel	**6400**	---	435	mg/kg dry	20	01/16/19	NWTPH-Dx	
Oil	ND	---	869	mg/kg dry	20	01/16/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: %*		*Limits: 50-150 %*	*20*	*01/16/19*	*NWTPH-Dx*	*S-01*
HC04-12 (A9A0293-06)				**Matrix: Soil**		**Batch: 9010728**		
Diesel	ND	---	25.0	mg/kg dry	1	01/15/19	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	01/15/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 89 %*		*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Dx*	
HC05-10 (A9A0293-07)				**Matrix: Soil**		**Batch: 9010728**		
Diesel	**130**	---	25.0	mg/kg dry	1	01/15/19	NWTPH-Dx	**F-11, F-15**
Oil	**62.9**	---	50.0	mg/kg dry	1	01/15/19	NWTPH-Dx	**F-16**
Surrogate: o-Terphenyl (Surr)		*Recovery: 96 %*		*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Dx*	
HC05-12 (A9A0293-08)				**Matrix: Soil**		**Batch: 9010728**		
Diesel	**2210**	---	25.0	mg/kg dry	1	01/15/19	NWTPH-Dx	**F-15**

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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	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

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
HC05-12 (A9A0293-08)				**Matrix: Soil**		**Batch: 9010728**		
Oil	**316**	---	50.0	mg/kg dry	1	01/15/19	NWTPH-Dx	**F-16**
Surrogate: o-Terphenyl (Surr)		*Recovery: 96 %*		*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Dx*	
HC05-15 (A9A0293-09)				**Matrix: Soil**		**Batch: 9010728**		
Diesel	ND	---	25.0	mg/kg dry	1	01/15/19	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	01/15/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 84 %*		*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Dx*	
HC06-09 (A9A0293-10)				**Matrix: Soil**		**Batch: 9010728**		
Diesel	**1750**	---	25.0	mg/kg dry	1	01/15/19	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	01/15/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 95 %*		*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Dx*	
HC06-12 (A9A0293-11)				**Matrix: Soil**		**Batch: 9010728**		
Diesel	**5560**	---	208	mg/kg dry	10	01/15/19	NWTPH-Dx	
Oil	ND	---	416	mg/kg dry	10	01/15/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 109 %*		*Limits: 50-150 %*	*10*	*01/15/19*	*NWTPH-Dx*	*S-05*
HC06-15 (A9A0293-12)				**Matrix: Soil**		**Batch: 9010741**		
Diesel	ND	---	25.0	mg/kg dry	1	01/15/19	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	01/15/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 77 %*		*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Dx*	
HC07-03 (A9A0293-13)				**Matrix: Soil**		**Batch: 9010832**		
Diesel	**1780**	---	25.0	mg/kg dry	1	01/18/19	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	01/18/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 101 %*		*Limits: 50-150 %*	*1*	*01/18/19*	*NWTPH-Dx*	
HC07-05 (A9A0293-14RE1)				**Matrix: Soil**		**Batch: 9010832**		
Diesel	**2740**	---	96.3	mg/kg dry	5	01/18/19	NWTPH-Dx	
Oil	ND	---	193	mg/kg dry	5	01/18/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 100 %*		*Limits: 50-150 %*	*5*	*01/18/19*	*NWTPH-Dx*	
HC07-15 (A9A0293-15)				**Matrix: Soil**		**Batch: 9010832**		
Diesel	ND	---	25.0	mg/kg dry	1	01/17/19	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	01/17/19	NWTPH-Dx	

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EPA ID: OR01039

HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

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
HC07-15 (A9A0293-15)				**Matrix: Soil**			**Batch: 9010832**	
Surrogate: o-Terphenyl (Surr)		*Recovery: 93 %*		*Limits: 50-150 %*	*1*	*01/17/19*	*NWTPH-Dx*	
HC08-04 (A9A0293-16)				**Matrix: Soil**			**Batch: 9010786**	
Diesel	ND	---	25.0	mg/kg dry	1	01/16/19	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	01/16/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 90 %*		*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Dx*	
HC08-09 (A9A0293-17)				**Matrix: Soil**			**Batch: 9010786**	
Diesel	**9150**	---	115	mg/kg dry	5	01/16/19	NWTPH-Dx	
Oil	ND	---	230	mg/kg dry	5	01/16/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 109 %*		*Limits: 50-150 %*	*5*	*01/16/19*	*NWTPH-Dx*	
HC08-12 (A9A0293-18)				**Matrix: Soil**			**Batch: 9010786**	
Diesel	ND	---	25.0	mg/kg dry	1	01/16/19	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	01/16/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 81 %*		*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Dx*	
HC09-02 (A9A0293-19RE2)				**Matrix: Soil**			**Batch: 9010786**	
Diesel	**3320**	---	97.4	mg/kg dry	5	01/17/19	NWTPH-Dx	**F-15**
Oil	**515**	---	195	mg/kg dry	5	01/17/19	NWTPH-Dx	**F-16**
Surrogate: o-Terphenyl (Surr)		*Recovery: 106 %*		*Limits: 50-150 %*	*5*	*01/17/19*	*NWTPH-Dx*	
HC10-05 (A9A0293-20)				**Matrix: Soil**			**Batch: 9010786**	
Diesel	ND	---	25.0	mg/kg dry	1	01/17/19	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	01/17/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 85 %*		*Limits: 50-150 %*	*1*	*01/17/19*	*NWTPH-Dx*	
HC10-12 (A9A0293-21)				**Matrix: Soil**			**Batch: 9010786**	
Diesel	**84.5**	---	25.0	mg/kg dry	1	01/17/19	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	01/17/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 86 %*		*Limits: 50-150 %*	*1*	*01/17/19*	*NWTPH-Dx*	
HC10-15 (A9A0293-22)				**Matrix: Soil**			**Batch: 9010786**	
Diesel	ND	---	25.0	mg/kg dry	1	01/17/19	NWTPH-Dx	
Oil	**51.7**	---	50.0	mg/kg dry	1	01/17/19	NWTPH-Dx	**F-03**

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EPA ID: OR01039

HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

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
HC10-15 (A9A0293-22)				**Matrix: Soil**		**Batch: 9010786**		
Surrogate: o-Terphenyl (Surr)		*Recovery: 60 %*		*Limits: 50-150 %*	*1*	*01/17/19*	*NWTPH-Dx*	
HC11-06 (A9A0293-23)				**Matrix: Soil**		**Batch: 9010786**		
Diesel	**45.0**	---	25.0	mg/kg dry	1	01/17/19	NWTPH-Dx	**F-11, F-15**
Oil	**1110**	---	50.0	mg/kg dry	1	01/17/19	NWTPH-Dx	**F-16**
Surrogate: o-Terphenyl (Surr)		*Recovery: 100 %*		*Limits: 50-150 %*	*1*	*01/17/19*	*NWTPH-Dx*	
HC11-11 (A9A0293-24RE1)				**Matrix: Soil**		**Batch: 9010786**		
Diesel	**6760**	---	199	mg/kg dry	10	01/17/19	NWTPH-Dx	**F-15**
Oil	**1740**	---	397	mg/kg dry	10	01/17/19	NWTPH-Dx	**F-16**
Surrogate: o-Terphenyl (Surr)		*Recovery: 111 %*		*Limits: 50-150 %*	*10*	*01/17/19*	*NWTPH-Dx*	*S-05*
HC11-15 (A9A0293-25)				**Matrix: Soil**		**Batch: 9010786**		
Diesel	ND	---	25.0	mg/kg dry	1	01/17/19	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	01/17/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 82 %*		*Limits: 50-150 %*	*1*	*01/17/19*	*NWTPH-Dx*	
HC12-08 (A9A0293-26)				**Matrix: Soil**		**Batch: 9010786**		
Diesel	ND	---	25.0	mg/kg dry	1	01/17/19	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	01/17/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 84 %*		*Limits: 50-150 %*	*1*	*01/17/19*	*NWTPH-Dx*	
HC12-12 (A9A0293-27RE1)				**Matrix: Soil**		**Batch: 9010786**		
Diesel	**3790**	---	219	mg/kg dry	10	01/17/19	NWTPH-Dx	**F-13**
Oil	ND	---	439	mg/kg dry	10	01/17/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 109 %*		*Limits: 50-150 %*	*10*	*01/17/19*	*NWTPH-Dx*	*S-05*
HC12-15 (A9A0293-28)				**Matrix: Soil**		**Batch: 9010786**		
Diesel	ND	---	25.0	mg/kg dry	1	01/17/19	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	01/17/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 96 %*		*Limits: 50-150 %*	*1*	*01/17/19*	*NWTPH-Dx*	
BH-1R-32 (A9A0293-29)				**Matrix: Soil**		**Batch: 9010832**		
Diesel	**73.5**	---	25.0	mg/kg dry	1	01/17/19	NWTPH-Dx	**F-13, F-15**
Oil	**125**	---	50.0	mg/kg dry	1	01/17/19	NWTPH-Dx	**F-03, F-16**
Surrogate: o-Terphenyl (Surr)		*Recovery: 87 %*		*Limits: 50-150 %*	*1*	*01/17/19*	*NWTPH-Dx*	

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HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

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
BH-R-37 (A9A0293-30)				**Matrix: Soil**		**Batch: 9010832**		
Diesel	**400**	---	25.0	mg/kg dry	1	01/17/19	NWTPH-Dx	**F-13**
Oil	ND	---	50.0	mg/kg dry	1	01/17/19	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 92 %*		*Limits: 50-150 %*	*1*	*01/17/19*	*NWTPH-Dx*	

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314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

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
HC03-07 (A9A0293-01)				**Matrix: Soil**			**Batch: 9010726**	
Gasoline Range Organics	ND	---	5.02	mg/kg dry	50	01/15/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery: 102 %*		*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*90 %*	*50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
HC03-10 (A9A0293-02RE1)				**Matrix: Soil**			**Batch: 9010754**	
Gasoline Range Organics	**3550**	---	89.5	mg/kg dry	1000	01/15/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery: 147 %*		*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*100 %*	*50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
HC03-15 (A9A0293-03RE1)				**Matrix: Soil**			**Batch: 9010754**	
Gasoline Range Organics	ND	---	5.08	mg/kg dry	50	01/15/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery: 96 %*		*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*86 %*	*50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
HC04-07 (A9A0293-04)				**Matrix: Soil**			**Batch: 9010726**	
Gasoline Range Organics	**152**	---	5.27	mg/kg dry	50	01/15/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery: 94 %*		*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*94 %*	*50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
HC04-09 (A9A0293-05)				**Matrix: Soil**			**Batch: 9010726**	
Gasoline Range Organics	**1070**	---	101	mg/kg dry	1000	01/15/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery: 109 %*		*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*95 %*	*50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
HC04-12 (A9A0293-06)				**Matrix: Soil**			**Batch: 9010726**	
Gasoline Range Organics	ND	---	4.98	mg/kg dry	50	01/15/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery: 99 %*		*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*90 %*	*50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
HC05-10 (A9A0293-07)				**Matrix: Soil**			**Batch: 9010726**	
Gasoline Range Organics	ND	---	5.63	mg/kg dry	50	01/15/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery: 99 %*		*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*89 %*	*50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
HC05-12 (A9A0293-08)				**Matrix: Soil**			**Batch: 9010726**	
Gasoline Range Organics	**101**	---	5.37	mg/kg dry	50	01/15/19	NWTPH-Gx (MS)	

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HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

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
HC05-12 (A9A0293-08)				**Matrix: Soil**		**Batch: 9010726**		
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 119 %*	*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*89 %*	*50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
HC05-15 (A9A0293-09)				**Matrix: Soil**		**Batch: 9010726**		
Gasoline Range Organics	**55.4**	---	5.47	mg/kg dry	50	01/15/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 114 %*	*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*92 %*	*50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
HC06-09 (A9A0293-10)				**Matrix: Soil**		**Batch: 9010726**		
Gasoline Range Organics	**17.6**	---	4.94	mg/kg dry	50	01/15/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 104 %*	*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*91 %*	*50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
HC06-12 (A9A0293-11)				**Matrix: Soil**		**Batch: 9010754**		
Gasoline Range Organics	**1900**	---	20.7	mg/kg dry	200	01/15/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 119 %*	*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*153 %*	*50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	*S-08*
HC06-15 (A9A0293-12RE1)				**Matrix: Soil**		**Batch: 9010767**		
Gasoline Range Organics	ND	---	5.28	mg/kg dry	50	01/16/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 97 %*	*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*86 %*	*50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
HC07-03 (A9A0293-13)				**Matrix: Soil**		**Batch: 9010754**		
Gasoline Range Organics	**712**	---	20.7	mg/kg dry	200	01/15/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 130 %*	*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*98 %*	*50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
HC07-05 (A9A0293-14)				**Matrix: Soil**		**Batch: 9010754**		
Gasoline Range Organics	**1270**	---	18.5	mg/kg dry	200	01/15/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 165 %*	*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	*S-08*
1,4-Difluorobenzene (Sur)			*102 %*	*50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
HC07-15 (A9A0293-15)				**Matrix: Soil**		**Batch: 9010754**		
Gasoline Range Organics	ND	---	4.92	mg/kg dry	50	01/15/19	NWTPH-Gx (MS)	

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314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

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
HC07-15 (A9A0293-15)				**Matrix: Soil**			**Batch: 9010754**	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 98 %*	*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*86 %*	*50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
HC08-04 (A9A0293-16)				**Matrix: Soil**			**Batch: 9010754**	
Gasoline Range Organics	ND	---	4.43	mg/kg dry	50	01/15/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 96 %*	*Limits: 50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*87 %*	*50-150 %*	*1*	*01/15/19*	*NWTPH-Gx (MS)*	
HC08-09 (A9A0293-17RE1)				**Matrix: Soil**			**Batch: 9010767**	
Gasoline Range Organics	**1260**	---	56.2	mg/kg dry	500	01/16/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 137 %*	*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*98 %*	*50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
HC08-12 (A9A0293-18)				**Matrix: Soil**			**Batch: 9010754**	
Gasoline Range Organics	ND	---	5.35	mg/kg dry	50	01/16/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 100 %*	*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*90 %*	*50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
HC09-02 (A9A0293-19)				**Matrix: Soil**			**Batch: 9010754**	
Gasoline Range Organics	**12200**	---	186	mg/kg dry	2000	01/16/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 140 %*	*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*99 %*	*50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
HC10-05 (A9A0293-20)				**Matrix: Soil**			**Batch: 9010754**	
Gasoline Range Organics	ND	---	4.92	mg/kg dry	50	01/16/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 96 %*	*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*86 %*	*50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
HC10-12 (A9A0293-21)				**Matrix: Soil**			**Batch: 9010753**	**V-16**
Gasoline Range Organics	**17.6**	---	5.84	mg/kg dry	50	01/16/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 110 %*	*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*92 %*	*50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
HC10-15 (A9A0293-22)				**Matrix: Soil**			**Batch: 9010754**	
Gasoline Range Organics	ND	---	6.88	mg/kg dry	50	01/16/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 99 %*	*Limits: 50-150 %*	*1*	*01/16/19*	*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
HC10-15 (A9A0293-22)				**Matrix: Soil**		**Batch: 9010754**		
Surrogate: 1,4-Difluorobenzene (Sur)			*Recovery: 89 %*	*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
HC11-06 (A9A0293-23)				**Matrix: Soil**		**Batch: 9010754**		
Gasoline Range Organics	ND	---	4.94	mg/kg dry	50	01/16/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 97 %*	*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*86 %*	*50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
HC11-11 (A9A0293-24)				**Matrix: Soil**		**Batch: 9010754**		
Gasoline Range Organics	**1520**	---	21.4	mg/kg dry	200	01/16/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 141 %*	*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*125 %*	*50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
HC11-15 (A9A0293-25RE1)				**Matrix: Soil**		**Batch: 9010767**		
Gasoline Range Organics	ND	---	4.95	mg/kg dry	50	01/16/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 97 %*	*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*87 %*	*50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
HC12-08 (A9A0293-26)				**Matrix: Soil**		**Batch: 9010754**		
Gasoline Range Organics	**627**	---	11.5	mg/kg dry	200	01/16/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 150 %*	*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*92 %*	*50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
HC12-12 (A9A0293-27RE1)				**Matrix: Soil**		**Batch: 9010765**		**V-15**
Gasoline Range Organics	**1190**	---	56.7	mg/kg dry	500	01/16/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 135 %*	*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*95 %*	*50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
HC12-15 (A9A0293-28)				**Matrix: Soil**		**Batch: 9010754**		
Gasoline Range Organics	ND	---	5.16	mg/kg dry	50	01/16/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 100 %*	*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*87 %*	*50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
BH-1R-32 (A9A0293-29)				**Matrix: Soil**		**Batch: 9010754**		
Gasoline Range Organics	ND	---	5.77	mg/kg dry	50	01/16/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 98 %*	*Limits: 50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*86 %*	*50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*	

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Lisa Domenighini, Client Services Manager

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HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

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
BH-R-37 (A9A0293-30)				**Matrix: Soil**		**Batch: 9010754**		
Gasoline Range Organics	**108**	---	5.07	mg/kg dry	50	01/16/19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery:*	*125 %*	*Limits:*	*50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*
1,4-Difluorobenzene (Sur)			*91 %*		*50-150 %*	*1*	*01/16/19*	*NWTPH-Gx (MS)*

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HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC03-07 (A9A0293-01)				**Matrix: Soil**			**Batch: 9010726**	
Benzene	ND	---	0.0100	mg/kg dry	50	01/15/19	5035A/8260C	
Toluene	ND	---	0.0502	mg/kg dry	50	01/15/19	5035A/8260C	
Ethylbenzene	ND	---	0.0251	mg/kg dry	50	01/15/19	5035A/8260C	
Xylenes, total	ND	---	0.0754	mg/kg dry	50	01/15/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*99 %*	*Limits: 80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
HC03-10 (A9A0293-02RE1)				**Matrix: Soil**			**Batch: 9010754**	**R-04**
Benzene	ND	---	0.179	mg/kg dry	1000	01/15/19	5035A/8260C	
Toluene	ND	---	0.895	mg/kg dry	1000	01/15/19	5035A/8260C	
Ethylbenzene	ND	---	0.447	mg/kg dry	1000	01/15/19	5035A/8260C	
Xylenes, total	ND	---	1.34	mg/kg dry	1000	01/15/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*93 %*	*Limits: 80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*101 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
HC03-15 (A9A0293-03)				**Matrix: Soil**			**Batch: 9010726**	
Benzene	ND	---	0.0102	mg/kg dry	50	01/15/19	5035A/8260C	
Toluene	ND	---	0.0508	mg/kg dry	50	01/15/19	5035A/8260C	
Ethylbenzene	ND	---	0.0254	mg/kg dry	50	01/15/19	5035A/8260C	
Xylenes, total	ND	---	0.0762	mg/kg dry	50	01/15/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*99 %*	*Limits: 80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*97 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
HC04-07 (A9A0293-04)				**Matrix: Soil**			**Batch: 9010726**	
Benzene	ND	---	0.0105	mg/kg dry	50	01/15/19	5035A/8260C	
Toluene	ND	---	0.0527	mg/kg dry	50	01/15/19	5035A/8260C	
Ethylbenzene	ND	---	0.0264	mg/kg dry	50	01/15/19	5035A/8260C	
Xylenes, total	**1.40**	---	0.0791	mg/kg dry	50	01/15/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*98 %*	*Limits: 80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
HC04-09 (A9A0293-05)				**Matrix: Soil**			**Batch: 9010726**	
Benzene	ND	---	0.203	mg/kg dry	1000	01/15/19	5035A/8260C	

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HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC04-09 (A9A0293-05)				**Matrix: Soil**			**Batch: 9010726**	
Toluene	ND	---	1.01	mg/kg dry	1000	01/15/19	5035A/8260C	
Ethylbenzene	ND	---	0.507	mg/kg dry	1000	01/15/19	5035A/8260C	
Xylenes, total	**10.2**	---	1.52	mg/kg dry	1000	01/15/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*98 %*	*Limits: 80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
HC04-12 (A9A0293-06)				**Matrix: Soil**			**Batch: 9010726**	
Benzene	ND	---	0.00996	mg/kg dry	50	01/15/19	5035A/8260C	
Toluene	ND	---	0.0498	mg/kg dry	50	01/15/19	5035A/8260C	
Ethylbenzene	ND	---	0.0249	mg/kg dry	50	01/15/19	5035A/8260C	
Xylenes, total	ND	---	0.0747	mg/kg dry	50	01/15/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*98 %*	*Limits: 80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
HC05-10 (A9A0293-07)				**Matrix: Soil**			**Batch: 9010726**	
Benzene	ND	---	0.0113	mg/kg dry	50	01/15/19	5035A/8260C	
Toluene	ND	---	0.0563	mg/kg dry	50	01/15/19	5035A/8260C	
Ethylbenzene	ND	---	0.0281	mg/kg dry	50	01/15/19	5035A/8260C	
Xylenes, total	ND	---	0.0844	mg/kg dry	50	01/15/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*97 %*	*Limits: 80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
HC05-12 (A9A0293-08)				**Matrix: Soil**			**Batch: 9010726**	
Benzene	ND	---	0.0107	mg/kg dry	50	01/15/19	5035A/8260C	
Toluene	ND	---	0.0537	mg/kg dry	50	01/15/19	5035A/8260C	
Ethylbenzene	ND	---	0.0269	mg/kg dry	50	01/15/19	5035A/8260C	
Xylenes, total	ND	---	0.0806	mg/kg dry	50	01/15/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*98 %*	*Limits: 80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
HC05-15 (A9A0293-09)				**Matrix: Soil**			**Batch: 9010726**	
Benzene	ND	---	0.0109	mg/kg dry	50	01/15/19	5035A/8260C	
Toluene	ND	---	0.0547	mg/kg dry	50	01/15/19	5035A/8260C	

