Additional Interim Action Addendum #4
Remedial Excavation Near MW-14

Coleman Oil Biodiesel Spill Site
600 South Worthen Street
Wenatchee, Washington

Coleman Oil Company Wenatchee Office
3 East Chehalis Street
Wenatchee, Washington

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

April 10, 2024

Prepared by:

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HydroCon Project No: 2017-074

Prepared by:

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Acronyms

AIA	Additional Interim Action
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and total xylenes
Coleman Oil	Coleman Oil Company
CUL	cleanup level
DRPH	diesel range petroleum hydrocarbons
Ecology	Washington State Department of Ecology
EPA	Environmental Protection Agency
GRPH	gasoline range petroleum hydrocarbons
HydroCon	HydroCon Environmental LLC
mg/Kg	milligrams per kilogram
MTCA	Model Toxics Control Act
ORPH	oil range petroleum hydrocarbons
OSHA	Occupational Safety and Health Administration
PCS	petroleum contaminated soil
PID	photoionization detector
QAPP	Quality Assurance Project Plan
R99	R99 Renewable Diesel
SAP	Sampling and Analysis Plan
SOP	Standard Operating Procedure
SRI	Supplemental Remedial Investigation
WISHA	Washington Industrial Safety and Health Act

1.0 INTRODUCTION

HydroCon Environmental, LLC (HydroCon), has prepared this Additional Interim Action (AIA) Addendum #4 report on behalf of Coleman Oil Company (Coleman Oil) to document a remedial excavation of petroleum contaminated soil (PCS) and installation of replacement well MW14R at the Coleman Oil Biodiesel Spill Site.

HydroCon prepared a work plan to perform a remedial excavation near MW14 which included a sampling and analysis plan (SAP) and quality assurance project plan (QAPP). Work performed during this remedial action was consistent with the protocols outlined in the work plan.

The site,[1] 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 CULs (herein referred to as the Site) as a result of releases at the Coleman Oil facility.

On March 17, 2017, a large oil sheen was observed on the Columbia River near the junction of Chehalis and Worthen Streets in Wenatchee, Washington. Laboratory analysis of samples of the sheen collected from the river indicated that the product was biodiesel. The site name was initially designated on this basis. However, subsequent analyses showed that the product entering into the Columbia River was a renewable diesel product called R99. Both biodiesel and R99 can be derived from the same organic sources but the products are distinctly different.

Following initial response after the release was discovered, a supplemental remedial investigation (SRI) was performed by HydroCon. A work plan to perform the SRI was 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 October 30, 2017 (Agreed Order).

[1] Note that the listed site address, 3 East Chehalis Street, is not currently or legally associated with Coleman Oil. The parcel address where the release originated is 600 South Worthen Street.

Supporting documentation is found in the attachments to the SRI Work Plan and Sampling and Analysis Plan (SAP) and includes Standard Operating Procedures (SOPs) and field forms that were used during the investigation (HydroCon 2018a). Work performed during the AIA Addendum #4 utilized many of the same SOPs used during the SRI. These are included in the Interim Action Addendum #4 Work Plan.

2.0 BACKGROUND INFORMATION

A summary of Site information, operational history, and the release of R99 renewable diesel fuel is provided below. Further details are discussed in detail the Supplemental Remedial Investigation (SRI) Work Plan (HydroCon 2018a) and the Draft SRI Report (HydroCon 2018b) as well as previous groundwater monitoring reports.

2.1 Site Description

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

The Site comprises the following four parcels:

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

2.2 Property Ownership and Operational History

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

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

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

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

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

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

2.3 Release of R99 Renewable Diesel Fuel

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 line tightness testing revealed that two lines could not hold pressure and review of Coleman Oil inventory records indicated that the release was most likely from the R99 renewable diesel fuel line. Inventory records revealed an estimated total loss of approximately 4,543 gallons.

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, April and August 2018 by HydroCon (2018b and 2018c) (Figure 2). This testing indicated soil and groundwater had been impacted at concentrations above CULs, including impacts to soil and groundwater near the location of the sheen.

2.4 Remedial Measures

Several remedial measures have been performed at the Site since the discovery of the release.

- Pads and booms were placed in the Columbia River in the observed sheen discharge area to recover product after discovery of the release. This practice has continued along with daily reporting regarding Columbia River conditions, now reduced to daily observations but weekly reporting.
- A remedial excavation was performed at the Coleman Oil facility near the point of 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.
- Farallon Consulting installed twelve wells at the Site (MW-1 through MW-11, and RW-1). Environmental Partners, Inc. (EPI) installed three wells, BH-1 through BH-3 in parcels owned by Chelan County PUD that are adjacent to the Columbia River. Product recovery via skimming using a peristaltic pump and tubing and/or passive recovery using hydrophobic socks occurred in some of the wells.
- In February 2018, HydroCon performed aquifer testing to assess hydraulic parameters as described in their technical memorandum dated March 16, 2018. Step-drawdown discharge tests

were conducted using six of the wells in the monitoring well network. Information obtained from this test was later incorporated into the SRI report.