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HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC05-15 (A9A0293-09)				**Matrix: Soil**			**Batch: 9010726**	
Ethylbenzene	ND	---	0.0274	mg/kg dry	50	01/15/19	5035A/8260C	
Xylenes, total	ND	---	0.0821	mg/kg dry	50	01/15/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*99 %*	*Limits:* *80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*97 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*103 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
HC06-09 (A9A0293-10)				**Matrix: Soil**			**Batch: 9010726**	
Benzene	ND	---	0.00987	mg/kg dry	50	01/15/19	5035A/8260C	
Toluene	ND	---	0.0494	mg/kg dry	50	01/15/19	5035A/8260C	
Ethylbenzene	ND	---	0.0247	mg/kg dry	50	01/15/19	5035A/8260C	
Xylenes, total	ND	---	0.0740	mg/kg dry	50	01/15/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*98 %*	*Limits:* *80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
HC06-12 (A9A0293-11)				**Matrix: Soil**			**Batch: 9010754**	
Benzene	ND	---	0.0414	mg/kg dry	200	01/15/19	5035A/8260C	
Toluene	ND	---	0.207	mg/kg dry	200	01/15/19	5035A/8260C	
Ethylbenzene	**0.968**	---	0.104	mg/kg dry	200	01/15/19	5035A/8260C	
Xylenes, total	**53.6**	---	0.311	mg/kg dry	200	01/15/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*95 %*	*Limits:* *80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
HC06-15 (A9A0293-12RE1)				**Matrix: Soil**			**Batch: 9010767**	
Benzene	ND	---	0.0106	mg/kg dry	50	01/16/19	5035A/8260C	
Toluene	ND	---	0.0528	mg/kg dry	50	01/16/19	5035A/8260C	
Ethylbenzene	ND	---	0.0264	mg/kg dry	50	01/16/19	5035A/8260C	
Xylenes, total	ND	---	0.0792	mg/kg dry	50	01/16/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*92 %*	*Limits:* *80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*104 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
HC07-03 (A9A0293-13)				**Matrix: Soil**			**Batch: 9010754**	
Benzene	**0.0913**	---	0.0415	mg/kg dry	200	01/15/19	5035A/8260C	
Toluene	ND	---	0.207	mg/kg dry	200	01/15/19	5035A/8260C	
Ethylbenzene	**0.373**	---	0.104	mg/kg dry	200	01/15/19	5035A/8260C	

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314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC07-03 (A9A0293-13)				**Matrix: Soil**			**Batch: 9010754**	
Xylenes, total	**2.17**	---	0.311	mg/kg dry	200	01/15/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*94 %*	*Limits:* *80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
HC07-05 (A9A0293-14)				**Matrix: Soil**			**Batch: 9010754**	
Benzene	**0.159**	---	0.0369	mg/kg dry	200	01/15/19	5035A/8260C	
Toluene	ND	---	0.185	mg/kg dry	200	01/15/19	5035A/8260C	
Ethylbenzene	**0.367**	---	0.0923	mg/kg dry	200	01/15/19	5035A/8260C	
Xylenes, total	**3.53**	---	0.277	mg/kg dry	200	01/15/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*94 %*	*Limits:* *80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*103 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
HC07-15 (A9A0293-15)				**Matrix: Soil**			**Batch: 9010754**	
Benzene	ND	---	0.00983	mg/kg dry	50	01/15/19	5035A/8260C	
Toluene	ND	---	0.0492	mg/kg dry	50	01/15/19	5035A/8260C	
Ethylbenzene	ND	---	0.0246	mg/kg dry	50	01/15/19	5035A/8260C	
Xylenes, total	ND	---	0.0737	mg/kg dry	50	01/15/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*93 %*	*Limits:* *80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*97 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*103 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
HC08-04 (A9A0293-16)				**Matrix: Soil**			**Batch: 9010754**	
Benzene	ND	---	0.00887	mg/kg dry	50	01/15/19	5035A/8260C	
Toluene	ND	---	0.0443	mg/kg dry	50	01/15/19	5035A/8260C	
Ethylbenzene	ND	---	0.0222	mg/kg dry	50	01/15/19	5035A/8260C	
Xylenes, total	ND	---	0.0665	mg/kg dry	50	01/15/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*94 %*	*Limits:* *80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*103 %*	*80-120 %*	*1*	*01/15/19*	*5035A/8260C*	
HC08-09 (A9A0293-17RE1)				**Matrix: Soil**			**Batch: 9010767**	**R-04**
Benzene	ND	---	0.112	mg/kg dry	500	01/16/19	5035A/8260C	
Toluene	ND	---	0.562	mg/kg dry	500	01/16/19	5035A/8260C	
Ethylbenzene	ND	---	0.281	mg/kg dry	500	01/16/19	5035A/8260C	
Xylenes, total	ND	---	0.843	mg/kg dry	500	01/16/19	5035A/8260C	

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HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC08-09 (A9A0293-17RE1)				**Matrix: Soil**			**Batch: 9010767**	**R-04**
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*94 %*	*Limits: 80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*96 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*104 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
HC08-12 (A9A0293-18)				**Matrix: Soil**			**Batch: 9010754**	
Benzene	ND	---	0.0107	mg/kg dry	50	01/16/19	5035A/8260C	
Toluene	ND	---	0.0535	mg/kg dry	50	01/16/19	5035A/8260C	
Ethylbenzene	ND	---	0.0267	mg/kg dry	50	01/16/19	5035A/8260C	
Xylenes, total	ND	---	0.0802	mg/kg dry	50	01/16/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*94 %*	*Limits: 80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*97 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*104 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
HC09-02 (A9A0293-19)				**Matrix: Soil**			**Batch: 9010754**	
Benzene	**2.35**	---	0.372	mg/kg dry	2000	01/16/19	5035A/8260C	
Toluene	**9.46**	---	1.86	mg/kg dry	2000	01/16/19	5035A/8260C	
Ethylbenzene	**41.4**	---	0.931	mg/kg dry	2000	01/16/19	5035A/8260C	
Xylenes, total	**307**	---	2.79	mg/kg dry	2000	01/16/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*93 %*	*Limits: 80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*103 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
HC10-05 (A9A0293-20)				**Matrix: Soil**			**Batch: 9010754**	
Benzene	ND	---	0.00984	mg/kg dry	50	01/16/19	5035A/8260C	
Toluene	ND	---	0.0492	mg/kg dry	50	01/16/19	5035A/8260C	
Ethylbenzene	ND	---	0.0246	mg/kg dry	50	01/16/19	5035A/8260C	
Xylenes, total	ND	---	0.0738	mg/kg dry	50	01/16/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*93 %*	*Limits: 80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*97 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
HC10-12 (A9A0293-21)				**Matrix: Soil**			**Batch: 9010753**	**V-16**
Benzene	ND	---	0.0117	mg/kg dry	50	01/16/19	5035A/8260C	
Toluene	ND	---	0.0584	mg/kg dry	50	01/16/19	5035A/8260C	
Ethylbenzene	ND	---	0.0292	mg/kg dry	50	01/16/19	5035A/8260C	
Xylenes, total	ND	---	0.0876	mg/kg dry	50	01/16/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*96 %*	*Limits: 80-120 %*	*1*	*01/16/19*	*5035A/8260C*	

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Lisa Domenighini, Client Services Manager

Apex Laboratories, LLC
12232 S.W. Garden Place
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503-718-2323
EPA ID: OR01039

HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC10-12 (A9A0293-21)				**Matrix: Soil**			**Batch: 9010753**	**V-16**
Surrogate: Toluene-d8 (Surr)		*Recovery:*	*97 %*	*Limits: 80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*107 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
HC10-15 (A9A0293-22)				**Matrix: Soil**			**Batch: 9010754**	
Benzene	ND	---	0.0138	mg/kg dry	50	01/16/19	5035A/8260C	
Toluene	ND	---	0.0688	mg/kg dry	50	01/16/19	5035A/8260C	
Ethylbenzene	ND	---	0.0344	mg/kg dry	50	01/16/19	5035A/8260C	
Xylenes, total	ND	---	0.103	mg/kg dry	50	01/16/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*93 %*	*Limits: 80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*97 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*104 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
HC11-06 (A9A0293-23)				**Matrix: Soil**			**Batch: 9010754**	
Benzene	ND	---	0.00987	mg/kg dry	50	01/16/19	5035A/8260C	
Toluene	ND	---	0.0494	mg/kg dry	50	01/16/19	5035A/8260C	
Ethylbenzene	ND	---	0.0247	mg/kg dry	50	01/16/19	5035A/8260C	
Xylenes, total	ND	---	0.0741	mg/kg dry	50	01/16/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*93 %*	*Limits: 80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
HC11-11 (A9A0293-24)				**Matrix: Soil**			**Batch: 9010754**	
Benzene	**1.12**	---	0.0428	mg/kg dry	200	01/16/19	5035A/8260C	
Toluene	ND	---	0.214	mg/kg dry	200	01/16/19	5035A/8260C	
Ethylbenzene	**0.567**	---	0.107	mg/kg dry	200	01/16/19	5035A/8260C	
Xylenes, total	**34.2**	---	0.321	mg/kg dry	200	01/16/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*96 %*	*Limits: 80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*97 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*106 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
HC11-15 (A9A0293-25RE1)				**Matrix: Soil**			**Batch: 9010767**	
Benzene	ND	---	0.00990	mg/kg dry	50	01/16/19	5035A/8260C	
Toluene	ND	---	0.0495	mg/kg dry	50	01/16/19	5035A/8260C	
Ethylbenzene	ND	---	0.0248	mg/kg dry	50	01/16/19	5035A/8260C	
Xylenes, total	ND	---	0.0743	mg/kg dry	50	01/16/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*93 %*	*Limits: 80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*97 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	

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EPA ID: OR01039

HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC11-15 (A9A0293-25RE1)				**Matrix: Soil**			**Batch: 9010767**	
Surrogate: 4-Bromofluorobenzene (Surr)		*Recovery: 102 %*		*Limits: 80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
HC12-08 (A9A0293-26)				**Matrix: Soil**			**Batch: 9010754**	
Benzene	ND	---	0.0231	mg/kg dry	200	01/16/19	5035A/8260C	
Toluene	ND	---	0.115	mg/kg dry	200	01/16/19	5035A/8260C	
Ethylbenzene	ND	---	0.0577	mg/kg dry	200	01/16/19	5035A/8260C	
Xylenes, total	**2.43**	---	0.173	mg/kg dry	200	01/16/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery: 94 %*		*Limits: 80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
Toluene-d8 (Surr)		*98 %*		*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)		*102 %*		*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
HC12-12 (A9A0293-27)				**Matrix: Soil**			**Batch: 9010753**	**V-15**
Benzene	ND	---	0.0113	mg/kg dry	50	01/16/19	5035A/8260C	
Toluene	ND	---	0.0567	mg/kg dry	50	01/16/19	5035A/8260C	
Ethylbenzene	**0.0458**	---	0.0283	mg/kg dry	50	01/16/19	5035A/8260C	
Xylenes, total	**2.80**	---	0.0850	mg/kg dry	50	01/16/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery: 98 %*		*Limits: 80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
Toluene-d8 (Surr)		*92 %*		*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)		*110 %*		*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
HC12-15 (A9A0293-28)				**Matrix: Soil**			**Batch: 9010754**	
Benzene	ND	---	0.0103	mg/kg dry	50	01/16/19	5035A/8260C	
Toluene	ND	---	0.0516	mg/kg dry	50	01/16/19	5035A/8260C	
Ethylbenzene	ND	---	0.0258	mg/kg dry	50	01/16/19	5035A/8260C	
Xylenes, total	ND	---	0.0774	mg/kg dry	50	01/16/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery: 93 %*		*Limits: 80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
Toluene-d8 (Surr)		*97 %*		*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)		*103 %*		*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
BH-1R-32 (A9A0293-29)				**Matrix: Soil**			**Batch: 9010754**	
Benzene	ND	---	0.0115	mg/kg dry	50	01/16/19	5035A/8260C	
Toluene	ND	---	0.0577	mg/kg dry	50	01/16/19	5035A/8260C	
Ethylbenzene	ND	---	0.0288	mg/kg dry	50	01/16/19	5035A/8260C	
Xylenes, total	ND	---	0.0865	mg/kg dry	50	01/16/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery: 93 %*		*Limits: 80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
Toluene-d8 (Surr)		*97 %*		*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)		*102 %*		*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	

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HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
BH-R-37 (A9A0293-30)				**Matrix: Soil**		**Batch: 9010754**		
Benzene	ND	---	0.0101	mg/kg dry	50	01/16/19	5035A/8260C	
Toluene	ND	---	0.0507	mg/kg dry	50	01/16/19	5035A/8260C	
Ethylbenzene	ND	---	0.0253	mg/kg dry	50	01/16/19	5035A/8260C	
Xylenes, total	ND	---	0.0760	mg/kg dry	50	01/16/19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*93 %*	*Limits:* *80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
Toluene-d8 (Surr)			*96 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*104 %*	*80-120 %*	*1*	*01/16/19*	*5035A/8260C*	

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314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC03-07 (A9A0293-01)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**91.8**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC03-10 (A9A0293-02)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**87.9**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC03-15 (A9A0293-03)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**93.9**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC04-07 (A9A0293-04)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**84.4**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC04-09 (A9A0293-05)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**85.3**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC04-12 (A9A0293-06)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**95.2**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC05-10 (A9A0293-07)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**88.0**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC05-12 (A9A0293-08)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**89.0**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC05-15 (A9A0293-09)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**88.8**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC06-09 (A9A0293-10)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**96.3**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC06-12 (A9A0293-11)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**89.4**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC06-15 (A9A0293-12)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**90.4**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC07-03 (A9A0293-13)				**Matrix: Soil**			**Batch: 9010723**	

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HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC07-03 (A9A0293-13)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**88.5**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC07-05 (A9A0293-14)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**93.1**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC07-15 (A9A0293-15)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**92.6**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC08-04 (A9A0293-16)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**95.7**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC08-09 (A9A0293-17)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**82.1**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC08-12 (A9A0293-18)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**90.5**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC09-02 (A9A0293-19)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**94.0**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC10-05 (A9A0293-20)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**95.0**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC10-12 (A9A0293-21)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**92.2**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC10-15 (A9A0293-22)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**79.7**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC11-06 (A9A0293-23)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**96.5**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC11-11 (A9A0293-24)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**90.5**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC11-15 (A9A0293-25)				**Matrix: Soil**			**Batch: 9010723**	

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HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC11-15 (A9A0293-25)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**92.3**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC12-08 (A9A0293-26)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**92.4**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC12-12 (A9A0293-27)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**88.3**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
HC12-15 (A9A0293-28)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**92.0**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
BH-1R-32 (A9A0293-29)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**88.3**	---	1.00	% by Weight	1	01/16/19	EPA 8000C	
BH-R-37 (A9A0293-30)				**Matrix: Soil**			**Batch: 9010723**	
% Solids	**82.8**	---	1.00	% by Weight	1	01/16/19	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
Batch 9010728 - EPA 3546 (Fuels)								Soil				
Blank (9010728-BLK1)		Prepared: 01/15/19 10:08 Analyzed: 01/16/19 02:00										
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 97 %*	*Limits: 50-150 %*		*Dilution: 1x*							
LCS (9010728-BS1)		Prepared: 01/15/19 10:08 Analyzed: 01/16/19 02:20										
NWTPH-Dx												
Diesel	114	---	25.0	mg/kg wet	1	125	---	91	76-115%	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 102 %*	*Limits: 50-150 %*		*Dilution: 1x*							
Batch 9010741 - EPA 3546 (Fuels)								Soil				
Blank (9010741-BLK1)		Prepared: 01/15/19 13:31 Analyzed: 01/15/19 21:54										
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 96 %*	*Limits: 50-150 %*		*Dilution: 1x*							
LCS (9010741-BS1)		Prepared: 01/15/19 13:31 Analyzed: 01/15/19 22:17										
NWTPH-Dx												
Diesel	126	---	20.0	mg/kg wet	1	125	---	101	76-115%	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 99 %*	*Limits: 50-150 %*		*Dilution: 1x*							
Duplicate (9010741-DUP1)		Prepared: 01/15/19 13:31 Analyzed: 01/15/19 23:02										
QC Source Sample: HC06-15 (A9A0293-12)												
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	---	50.0	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery: 82 %*	*Limits: 50-150 %*		*Dilution: 1x*							

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EPA ID: OR01039

HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9010786 - EPA 3546 (Fuels)							**Soil**					
Blank (9010786-BLK1)		Prepared: 01/16/19 13:01 Analyzed: 01/16/19 21:52										
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 100 %*		*Limits: 50-150 %*			*Dilution: 1x*					
LCS (9010786-BS1)		Prepared: 01/16/19 13:01 Analyzed: 01/16/19 22:12										
NWTPH-Dx												
Diesel	128	---	25.0	mg/kg wet	1	125	---	103	76-115%	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 104 %*		*Limits: 50-150 %*			*Dilution: 1x*					
Duplicate (9010786-DUP1)		Prepared: 01/16/19 13:01 Analyzed: 01/16/19 22:54										
QC Source Sample: HC08-04 (A9A0293-16)												
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	---	50.0	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery: 95 %*		*Limits: 50-150 %*			*Dilution: 1x*					

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314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9010832 - EPA 3546 (Fuels)							**Soil**					
Blank (9010832-BLK1)		Prepared: 01/17/19 13:09 Analyzed: 01/18/19 04:47										
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
Mineral Oil	ND	---	33.3	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 98 %*	*Limits: 50-150 %*		*Dilution: 1x*							
LCS (9010832-BS1)		Prepared: 01/17/19 13:09 Analyzed: 01/18/19 05:08										
NWTPH-Dx												
Diesel	111	---	25.0	mg/kg wet	1	125	---	89	76-115%	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 102 %*	*Limits: 50-150 %*		*Dilution: 1x*							
Duplicate (9010832-DUP1)		Prepared: 01/17/19 13:09 Analyzed: 01/18/19 05:51										
QC Source Sample: HC07-03 (A9A0293-13)												
NWTPH-Dx												
Diesel	**1910**	---	25.0	mg/kg dry	1	---	1780	---	---	8	30%	
Oil	ND	---	50.0	mg/kg dry	1	---	ND	---	---	---	30%	
Mineral Oil	ND	---	40.3	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery: 101 %*	*Limits: 50-150 %*		*Dilution: 1x*							

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QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9010726 - EPA 5035A							**Soil**					
Blank (9010726-BLK1)		Prepared: 01/15/19 09:00 Analyzed: 01/15/19 11:18										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 98 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*89 %*		*50-150 %*		*"*					
LCS (9010726-BS2)		Prepared: 01/15/19 09:00 Analyzed: 01/15/19 10:51										
NWTPH-Gx (MS)												
Gasoline Range Organics	23.4	---	5.00	mg/kg wet	50	25.0	---	94	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 96 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*91 %*		*50-150 %*		*"*					
Duplicate (9010726-DUP1)		Prepared: 01/08/19 09:20 Analyzed: 01/15/19 12:11										
QC Source Sample: HC03-07 (A9A0293-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	5.10	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 98 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*90 %*		*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
Batch 9010753 - EPA 5035A							**Soil**					
Blank (9010753-BLK1)		Prepared: 01/15/19 17:30 Analyzed: 01/15/19 19:00										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 97 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)		*89 %*		*50-150 %*			*"*					
LCS (9010753-BS2)		Prepared: 01/15/19 17:30 Analyzed: 01/15/19 18:33										
NWTPH-Gx (MS)												
Gasoline Range Organics	22.8	---	5.00	mg/kg wet	50	25.0	---	91	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 93 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)		*89 %*		*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
Batch 9010754 - EPA 5035A							**Soil**					
Blank (9010754-BLK1)		Prepared: 01/15/19 17:40 Analyzed: 01/15/19 19:01										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 95 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)		*86 %*		*50-150 %*			*"*					
LCS (9010754-BS2)		Prepared: 01/15/19 17:40 Analyzed: 01/15/19 18:34										
NWTPH-Gx (MS)												
Gasoline Range Organics	22.6	---	5.00	mg/kg wet	50	25.0	---	91	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 98 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)		*88 %*		*50-150 %*			*"*					
Duplicate (9010754-DUP1)		Prepared: 01/08/19 12:20 Analyzed: 01/15/19 20:49										
QC Source Sample: HC06-12 (A9A0293-11)												
NWTPH-Gx (MS)												
Gasoline Range Organics	**1660**	---	21.7	mg/kg dry	200	---	1900	---	---	14	30%	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 121 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)		*141 %*		*50-150 %*			*"*					
Duplicate (9010754-DUP2)		Prepared: 01/09/19 10:55 Analyzed: 01/16/19 02:11										
QC Source Sample: HC10-15 (A9A0293-22)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	7.41	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 97 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)		*91 %*		*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
Batch 9010765 - EPA 5035A							**Soil**					
Blank (9010765-BLK1)		Prepared: 01/16/19 08:55 Analyzed: 01/16/19 11:40										
NWTPH-Gx (MS)												
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)			*92 %*		*50-150 %*		*"*					
LCS (9010765-BS2)		Prepared: 01/16/19 08:55 Analyzed: 01/16/19 10:19										
NWTPH-Gx (MS)												
Gasoline Range Organics	23.6	---	5.00	mg/kg wet	50	25.0	---	94	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 101 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*93 %*		*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
Batch 9010767 - EPA 5035A							**Soil**					
Blank (9010767-BLK1)		Prepared: 01/16/19 09:00 Analyzed: 01/16/19 11:22										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 97 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*86 %*		*50-150 %*		*"*					
LCS (9010767-BS3)		Prepared: 01/16/19 09:00 Analyzed: 01/16/19 10:55										
NWTPH-Gx (MS)												
Gasoline Range Organics	22.1	---	5.00	mg/kg wet	50	25.0	---	88	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 94 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*88 %*		*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
Batch 9010726 - EPA 5035A							**Soil**					
Blank (9010726-BLK1)		Prepared: 01/15/19 09:00		Analyzed: 01/15/19 11:18								
5035A/8260C												
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: 97 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*98 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*100 %*		*80-120 %*			*"*					
LCS (9010726-BS1)		Prepared: 01/15/19 09:00		Analyzed: 01/15/19 10:24								
5035A/8260C												
Benzene	0.964	---	0.0100	mg/kg wet	50	1.00	---	96	80-120%	---	---	
Toluene	0.931	---	0.0500	mg/kg wet	50	1.00	---	93	80-120%	---	---	
Ethylbenzene	1.00	---	0.0250	mg/kg wet	50	1.00	---	100	80-120%	---	---	
Xylenes, total	3.11	---	0.0750	mg/kg wet	50	3.00	---	104	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 98 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*100 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*99 %*		*80-120 %*			*"*					
Duplicate (9010726-DUP1)		Prepared: 01/08/19 09:20		Analyzed: 01/15/19 12:11								
QC Source Sample: HC03-07 (A9A0293-01)												
5035A/8260C												
Benzene	ND	---	0.0102	mg/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	0.0510	mg/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.0255	mg/kg dry	50	---	ND	---	---	---	30%	
Xylenes, total	ND	---	0.0765	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 98 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*98 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*98 %*		*80-120 %*			*"*					
Matrix Spike (9010726-MS1)		Prepared: 01/08/19 12:15		Analyzed: 01/15/19 17:08								
QC Source Sample: HC06-09 (A9A0293-10)												
5035A/8260C												

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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
Batch 9010726 - EPA 5035A							**Soil**					
Matrix Spike (9010726-MS1)		Prepared: 01/08/19 12:15 Analyzed: 01/15/19 17:08										
QC Source Sample: HC06-09 (A9A0293-10)												
Benzene	0.997	---	0.00987	mg/kg dry	50	0.987	ND	101	77-121%	---	---	
Toluene	0.921	---	0.0494	mg/kg dry	50	0.987	ND	93	77-121%	---	---	
Ethylbenzene	1.01	---	0.0247	mg/kg dry	50	0.987	ND	103	76-122%	---	---	
Xylenes, total	3.23	---	0.0740	mg/kg dry	50	2.96	0.0503	107	78-124%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 98 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*98 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*101 %*		*80-120 %*			*"*					

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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
Batch 9010753 - EPA 5035A							**Soil**					
Blank (9010753-BLK1)		Prepared: 01/15/19 17:30 Analyzed: 01/15/19 19:00										
5035A/8260C												
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: 94 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*100 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*108 %*		*80-120 %*			*"*					
LCS (9010753-BS1)		Prepared: 01/15/19 17:30 Analyzed: 01/15/19 18:06										
5035A/8260C												
Benzene	0.942	---	0.0100	mg/kg wet	50	1.00	---	94	80-120%	---	---	
Toluene	0.935	---	0.0500	mg/kg wet	50	1.00	---	94	80-120%	---	---	
Ethylbenzene	0.962	---	0.0250	mg/kg wet	50	1.00	---	96	80-120%	---	---	
Xylenes, total	2.87	---	0.0750	mg/kg wet	50	3.00	---	96	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 95 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*97 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*106 %*		*80-120 %*			*"*					

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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	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

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
Batch 9010754 - EPA 5035A							**Soil**					
Blank (9010754-BLK1)		Prepared: 01/15/19 17:40 Analyzed: 01/15/19 19:01										
5035A/8260C												
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: 93 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*99 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*102 %*		*80-120 %*			*"*					
LCS (9010754-BS1)		Prepared: 01/15/19 17:40 Analyzed: 01/15/19 18:07										
5035A/8260C												
Benzene	0.906	---	0.0100	mg/kg wet	50	1.00	---	91	80-120%	---	---	
Toluene	0.916	---	0.0500	mg/kg wet	50	1.00	---	92	80-120%	---	---	
Ethylbenzene	0.988	---	0.0250	mg/kg wet	50	1.00	---	99	80-120%	---	---	
Xylenes, total	3.13	---	0.0750	mg/kg wet	50	3.00	---	104	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 93 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*98 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*102 %*		*80-120 %*			*"*					
Duplicate (9010754-DUP1)		Prepared: 01/08/19 12:20 Analyzed: 01/15/19 20:49										
QC Source Sample: HC06-12 (A9A0293-11)												
5035A/8260C												
Benzene	ND	---	0.0434	mg/kg dry	200	---	ND	---	---	---	30%	
Toluene	ND	---	0.217	mg/kg dry	200	---	ND	---	---	---	30%	
Ethylbenzene	**0.877**	---	0.109	mg/kg dry	200	---	0.968	---	---	10	30%	
Xylenes, total	**48.3**	---	0.326	mg/kg dry	200	---	53.6	---	---	10	30%	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 96 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*98 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*103 %*		*80-120 %*			*"*					
Duplicate (9010754-DUP2)		Prepared: 01/09/19 10:55 Analyzed: 01/16/19 02:11										
QC Source Sample: HC10-15 (A9A0293-22)												
5035A/8260C												

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HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

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
Batch 9010754 - EPA 5035A							**Soil**					
Duplicate (9010754-DUP2)		Prepared: 01/09/19 10:55 Analyzed: 01/16/19 02:11										
QC Source Sample: HC10-15 (A9A0293-22)												
Benzene	ND	---	0.0148	mg/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	0.0741	mg/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.0370	mg/kg dry	50	---	ND	---	---	---	30%	
Xylenes, total	ND	---	0.111	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 94 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*97 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*104 %*		*80-120 %*			*"*					
Matrix Spike (9010754-MS1)		Prepared: 01/10/19 13:15 Analyzed: 01/16/19 05:47										**T-02**
QC Source Sample: BH-R-37 (A9A0293-30)												
5035A/8260C												
Benzene	0.932	---	0.0101	mg/kg dry	50	1.01	ND	92	77-121%	---	---	
Toluene	0.898	---	0.0507	mg/kg dry	50	1.01	ND	89	77-121%	---	---	
Ethylbenzene	0.979	---	0.0253	mg/kg dry	50	1.01	ND	97	76-122%	---	---	
Xylenes, total	3.15	---	0.0760	mg/kg dry	50	3.04	ND	104	78-124%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 94 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*96 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*104 %*		*80-120 %*			*"*					

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314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

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
Batch 9010767 - EPA 5035A							**Soil**					
Blank (9010767-BLK1)		Prepared: 01/16/19 09:00		Analyzed: 01/16/19 11:22								
5035A/8260C												
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: 94 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*98 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*102 %*		*80-120 %*			*"*					
LCS (9010767-BS2)		Prepared: 01/16/19 09:00		Analyzed: 01/16/19 10:28								
5035A/8260C												
Benzene	0.945	---	0.0100	mg/kg wet	50	1.00	---	94	80-120%	---	---	
Toluene	0.962	---	0.0500	mg/kg wet	50	1.00	---	96	80-120%	---	---	
Ethylbenzene	1.04	---	0.0250	mg/kg wet	50	1.00	---	104	80-120%	---	---	
Xylenes, total	3.26	---	0.0750	mg/kg wet	50	3.00	---	108	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 93 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*99 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*102 %*		*80-120 %*			*"*					

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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
Batch 9010723 - Total Solids (Dry Weight)							**Soil**					
Duplicate (9010723-DUP1)		Prepared: 01/15/19 08:52		Analyzed: 01/16/19 08:37								
QC Source Sample: HC03-07 (A9A0293-01)												
EPA 8000C												
% Solids	**91.8**	---	1.00	% by Weight	1	---	91.8	---	---	0.03	10%	
Duplicate (9010723-DUP2)		Prepared: 01/15/19 08:52		Analyzed: 01/16/19 08:37								
QC Source Sample: HC06-12 (A9A0293-11)												
EPA 8000C												
% Solids	**89.1**	---	1.00	% by Weight	1	---	89.4	---	---	0.3	10%	
Duplicate (9010723-DUP3)		Prepared: 01/15/19 08:52		Analyzed: 01/16/19 08:37								
QC Source Sample: HC10-12 (A9A0293-21)												
EPA 8000C												
% Solids	**92.3**	---	1.00	% by Weight	1	---	92.2	---	---	0.1	10%	

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

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314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

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: 9010728							
A9A0293-01	Soil	NWTPH-Dx	01/08/19 09:20	01/15/19 10:08	11.12g/5mL	10g/5mL	0.90
A9A0293-02RE1	Soil	NWTPH-Dx	01/08/19 09:30	01/15/19 10:08	10.54g/5mL	10g/5mL	0.95
A9A0293-03	Soil	NWTPH-Dx	01/08/19 09:40	01/15/19 10:08	10.68g/5mL	10g/5mL	0.94
A9A0293-04RE1	Soil	NWTPH-Dx	01/08/19 10:50	01/15/19 10:08	11.44g/5mL	10g/5mL	0.87
A9A0293-05	Soil	NWTPH-Dx	01/08/19 10:55	01/15/19 10:08	10.79g/5mL	10g/5mL	0.93
A9A0293-06	Soil	NWTPH-Dx	01/08/19 11:00	01/15/19 10:08	11.07g/5mL	10g/5mL	0.90
A9A0293-07	Soil	NWTPH-Dx	01/08/19 11:30	01/15/19 10:08	10.28g/5mL	10g/5mL	0.97
A9A0293-08	Soil	NWTPH-Dx	01/08/19 11:40	01/15/19 10:08	10.63g/5mL	10g/5mL	0.94
A9A0293-09	Soil	NWTPH-Dx	01/08/19 11:45	01/15/19 10:08	10.23g/5mL	10g/5mL	0.98
A9A0293-10	Soil	NWTPH-Dx	01/08/19 12:15	01/15/19 10:08	10.69g/5mL	10g/5mL	0.94
A9A0293-11	Soil	NWTPH-Dx	01/08/19 12:20	01/15/19 10:08	10.76g/5mL	10g/5mL	0.93
Batch: 9010741							
A9A0293-12	Soil	NWTPH-Dx	01/08/19 12:25	01/15/19 13:31	10.71g/5mL	10g/5mL	0.93
Batch: 9010786							
A9A0293-16	Soil	NWTPH-Dx	01/09/19 09:35	01/16/19 13:01	10.79g/5mL	10g/5mL	0.93
A9A0293-17	Soil	NWTPH-Dx	01/09/19 09:40	01/16/19 13:01	10.58g/5mL	10g/5mL	0.95
A9A0293-18	Soil	NWTPH-Dx	01/09/19 09:45	01/16/19 13:01	11.42g/5mL	10g/5mL	0.88
A9A0293-19RE2	Soil	NWTPH-Dx	01/09/19 10:15	01/16/19 13:01	10.93g/5mL	10g/5mL	0.92
A9A0293-20	Soil	NWTPH-Dx	01/09/19 10:40	01/16/19 13:01	11.04g/5mL	10g/5mL	0.91
A9A0293-21	Soil	NWTPH-Dx	01/09/19 10:50	01/16/19 13:01	10.81g/5mL	10g/5mL	0.93
A9A0293-22	Soil	NWTPH-Dx	01/09/19 10:55	01/16/19 13:01	11.5g/5mL	10g/5mL	0.87
A9A0293-23	Soil	NWTPH-Dx	01/09/19 11:20	01/16/19 13:01	11.75g/5mL	10g/5mL	0.85
A9A0293-24RE1	Soil	NWTPH-Dx	01/09/19 11:25	01/16/19 13:01	11.13g/5mL	10g/5mL	0.90
A9A0293-25	Soil	NWTPH-Dx	01/09/19 11:30	01/16/19 13:01	10.49g/5mL	10g/5mL	0.95
A9A0293-26	Soil	NWTPH-Dx	01/09/19 13:10	01/16/19 13:01	10.44g/5mL	10g/5mL	0.96
A9A0293-27RE1	Soil	NWTPH-Dx	01/09/19 13:15	01/16/19 13:01	10.33g/5mL	10g/5mL	0.97
A9A0293-28	Soil	NWTPH-Dx	01/09/19 13:20	01/16/19 13:01	10.39g/5mL	10g/5mL	0.96
Batch: 9010832							
A9A0293-13	Soil	NWTPH-Dx	01/09/19 08:40	01/17/19 13:09	11.3g/5mL	10g/5mL	0.89
A9A0293-14RE1	Soil	NWTPH-Dx	01/09/19 08:45	01/17/19 13:09	11.16g/5mL	10g/5mL	0.90
A9A0293-15	Soil	NWTPH-Dx	01/09/19 08:55	01/17/19 13:09	11.5g/5mL	10g/5mL	0.87
A9A0293-29	Soil	NWTPH-Dx	01/10/19 13:10	01/17/19 13:09	10.03g/5mL	10g/5mL	1.00
A9A0293-30	Soil	NWTPH-Dx	01/10/19 13:15	01/17/19 13:09	10.52g/5mL	10g/5mL	0.95

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HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

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
Batch: 9010726							
A9A0293-01	Soil	NWTPH-Gx (MS)	01/08/19 09:20	01/08/19 09:20	5.95g/5mL	5g/5mL	0.84
A9A0293-04	Soil	NWTPH-Gx (MS)	01/08/19 10:50	01/08/19 10:50	6.82g/5mL	5g/5mL	0.73
A9A0293-05	Soil	NWTPH-Gx (MS)	01/08/19 10:55	01/08/19 10:55	6.97g/5mL	5g/5mL	0.72
A9A0293-06	Soil	NWTPH-Gx (MS)	01/08/19 11:00	01/08/19 11:00	5.55g/5mL	5g/5mL	0.90
A9A0293-07	Soil	NWTPH-Gx (MS)	01/08/19 11:30	01/08/19 11:30	5.74g/5mL	5g/5mL	0.87
A9A0293-08	Soil	NWTPH-Gx (MS)	01/08/19 11:40	01/08/19 11:40	5.91g/5mL	5g/5mL	0.85
A9A0293-09	Soil	NWTPH-Gx (MS)	01/08/19 11:45	01/08/19 11:45	5.82g/5mL	5g/5mL	0.86
A9A0293-10	Soil	NWTPH-Gx (MS)	01/08/19 12:15	01/08/19 12:15	5.47g/5mL	5g/5mL	0.91
Batch: 9010753							
A9A0293-21	Soil	NWTPH-Gx (MS)	01/09/19 10:50	01/11/19 13:07	5g/5mL	5g/5mL	1.00
Batch: 9010754							
A9A0293-02RE1	Soil	NWTPH-Gx (MS)	01/08/19 09:30	01/08/19 09:30	7.51g/5mL	5g/5mL	0.67
A9A0293-03RE1	Soil	NWTPH-Gx (MS)	01/08/19 09:40	01/08/19 09:40	5.59g/5mL	5g/5mL	0.89
A9A0293-11	Soil	NWTPH-Gx (MS)	01/08/19 12:20	01/08/19 12:20	6.1g/5mL	5g/5mL	0.82
A9A0293-13	Soil	NWTPH-Gx (MS)	01/09/19 08:40	01/09/19 08:40	6.23g/5mL	5g/5mL	0.80
A9A0293-14	Soil	NWTPH-Gx (MS)	01/09/19 08:45	01/09/19 08:45	6.33g/5mL	5g/5mL	0.79
A9A0293-15	Soil	NWTPH-Gx (MS)	01/09/19 08:55	01/09/19 08:55	5.98g/5mL	5g/5mL	0.84
A9A0293-16	Soil	NWTPH-Gx (MS)	01/09/19 09:35	01/09/19 09:35	6.2g/5mL	5g/5mL	0.81
A9A0293-18	Soil	NWTPH-Gx (MS)	01/09/19 09:45	01/09/19 09:45	5.73g/5mL	5g/5mL	0.87
A9A0293-19	Soil	NWTPH-Gx (MS)	01/09/19 10:15	01/09/19 10:15	6.14g/5mL	5g/5mL	0.81
A9A0293-20	Soil	NWTPH-Gx (MS)	01/09/19 10:40	01/09/19 10:40	5.65g/5mL	5g/5mL	0.89
A9A0293-22	Soil	NWTPH-Gx (MS)	01/09/19 10:55	01/09/19 10:55	5.59g/5mL	5g/5mL	0.89
A9A0293-23	Soil	NWTPH-Gx (MS)	01/09/19 11:20	01/09/19 11:20	5.45g/5mL	5g/5mL	0.92
A9A0293-24	Soil	NWTPH-Gx (MS)	01/09/19 11:25	01/09/19 11:25	5.73g/5mL	5g/5mL	0.87
A9A0293-26	Soil	NWTPH-Gx (MS)	01/09/19 13:10	01/09/19 13:10	10.93g/5mL	5g/5mL	0.46
A9A0293-28	Soil	NWTPH-Gx (MS)	01/09/19 13:20	01/09/19 13:20	5.75g/5mL	5g/5mL	0.87
A9A0293-29	Soil	NWTPH-Gx (MS)	01/10/19 13:10	01/10/19 13:10	5.54g/5mL	5g/5mL	0.90
A9A0293-30	Soil	NWTPH-Gx (MS)	01/10/19 13:15	01/10/19 13:15	7.49g/5mL	5g/5mL	0.67
Batch: 9010765							
A9A0293-27RE1	Soil	NWTPH-Gx (MS)	01/09/19 13:15	01/11/19 13:07	5.66g/5mL	5g/5mL	0.88
Batch: 9010767							
A9A0293-12RE1	Soil	NWTPH-Gx (MS)	01/08/19 12:25	01/08/19 12:25	5.82g/5mL	5g/5mL	0.86
A9A0293-17RE1	Soil	NWTPH-Gx (MS)	01/09/19 09:40	01/09/19 09:40	6.72g/5mL	5g/5mL	0.74
A9A0293-25RE1	Soil	NWTPH-Gx (MS)	01/09/19 11:30	01/09/19 11:30	5.97g/5mL	5g/5mL	0.84