- In April 2018, HydroCon completed and submitted the SRI report. One key finding described in the SRI report is that there is no evidence of hydraulic connection between any of the six wells involved in the aquifer testing. Also, in 2018, HydroCon added fourteen new 4-inch diameter monitoring wells (MW12 through MW23, MW01S and MW03S).
- Three wells with persistent light nonaqueous-phase liquid (LNAPL) measurements (MW-9, MW-10, and BH-1) were fitted with pumps and connected with underground piping for pressurized air to operate the pumps, and conduit for electrical power for heat tape at each pumping well and effluent piping to collect the recovered groundwater and product. The recovered groundwater and product from these wells were routed through three oil/water separators, into storage tanks and then through filtration and GAC and into storage tanks. The treated water was analyzed prior to discharge in batches under an agreement between Coleman Oil and the City of Wenatchee into the City's sanitary sewer system. Pumping of the three wells began on May 5, 2018.
- In August 2018 nine new 4-inch diameter monitoring wells (MW24 through MW32) were installed at the Site. Two of the wells used to recover product and contaminated groundwater (MW-9 and MW-10) were deepened, completed as 4-inch diameter wells, and renamed MW09R and MW10R, respectively.
- A release of diesel and gasoline from a 55-gallon drum onto the ground surface occurred at the Site near the northeastern corner of Tank Farm A in early September 2018. In response, a total of 16.83 tons of petroleum contaminated soil was removed by excavation. Confirmation soil sampling results indicated that the lateral extent of contamination had been removed. However, the concentration of GRPH and DRPH in the excavation floor sample collected near the groundwater interface exceeded their respective MTCA Method A cleanup level. No further excavation was attempted due to the proximity of the Tank Farm A containment and a massive boulder that was too large to remove using the excavation equipment. Further remedial action in this area was considered in the feasibility study that was prepared later for the Site.
- The remediation system for recovering product and treating groundwater was expanded in November 2018 to include six more recovery points (MW17, MW24, MW28, MW29, MW30, and MW32). The modified remediation system now consists of three separate zones that pump LNAPL and contaminated groundwater into three OWSs. These zones include the MW09R zone (MW09R, MW17, and MW32); the MW10R zone (MW10R, MW24, and MW28); and the BH-1 zone (BH01R, MW29, and MW30) with all 9 wells active. The expanded remediation system began pumping on November 2, 2018. As of December 31, 2019, a total of 454.47 gallons of product had been recovered (HydroCon

2020b). The majority of the product is believed to be R99 from the 2017 release. Other fuel products have been identified by forensic analysis to be present in the subsurface, including gasoline, non-R99 diesel fuel, and lubricating oil, so it is likely that some of the recovered product includes petroleum products other than R99.

- On May 21-23, 2019 a remedial excavation was performed at the former Control Valve Building (CVB) and Tank Farm B. The PCS at this area of the site had the highest concentrations of GRPH and related VOCs including BTEX and naphthalene. A total of 875 tons of PCS was removed and disposed at the Greater Wenatchee Regional Landfill. Monitoring well MW13 was removed during the excavation process. Replacement well MW13R was installed in a similar location after the remedial excavation was completed. Two sets of 4-inch diameter slotted Schedule 40 PVC piping were placed inside the excavation at a depth of approximately 5 feet bgs for future use as conveyance piping for the application of treated and oxygen enriched groundwater. Post remediation groundwater sampling has revealed that a dramatic improvement in groundwater quality has been achieved from this remedial action with no detection of GRPH, BTEX and naphthalene in MW13R.
- The Site's groundwater treatment system was upgraded in 2020. The new system was activated in August 2020 and recirculates treated water into sumps located in the uplands area of the Site instead of discharging it into the City of Wenatchee's sanitary sewer system. Petroleum contaminated water is collected from 9 pumping wells (MW09R, MW10R, BH01R, MW17, MW24, MW28, MW29, MW30, and MW32) and treated using granular activated carbon (GAC), the same as the previous system. The treated water is temporarily placed into storage tanks located in Tank Farm A. The treated water is enriched with oxygen using 0.075% hydrogen peroxide (H202) and then discharged into one or more of the sumps that were placed in the uplands area during remedial excavations in 2017 and 2019. This creates a closed loop system designed to enhance the biologic degradation of residual hydrocarbons at the Site. Since December 31, 2019 measurement and product recovery from remediation system was halted due to the lack of observable product collecting in the OWS. However, the OWS are checked and skimmed on a bi-weekly basis for the presence of free product. Algae and iron bacteria have been the only things observed and removed in the OWS.

2.5 Geologic & Hydrogeologic Setting

The Site is located in the Wenatchee Valley approximately 150 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-east 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, cobbles and boulders. The thickness of the alluvium 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. The MW22 area has been disturbed by previous excavation and has been backfilled with construction and other debris.

Contaminant transport and groundwater flow appears to follow the surface of the Chumstick formation and field observations paired with analytical data suggest that the petroleum contamination penetrates a few feet into the formation and travels laterally within the shaley sandstone and shale, siltstone, mudstone of the Chumstick formation. 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 (near the riverbank), where both are more to the east, as shown in Figures 11 and 22 of the Supplemental Remediation Report.

Aquifer testing performed in February 2018 demonstrated that there is little or no hydraulic connection between the monitoring wells used for the pumping test as described in the report titled, Additional Interim Action. Addendum #2. However, over 200 gallons of R99 (based on product recovery totals) has been recovered from the Columbia River with the apparent discharge points (Seeps SL01 through SL04) located east of monitoring wells BH-2 (south) to MW-10 (north).

The fact that separate phase product entered the Columbia River demonstrates a complete exposure pathway from groundwater to surface water. Likewise, this same pathway also serves as a conduit for groundwater with contaminant concentrations to enter the surface water. Granted, the artificially controlled water elevation between the upper and lower hydroelectric dams may mitigate the impact to surface water during times when the river water level is high such that the net flow is towards the uplands.

2.6 Groundwater Monitoring at the Site

Routine groundwater monitoring (quarterly to semi-annual) has been performed at the site since 2018. In 2020 the Site's groundwater treatment system was upgraded. The new system recirculates treated water into sumps located in the uplands area of the Site instead of discharging it into the City of Wenatchee's sanitary sewer system. Petroleum contaminated water is collected from 9 pumping wells (MW09R, MW10R, BH01R, MW17, MW24, MW28, MW29, MW30, and MW32) and treated using granular activated carbon (GAC), the same as the previous system. The treated water is temporarily

placed into storage tanks located in Tank Farm A. The treated water is enriched with oxygen using 0.075% hydrogen peroxide (H202) and then discharged into one or more of the sumps that were placed in the uplands area during remedial excavations in 2017 and 2019. This creates a closed loop system designed to enhance the biologic degradation of residual hydrocarbons at the Site. The new treatment system has been automated and requires less manpower to operate and maintain. Coleman Oil hired a full-time position (Mr. Jim Clayson) to assist HydroCon with onsite routine operations and maintenance (O&M) of the remediation system, Columbia River level and sheen monitoring, water and product level monitoring at selected wells and boom management. Mr. Clayson provides HydroCon with the monitoring data, which is included in the monthly Progress Reports.

2.6.1 Revised Frequency of Groundwater Monitoring at the Site

Based on the capabilities of the new remediation system as well as the improved Site conditions due to remedial interim actions taken at the Site, HydroCon petitioned Ecology to modify groundwater monitoring. These modifications were approved by Ecology with the following stipulations:

- Beginning in 2021, groundwater monitoring will be performed on a semi-annual basis at selected monitoring wells agreed upon by Ecology (MW-6, MW-8, MW09R, MW10R, MW-11, MW13R, MW14, MW17, MW20, MW21, MW24, MW28, MW29, MW30, MW32, BH01R and BH-2) until all contaminants of concern are reduced below their respective CUL. Once that occurs, the groundwater monitoring schedule will revert back to a quarterly basis until the concentration of all contaminants of concern (COCs) remain below their CULs at all wells being monitored for 4 consecutive quarters.
- At Ecology's request, at least one monitoring event during the final quarterly sampling process will include sampling of all site monitoring wells to verify that the "clean wells" have remained below the cleanup level.

2.7 Remaining Source of Gasoline Range Petroleum Hydrocarbons and Related VOCs in Uplands

The remedial action taken in May 2019 at the former CVB and Tank Farm B was successful at reducing GRPH, BTEX and naphthalene to concentrations below their respective MRLs in MW13R and downgradient. A plume of GRPH and to a lesser extent BTEX remained in the area north of this remedial excavation around monitoring well MW14. Application of treated groundwater from the recirculation system has been applied to this area via conveyance piping along the West Trench to enhance biodegradation of contamination near MW13 but has had only limited success in reducing GRPH concentrations in groundwater. Remedial action similar to what was performed in May 2019 was considered warranted to reduce the concentrations of GRPH and related VOCs to concentrations below

their respective CUL. The intent of this remedial action is to remove GRPH and associated VOCs as contaminants of concern (COCs) from the Site.

3.0 PURPOSE AND SCOPE

The purpose of the remedial excavation was to remove the contaminant source mass to the maximum extent practicable in the unsaturated (vadose) zone and weathered portion of the upper Chumstick Formation in the area around MW-14 and downgradient of this well. Removal of this contaminated soil is expected to enhance and accelerate natural attenuation in downgradient areas where excavation is not cost effective and/or accessible (e.g., the PUD facility located north of the property).