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

HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

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
Batch: 9010726							
A9A0293-01	Soil	5035A/8260C	01/08/19 09:20	01/08/19 09:20	5.95g/5mL	5g/5mL	0.84
A9A0293-03	Soil	5035A/8260C	01/08/19 09:40	01/08/19 09:40	5.59g/5mL	5g/5mL	0.89
A9A0293-04	Soil	5035A/8260C	01/08/19 10:50	01/08/19 10:50	6.82g/5mL	5g/5mL	0.73
A9A0293-05	Soil	5035A/8260C	01/08/19 10:55	01/08/19 10:55	6.97g/5mL	5g/5mL	0.72
A9A0293-06	Soil	5035A/8260C	01/08/19 11:00	01/08/19 11:00	5.55g/5mL	5g/5mL	0.90
A9A0293-07	Soil	5035A/8260C	01/08/19 11:30	01/08/19 11:30	5.74g/5mL	5g/5mL	0.87
A9A0293-08	Soil	5035A/8260C	01/08/19 11:40	01/08/19 11:40	5.91g/5mL	5g/5mL	0.85
A9A0293-09	Soil	5035A/8260C	01/08/19 11:45	01/08/19 11:45	5.82g/5mL	5g/5mL	0.86
A9A0293-10	Soil	5035A/8260C	01/08/19 12:15	01/08/19 12:15	5.47g/5mL	5g/5mL	0.91
Batch: 9010753							
A9A0293-21	Soil	5035A/8260C	01/09/19 10:50	01/11/19 13:07	5g/5mL	5g/5mL	1.00
A9A0293-27	Soil	5035A/8260C	01/09/19 13:15	01/11/19 13:07	5.66g/5mL	5g/5mL	0.88
Batch: 9010754							
A9A0293-02RE1	Soil	5035A/8260C	01/08/19 09:30	01/08/19 09:30	7.51g/5mL	5g/5mL	0.67
A9A0293-11	Soil	5035A/8260C	01/08/19 12:20	01/08/19 12:20	6.1g/5mL	5g/5mL	0.82
A9A0293-13	Soil	5035A/8260C	01/09/19 08:40	01/09/19 08:40	6.23g/5mL	5g/5mL	0.80
A9A0293-14	Soil	5035A/8260C	01/09/19 08:45	01/09/19 08:45	6.33g/5mL	5g/5mL	0.79
A9A0293-15	Soil	5035A/8260C	01/09/19 08:55	01/09/19 08:55	5.98g/5mL	5g/5mL	0.84
A9A0293-16	Soil	5035A/8260C	01/09/19 09:35	01/09/19 09:35	6.2g/5mL	5g/5mL	0.81
A9A0293-18	Soil	5035A/8260C	01/09/19 09:45	01/09/19 09:45	5.73g/5mL	5g/5mL	0.87
A9A0293-19	Soil	5035A/8260C	01/09/19 10:15	01/09/19 10:15	6.14g/5mL	5g/5mL	0.81
A9A0293-20	Soil	5035A/8260C	01/09/19 10:40	01/09/19 10:40	5.65g/5mL	5g/5mL	0.89
A9A0293-22	Soil	5035A/8260C	01/09/19 10:55	01/09/19 10:55	5.59g/5mL	5g/5mL	0.89
A9A0293-23	Soil	5035A/8260C	01/09/19 11:20	01/09/19 11:20	5.45g/5mL	5g/5mL	0.92
A9A0293-24	Soil	5035A/8260C	01/09/19 11:25	01/09/19 11:25	5.73g/5mL	5g/5mL	0.87
A9A0293-26	Soil	5035A/8260C	01/09/19 13:10	01/09/19 13:10	10.93g/5mL	5g/5mL	0.46
A9A0293-28	Soil	5035A/8260C	01/09/19 13:20	01/09/19 13:20	5.75g/5mL	5g/5mL	0.87
A9A0293-29	Soil	5035A/8260C	01/10/19 13:10	01/10/19 13:10	5.54g/5mL	5g/5mL	0.90
A9A0293-30	Soil	5035A/8260C	01/10/19 13:15	01/10/19 13:15	7.49g/5mL	5g/5mL	0.67
Batch: 9010767							
A9A0293-12RE1	Soil	5035A/8260C	01/08/19 12:25	01/08/19 12:25	5.82g/5mL	5g/5mL	0.86
A9A0293-17RE1	Soil	5035A/8260C	01/09/19 09:40	01/09/19 09:40	6.72g/5mL	5g/5mL	0.74
A9A0293-25RE1	Soil	5035A/8260C	01/09/19 11:30	01/09/19 11:30	5.97g/5mL	5g/5mL	0.84

Apex Laboratories

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Lisa Domenighini, Client Services Manager

Apex Laboratories, LLC
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Tigard, OR 97223
503-718-2323
EPA ID: OR01039

HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

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
Batch: 9010723							
A9A0293-01	Soil	EPA 8000C	01/08/19 09:20	01/15/19 08:52			NA
A9A0293-02	Soil	EPA 8000C	01/08/19 09:30	01/15/19 08:52			NA
A9A0293-03	Soil	EPA 8000C	01/08/19 09:40	01/15/19 08:52			NA
A9A0293-04	Soil	EPA 8000C	01/08/19 10:50	01/15/19 08:52			NA
A9A0293-05	Soil	EPA 8000C	01/08/19 10:55	01/15/19 08:52			NA
A9A0293-06	Soil	EPA 8000C	01/08/19 11:00	01/15/19 08:52			NA
A9A0293-07	Soil	EPA 8000C	01/08/19 11:30	01/15/19 08:52			NA
A9A0293-08	Soil	EPA 8000C	01/08/19 11:40	01/15/19 08:52			NA
A9A0293-09	Soil	EPA 8000C	01/08/19 11:45	01/15/19 08:52			NA
A9A0293-10	Soil	EPA 8000C	01/08/19 12:15	01/15/19 08:52			NA
A9A0293-11	Soil	EPA 8000C	01/08/19 12:20	01/15/19 08:52			NA
A9A0293-12	Soil	EPA 8000C	01/08/19 12:25	01/15/19 08:52			NA
A9A0293-13	Soil	EPA 8000C	01/09/19 08:40	01/15/19 08:52			NA
A9A0293-14	Soil	EPA 8000C	01/09/19 08:45	01/15/19 08:52			NA
A9A0293-15	Soil	EPA 8000C	01/09/19 08:55	01/15/19 08:52			NA
A9A0293-16	Soil	EPA 8000C	01/09/19 09:35	01/15/19 08:52			NA
A9A0293-17	Soil	EPA 8000C	01/09/19 09:40	01/15/19 08:52			NA
A9A0293-18	Soil	EPA 8000C	01/09/19 09:45	01/15/19 08:52			NA
A9A0293-19	Soil	EPA 8000C	01/09/19 10:15	01/15/19 08:52			NA
A9A0293-20	Soil	EPA 8000C	01/09/19 10:40	01/15/19 08:52			NA
A9A0293-21	Soil	EPA 8000C	01/09/19 10:50	01/15/19 08:52			NA
A9A0293-22	Soil	EPA 8000C	01/09/19 10:55	01/15/19 08:52			NA
A9A0293-23	Soil	EPA 8000C	01/09/19 11:20	01/15/19 08:52			NA
A9A0293-24	Soil	EPA 8000C	01/09/19 11:25	01/15/19 08:52			NA
A9A0293-25	Soil	EPA 8000C	01/09/19 11:30	01/15/19 08:52			NA
A9A0293-26	Soil	EPA 8000C	01/09/19 13:10	01/15/19 08:52			NA
A9A0293-27	Soil	EPA 8000C	01/09/19 13:15	01/15/19 08:52			NA
A9A0293-28	Soil	EPA 8000C	01/09/19 13:20	01/15/19 08:52			NA
A9A0293-29	Soil	EPA 8000C	01/10/19 13:10	01/15/19 08:52			NA
A9A0293-30	Soil	EPA 8000C	01/10/19 13:15	01/15/19 08:52			NA

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Lisa Domenighini, Client Services Manager

Apex Laboratories, LLC

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EPA ID: OR01039

HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

QUALIFIER DEFINITIONS

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

Apex Laboratories

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.
R-04	Reporting levels elevated due to preparation and/or analytical 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.
T-02	This Batch QC sample was analyzed outside of the method specified 12 hour tune window. Results are estimated.
V-15	Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.
V-16	Sample aliquot was subsampled from the sample container in the laboratory. The subsampled aliquot was not preserved within 48 hours of sampling.

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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.

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

Miscellaneous Notes:

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

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

Blanks:

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

Apex Laboratories

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Lisa Domenighini, Client Services Manager

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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 sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

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

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

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

Soil and Sediment Samples:

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

Sampling and Preservation Notes:

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

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

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

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

Apex Laboratories, LLC
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Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

LABORATORY ACCREDITATION INFORMATION

TNI Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

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

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

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

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

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

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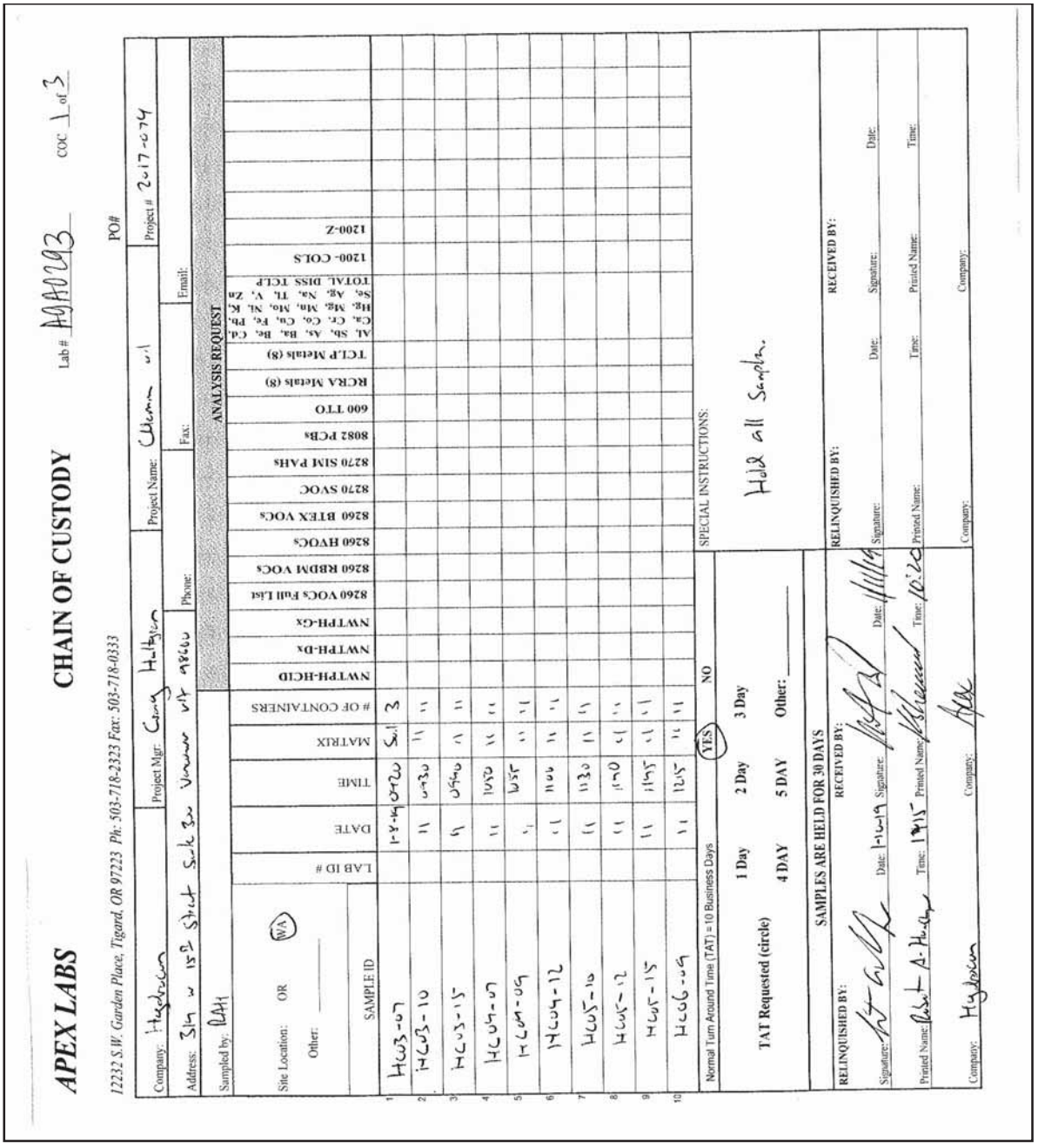
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**



APEX LABS — **CHAIN OF CUSTODY** — Lab # A9A0293 — COC 1 of 3 — PO#

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Company: Hydrocon — Project Mgr: Craig Hultgren — Phone: — Project Name: Chelan wtl — Project # 2017-074

Address: 314 W 15th St Suite 300 Vancouver WA 98660 — Fax: — Email:

Sampled by: RAH

Site Location: OR WA — Other: ____

ANALYSIS REQUEST

#	SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS
1	HC03-05		10-4-19	0820	Soil	3
2	HC03-15		11	0930	11	11
3	HC03-25		11	0940	11	11
4	HC06-05		11	1020	11	11
5	HC06-05		11	1035	11	11
6	HC06-12		11	1050	11	11
7	HC05-15		11	1130	11	11
8	HC05-12		11	1105	11	11
9	HC05-15		11	1145	11	11
10	HC06-05		11	1215	11	11

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 TTO; 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, Tl, V, Zn TOTAL DISS TCLP; 1200- COLS; 1200-Z

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: Hold all Samples.

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: Signature: ____ Date: 10-10-19 Printed Name: ____ Time: 1915 Company: Hydrocon

RECEIVED BY: Signature: ____ Date: 10-11-19 Printed Name: ____ Time: 12:20 Company: APEX

RELINQUISHED BY: Signature: ____ Date: ____ Printed Name: ____ Time: ____ Company: ____

RECEIVED BY: Signature: ____ Date: ____ Printed Name: ____ Time: ____ Company: ____

Apex Laboratories

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

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Apex Laboratories, LLC

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

APEX LABS — **CHAIN OF CUSTODY** — Lab # A9A0293 — COC 2 of 3

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 c.l — Project # 2017-074

Address: See Pg 1 — Phone: — Fax: — Email:

Sampled by:

Site Location: OR (WA) Other:

ANALYSIS REQUEST: 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 TTO, 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, Tl, V, Zn TOTAL DISS TCLP, 1200-COLS, 1200-Z

	SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS
1	HC06-12		1-8-19	1220	S.l	3
2	HC06-15		"	1225	"	"
3	HC07-03		1-9-19	0840	"	"
4	HC07-05		"	0845	"	"
5	HC07-15		"	0855	"	"
6	HC08-04		"	0935	"	"
7	HC08-09		"	0940	"	"
8	HC08-12		"	0945	"	"
9	HC09-02		"	1015	"	"
10	HC10-05		"	1040	"	"

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

SPECIAL INSTRUCTIONS: Hold all Samples.

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature] Date: 1-10-19	Signature: [signature] Date: 1/11/19	Signature: Date:	Signature: Date:
Printed Name: Robert A. Hultgren Time: 1415	Printed Name: [illegible] Time: 10:20	Printed Name: Time:	Printed Name: Time:
Company: Hydrocon	Company: Apex	Company:	Company:

Apex Laboratories, LLC

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

APEX LABS

CHAIN OF CUSTODY Lab # A9A0293 COC 3 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: 2017-074 Coleman ... | Project # 2017-074

Address: | Phone: | Fax: | Email: | PO#

Sampled by:

Site Location: OR (WA) Other:

ANALYSIS REQUEST: 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, 8081 Pest, 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, Tl, V, Zn TOTAL DISS TCLP, 1200- COLS, 1200-Z

#	SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS
1	HC10-12		1-9-19	1030	Soil	3
2	HC10-15		"	1035	"	"
3	HC11-06		"	1120	"	"
4	HC11-11		"	1125	"	"
5	HC11-15		"	1430	"	"
6	HC12-08		"	1310	"	"
7	HC12-12		"	1315	"	"
8	HC12-15		"	1320	"	"
9	BH-12-32		1-10-19	1310	"	"
10	BH-12-37		1-10-19	1315	"	"

Normal Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day, 2 Day, 3 Day, 4 DAY, 5 DAY, Other: ____

(YES) NO

SAMPLES ARE HELD FOR 30 DAYS

SPECIAL INSTRUCTIONS: Hold all Samples.

RELINQUISHED BY: Signature: [signature] Date: 1-11-19 Printed Name: Robert A. Hultgren Time: 1415 Company: Hydrocon

RECEIVED BY: Signature: [signature] Date: 1/11/19 Printed Name: [signature] Time: 10:20 Company: Apex

RELINQUISHED BY: Signature: Date: Printed Name: Time: Company:

RECEIVED BY: Signature: Date: Printed Name: Time: Company:

Apex Laboratories, LLC
12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

APEX LABS COOLER RECEIPT FORM

Client: HydroCon Element WO#: A9 A0293

Project/Project #: Coleman Oil

Delivery Info:

Date/time received: 1/11/19 @ 10:20 By: VMS

Delivered by: Apex ___ Client ___ ESS ___ FedEx ___ UPS X Swift ___ Senvoy ___ SDS ___ Other ___

Cooler Inspection Date/time inspected: 1/11/19 @ 10:20 By: VMS

Chain of Custody included? Yes X No ___ Custody seals? Yes ___ No X

Signed/dated by client? Yes X No ___

Signed/dated by Apex? Yes X No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	2.4	1.1	2.1				
Received on ice? (Y/N)	Y	Y	Y				
Temp. blanks? (Y/N)	Y	Y	Y				
Ice type: (Gel/Real/Other)	Real	Real	Real				
Condition:	Good	Good	Good				

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

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

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

Samples Inspection: Date/time inspected: 1/11/19 @ 12:35 By: VMS

All samples intact? Yes X No ___ Comments: ___

Bottle labels/COCs agree? Yes ___ No X Comments: 1/2 MeOH VOAs T reads 10:25 on HC11-11, 10L T reads 11:25.

COC/container discrepancies form initiated? Yes ___ No ___ NA X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: ___

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments ___

Water samples: pH checked: Yes ___ No ___ NA X pH appropriate? Yes ___ No ___ NA X

Comments: ___

Additional information: UPS # 1ZE00 708 01 4663 1218 @ 1/11/19

2/2 MeOH VOAs, never filled. on HC12-12, HC10=TC IA house extraction

2/2 MeOH VOAs HC10-12 received w/ no MeOH in vials

Labeled by: Witness: VMS Cooler Inspected by: KRS See Project Contact Form: Y

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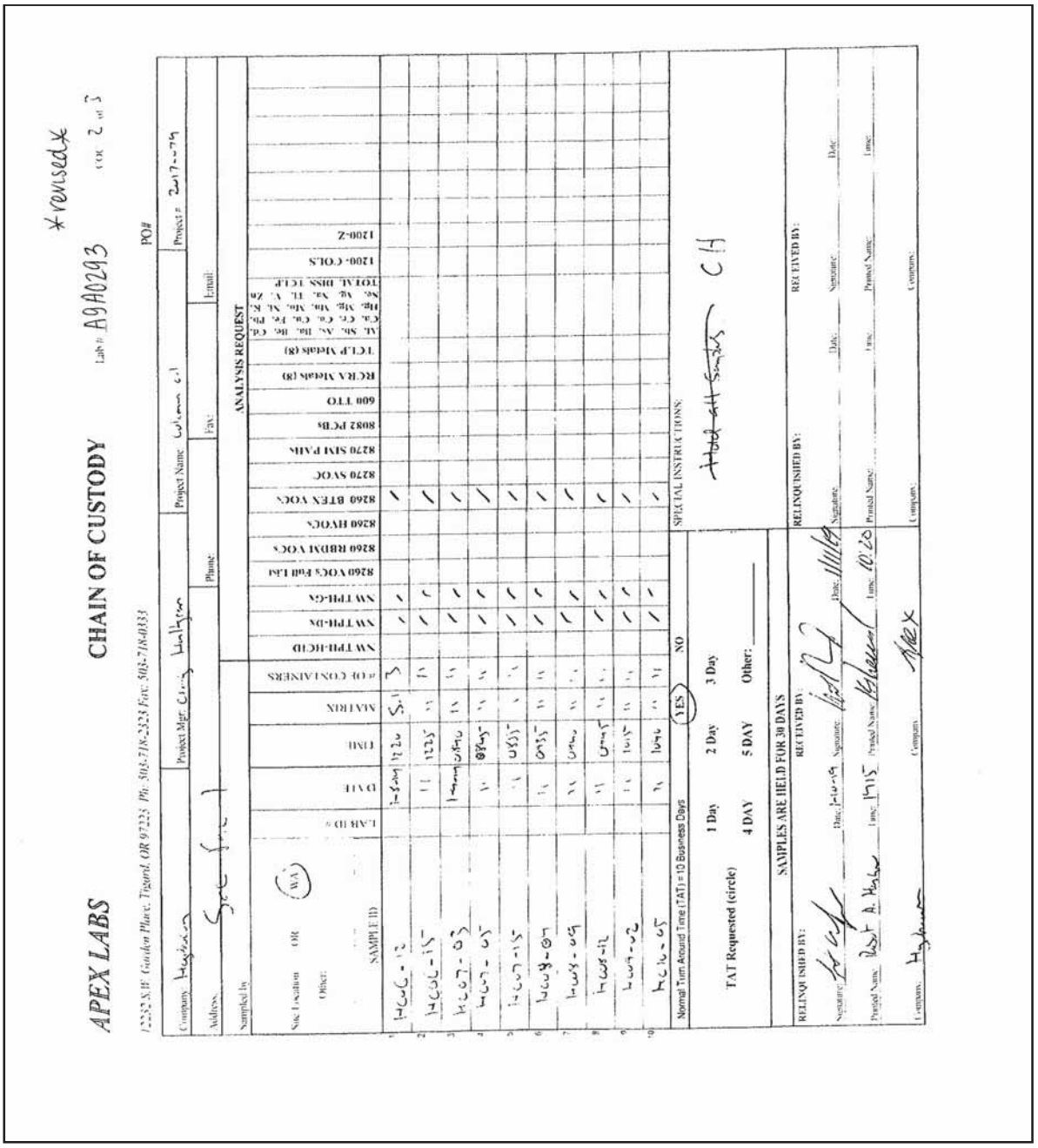

Apex Laboratories

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Lisa Domenighini, Client Services Manager