Exploratory test pits were excavated on October 10, 2023 to assess if there's a shallow source of PCS and to get an approximate bound on the planned remedial excavation near MW14 to remove as much of the source of GRPH and associated VOCs that is affecting groundwater quality at that well and downgradient. Results of the exploratory test pit excavations indicated that there doesn't appear to be a source of shallow soil contamination in the northern portion of former Tank Farm B. Review of well logs drilled at and near MW14 indicate that the upper portion of the Chumstick Formation is impacted, which was confirmed by the test pit explorations. This soil was targeted for removal during the remedial excavation.

4.0 REMEDIAL EXCAVATION FIELD WORK

A discussion of each field task is provided below. Photographs taken during the excavation are include in Appendix A.

4.1 Abandoning MW14

Monitoring well MW14 was located within the footprint of the proposed remedial excavation and was abandoned by grouting in-place and then removal by excavation in accordance with Chapter 173-160 WAC. A copy of the well abandonment log is included as Appendix B.

4.2 Field Screening

Field screening was used to direct the remedial excavation. The screening included visual and olfactory observations of the soil as well as volatile vapor screening using a photoionization detector (PID) and sheen testing. Procedures for these field screening methods are documented on the standard operating procedures included in the work plan.

4.3 Remedial Excavation

The excavation was performed using a 350 sized tracked excavator operated by Clarke Construction. A large bucket equipped with tiger teeth was used to remove the cobbles and large boulders present in the subsurface. As discovered during the test pit explorations, approximately 6 feet of the upper soil horizon was not impacted with PCS. This soil was segregated and stockpiled on site for use as backfill. Subsurface soil consisted of unconsolidated gravelly sand with varying amount of silt, cobbles and boulders. The top of the Chumstick Formation that was encountered consisted of mudstone and sandstone.

During the excavation, four-inch diameter PVC piping was encountered at a depth of approximate 7 feet bgs and extended for almost the entire length of the excavation. The piping is believed to be a former drain line. Soil underlying the pipe was some of the most contaminated soil encountered during the SRI and interim remedial actions. The PCS encountered in the excavation was dark gray in color and exhibited slight to strong weathered hydrocarbon odor with limited PID response. The lower PID values is likely due to extensive weathering. The sheen testing proved to be the most reliable tool to assess the extent of contamination. The excavation was advanced as far west as possible but ended at or near the BNSF property line. The floor samples were collected at the maximum depth of soil before bedrock was encountered. Based on field indication, the north and south sidewalls and much of the eastern sidewalls of the excavation were not visibly impacted.

PCS was removed to the maximum extent practicable in the remedial excavation area. The excavation was extended down approximately 1 to 2 feet below the top of the Chumstick Formation. The Chumstick Formation was encountered approximately 13 feet bgs in the southern portion of the excavation and approximately 16 feet bgs in the northern end. PCS was directly loaded into dump trucks and transported to the Wenatchee Regional landfill for disposal. A total of 523.55 tons of PCS was removed and disposed at the landfill. A copy of the soil disposal documentation is included in Appendix C.

Groundwater was not encountered in sufficient quantity to warrant removal by pumping during the excavation.

The remedial excavation was backfilled with the clean overburden soil stockpiled at the site and supplemented with clean imported granular soil obtained from a local quarry. The soil was compacted in approximate 2-foot lifts using the excavator bucket and track-walked using the tracked excavator.

4.4 Soil Sampling

Confirmation soil sampling was performed during the remedial excavation. The samples were collected directly out of the excavation bucket at approximately 20-foot intervals laterally. These samples were placed into laboratory-prepared and properly labeled sample jars following the procedures documented in the SOPs. A total of 13 samples were collected from the excavation. The sampling locations are shown on Figure 2. The samples were placed in an iced cooler along with chain-of-custody documentation and transported to Friedman & Bruya Laboratory in Seattle, Washington.

4.5 Laboratory Analysis

The soil samples were analyzed for the following parameters:

- GRPH using Northwest Method NWTPH-Gx.
- DRPH and ORPH using Northwest Method NWTPH-Dx.
- BTEX using EPA Method 8260D.
- Soil samples utilized EPA 5035A sample kits for the preservation of volatiles.

4.6 Installation of 4-Inch Diameter Slotted PVC Pipe in Remedial Excavation

Two sets of 4-inch diameter slotted Schedule 40 PVC piping were placed inside the excavation at a depth of approximately 5 feet bgs. An end cap was placed on the northern end of the pipe run. Blank PVC riser pipe extends above the ground surface on the southern end of the pipe run. The blank PVC riser pipe was attached to the slotted section using an elbow. The screened section was wrapped in fabric to prevent fine grained soil from plugging the slots. The piping was bedded in pea gravel and then backfilled with granular soil used to backfill the remedial excavation. This piping will be used for application of the treated water produced from the recirculation system to promote flushing and increase the available oxygen concentration in groundwater to enhance the rate of biodegradation.

4.7 Installation of MW14R

On December 20, 2023 monitoring Well MW14R was installed near the original location (see Figure 2). The Chumstick Formation was encountered at a depth of 16 feet bgs. The boring was advanced 1 foot into the Chumstick Formation and the replacement well was installed. The well was constructed with a 12-foot length of 4-inch diameter 0.010-inch slotted PVC well screen. The well construction details are documented on the boring log in Appendix D and on Table 1. Well development was not performed after drilling due to the lack of water in the alluvial aquifer. The well will undergo rigorous development prior to the next groundwater

sampling event tentatively scheduled for March 2024. A copy of the well development field form will be attached to the March 2024 Semi Annual Groundwater Monitoring Report.

4.8 Surveying

Elandsen Inc. was contracted to survey the location and elevation of the ground surface and top of the PVC casing at the scribed reference mark for MW14R. The elevations are located in both the latitude and longitude plane relative to the Washington State plane [South Zone NAD83)] as well as the vertical dimension using the North American Vertical Datum of 1988 (NAVD88). Modern RTK GNSS systems used for the surveying can get an accuracy of 0.8cm +/- 1ppm horizontal and 1.5cm +/- 1ppm in the vertical.#The survey information for MW14R is included on the boring log and Table 1.

5.0 ANALYTICAL RESULTS

Soil analytical results are reported as milligrams per kilogram (mg/kg), which are equivalent to parts per million (ppm). The results are summarized on Table 2 and displayed on Figure 2 and compared to their respective CULs. The laboratory report is included in Appendix E.

5.1 Remedial Excavation Sample Results

The results of the soil samples are discussed for each area of the excavation including the sidewalls and floor of the excavation. No further excavation was performed in the sampling locations due to their location (sidewall samples along the property boundary with BNSF) or the floor samples (due to the presence of bedrock).

Northwest Sidewall – Two soil samples (NWSW01-13 and NESW01-13) were collected from the northwest sidewall. There was no detection of any analyte above their respective MRL in the NWSW01-13 sample. GRPH (38 mg/kg) and DRPH (330 mg/kg) were detected in the NESW01-13 sample. The concentration of GRPH exceeds the MTCA Method A cleanup level (CUL).

Central Sidewall – Two soil samples (CESW01-13 and CWSW01-13) were collected from the central sidewall. There was no detection of any analyte above the respective MRL in the CESW01-13 sample. GRPH (38 mg/kg) was detected in the CWSW01-13 sample. The concentration of GRPH exceeds the CUL.

Southwest Sidewall – Two soil samples (SWSW01-12 and SWSW02-10) were collected from the southwest sidewall. GRPH (up to 470 mg/kg) and DRPH (up to 370 mg/kg) was detected

in both samples. Ethylbenzene (0.27 mg/kg) was detected in the SWSW02-10 sample. The concentration of GRPH in both samples exceeds the CUL.

South Sidewall – One soil sample (SSW01-10) was collected from the south sidewall. GRPH (690 mg/kg) and DRPH (4,200 mg/kg) was detected in the sample. The concentration of GRPH and DRPH exceeds the respective CUL.

Southeast Sidewall – Two soil samples (SESW01-12 and SESW02-10) were collected from the southeast sidewall. There was no detection of any analyte above the respective MRL in the SES02-10 sample. GRPH (15 mg/kg) and DRPH (57 mg/kg) were detected in the SESW01-12 sample. Neither of the concentrations are above their respective CUL.

Floor Samples - Four soil samples (SB10-15, SB02-13, B01-16 and CB01-16) were collected from the floor of the excavation. GRPH (up to 100 mg/kg) was detected in each sample. Benzene (0.041 mg/kg) was detected in the CB01-16 sample. The concentration of GRPH in each sample except B01-16 exceeded the CUL. The concentration of benzene in the CB01-16 sample exceeded the CUL.

5.2 Data Quality Review

Laboratory testing of soil resulted in one laboratory report including Friedman & Bruya Laboratory Work Order F&BI 311080. The data review reports are included in Appendix F. 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

Sample SSW01-10 was analyzed outside the holding time. This sample location was removed by excavation so the sample was initially placed on hold. HydroCon later requested the results of the sample to assess the magnitude of the contamination even though it was outside the

holding time. Surrogate percent recovery for GRPH (sample SSW01-10) and BTEX (samples SWSW02-10 and SB02-13) were outside control limits. 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.

6.0 DISCUSSION

The purpose of the remedial excavation was to remove the contaminant source mass to the maximum extent practicable in the unsaturated (vadose) zone and weathered portion of the upper Chumstick Formation in the area around MW-14 and downgradient of this well. Soil analytical results indicate that residual contamination above the CUL remains in the sidewall along some areas of the shared property line with BNSF as well as middle and southern excavation bottom.

HydroCon placed two sets of 4-inch diameter slotted PVC pipe in the remedial excavation to apply the treated water generated from the on-site groundwater recirculation system. Application of the treated water that contains low concentrations of hydrogen peroxide to increase available oxygen should promote biodegradation of the residual petroleum contamination in the soil left in place.