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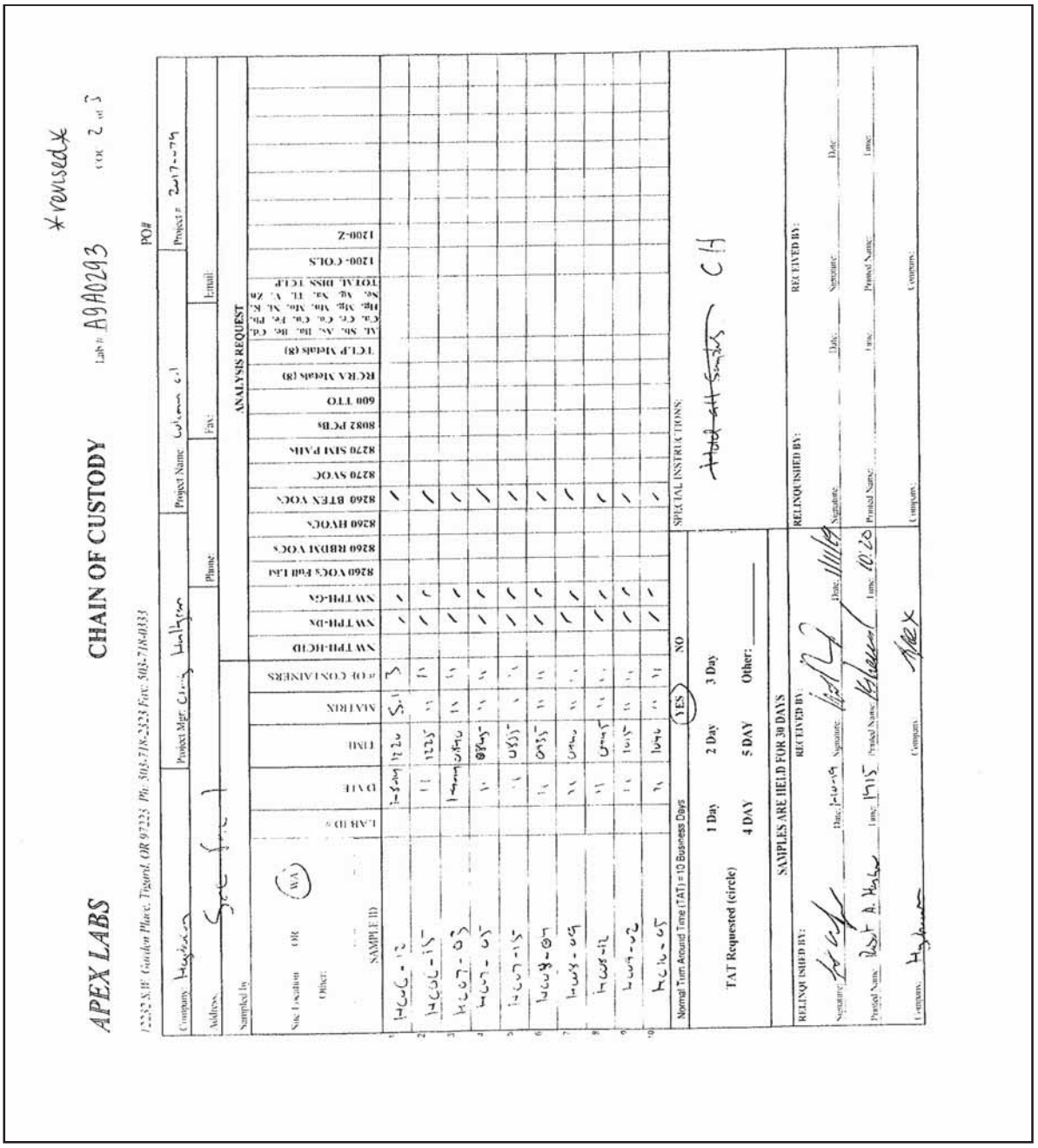
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**



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314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0293 - 01 21 19 0939**

APEX LABS — **CHAIN OF CUSTODY** — Lab # A9A0293 — *revised* — COC 3 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: 2017-74 Coleman — Project #: 2017-074 — PO#

Address: See file — Phone: — Fax: — Email:

Sampled by:

Site Location: OR (WA) — Other:

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 TTO	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, Tl, V, Zn TOTAL DISS TCLP	1200-COLS	1200-Z
1	HC10-12		1-10-19	1010	Soil	3		✓	✓				✓									
2	HC10-15		"	1055	"	"		✓	✓				✓									
3	HC11-06		"	1120	"	"		✓	✓				✓									
4	HC11-11		"	1126	"	"		✓	✓				✓									
5	HC11-15		"	1430	"	"		✓	✓				✓									
6	HC12-05		"	1510	"	"		✓	✓				✓									
7	HC12-12		"	1315	"	"		✓	✓				✓									
8	HC12-15		"	1320	"	"		✓	✓				✓									
9	BH-1R-32		1-10-19	1310	"	"		✓	✓				✓									
10	BH-1R-37		1-10-19	1315	"	"		✓	✓				✓									

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: Hold all Samples CH

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature] Date: 1-11-19	Signature: [signature] Date: 1/11/19	Signature: Date:	Signature: Date:
Printed Name: Robert A. Haley Time: 1415	Printed Name: K. Khreeney Time: 10:20	Printed Name: Time:	Printed Name: Time:
Company: Hydrocon	Company: Apex	Company:	Company:

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503-718-2323
EPA ID: OR01039

Monday, Jaur aoy 21, 092V

L oamg Cr lhgoAu
CydoeL eu 33L
425 8 2t hS i hoAAhi r mA 499
cauver WAo, 8 6 V1HH9

(E: 6V690Vt 7 L elAmau 8 AuahvSAA 7 092P79P5

TSauk yer feor snug 6pAx 3abecahemAs. 8 A goAahy appoAvmahA yer obr snuAss aud shoWA he poeWdA hSA SmgSAshqr almy sAoWvAs he hSA AuWbeumAuhal nudr shoy.

EuvlesAd aoA hSA oAsr lhs ef aualysAs feoweck eodAo6 V690Vt , wSmS was oAvAmWAd by hSA labecaheoy eu 2/22/092V ah29:09:996I .

@yer SaWA auy qr Ashmeus veuvAoumug hSms oApecheohSA sAoWvAs wA effAo, plAasA fAAl foAA he veuhavhmA by Amaml ah ldemAumgSmm- apAx7labs.vem, eoby pSeuA aht 947P2170404.

_lAasA uehA: 6ll samplAs wmll bA dmspesAd ef wmhSmu 49 days ef fmual oApechmug, r ulAss poeoaooaugAmAuhs SaWA bAAu madA.

RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR

L eelAo(AvAmph@feomahmeu

Fi AA L eelAo(AvAmphMeom feodAhmls)

L eelAo#2	0.5 dAgL	L eelAo#0	2.2 dAgL
L eelAo#4	0.2 dAgL		

RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR

TSms Mmual (Apechms hSA effmvmal WAosmeu ef hSA daha oAsr lhs feohSms samplA sr bmmssmeu , r ulAss sr pAosAdAd by a sr bsAqr Auh, labAlAd amAudAd oApech
6ll ehSAodAlmWAoablAs dAomWAd feem hSms daha, muvlr dmug ElAvhoeumv Daha DAlmWAoablAs FEDDs), L 3_7mkA feoms, vlmAuhoAqr AshAd sr mmaoy sSAAhs, aud all ehSAopoedr vhs aoA veusmdAoAd sAveudaoy he hSms oApech

RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR

ORELAP

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Lisa Domenighini, Client Services Manager

Apex Laboratories, LLC
12232 S.W. Garden Place
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EPA ID: OR01039

HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0295 - 01 18 19 0925**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TP01-02	A9A0295-01	Soil	01/07/19 10:35	01/11/19 10:20
TP02-02	A9A0295-03	Soil	01/07/19 10:50	01/11/19 10:20
TP03-04	A9A0295-06	Soil	01/07/19 11:25	01/11/19 10:20
TP04-02	A9A0295-07	Soil	01/07/19 11:35	01/11/19 10:20
TP05-02	A9A0295-09	Soil	01/07/19 11:50	01/11/19 10:20
TP06-02	A9A0295-10	Soil	01/07/19 12:00	01/11/19 10:20

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HydroCon LLC	Pro3ectj **Coleman Wenatchee**	
314 W 15th Street Suite 300	Pro3ect : Nmberj **2017-074**	**Report ID:**
Vancouver, WA 98660	Pro3ect Managerj **Craig Hultgren**	**A9A0295 - 01 18 19 0925**

ANALYTICAL SAMPLE RESBLTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Anal2te	Sample u esNt	Detection Limit	u eporting Limit	d nits	DilNtion	Date Anal2. eR	MethoR u efy	: otes
TPC0-C3 7A(AC3(9-C0RE02				**Ma1rix) Soil**		**t a1c:) (C0CBh0**		
Diesel	**3510**	///	5H-	mg0)g Rr2	1k	k16l W6l T	: U z P0 /Dx	**F-19**
Oil	**1850**	///	O-H	mg0)g Rr2	1k	k16l W6l T	: U z P0 /Dx	**F-16**
Nurrogate1 oWerphenyl (Nurr)		*v eco7ery1 %8 /*	*0imits1 HPWHP /*	*%P*	*P%0%9%R*	*- D Tx L W 5*		*MPH*
TPC3-C3 7A(AC3(9-C8RE02				**Ma1rix) Soil**		**t a1c:) (C0CBh0**		
Diesel	: D	///	TTy4	mg0)g Rr2	8	k16l W6l T	: U z P0 /Dx	
Oil	**1250**	///	5kk	mg0)g Rr2	8	k16l W6l T	: U z P0 /Dx	
Nurrogate1 oWerphenyl (Nurr)		*v eco7ery1 R3 /*	*0imits1 HPWHP /*	*H*	*P%0%9%R*	*- D Tx L W 5*		*MPH*
TPC8-Ch 7A(AC3(9-C52				**Ma1rix) Soil**		**t a1c:) (C0CBh0**		
Diesel	**119**	///	58yk	mg0)g Rr2	1	k16l W6l T	: U z P0 /Dx	**F-11**
7 il	: D	///	8kyk	mg0)g Rr2	1	k16l W6l T	: U z P0 /Dx	
Nurrogate1 oWerphenyl (Nurr)		*v eco7ery1 22 /*	*0imits1 HPWHP /*	*%*	*P%0%9%R*	*- D Tx L W 5*		
TPCh-C3 7A(AC3(9-CBRE02				**Ma1rix) Soil**		**t a1c:) (C0CBh0**		
Diesel	: D	///	8Wk	mg0)g Rr2	58	k16l W6l T	: U z P0 /Dx	
Oil	**4270**	///	115k	mg0)g Rr2	58	k16l W6l T	: U z P0 /Dx	
Nurrogate1 oWerphenyl (Nurr)		*v eco7ery1 /*	*0imits1 HPWHP /*	*3H*	*P%0%9%R*	*- D Tx L W 5*		*MP%*
TPC9-C3 7A(AC3(9-C(2				**Ma1rix) Soil**		**t a1c:) (C0CBh0**		
Diesel	**270**	///	58yk	mg0)g Rr2	1	k16l W6l T	: U z P0 /Dx	**F-11**
7 il	: D	///	8kyk	mg0)g Rr2	1	k16l W6l T	: U z P0 /Dx	
Nurrogate1 oWerphenyl (Nurr)		*v eco7ery1 23 /*	*0imits1 HPWHP /*	*%*	*P%0%9%R*	*- D Tx L W 5*		
TPC5-C3 7A(AC3(9-0CRE02				**Ma1rix) Soil**		**t a1c:) (C0CBh0**		
Diesel	**580**	///	58yk	mg0)g Rr2	1	k16l W6l T	: U z P0 /Dx	**F-13, F-15**
Oil	**61.1**	///	8kyk	mg0)g Rr2	1	k16l W6l T	: U z P0 /Dx	**F-16**
Nurrogate1 oWerphenyl (Nurr)		*v eco7ery1 R9 /*	*0imits1 HPWHP /*	*%*	*P%0%9%R*	*- D Tx L W 5*		

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EPA ID: OR01039

HydroCon LLC	Pro3ectj **Coleman Wenatchee**	
314 W 15th Street Suite 300	Pro3ect : Nmberj **2017-074**	**Report ID:**
Vancouver, WA 98660	Pro3ect Managerj **Craig Hultgren**	**A9A0295 - 01 18 19 0925**

ANALYTICAL SAMPLE RESBLTS

4 asoline Ran6e Hydrocarbons 7t enGene 1: rog6: Naz: 1: alene2by NWTPH-4 x

Anal2te	Sample u esNt	Detection Limit	u eporting Limit	d nits	DilNion	Date Anal2. eR	MethoR u efy	: otes
TPC0-C3 7A(AC3(9-C0RE02				**Ma1rix) Soil**		**t a1c:) (C0CB59**		**u-05**
Gasoline Range Organics	**4970**	///	- kO	mg69g Rr2	8kkk	k16l W6l T	: U z P0 /Gx (MS)	
Nurrogate1 GM4romofluorobenzene (Nur)		*v eco7ery1 %PG/*		*0imits1 HPWHP /*	*%*	*P%69GR*	*- D Tx L W5 (4 N)*	
%4GW ifluorobenzene (Nur)		*%P3 /*		*HPWHP /*	*%*	*P%69GR*	*- D Tx L W5 (4 N)*	
TPC3-C3 7A(AC3(9-C8RE02				**Ma1rix) Soil**		**t a1c:) (C0CB59**		**u-05**
Gasoline u ange 7 rganics	: D	///	WykW	mg69g Rr2	8k	k16l W6l T	: U z P0 /Gx (MS)	
Nurrogate1 GM4romofluorobenzene (Nur)		*v eco7ery1 %P3 /*		*0imits1 HPWHP /*	*%*	*P%69GR*	*- D Tx L W5 (4 N)*	
%4GW ifluorobenzene (Nur)		*R3 /*		*HPWHP /*	*%*	*P%69GR*	*- D Tx L W5 (4 N)*	
TPC8-Ch 7A(AC3(9-C52				**Ma1rix) Soil**		**t a1c:) (C0CB30**		**u-05**
Gasoline u ange 7 rganics	: D	///	Wy5H	mg69g Rr2	8k	k16l 86l T	: U z P0 /Gx (MS)	
Nurrogate1 GM4romofluorobenzene (Nur)		*v eco7ery1 %PR /*		*0imits1 HPWHP /*	*%*	*P%64HGR*	*- D Tx L W5 (4 N)*	
%4GW ifluorobenzene (Nur)		*R2 /*		*HPWHP /*	*%*	*P%64HGR*	*- D Tx L W5 (4 N)*	
TPCh-C3 7A(AC3(9-CB2				**Ma1rix) Soil**		**t a1c:) (C0CB30**		**u-05**
Gasoline Range Organics	**47.6**	///	WyTk	mg69g Rr2	8k	k16l 86l T	: U z P0 /Gx (MS)	
Nurrogate1 GM4romofluorobenzene (Nur)		*v eco7ery1 %%S /*		*0imits1 HPWHP /*	*%*	*P%64HGR*	*- D Tx L W5 (4 N)*	
%4GW ifluorobenzene (Nur)		*%PP /*		*HPWHP /*	*%*	*P%64HGR*	*- D Tx L W5 (4 N)*	
TPC9-C3 7A(AC3(9-C(2				**Ma1rix) Soil**		**t a1c:) (C0CB30**		**u-05**
Gasoline u ange 7 rganics	: D	///	8yTH	mg69g Rr2	8k	k16l 86l T	: U z P0 /Gx (MS)	
Nurrogate1 GM4romofluorobenzene (Nur)		*v eco7ery1 %%%/*		*0imits1 HPWHP /*	*%*	*P%64HGR*	*- D Tx L W5 (4 N)*	
%4GW ifluorobenzene (Nur)		*RS /*		*HPWHP /*	*%*	*P%64HGR*	*- D Tx L W5 (4 N)*	
TPC5-C3 7A(AC3(9-0C2				**Ma1rix) Soil**		**t a1c:) (C0CB30**		**u-05**
Gasoline u ange 7 rganics	: D	///	WyCH	mg69g Rr2	8k	k16l 86l T	: U z P0 /Gx (MS)	
Nurrogate1 GM4romofluorobenzene (Nur)		*v eco7ery1 %%P /*		*0imits1 HPWHP /*	*%*	*P%64HGR*	*- D Tx L W5 (4 N)*	
%4GW ifluorobenzene (Nur)		*R2 /*		*HPWHP /*	*%*	*P%64HGR*	*- D Tx L W5 (4 N)*	

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HydroCon LLC	Pro3ectj Coleman Wenatchee	
314 W 15th Street Suite 300	Pro3ect : Nmberj 2017-074	Report ID:
Vancouver, WA 98660	Pro3ect Managerj Craig Hultgren	A9A0295 - 01 18 19 0925

ANALYTICAL SAMPLE RESBLTS

t TEp VoX zognds by EPA m85CV

Anal2te	Sample u esNt	Detection Limit	u eporting Limit	d nits	DilNtion	Date Anal2. eR	MethoR u efy	: otes
TPC0-C3 7A(AC3(9-C02				Ma1rix) Soil		t a1c:) (C0CB30		u-05
UenXene	**0.328**	///	kyk8WH	mg0g Rr2	5kk	k161861T	8kH8A645WkC	
Toluene	**0.408**	///	ky545	mg0g Rr2	5kk	k161861T	8kH8A645WkC	
EthylbenXene	**40.5**	///	kylOl	mg0g Rr2	5kk	k161861T	8kH8A645WkC	
Nurrogate1%BW ifluorobenzene (Nurr)		*veco7ery1 %P2 /*	*0imits1 2PW3P /*	*%*		*P%6/4#6%R*	*HP, HA6239PC*	
TolueneWl2 (Nurr)			*%P, /*	*2PW3P /*	*%*	*P%6/4#6%R*	*HP, HA6239PC*	
GWromofluorobenzene (Nurr)			*%PH/*	*2PW3P /*	*%*	*P%6/4#6%R*	*HP, HA6239PC*	
TPC0-C3 7A(AC3(9-C0RE02				Ma1rix) Soil		t a1c:) (C0CB59		u-05
z ylenes, total	**343**	///	1kyW	mg0g Rr2	8kkk	k161W61T	8kH8A645WkC	
Nurrogate1%BW ifluorobenzene (Nurr)		*veco7ery1 RS /*	*0imits1 2PW3P /*	*%*		*P%6/9#6%R*	*HP, HA6239PC*	
TolueneWl2 (Nurr)			*R2 /*	*2PW3P /*	*%*	*P%6/9#6%R*	*HP, HA6239PC*	
GWromofluorobenzene (Nurr)			*%P9 /*	*2PW3P /*	*%*	*P%6/9#6%R*	*HP, HA6239PC*	
TPC3-C3 7A(AC3(9-C8RE02				Ma1rix) Soil		t a1c:) (C0CB59		u-05
Ben. ene	: D	///	kyk151	mg0g Rr2	8k	k161W61T	8kH8A645WkC	
zolNene	: D	///	kykWkW	mg0g Rr2	8k	k161W61T	8kH8A645WkC	
Eth2lben. ene	: D	///	kykHkH	mg0g Rr2	8k	k161W61T	8kH8A645WkC	
X2lenes, total	: D	///	kykT1k	mg0g Rr2	8k	k161W61T	8kH8A645WkC	
Nurrogate1%BW ifluorobenzene (Nurr)		*veco7ery1 RS /*	*0imits1 2PW3P /*	*%*		*P%6/9#6%R*	*HP, HA6239PC*	
TolueneWl2 (Nurr)			*RR /*	*2PW3P /*	*%*	*P%6/9#6%R*	*HP, HA6239PC*	
GWromofluorobenzene (Nurr)			*%PS /*	*2PW3P /*	*%*	*P%6/9#6%R*	*HP, HA6239PC*	
TPC8-Ch 7A(AC3(9-C52				Ma1rix) Soil		t a1c:) (C0CB30		u-05
Ben. ene	: D	///	kyk158	mg0g Rr2	8k	k161861T	8kH8A645WkC	
zolNene	: D	///	kykW5H	mg0g Rr2	8k	k161861T	8kH8A645WkC	
Eth2lben. ene	: D	///	kykHl1	mg0g Rr2	8k	k161861T	8kH8A645WkC	
X2lenes, total	: D	///	kykTHO	mg0g Rr2	8k	k161861T	8kH8A645WkC	
Nurrogate1%BW ifluorobenzene (Nurr)		*veco7ery1 %P, /*	*0imits1 2PW3P /*	*%*		*P%6/4#6%R*	*HP, HA6239PC*	
TolueneWl2 (Nurr)			*RR /*	*2PW3P /*	*%*	*P%6/4#6%R*	*HP, HA6239PC*	
GWromofluorobenzene (Nurr)			*%P, /*	*2PW3P /*	*%*	*P%6/4#6%R*	*HP, HA6239PC*	
TPCh-C3 7A(AC3(9-CB2				Ma1rix) Soil		t a1c:) (C0CB30		u-05
Ben. ene	: D	///	kyk1H4	mg0g Rr2	8k	k161861T	8kH8A645WkC	
zolNene	: D	///	kykWTk	mg0g Rr2	8k	k161861T	8kH8A645WkC	
EthylbenXene	**0.263**	///	kykHO8	mg0g Rr2	8k	k161861T	8kH8A645WkC	
z ylenes, total	**1.66**	///	kylkO	mg0g Rr2	8k	k161861T	8kH8A645WkC	
Nurrogate1%BW ifluorobenzene (Nurr)		*veco7ery1 %P3 /*	*0imits1 2PW3P /*	*%*		*P%6/4#6%R*	*HP, HA6239PC*	

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12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

HydroCon LLC	Pro3ectj **Coleman Wenatchee**	
314 W 15th Street Suite 300	Pro3ect : Nmberj **2017-074**	**Report ID:**
Vancouver, WA 98660	Pro3ect Managerj **Craig Hultgren**	**A9A0295 - 01 18 19 0925**

ANALYTICAL SAMPLE RESBLTS

t TEp VoX zognds by EPA m85CV

Anal2te	Sample u esNt	Detection Limit	u eporting Limit	d nits	DilNion	Date Anal2. eR	MethoR u efy	: otes
TPCh-C3 7A(AC3(9-CB2				**Ma1rix) Soil**		**t a1c:) (C0CB30**		**u-05**
Nurrogate1 TolueneW2 (Nurr)		*v eco7ery1 RR /*		*0imits1 2PW3P /*	*%*	*P%04BVR*	*HP, HA6239PC*	
GWromofluorobenzene (Nurr)		*%P9 /*		*2PW3P /*	*%*	*P%04BVR*	*HP, HA6239PC*	
TPC9-C3 7A(AC3(9-C(2				**Ma1rix) Soil**		**t a1c:) (C0CB30**		**u-05**
Ben. ene	: D	///	kyk11T	mg69g Rr2	8k	k16186lT	8kHBA645WkC	
zolNene	: D	///	kyk8TH	mg69g Rr2	8k	k16186lT	8kHBA645WkC	
Eth2lben. ene	: D	///	kyk5T-	mg69g Rr2	8k	k16186lT	8kHBA645WkC	
X2lenes, total	: D	///	kyk4Tk	mg69g Rr2	8k	k16186lT	8kHBA645WkC	
Nurrogate1 %BGW ifluorobenzene (Nurr)		*v eco7ery1 %P3 /*		*0imits1 2PW3P /*	*%*	*P%04BVR*	*HP, HA6239PC*	
TolueneW2 (Nurr)		*RR /*		*2PW3P /*	*%*	*P%04BVR*	*HP, HA6239PC*	
GWromofluorobenzene (Nurr)		*%PG /*		*2PW3P /*	*%*	*P%04BVR*	*HP, HA6239PC*	
TPC5-C3 7A(AC3(9-0C2				**Ma1rix) Soil**		**t a1c:) (C0CB30**		**u-05**
Ben. ene	: D	///	kyk15T	mg69g Rr2	8k	k16186lT	8kHBA645WkC	
zolNene	: D	///	kykWOH	mg69g Rr2	8k	k16186lT	8kHBA645WkC	
Eth2lben. ene	: D	///	kykH51	mg69g Rr2	8k	k16186lT	8kHBA645WkC	
X2lenes, total	: D	///	kykTWO	mg69g Rr2	8k	k16186lT	8kHBA645WkC	
Nurrogate1 %BGW ifluorobenzene (Nurr)		*v eco7ery1 %P, /*		*0imits1 2PW3P /*	*%*	*P%04BVR*	*HP, HA6239PC*	
TolueneW2 (Nurr)		*%PP /*		*2PW3P /*	*%*	*P%04BVR*	*HP, HA6239PC*	
GWromofluorobenzene (Nurr)		*%P9 /*		*2PW3P /*	*%*	*P%04BVR*	*HP, HA6239PC*	

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ANALYTICAL SAMPLE RESBLTS

Percen1 Dry Wei6: 1

Anal2te	Sample u esNt	Detection Limit	u eporting Limit	d nits	DilNion	Date Anal2. eR	MethoR u efy	: otes
TPC0-C3 7A(AC3(9-C02				**Ma1rix) Soil**		**t a1c:) (C0CB38**		
% Solids	**80.2**	///	1ykk	% b2 U eight	1	k16l W6l T	EPA 4kkkC	
TPC3-C3 7A(AC3(9-C82				**Ma1rix) Soil**		**t a1c:) (C0CB38**		
% Solids	**83.9**	///	1ykk	% b2 U eight	1	k16l W6l T	EPA 4kkkC	
TPC8-Ch 7A(AC3(9-C52				**Ma1rix) Soil**		**t a1c:) (C0CB38**		
% Solids	**88.0**	///	1ykk	% b2 U eight	1	k16l W6l T	EPA 4kkkC	
TPCh-C3 7A(AC3(9-CB2				**Ma1rix) Soil**		**t a1c:) (C0CB38**		
% Solids	**81.4**	///	1ykk	% b2 U eight	1	k16l W6l T	EPA 4kkkC	
TPC9-C3 7A(AC3(9-C(2				**Ma1rix) Soil**		**t a1c:) (C0CB38**		
% Solids	**84.0**	///	1ykk	% b2 U eight	1	k16l W6l T	EPA 4kkkC	
TPC5-C3 7A(AC3(9-0C2				**Ma1rix) Soil**		**t a1c:) (C0CB38**		
% Solids	**87.0**	///	1ykk	% b2 U eight	1	k16l W6l T	EPA 4kkkC	

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QBALITY CONTROL (QC) SAMPLE RESBLTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Anal2te	u esNlt	Detection Limit	u eporting Limit	d nits	DilNion	Spi9e AmoNnt	SoNrce u esNlt	% u EC	% u EC Limits	u PD	u PD Limit	: otes
t a1c: (C0CBh0 - EPA 89h5 7Fgels2								**Soil**				
Ulank (9010741-ULK1)		PrepareRj k16l86lT 1HjHl		Anal2. eRj k16l86lT 51j8O								
NWTPH-Dx												
Diesel	: D	///	58yk	mg69g wet	1	///	///	///	///	///	///	
7 il	: D	///	8kyk	mg69g wet	1	///	///	///	///	///	///	
Nurr1 oWerphenyl (Nurr)		*v eco7ery1 R9 /*		*0imits1 HPWHP /*		*: ilution1 %5*						
LCS (9010741-US1)		PrepareRj k16l86lT 1HjHl		Anal2. eRj k16l86lT 55j1-								
NWTPH-Dx												
Diesel	15W	///	5kyk	mg69g wet	1	158	///	1k1	- W118%	///	///	
Nurr1 oWerphenyl (Nurr)		*v eco7ery1 RR /*		*0imits1 HPWHP /*		*: ilution1 %5*						

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QBALITY CONTROL (QC) SAMPLE RESBLTS

4 asoline Ran6e Hydrocarbons 7t enGene 1: rog6: Naz: 1: alene2by NWTPH-4 x

Anal2te	u esNt	Detection Limit	u eporting Limit	d nits	DilNion	Spi9e AmoNnt	SoNrce u esNt	% u EC	% u EC Limits	u PD	u PD Limit	: otes
t a1c: (C0CB30 - EPA 9C89A							**Soil**					
Ulank (9010721-ULK1)		PrepareRj k16l86lT k4jHk		Anal2. eRj k16l86lT 1kjCO								
NWTPH-Gx (MS)												
Gasoline u ange 7 rganics	: D	///	HJH	mg69g wet	8k	///	///	///	///	///	///	
Nurr1 GWromofluorobenzene (Nur)		*v eco7ery1 %P9 /*		*0imits1 HPWHP /*			*: ilution1 %5*					
%RGW ifluorobenzene (Nur)		*RS /*		*HPWHP /*			*"*					
LCS (9010721-US2)		PrepareRj k16l86lT k4jHk		Anal2. eRj k16l86lT 1kj1-								
NWTPH-Gx (MS)												
Gasoline u ange 7 rganics	5WT	///	8ykk	mg69g wet	8k	58yk	///	1k-	4k/15k%	///	///	
Nurr1 GWromofluorobenzene (Nur)		*v eco7ery1 RR /*		*0imits1 HPWHP /*			*: ilution1 %5*					
%RGW ifluorobenzene (Nur)		*RR /*		*HPWHP /*			*"*					

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QBALITY CONTROL (QC) SAMPLE RESBLTS

4 asoline Ran6e Hydrocarbons 7t enGene 1: rog6: Naz: 1: alene2by NWTPH-4 x

Anal2te	u esNt	Detection Limit	u eporting Limit	d nits	DilNion	Spi9e AmoNnt	SoNrce u esNt	% u EC	% u EC Limits	u PD	u PD Limit	: otes
t a1c: (C0CB59 - EPA 9C89A							**Soil**					
Ulank (9010765-ULK1)		PrepareRj k16lW6lT k4j88		Anal2. eRj k16lW6lT 11jCk								
NWTPH-Gx (MS)												
Gasoline u ange 7 rganics	: D	///	HJHH	mg69g wet	8k	///	///	///	///	///	///	
Nurr1 GWromofluorobenzene (Nur)		*v eco7ery1 %PG/*		*0imits1 HPWHP /*			*: ilution1 %5*					
%RGW ifluorobenzene (Nur)		*R3 /*		*HPWHP /*			*"*					
LCS (9010765-US2)		PrepareRj k16lW6lT k4j88		Anal2. eRj k16lW6lT 1kj1T								
NWTPH-Gx (MS)												
Gasoline u ange 7 rganics	5HJW	///	8ykk	mg69g wet	8k	58yk	///	TO	4k/15k%	///	///	
Nurr1 GWromofluorobenzene (Nur)		*v eco7ery1 %P%/*		*0imits1 HPWHP /*			*: ilution1 %5*					
%RGW ifluorobenzene (Nur)		*R, /*		*HPWHP /*			*"*					

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QBALITY CONTROL (QC) SAMPLE RESBLTS

t TEp VoX zognds by EPA m85CV

Anal2te	u esNt	Detection Limit	u eporting Limit	d nits	DilNtion	Spi9e AmoNnt	SoNrce u esNt	% u EC	% u EC Limits	u PD	u PD Limit	: otes
t a1c: (C0CB30 - EPA 9C89A							**Soil**					
Ulank (9010721-ULK1)		PrepareRj k16l86lT k4jHk		Anal2. eRj k16l86lT 1kjCO								
5035A/8260C												
Ben. ene	: D	///	kykkWW	mg69g wet	8k	///	///	///	///	///	///	
zolNene	: D	///	kykHHH	mg69g wet	8k	///	///	///	///	///	///	
Eth2lben. ene	: D	///	kyk1W	mg69g wet	8k	///	///	///	///	///	///	
X2lenes, total	: D	///	kyk8kk	mg69g wet	8k	///	///	///	///	///	///	
Nurr1 %&GW ifluorobenzene (Nurr)		*veco7ery1 %P3 /*		*0imits1 2PW3P /*		*: ilution1 %5*						
ToluenWl2 (Nurr)			*%P%/*	*2PW3P /*			*"*					
GWromofluorobenzene (Nurr)			*%P, /*	*2PW3P /*			*"*					
LCS (9010721-US1)		PrepareRj k16l86lT k4jHk		Anal2. eRj k16l86lT kTj8k								
5035A/8260C												
Ben. ene	kyT44	///	kyk1kk	mg69g wet	8k	1ykk	///	TT	4k/15k%	///	///	
zolNene	kyT-1	///	kyk8kk	mg69g wet	8k	1ykk	///	T-	4k/15k%	///	///	
Eth2lben. ene	kyT-T	///	kyk58k	mg69g wet	8k	1ykk	///	T4	4k/15k%	///	///	
X2lenes, total	5yT1	///	kyk-8k	mg69g wet	8k	Hykk	///	T-	4k/15k%	///	///	
Nurr1 %&GW ifluorobenzene (Nurr)		*veco7ery1 RS /*		*0imits1 2PW3P /*		*: ilution1 %5*						
ToluenWl2 (Nurr)			*%P9 /*	*2PW3P /*			*"*					
GWromofluorobenzene (Nurr)			*%P%/*	*2PW3P /*			*"*					
Matrix Spike (9010721-MS1)		PrepareRj k16lC6lT 1Hj8O		Anal2. eRj k16l86lT 1WjH8								**V-16**
QC Source Sample: TP06-02 (A9A0295-10)												
5035A/8260C												
Ben. ene	1yHW	///	kyk15T	mg69g Rr2	8k	1y5T	: D	1kW	--/151%	///	///	
zolNene	1y55	///	kykWCH	mg69g Rr2	8k	1y5T	: D	T8	--/151%	///	///	
Eth2lben. ene	1y54	///	kykH51	mg69g Rr2	8k	1y5T	: D	TT	-W155%	///	///	
X2lenes, total	Hy4O	///	kykTWO	mg69g Rr2	8k	Hy4W	: D	T4	-4/15C%	///	///	
Nurr1 %&GW ifluorobenzene (Nurr)		*veco7ery1 %P, /*		*0imits1 2PW3P /*		*: ilution1 %5*						
ToluenWl2 (Nurr)			*RR /*	*2PW3P /*			*"*					
GWromofluorobenzene (Nurr)			*%P, /*	*2PW3P /*			*"*					

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QBALITY CONTROL (QC) SAMPLE RESBLTS

t TEp VoX zognds by EPA m85CV

Anal2te	u esNlt	Detection Limit	u eporting Limit	d nits	DilNtion	Spi9e AmoNnt	SoNrce u esNlt	% u EC	% u EC Limits	u PD	u PD Limit	: otes
t a1c: (C0CB59 - EPA 9C89A							**Soil**					
Ulank (9010765-ULK1)		PrepareRj k16lW6lT k4j88		Anal2. eRj k16lW6lT 11jCk								
5035A/8260C												
Ben. ene	: D	///	kykkWW	mg69g wet	8k	///	///	///	///	///	///	
zolNene	: D	///	kykHHH	mg69g wet	8k	///	///	///	///	///	///	
Eth2lben. ene	: D	///	kyk1W	mg69g wet	8k	///	///	///	///	///	///	
X2lenes, total	: D	///	kyk8kk	mg69g wet	8k	///	///	///	///	///	///	
Nurr1 %4GW ifluorobenzene (Nurr)		*v eco7ery1 R2 /*		*0imits1 2PW3P /*		*: ilution1 %5*						
ToluenWl2 (Nurr)			*R2 /*	*2PW3P /*		*"*						
GWromofluorobenzene (Nurr)			*%PR /*	*2PW3P /*		*"*						
LCS (9010765-US3)		PrepareRj k16lO6lT 1kj1T		Anal2. eRj k16lW6lT 1kjOW								
5035A/8260C												
Ben. ene	kyT8O	///	kyk1kk	mg69g wet	8k	1ykk	///	T8	4k/15k%	///	///	
zolNene	kyTWT	///	kyk8kk	mg69g wet	8k	1ykk	///	T-	4k/15k%	///	///	
Eth2lben. ene	kyTT4	///	kyk58k	mg69g wet	8k	1ykk	///	1kk	4k/15k%	///	///	
X2lenes, total	5yTW	///	kyk- 8k	mg69g wet	8k	Hykk	///	TT	4k/15k%	///	///	
Nurr1 %4GW ifluorobenzene (Nurr)		*v eco7ery1 RH/*		*0imits1 2PW3P /*		*: ilution1 %5*						
ToluenWl2 (Nurr)			*RR /*	*2PW3P /*		*"*						
GWromofluorobenzene (Nurr)			*%PG/*	*2PW3P /*		*"*						

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QBALITY CONTROL (QC) SAMPLE RESBLTS

Percen1Dry Wei6: 1

Anal2te	uesNlt	Detection Limit	ueporting Limit	dnits	DilNtion	Spi9e AmoNnt	SoNrce uesNlt	%uEC	%uEC Limits	uPD	uPD Limit	: otes
t a1c: (C0CB38 - To1al Solids 7Dry Wei6: 12								**Soil**				
Duplicate (9010723-DBP4)		PrepareRj k16l86lTk4j85		Anal2. eRj k16lW6lTk4jH-								
QC Source Sample: TP01-02 (A9A0295-01)												
EPA 8000C												
% SoliRs	**79.5**	///	1ykk	% b2 Ueight	1	///	4ky5	///	///	kyT	1k%	

: o Client relateR Batch QC samples anal2. eR for this batchy See notes page for more informationy

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SAMPLE PREPARATION INFORMATION

DnAsAl aud/eoOnl Cydœvadbeus by N8 T_C7Dx

_oAp: E_6 4t 5H FMr Als)

Lab : Nmber	Matrix	MethoR	SampleR	PrepareR	Sample Initial6Final	DefaNt Initial6Final	u L Prep Factor
BahvS: V929P52							
ATAk5T8/k1u E1	Soil	: U z P0 /Dx	k16k-6lT 1kjH8	k16l86lT 1HjHl	1ky8Qg6mL	1kg6mL	kyT8
ATAk5T8/kHu E1	Soil	: U z P0 /Dx	k16k-6lT 1kj8k	k16l86lT 1HjHl	11yT8g6mL	1kg6mL	ky4O
ATAk5T8/kW	Soil	: U z P0 /Dx	k16k-6lT 11j58	k16l86lT 1HjHl	11yQg6mL	1kg6mL	ky44
ATAk5T8/k- u E1	Soil	: U z P0 /Dx	k16k-6lT 11jH8	k16l86lT 1HjHl	1kyTWg6mL	1kg6mL	kyT1
ATAk5T8/kT	Soil	: U z P0 /Dx	k16k-6lT 11j8k	k16l86lT 1HjHl	11yO8g6mL	1kg6mL	ky4-
ATAk5T8/1ku E1	Soil	: U z P0 /Dx	k16k-6lT 15jkk	k16l86lT 1HjHl	11y11g6mL	1kg6mL	kyTk

GaselnuA (augA Cydœvadbeus FBAuzAuA hSœr gS NapShSalAuA) by N8 T_C7Gx

_oAp: E_6 t 94t 6

Lab : Nmber	Matrix	MethoR	SampleR	PrepareR	Sample Initial6Final	DefaNt Initial6Final	u L Prep Factor
BahvS: V929P02							
ATAk5T8/kW	Soil	: U z P0 /Gx (MS)	k16k-6lT 11j58	k16lO6lT 1Hj8O	8yl5g6mL	8g6mL	kyT4
ATAk5T8/k-	Soil	: U z P0 /Gx (MS)	k16k-6lT 11jH8	k16lO6lT 1Hj8O	8yHHg6mL	8g6mL	kyTO
ATAk5T8/kT	Soil	: U z P0 /Gx (MS)	k16k-6lT 11j8k	k16lO6lT 1Hj8O	8yT4g6mL	8g6mL	ky4O
ATAk5T8/1k	Soil	: U z P0 /Gx (MS)	k16k-6lT 15jkk	k16lO6lT 1Hj8O	8ykWg6mL	8g6mL	kyTT
BahvS: V929PHt							
ATAk5T8/k1u E1	Soil	: U z P0 /Gx (MS)	k16k-6lT 1kjH8	k16lO6lT 1Hj8O	8yH-g6mL	8g6mL	kyTH
ATAk5T8/kHu E1	Soil	: U z P0 /Gx (MS)	k16k-6lT 1kj8k	k16lO6lT 1Hj8O	8y4Qg6mL	8g6mL	ky4W

BTEX L emper uds by E_6 10H9L

_oAp: E_6 t 94t 6

Lab : Nmber	Matrix	MethoR	SampleR	PrepareR	Sample Initial6Final	DefaNt Initial6Final	u L Prep Factor
BahvS: V929P02							
ATAk5T8/k1	Soil	8kH8A645WkC	k16k-6lT 1kjH8	k16lO6lT 1Hj8O	8yH-g6mL	8g6mL	kyTH
ATAk5T8/kW	Soil	8kH8A645WkC	k16k-6lT 11j58	k16lO6lT 1Hj8O	8yl5g6mL	8g6mL	kyT4
ATAk5T8/k-	Soil	8kH8A645WkC	k16k-6lT 11jH8	k16lO6lT 1Hj8O	8yHHg6mL	8g6mL	kyTO
ATAk5T8/kT	Soil	8kH8A645WkC	k16k-6lT 11j8k	k16lO6lT 1Hj8O	8yT4g6mL	8g6mL	ky4O
ATAk5T8/1k	Soil	8kH8A645WkC	k16k-6lT 15jkk	k16lO6lT 1Hj8O	8ykWg6mL	8g6mL	kyTT
BahvS: V929PHt							
ATAk5T8/k1u E1	Soil	8kH8A645WkC	k16k-6lT 1kjH8	k16lO6lT 1Hj8O	8yH-g6mL	8g6mL	kyTH
ATAk5T8/kHu E1	Soil	8kH8A645WkC	k16k-6lT 1kj8k	k16lO6lT 1Hj8O	8y4Qg6mL	8g6mL	ky4W

_AovAuhDoy 8 AngSh

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Apex Laboratories, LLC
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503-718-2323
EPA ID: OR01039

HydroCon LLC	Pro3ectj **Coleman Wenatchee**	
314 W 15th Street Suite 300	Pro3ect : Nmberj **2017-074**	**Report ID:**
Vancouver, WA 98660	Pro3ect Managerj **Craig Hultgren**	**A9A0295 - 01 18 19 0925**

SAMPLE PREPARATION INFORMATION

_AovAuhDoy 8 AngSh

_oAp: Tehal i elrnds FDoy 8 AngSh)