Groundwater monitoring will be performed to evaluate the effectiveness of the interim action to remove contaminant source mass.

A new 4-inch diameter replacement well (MW14R) will be utilized to monitor post-remediation groundwater quality in this area of the site. The well will be developed in March 2024 prior to the next groundwater monitoring event. Well development documentation will be included in the report that documents the March 2024 groundwater monitoring event.

7.0 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.

8.0 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.

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_____. 2019b. *Additional Interim Action #3 – Remedial Excavation Work Plan*. Prepared for Coleman Oil Company, LLC. May 14.

Ecology. 2019. Email – Approval of the *Additional Interim Action #3 Remedial Excavation Work Plan*. May 15.

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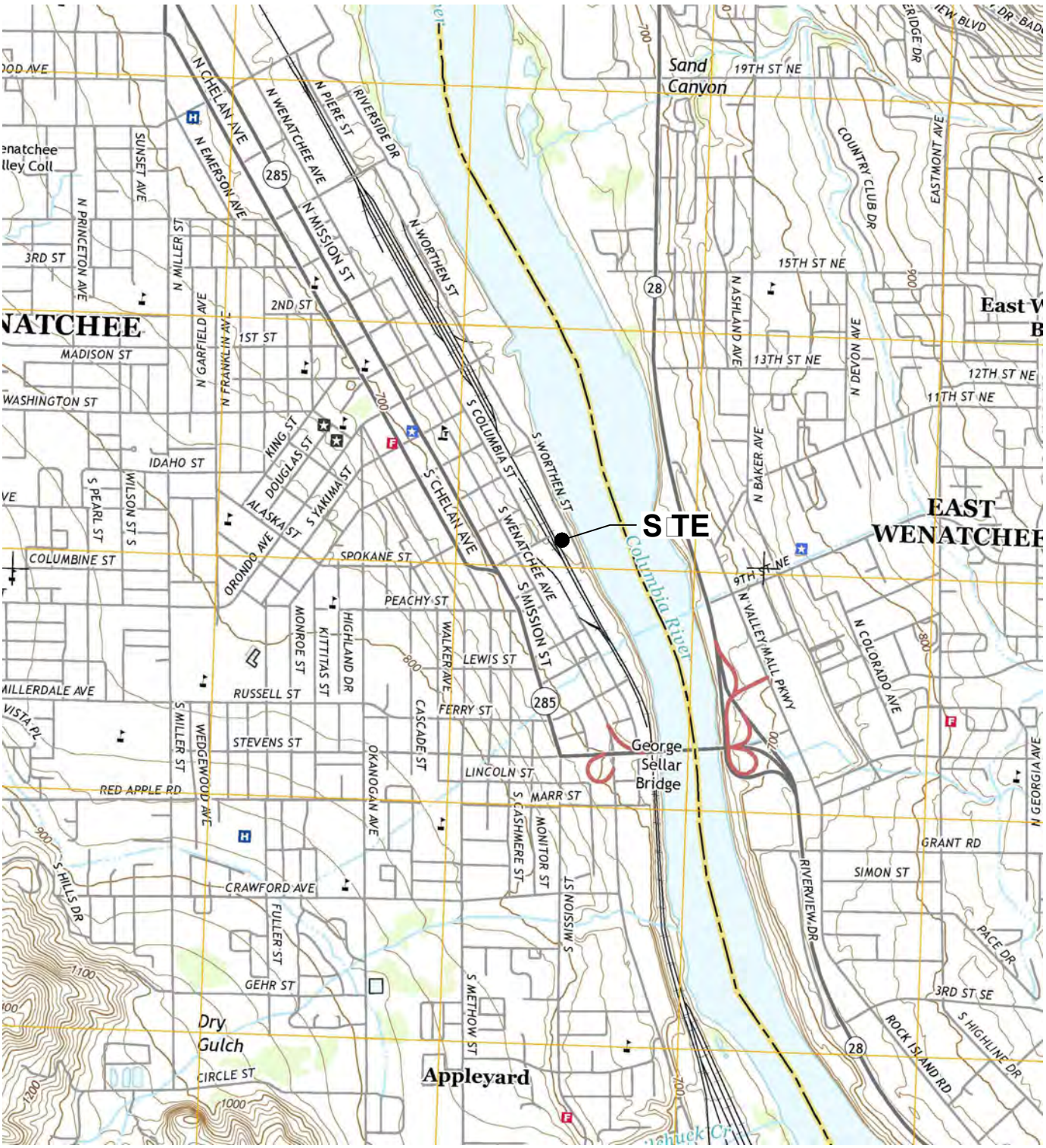
_____. 2020a. *Addendum to the 2019 O&M Monitoring Report – Modifications to Site Monitoring*, August 10.