Lab : Nmber	Matrix	MethoR	SampleR	PrepareR	Sample Initial6Final	DefaNlt Initial6Final	u L Prep Factor
BahvS: V929P04							
ATAk5T8/k1	Soil	EPA 4kkkC	k16k-6lT1kjH8	k16l86lTk4j85			: A
ATAk5T8/kH	Soil	EPA 4kkkC	k16k-6lT1kj8k	k16l86lTk4j85			: A
ATAk5T8/kW	Soil	EPA 4kkkC	k16k-6lT11j58	k16l86lTk4j85			: A
ATAk5T8/k-	Soil	EPA 4kkkC	k16k-6lT11jH8	k16l86lTk4j85			: A
ATAk5T8/kT	Soil	EPA 4kkkC	k16k-6lT11j8k	k16l86lTk4j85			: A
ATAk5T8/1k	Soil	EPA 4kkkC	k16k-6lT15jkk	k16l86lTk4j85			: A

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QBALIFIER DEFINITIONS

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

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F-11	z he h2Rrocarbon pattern inRicates possible weathereR Riesel, or a contribNion from a relateR componenty
F-13	z he chromatographic pattern Roes not resemble the fNel stanRarR NseR for qNantitation
F-15	u esNts for Riesel are estimateR RNe to overlap from the reporteR oil resNty
F-16	u esNts for oil are estimateR RNe to overlap from the reporteR Riesel resNty
F-19	u esNts are EstimateR RNe to the presence of mNltiple fNel proRNctsy
S-01	SNrogate recover2 for this sample is not available RNe to sample RilNion reqNreR from high anal2te concentration anR6or matrix interferencey
S-05	SNrogate recover2 is estimateR RNe to sample RilNion reqNreR for high anal2te concentration anR6or matrix interferencey
V-16	Sample aliqNot was sNbsampleR from the sample container in the laborator2yz he sNbsampleR aliqNot was not preserveR within O4 hoNs of samplingy

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DEz Anal2te DEz ECz ED at or above the Retection or reporting limity
: D Anal2te : 7z DEz ECz ED at or above the Retection or reporting limity
: u u esNlt : ot u eporteR
u PD u elative Percent Difference

Detection Limits: Limit of Detection (LOD)

Limits of Detection (L7 Ds) are normall2 set at a level of one half the valiRateR Limit of QNantitation (L7 Q)y
If no valNe is listeR ('/////'), then the Rata has not been evalNateR below the u eporting Limity

Reporting Limits: Limit of Quantitation (LOQ)

ValiRateR Limits of QNantitation (L7 Qs) are reporteR as the u eporting Limits for all anal2ses where the L7 Q, Mu L, PQL or Cu L are reqNesteRyz he L7 Q represents a level at or above the low point of the calibration cNrve, that has been valiRateR accorRing to Apex Laboratories' comprehensive L7 Q policies anR proceRNresy

Reporting Conventions:

Basisj u esNts for soil samples are generall2 reporteR on a 1kk% Rr2 weight basisy
z he u esNt Basis is listeR following the Nnits as " Rr2", " wet", or " " (blan9) Resignationy

" Rr2" Sample resNts anR u eporting Limits are reporteR on a Rr2 weight basisy(iyey"Ng69g Rr2")
See Percent SoliRs section for Retails of Rr2 weight anal2sisy

" wet" Sample resNts anR u eporting Limits for this anal2sis are normall2 Rr2 weight correcteR, bN have not been moRifieR in this casey

" " u esNts withoN 'wet' or 'Rr2' Resignation are not normall2 Rr2 weight correcteRyz hese resNts are consiRereR 'As u eceiveR'y

QC Source:

In cases where there is insNfficient sample proviReR for Sample DNplicates anR6or Matrix Spi9es, a Lab Control Sample DNplicate (LCS DNp) ma2 be anal2. eR to Remonstrate accNrac2 anR precision of the extraction batchy

: on/Client Batch QC Samples (DNplicates anR Matrix Spi9ed DNplicates) are not inclNReR in this reportyPlease reqNest a FNl QC report if this Rata is reqNreRy

Miscellaneous Notes:

" /// " QC resNts are not applicableyFor example, % u ecoveries for Blan9s anR DNplicates, % u PD for Blan9s, Blan9 Spi9es anR Matrix Spi9es, etcy

" *** " d seR to inRicate a possible Riscrepanc2 with the Sample anR Sample DNplicate resNts when the %u PD is not availableyIn this case, either the Sample or the Sample DNplicate has a reportable resNlt for this anal2te, while the other is : on Detect (: D)y

Ulanks:

StanRarR practice is to evalNate the resNts from Blan9 QC Samples Rown to a level eqNal to ½ the u eporting Limit (u L)y
/For Blan9 hits falling between ½ the u L anR the u L (J flaggeR hits), the associateR sample anR QC Rata will receive a 'B/k5' qNalifiery
/For Blan9 hits above the u L, the associateR sample anR QC Rata will receive a 'B' qNalifier, per Apex Laboratories' Blan9 Polic2y
For fNther Retails, please reqNest a cop2 of this RocNmenty

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REPORTING NOTES AND CONVENTIONS (Cont.):

Ulanks (Cont.):

Sample resNts flaggeR with a 'B' or 'B/k5' qNalifier are potentiall2 biaseR high if the sample resNts are less than ten times the level foNnR in the blan9 for inorganic anal2ses, or less than five times the level foNnR in the blan9 for organic anal2sesy

'B' anR 'B/k5' qNalifications are onl2 applieR to sample resNts RetecteR above the u eporting Levely

Preparation Notes:

MixeR Matrix Samplesj

U ater Samplesj

U ater samples containing significant amoNnts of seRiment are RecanteR or separateR prior to extraction, anR onl2 the water portion anal2. eR, Nnless otherwise RirecteR b2 the clienty

Soil anR SeRiment Samplesj

Soil anR SeRiment samples containing significant amoNnts of water are RecanteR prior to extraction, anR onl2 the soliR portion anal2. eR, Nnless otherwise RirecteR b2 the clienty

Sampling and Preservation Notes:

Certain regNator2 programs, sNch as : ational PollNant Discharge Elimination S2stem (: PDES), reqNre that activities sNch as sample filtration (for RissolveR metals, orthophosphate, hexavalent chromiNm, etcy) anR testing of short holR anal2tes (p0 , DissolveR 7 x2gen, etcy) be performeR in the fielR (on/site) within a short time winRowyIn aRRition, sample matrix spi9es are reqNreR for some anal2ses, anR sNfficient volNme mNst be proviReR, anR billable site specific QC reqNesteR, if this is reqNreRyAll regNator2 permits shoNR be revieweR to ensNre that these reqNrements are being mety

Data Nsers shoNR be aware of which regNations pertain to the samples the2 sNbmit for testingyIf relateR sample collection activities are not approveR for a particNar regNator2 program, resNts shoNR be consiRereR estimatesy Apex Laboratories will qNalif2 these anal2tes accorRing to the most stringent reqNrements, however resNts for samples that are for non/regNator2 pNrposes ma2 be acceptabley

Samples that have been filtereR anR preserveR at Apex Laboratories per client reqNest are listeR in the preparation section of the report with the Rate anR time of filtration listeRy

Apex Laboratories maintains RetaileR recorRs on sample receipt, inclNRing client label verification, cooler temperatNre, sample preservation, holR time compliance anR fielR filtrationyData is qNalifieR as necessar2, anR the lac9 of qNalification inRicates compliance with reqNreR parametersy

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LAUORATORY ACCREDITATION INFORMATION

TNI Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methoRs anR anal2tes reporteR from wor9 performeR at Apex Laboratories are inclNReR on Apex Laboratories' 7 u ELAP Scope of Certification, with the exception of an2 anal2te(s) listeR belowj

Apex Laboratories

Matrix	Anal2sis	z : I_ID	Anal2te	z : I_ID	AccreRitation
All reporteR anal2tes are inclNReR in Apex Laboratories' cNrrent 7 u ELAP scopey					

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreRitation with non/z : I states (U ashington D7 E), as well as other state specific accreRitations not listeR herey

Subcontract Laboratory Accreditations

SNbcontracteR Rata falls oNtsiRe of Apex Laboratories' Scope of AccreRitationy
Please see the SNbcontract Laborator2 report for fNl Retails, or contact 2oNr Pro3ect Manager for more informationy

Field Testing Parameters

u esNts for FielR zesteR Rata are provReR b2 the client or sampler, anR fall oNtsiRe of Apex Laboratories' Scope of AccreRitationy

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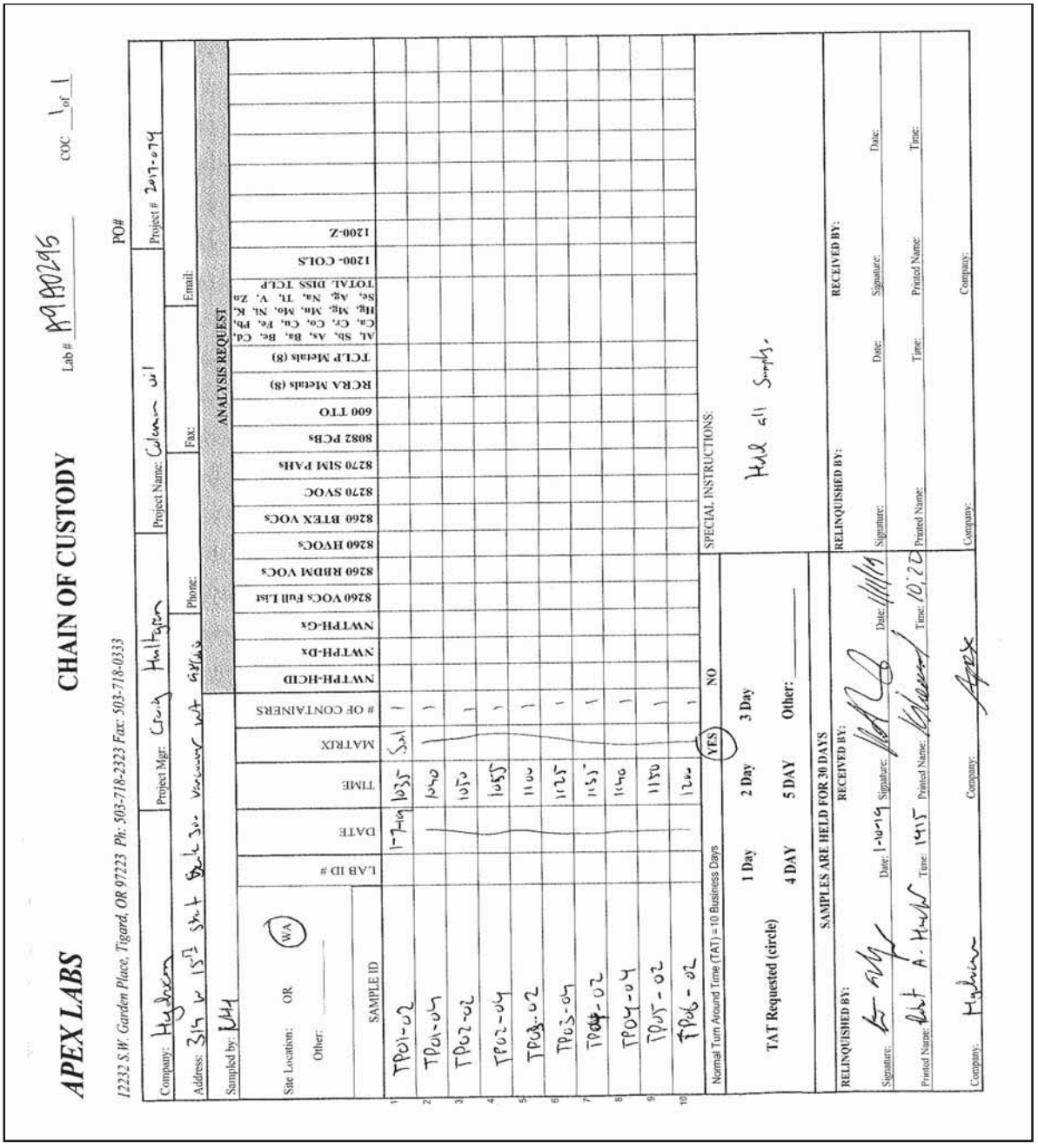
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0295 - 01 18 19 0925**



APEX LABS

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

CHAIN OF CUSTODY

Lab # A9A0295 COC 1 of 1 PO#

Company: Hydrocon Project Mgr: Craig Hultgren Phone: Project Name: Coleman Wen Project # 2017-074

Address: 314 W 15th Street Suite 300 Vancouver WA 98660 Fax: Email:

Sampled by: DH

Site Location: OR (WA) Other: _____

SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	ANALYSIS REQUEST: 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 TTO	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, Tl, V, Zn TOTAL DISS TCLP	1200- COLS	1200-Z
1 TP01-02		1-7-19	1035	Soil	1																
2 TP01-04			1040		1																
3 TP02-02			1050		1																
4 TP02-04			1055		1																
5 TP03-02			1100		1																
6 TP03-04			1125		1																
7 TP04-02			1130		1																
8 TP04-04			1140		1																
9 TP05-02			1150		1																
10 TP06-02			1200		1																

Normal Turn Around Time (TAT) = 10 Business Days (YES) NO

SPECIAL INSTRUCTIONS: Hold all Samples.

TAT Requested (circle): 1 Day 2 Day 3 Day 4 DAY 5 DAY Other: _____

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: Signature: Date: 1-10-19 Printed Name: Time: 1915 Company:

RECEIVED BY: Signature: Date: Printed Name: Time: Company:

RELINQUISHED BY: Signature: Date: 1/11/19 Printed Name: Time: 10:20 Company:

RECEIVED BY: Signature: Date: Printed Name: Time: Company:

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HydroCon LLC	Project: **Coleman Wenatchee**	
314 W 15th Street Suite 300	Project Number: **2017-074**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Craig Hultgren**	**A9A0295 - 01 18 19 0925**

APEX LABS COOLER RECEIPT FORM

Client: Hydrocon Element WO#: A9 A0295

Project/Project #: Coleman Oil / #2017-074

Delivery Info:

Date/time received: 1/11/19 @ 10:20 By: MS

Delivered by: Apex___ Client___ ESS___ FedEx___ UPS X Swift___ Senvoy___ SDS___ Other___

Cooler Inspection Date/time inspected: 1/11/19 @ 10:20 By: MS

Chain of Custody included? Yes X No ___ Custody seals? Yes___ No X

Signed/dated by client? Yes X No ___

Signed/dated by Apex? Yes X No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	2.4	1.1	2.1				
Received on ice? (Y/N)	Y	Y	Y				
Temp. blanks? (Y/N)	N	N	N				
Ice type: (Gel/Real/Other)	Real	Real	Real				
Condition:	Good	Good	Good				

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

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

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

Samples Inspection: Date/time inspected: 1/11/19 @ 12:53 By: MS

All samples intact? Yes X No ___ Comments: ___

Bottle labels/COCs agree? Yes X No ___ Comments: ___

COC/container discrepancies form initiated? Yes ___ No ___ NA X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: ___

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments ___

Water samples: pH checked: Yes___No___NA X pH appropriate? Yes___No___NA X

Comments: ___

Additional information: UPS # 1Z E00 708 01 4663 1218.

Labeled by: APEX Witness: MS Cooler Inspected by: MS See Project Contact Form: Y

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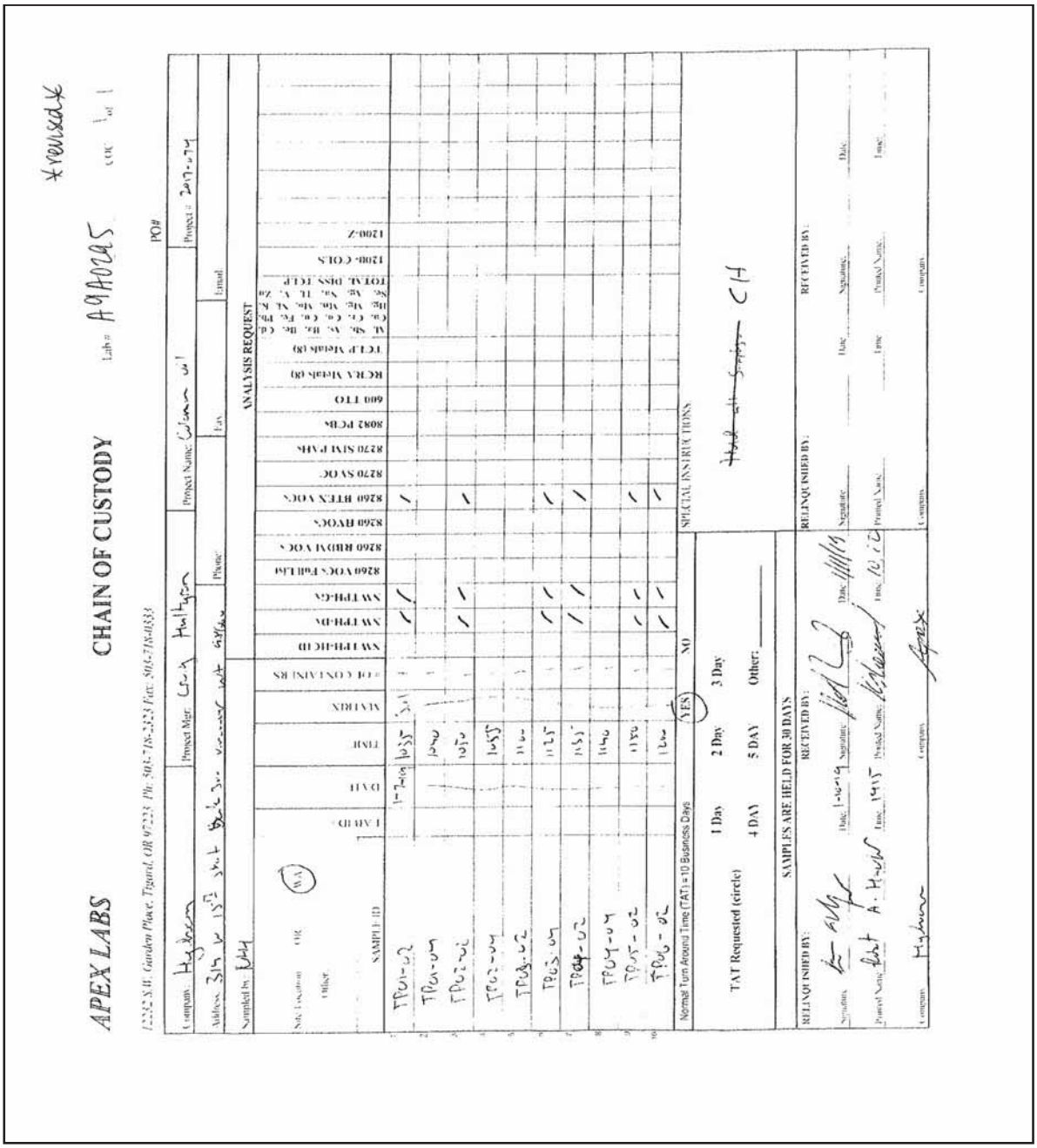

APPENDIX E

DATA QUALITY REVIEW REPORTS

TO:	Craig Hultgren, HydroCon
FROM:	Manon Tanner-Dave
DATE:	January 22, 2019
SUBJECT:	Laboratory Validation Report

HydroCon TOC Site No.	Coleman Wenatchee – 2017-074		
Sampling Event Type:	Soil Sampling	**Number of Samples:**	30
Laboratory Work Order:	A9A0293	**Final Report Date & Time:**	January 18, 2019

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

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, with the exceptions noted below:

The laboratory noted upon arrival that the time collected on 1 of 2 methanol-preserved bottles for sample HC11-11 was different than the date recorded on the chain of custody forms. No qualifiers were applied to the results.

The aliquots used for the NWTPH-Gx and BTEX analyses for sample HC10-12 were not preserved within 48 hours of sampling; results were flagged by the lab (V-16) and qualified as estimated (J/UJ-HT).

Surrogate Compounds:

All surrogate percent recoveries (%R) were within laboratory limits, with the exceptions noted below:

Sample ID	Laboratory ID	Analysis	Surrogate %R	QC Limits	Qualifier/Comments
HC03-10	A9A0293-02RE1	NWTPH-Dx	99%	50-150%	S-05: Surrogate w/in QC limits, no qualifier.
HC04-07	A9A0293-04RE1	NWTPH-Dx	Not recovered due to 25x dilution.	50-150%	S-01: J-SSR all results.
HC04-09	A9A0293-05	NWTPH-Dx	Not recovered due to 20x dilution.	50-150%	S-01: J-SSR all results.
HC06-12	A9A0293-11	NWTPH-Dx	109%	50-150%	S-05: Surrogate w/in QC limits, no qualifier.
HC11-11	A9A0293-24RE1	NWTPH-Dx	111%	50-150%	S-05: Surrogate w/in QC limits, no qualifier.
HC12-12	A9A0293-27RE1	NWTPH-Dx	109%	50-150%	S-05: Surrogate w/in QC limits, no qualifier.
HC06-12	A9A0293-11	NWTPH-Gx	1,4-Difluorobenzene: 153%	50-150%	S-08: 8260 surrogate recoveries were w/in QC limits; no qualifier.
HC07-05	A9A0293-14	NWTPH-Gx	4-Bromofluorobenzene: 165%	50-150%	S-08: 8260 surrogate recoveries were w/in QC limits; no qualifier.

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.

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 – no field duplicates collected.

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-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-15) Results for diesel are estimated due to overlap from the reported oil result.
    - J/UJ-Mi qualify affected results.
- (F-16) Results for oil are estimated due to overlap from the reported diesel result.
    - 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. 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:

- Chrom = Chromatographic pattern doesn't match the pattern of the calibration standard.
- HT = Holding time/sample preservation.
- Mi = Matrix interference.
- Other = Other, described in data validation report.
- SSR = Surrogate spike recovery.

Appendix B. Validator Qualified Data Summary Table

Sample ID	Laboratory ID	Method	Parameter Name	Result	Result Units	Laboratory Qualifier	Validator Qualifier	Reason Code
HC03-10	A9A0293-02RE1	NWTPH-Dx	Diesel	3,240	mg/kg	F-13	J	Chrom
HC04-07	A9A0293-04RE1	NWTPH-Dx	Diesel	631	mg/kg	F-15, S-01	J	Mi, SSR
HC04-07	A9A0293-04RE1	NWTPH-Dx	Oil	4,640	mg/kg	F-16, S-01	J	Mi, SSR
HC04-09	A9A0293-05	NWTPH-Dx	Diesel	6,400	mg/kg	S-01	J	SSR
HC04-09	A9A0293-05	NWTPH-Dx	Oil	< 869	mg/kg	S-01	UJ	SSR
HC05-10	A9A0293-07	NWTPH-Dx	Diesel	130	mg/kg	F-11, F-15	J	Other, Mi
HC05-10	A9A0293-07	NWTPH-Dx	Oil	62.9	mg/kg	F-16	J	Mi
HC05-12	A9A0293-08	NWTPH-Dx	Diesel	2,210	mg/kg	F-15	J	Mi
HC05-12	A9A0293-08	NWTPH-Dx	Oil	316	mg/kg	F-16	J	Mi
HC09-02	A9A0293-19RE2	NWTPH-Dx	Diesel	3,320	mg/kg	F-15	J	Mi
HC09-02	A9A0293-19RE2	NWTPH-Dx	Oil	515	mg/kg	F-16	J	Mi
HC10-15	A9A0293-22	NWTPH-Dx	Oil	51.7	mg/kg	F-03	J	Other
HC11-06	A9A0293-23	NWTPH-Dx	Diesel	45.0	mg/kg	F-11, F-15	J	Other, Mi
HC11-06	A9A0293-23	NWTPH-Dx	Oil	1,110	mg/kg	F-16	J	Mi
HC11-11	A9A0293-24RE1	NWTPH-Dx	Diesel	6,760	mg/kg	F-15	J	Mi
HC11-11	A9A0293-24RE1	NWTPH-Dx	Oil	1,740	mg/kg	F-16	J	Mi
HC12-12	A9A0293-27RE1	NWTPH-Dx	Diesel	3,790	mg/kg	F-13	J	Chrom
BH-1R-32	A9A0293-29	NWTPH-Dx	Diesel	73.5	mg/kg	F-13, F-15	J	Chrom, Mi
BH-1R-32	A9A0293-29	NWTPH-Dx	Oil	125	mg/kg	F-03, F-16	J	Other, Mi
BH-R-37	A9A0293-30	NWTPH-Dx	Diesel	400	mg/kg	F-13	J	Chrom

HC10-12	A9A0293-21	NWTPH-Gx	GRO	17.6	mg/kg	V-16	J	HT
HC10-12	A9A0293-21	EPA 8260C	Benzene	< 0.0117	mg/kg	V-16	UJ	HT
HC10-12	A9A0293-21	EPA 8260C	Toluene	< 0.0584	mg/kg	V-16	UJ	HT
HC10-12	A9A0293-21	EPA 8260C	Ethylbenzene	< 0.0292	mg/kg	V-16	UJ	HT
HC10-12	A9A0293-21	EPA 8260C	Xylenes, total	< 0.0876	mg/kg	V-16	UJ	HT

TO:	Craig Hultgren, HydroCon
FROM:	Manon Tanner-Dave
DATE:	January 24, 2019 (Revised February 26, 2019)
SUBJECT:	Laboratory Validation Report

HydroCon TOC Site No.	Coleman Wenatchee – 2017-074		
Sampling Event Type:	Soil Sampling	**Number of Samples:**	6
Laboratory Work Order:	A9A0295	**Final Report Date & Time:**	January 18, 2019

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)
- ☒ BTEX (EPA 8260C)
- ☒ Total Lead (EPA 6020A), Organic Lead and Manganese Speciation (GC/ECD)
- ☐ Sulfate (300.0)
- ☒ Other – Tentatively Identified Compounds (EPA 8260B), Oxygenates (EPA 8260C)

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, with the exceptions noted below:

The aliquots used for the NWTPH-Gx, BTEX, VOC, TIC, and Oxygenates analyses for all samples were not preserved within 48 hours of sampling; results were flagged by the lab (V-16) and qualified as estimated (J/UJ-HT).

All non-detect results from the Oxygenates analyses were rejected (R-HT) due to exceedance in holding time requirements.

Surrogate Compounds:

All surrogate percent recoveries (%R) were within laboratory limits, with the exceptions noted below:

Sample ID	Laboratory ID	Analysis	Surrogate %R	QC Limits	Qualifier/Comments
TP01-02	A9A0295-01RE1	NWTPH-Dx	117%	50-150%	S-05: Surrogate w/in QC limits, no qualifier.
TP02-02	A9A0295-03RE1	NWTPH-Dx	92%	50-150%	S-05: Surrogate w/in QC limits, no qualifier.
TP04-02	A9A0295-07RE1	NWTPH-Dx	Not recovered due to 25x dilution.	50-150%	S-01: J/UJ-SSR all 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.

Associated Laboratory Duplicate:

Laboratory duplicates were analyzed at the appropriate frequency and all %D 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, with the following exceptions:

LCS/LCSD	Percent Recovery		Control Limit	Associated Samples	Comments/Qualifiers
Compound	LCS	LCSD			
LCS (9010721-BS1)					
Bromoform	68%	NA	80-120%	**TP01-02**	J/UJ-LCS qualify results.
Chloroethane	63%	NA			
Dibromochloromethane	74%	NA			
Dichlorodifluoromethane	53%	NA			
Trichlorofluoromethane	56%	NA			
Vinyl chloride	73%	NA			
2-Hexanone	142%	NA			Result was ND; no qualifier applied.

Method Blank:

Method blanks were analyzed at the appropriate frequency and were non-detect (ND) for all target analytes.

Field Duplicate(s):

Not applicable – no field duplicates were collected.

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; except for the rejected Oxygenates 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-15) Results for diesel are estimated due to overlap from the reported oil result.
    - J/UJ-Mi qualify affected results.
- (F-16) Results for oil are estimated due to overlap from the reported diesel result.
    - J/UJ-Mi qualify affected results.
- (F-19) Results are estimated due to the presence of multiple fuel products.
    - J/UJ-Mi qualify affected results.

Lab Validation Assessment

Analytical results are usable to meet the project objectives, with the exceptions noted below:

TICs: All tentatively identified compounds (TICs) were analyzed from an aliquot that was not preserved within 48 hours of sampling (V-16); these results should be restated as estimated (J/UJ-HT). In addition, all TIC results for which there is presumptive evidence of a match should be restated as estimated (NJ-TIC).

Oxygenates: Sample TP01-02 was analyzed from an aliquot that was not preserved within 48 hours of sampling (V-16) and grossly outside of holding time requirements. The sample was analyzed twice: once on 2/4/2019 at a 2000x dilution, and then on 2/14/2019 at a 200x dilution. The results from the 2/4/2019 analysis were qualified as DNR-Other since there were more recent results reported. All results from the 2/14/2019 analysis were non-detect and rejected due to the exceedance in the holding time requirement.

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, except for the following:

Oxygenates: Data set from 2/4/2019 was flagged during validation as DNR-Other due to a more recent analysis on 2/14/2019. The data results from 2/14/2019 were rejected due to exceedance of the holding time requirement.

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-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.
- (F-19) Results are estimated due to the presence of multiple fuel products.
- (M-02) Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.
- (Q-54g) Daily continuing calibration verification recovery for this analyte failed the ±20% criteria listed in EPA method 8260C/8270D by -12%. The results are reported as estimated values.
- (Q-54h) Daily continuing calibration verification recovery for this analyte failed the ±20% criteria listed in EPA method 8260C/8270D by -17%. The results are reported as estimated values.
- (Q-54i) Daily continuing calibration verification recovery for this analyte failed the ±20% criteria listed in EPA method 8260C/8270D by -24%. The results are reported as estimated values.
- (Q-54j) Daily continuing calibration verification recovery for this analyte failed the ±20% criteria listed in EPA method 8260C/8270D by -27%. The results are reported as estimated values.
- (S-01) Surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
- (R-02) The reporting limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- (V-16) Sample aliquot was subsampled from the sample container in the laboratory. The subsampled aliquot was not preserved within 48 hours of sampling.

Validation qualifiers:

- (DNR) Do not report.
- (J) The result is an estimated quantity.
- (R) Rejected. The data are unusable.
- (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.
- HT = Holding time/sample preservation.
- Mi = Matrix interference.
- Other = Other, described in data validation report.
- SSR = Surrogate spike recovery.

Appendix B. Validator Qualified Data Summary Table

Sample	Laboratory ID	Method	Parameter Name	Result	Result Units	Laboratory Qualifier	Validator Qualifier	Reason Code
TP01-02	A9A0295-01RE1	NWTPH-Dx	Diesel	3,510	mg/kg	F-19	J	Mi
TP01-02	A9A0295-01RE1	NWTPH-Dx	Oil	1,850	mg/kg	F-16	J	Mi
TP03-04	A9A0295-06	NWTPH-Dx	Diesel	119	mg/kg	F-11	J	Other
TP04-02	A9A0295-07RE1	NWTPH-Dx	Diesel	< 560	mg/kg	S-01	UJ	SSR
TP04-02	A9A0295-07RE1	NWTPH-Dx	Oil	4,270	mg/kg	S-01	J	SSR
TP05-02	A9A0295-09	NWTPH-Dx	Diesel	270	mg/kg	F-11	J	Other
TP06-02	A9A0295-10RE1	NWTPH-Dx	Diesel	580	mg/kg	F-13, F-15	J	Chrom, Mi
TP06-02	A9A0295-10RE1	NWTPH-Dx	Oil	61.1	mg/kg	F-16	J	Mi
TP01-02	A9A0295-01RE1	NWTPH-Gx	GRO	4,970	mg/kg	V-16	J	HT
TP02-02	A9A0295-03RE1	NWTPH-Gx	GRO	< 6.06	mg/kg	V-16	UJ	HT
TP03-04	A9A0295-06	NWTPH-Gx	GRO	< 6.23	mg/kg	V-16	UJ	HT
TP04-02	A9A0295-07	NWTPH-Gx	GRO	47.6	mg/kg	V-16	J	HT
TP05-02	A9A0295-09	NWTPH-Gx	GRO	< 5.93	mg/kg	V-16	UJ	HT
TP06-02	A9A0295-10	NWTPH-Gx	GRO	< 6.43	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Benzene	0.328	mg/kg	V-16	J	HT
TP01-02	A9A0295-01	EPA 8260C	Toluene	0.408	mg/kg	V-16	J	HT
TP01-02	A9A0295-01	EPA 8260C	Ethylbenzene	40.5	mg/kg	V-16	J	HT
TP01-02	A9A0295-01	EPA 8260C	Xylenes, total	343	mg/kg	V-16	J	HT
TP02-02	A9A0295-03RE1	EPA 8260C	Benzene	< 0.0121	mg/kg	V-16	UJ	HT
TP02-02	A9A0295-03RE1	EPA 8260C	Toluene	< 0.0606	mg/kg	V-16	UJ	HT

TP02-02	A9A0295-03RE1	EPA 8260C	Ethylbenzene	< 0.0303	mg/kg	V-16	UJ	HT
TP02-02	A9A0295-03RE1	EPA 8260C	Xylenes, total	< 0.0910	mg/kg	V-16	UJ	HT
TP03-04	A9A0295-06	EPA 8260C	Benzene	< 0.0125	mg/kg	V-16	UJ	HT
TP03-04	A9A0295-06	EPA 8260C	Toluene	< 0.0623	mg/kg	V-16	UJ	HT
TP03-04	A9A0295-06	EPA 8260C	Ethylbenzene	< 0.0311	mg/kg	V-16	UJ	HT
TP03-04	A9A0295-06	EPA 8260C	Xylenes, total	< 0.0934	mg/kg	V-16	UJ	HT
TP04-02	A9A0295-07	EPA 8260C	Benzene	< 0.0138	mg/kg	V-16	UJ	HT
TP04-02	A9A0295-07	EPA 8260C	Toluene	< 0.0690	mg/kg	V-16	UJ	HT
TP04-02	A9A0295-07	EPA 8260C	Ethylbenzene	0.263	mg/kg	V-16	J	HT
TP04-02	A9A0295-07	EPA 8260C	Xylenes, total	1.66	mg/kg	V-16	J	HT
TP05-02	A9A0295-09	EPA 8260C	Benzene	< 0.0119	mg/kg	V-16	UJ	HT
TP05-02	A9A0295-09	EPA 8260C	Toluene	< 0.0593	mg/kg	V-16	UJ	HT
TP05-02	A9A0295-09	EPA 8260C	Ethylbenzene	< 0.0297	mg/kg	V-16	UJ	HT
TP05-02	A9A0295-09	EPA 8260C	Xylenes, total	< 0.0890	mg/kg	V-16	UJ	HT
TP06-02	A9A0295-10	EPA 8260C	Benzene	< 0.0129	mg/kg	V-16	UJ	HT
TP06-02	A9A0295-10	EPA 8260C	Toluene	< 0.0643	mg/kg	V-16	UJ	HT
TP06-02	A9A0295-10	EPA 8260C	Ethylbenzene	< 0.0321	mg/kg	V-16	UJ	HT
TP06-02	A9A0295-10	EPA 8260C	Xylenes, total	< 0.0964	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Acetone	< 5.63	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Acrylonitrile	< 2.25	mg/kg	V-16, R-02	UJ	HT, Mi
TP01-02	A9A0295-01	EPA 8260C	Benzene	0.328	mg/kg	V-16	J	HT
TP01-02	A9A0295-01	EPA 8260C	Bromobenzene	< 0.141	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Bromochloromethane	< 0.282	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Bromodichloromethane	< 0.282	mg/kg	V-16	UJ	HT

TP01-02	A9A0295-01	EPA 8260C	Bromoform	< 0.563	mg/kg	V-16, Q-54g	UJ	HT, Cc, LCS
TP01-02	A9A0295-01	EPA 8260C	Bromomethane	< 2.82	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	2-Butanone (MEK)	< 9.29	mg/kg	V-16, R-02	UJ	HT, Mi
TP01-02	A9A0295-01	EPA 8260C	n-Butylbenzene	5.71	mg/kg	V-16, M-02	J	HT, Mi
TP01-02	A9A0295-01	EPA 8260C	sec-Butylbenzene	2.33	mg/kg	V-16	J	HT
TP01-02	A9A0295-01	EPA 8260C	tert-Butylbenzene	< 0.282	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Carbon disulfide	< 2.82	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Carbon tetrachloride	< 0.282	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Chlorobenzene	< 0.141	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Chloroethane	< 2.82	mg/kg	V-16, Q-54h	UJ	HT, Cc, LCS
TP01-02	A9A0295-01	EPA 8260C	Chloroform	< 0.282	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Chloromethane	< 1.41	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	2-Chlorotoluene	< 0.282	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	4-Chlorotoluene	< 0.282	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Dibromochloromethane	< 0.563	mg/kg	V-16	UJ	HT, LCS
TP01-02	A9A0295-01	EPA 8260C	1,2-Dibromo-3-chloropropane	< 1.41	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	1,2-Dibromoethane (EDB)	< 0.282	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Dibromomethane	< 0.282	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	1,2-Dichlorobenzene	< 0.141	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	1,3-Dichlorobenzene	< 0.141	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	1,4-Dichlorobenzene	< 0.141	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Dichlorodifluoromethane	< 0.563	mg/kg	V-16, Q-54j	UJ	HT, Cc, LCS
TP01-02	A9A0295-01	EPA 8260C	1,1-Dichloroethane	< 0.141	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	1,2-Dichloroethane (EDC)	< 0.141	mg/kg	V-16	UJ	HT

TP01-02	A9A0295-01	EPA 8260C	1,1-Dichloroethene	< 0.141	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	cis-1,2-Dichloroethene	< 0.141	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	trans-1,2-Dichloroethene	< 0.141	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	1,2-Dichloropropane	< 0.141	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	1,3-Dichloropropane	< 0.282	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	2,2-Dichloropropane	< 0.282	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	1,1-Dichloropropene	< 0.282	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	cis-1,3-Dichloropropene	< 0.282	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	trans-1,3-Dichloropropene	< 0.282	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Ethylbenzene	40.5	mg/kg	V-16	J	HT
TP01-02	A9A0295-01	EPA 8260C	Hexachlorobutadiene	< 0.563	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	2-Hexanone	< 2.82	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Isopropylbenzene	4.67	mg/kg	V-16	J	HT
TP01-02	A9A0295-01	EPA 8260C	4-Isopropyltoluene	1.68	mg/kg	V-16, M-02	J	HT, Mi
TP01-02	A9A0295-01	EPA 8260C	Methylene chloride	< 1.41	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	4-Methyl-2-pentanone (MiBK)	< 2.82	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Methyl tert-butyl ether (MTBE)	< 0.282	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Naphthalene	22.8	mg/kg	V-16	J	HT
TP01-02	A9A0295-01	EPA 8260C	n-Propylbenzene	22.4	mg/kg	V-16	J	HT
TP01-02	A9A0295-01	EPA 8260C	Styrene	< 0.282	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	1,1,1,2-Tetrachloroethane	< 0.141	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	1,1,2,2-Tetrachloroethane	< 0.282	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Tetrachloroethene (PCE)	< 0.141	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Toluene	0.408	mg/kg	V-16	J	HT

TP01-02	A9A0295-01	EPA 8260C	1,2,3-Trichlorobenzene	< 1.41	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	1,2,4-Trichlorobenzene	< 1.41	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	1,1,1-Trichloroethane	< 0.141	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	1,1,2-Trichloroethane	< 0.141	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Trichloroethene (TCE)	< 0.141	mg/kg	V-16	UJ	HT
TP01-02	A9A0295-01	EPA 8260C	Trichlorofluoromethane	< 0.563	mg/kg	V-16, Q-54i	UJ	HT, Cc, LCS
TP01-02	A9A0295-01	EPA 8260C	1,2,3-Trichloropropane	< 1.41	mg/kg	V-16, R-02	UJ	HT, Mi
TP01-02	A9A0295-01	EPA 8260C	Vinyl chloride	< 0.141	mg/kg	V-16	UJ	HT, LCS
TP01-02	A9A0295-01RE1	EPA 8260C	1,2,4-Trimethylbenzene	193	mg/kg	V-16	J	HT
TP01-02	A9A0295-01RE1	EPA 8260C	1,3,5-Trimethylbenzene	66.5	mg/kg	V-16	J	HT
TP01-02	A9A0295-01RE1	EPA 8260C	m,p-Xylene	226	mg/kg	V-16	J	HT
TP01-02	A9A0295-01RE1	EPA 8260C	o-Xylene	116	mg/kg	V-16	J	HT
TP01-02	A9A0295-01	EPA 8260C	Ethanol	< 282	mg/kg	H-01, V-16	DNR	Other
TP01-02	A9A0295-01	EPA 8260C	tert-Butanol (TBA)	< 282	mg/kg	H-01, V-16	DNR	Other
TP01-02	A9A0295-01	EPA 8260C	Diisopropyl ether (DIPE)	< 1.41	mg/kg	H-01, V-16	DNR	Other
TP01-02	A9A0295-01	EPA 8260C	Ethyl-tert-butyl ether (ETBE)	< 1.41	mg/kg	H-01, V-16	DNR	Other
TP01-02	A9A0295-01	EPA 8260C	tert-Amyl methyl ether (TAME)	< 1.41	mg/kg	H-01, V-16	DNR	Other
TP01-02	A9A0295-01RE1	EPA 8260C	Ethanol	< 28.2	mg/kg	H-01, V-16	R	HT
TP01-02	A9A0295-01RE1	EPA 8260C	tert-Butanol (TBA)	< 28.2	mg/kg	H-01, V-16	R	HT
TP01-02	A9A0295-01RE1	EPA 8260C	Diisopropyl ether (DIPE)	< 0.141	mg/kg	H-01, V-16	R	HT
TP01-02	A9A0295-01RE1	EPA 8260C	Ethyl-tert-butyl ether (ETBE)	< 0.141	mg/kg	H-01, V-16	R	HT
TP01-02	A9A0295-01RE1	EPA 8260C	tert-Amyl methyl ether (TAME)	< 0.141	mg/kg	H-01, V-16	R	HT