_____. 2023a. *Focused Feasibility Study – V4*, July 5.

_____. *2023b. Interim Action Addendum #4 Work Plan – Remedial Excavation Near MW14.* August 4.

_____. *2023c. Technical Memorandum - Results of Test Pit Explorations near MW14.* November 8.

FIGURES



TEST

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: 10-18-18
DWN: JJT
CHK: RH
APPROVED: RH
PRJ. MGR: CH
PROJECT NO: 2017-074

FIGURE 1
SITE LOCATION MAP

COLEMAN OIL COMPANY
3 CHEHALIS ST.
WENATCHEE, WA.

C:\Users\Josh\Desktop\Autocad Files\Hydrocon-Autocad\2017-074 Coleman Oil\2018\Oct 2018\2017-074_BM-101718.dwg

Sample ID	Depth	SoiL Analytical Results (mg/kg)						
		GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
WA MTCA Method A CUL		**30/100**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**
Sidewall Samples								
NWSW01-13	13.0	<5	<50	<250	<0.03	<0.05	<0.05	<0.15
NESW01-13	13.0	**38**	**330**	<250	<0.03	<0.05	<0.05	<0.15
CESW01-13	13.0	<5	<50	<250	<0.03	<0.05	<0.05	<0.15
CWSW01-13	13.0	**38**	<50	<250	<0.03	<0.05	<0.05	<0.15
SWSW01-12	12.0	**90**	**230**	<250	<0.03	<0.05	<0.05	<0.15
SWSW02-10	10.0	**470**	**370**	<250	<0.03	<0.05	**0.27**	<0.15
SSW01-10	10.0	**690**	**4,200**	<250	<0.03	<0.05	<0.05	<0.15
SESW01-12	12.0	**15**	**57**	<250	<0.03	<0.05	<0.05	<0.15
SESW02-10	10.0	<5	<50	<250	<0.03	<0.05	<0.05	<0.15
Floor Samples								
SB01-15	15.0	**110**	<50	<250	<0.03	<0.05	<0.05	<0.15
SB02-13	13.0	**100**	<50	<250	<0.03	<0.05	<0.05	<0.15
B01-16	16.0	**6.6**	<50	<250	<0.03	<0.05	<0.05	<0.15
CB01-16	16.0	**31**	<50	<250	**0.041**	<0.05	<0.05	<0.15

LEGEND

- Road
- Railroad
- MW-1 — Monitoring Well (FARALLON)
- MW12 — Monitoring Well (HydroCon)
- MW-2 — Decommissioned Wells
- FB-3 — Boring Locations
- SUMP#6 — Sump
- Remedial Excavation Soil Sample Locations
- 2023 Remedial Excavation Area
- TP08 — Test Pit Locations

MW16
CHEHALIS ST.
MW17
MW18
MW-8
SUMP#5
HC02
2017 Remdial Excavation
Former Storage Building
MW-11
SUMP#6
SUMP#3
MW15
Former Main Office and Warehouse Building
NESW01-13
NB01-16
MW14R
NWSW01-13
SUMP#2
CB01-16
CESW01-13
CWSW01-13
MW-7
Former Dry Well
MW-6
HC01
MW23
Former Truck Loading Rack
Abandoned Perforated Drain Line
SB01-15
SESW01-12
SUMP#1
SWSW01-12
SSW01-10
TP08
MW-4
TP07
2023 Remedial Excavation
SB02-13
SESW02-10
SUMP#4
SWSW02-10
MW-2
Former Underground Produ
Former Tank Farm B Fuel and Oil ASTs
2018 Drum Spill E
2019 Remedial Excavation
MW13R
2013 F
Former Pipe Load/Unload
RE-EAST
RE-WEST
MW(
MW-1
Former Control Valve Building
Former Above Ground Pumps
Former Dispenser Island
MW03S
MW-3
Card
Dispe

FIGURE 2
2023 REMEDIAL EXCAVATION AREA
AND SOIL ANALYTICAL RESULTS
COLEMAN OIL COMPANY
3 CHEHALIS ST.
WENATCHEE, WA.

DATE: 4-1-24
DWN: JJT
CHK: RH
APPROVED: RH
PRJ. MGR: CH
PROJECT NO: 10019-001.00

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

SCALE IN FEET
1" = 30'
0 30 60

N W E S

I:\Autocad Files\Hydrocon-Autocad\10019-001.00 Coleman Oil\2024\Jan 2024\10019-001.00_BM-011824.dwg

TABLES

Table 1
Well Construction Details
Coleman Oil
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	4/3/2018	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	35.00	19.86	4	PVC	0.01	15	0.23	4.63-19.63	657.04
MW13R	7/2/2019	HydroCon	Sonic	19.00	18.46	4	PVC	0.01	14	0.23	4.23 - 18.23	656.67
MW14	3/30/2018	HydroCon	Sonic	35.00	20.46	4	PVC	0.01	15	0.23	5.23-20.23	657.15
MW14R	12/20/2023	HydroCon	Sonic	17.10	17.05	4	PVC	0.01	12	0.20	4.85-16.85	657.46
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	652.06
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

NOTES:

Shading indicates the well has been removed and replaced by deeper well

Table 2

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

			Fuels			BTEX			
			GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
WA MTCA Method A Cleanup Level for Soil			30/100	2,000	2,000	0.03	7	6	9
Benzene (Non Detect)			100						
Benzene (Detect)			30						
Field ID	**Sample Depth (Feet)**	**Date**							
EXPLORATORY TEST PITS NEAR MW-14									
TP07-03.5	3.5	10/10/2023	<5	<50	<250	<0.03	<0.05	<0.05	<0.15
TP08-08	8.0	10/10/2023	**9.6**	<50	<250	<0.03	<0.05	<0.05	<0.15
TP09-06	6.0	10/10/2023	<5	<50	<250	<0.03	<0.05	<0.05	<0.15
TP10-08	8.0	10/10/2023	<5	<50	<250	<0.03	<0.05	<0.05	<0.15
TP11-10	10.0	10/10/2023	**6.1**	<50	<250	<0.03	<0.05	<0.05	<0.15
TP12-10.5	10.5	10/10/2023	<5	<50	<250	<0.03	<0.05	<0.05	<0.15
TP13-09	9.0	10/10/2023	<5	<50	<250	<0.03	<0.05	<0.05	<0.15
TP14-11.5	11.5	10/10/2023	<5	<50	<250	<0.03	<0.05	<0.05	<0.15
REMEDIAL EXCAVATION NEAR MW14									
Sidewall Samples									
NWSW01-13	13.0	10/31/2023	<5	<50	<250	<0.03	<0.05	<0.05	<0.15
NESW01-13	13.0	10/31/2023	38	**330**	<250	<0.03	<0.05	<0.05	<0.15
CESW01-13	13.0	10/31/2023	<5	<50	<250	<0.03	<0.05	<0.05	<0.15
CWSW01-13	13.0	10/31/2023	38	<50	<250	<0.03	<0.05	<0.05	<0.15
SWSW01-12	12.0	10/31/2023	90	**230**	<250	<0.03	<0.05	<0.05	<0.15
SWSW02-10	10.0	11/1/2023	470	**370**	<250	<0.03	<0.05	**0.27**	<0.15
SSW01-10	10.0	10/31/2023	690	4,200	<250	<0.03	<0.05	<0.05	<0.15
SESW01-12	12.0	10/31/2023	**15**	**57**	<250	<0.03	<0.05	<0.05	<0.15
SESW02-10	10.0	11/1/2023	<5	<50	<250	<0.03	<0.05	<0.05	<0.15
Floor Samples									
SB01-15	15.0	10/31/2023	110	<50	<250	<0.03	<0.05	<0.05	<0.15
SB02-13	13.0	11/1/2023	100	<50	<250	<0.03	<0.05	<0.05	<0.15
B01-16	16.0	10/31/2023	**6.6**	<50	<250	<0.03	<0.05	<0.05	<0.15
CB01-16	16.0	10/31/2023	31	<50	<250	0.041	<0.05	<0.05	<0.15

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.
MTCA Method A Cleanup Levels, WAC 173-340-720 through 173-340-760, revised Nov., 2007

Notes

Volatiles analyzed by EPA Method 8260D.
< = method reporting limit (MRL) shown
Sample removed by remedial excavation

APPENDIX A

PHOTO DOCUMENTATION

PHOTO 1
Backfilling.

PHOTO 2
Conveyance piping installation.

PHOTO 3
Drain Pipe 1.

Hydro Con
1339 Commerce Ave, Suite 211, Longview, Wa. 98632
Ph (360)-703-6086

DATE: 1-18-24
DWN: JJT
CHK: CH
APPROVED: CH
PRJ. MGR: CH
PROJECT NO:
10019-001.00

PHOTOPLATE 1
SITE PHOTOGRAPHS

COLEMAN OIL COMPANY
3 CHEHALIS ST.
WENATCHEE, WA.

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PHOTO 4
John Deere 350 Tracked Excavator.

PHOTO 5
PCS left in place near railroad tracks.

PHOTO 6
Petroleum contaminated soil.

HydroCon
1339 Commerce Ave, Suite 211, Longview, Wa. 98632
Ph (360)-703-6086

DATE: 1-18-24
DWN: JJT
CHK: CH
APPROVED: CH
PRJ. MGR: CH
PROJECT NO: 10019-001.00

PHOTOPLATE 2
SITE PHOTOGRAPHS

COLEMAN OIL COMPANY
3 CHEHALIS ST.
WENATCHEE, WA.

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PHOTO 7
Remedial excavation looking north.

PHOTO 8
Remedial excavation looking south.

Hydro Con
1339 Commerce Ave, Suite 211, Longview, Wa. 98632
Ph (360)-703-6086

DATE: 1-18-24
DWN: JJT
CHK: CH
APPROVED: CH
PRJ. MGR: CH
PROJECT NO:
10019-001.00

PHOTOPLATE 3
SITE PHOTOGRAPHS

COLEMAN OIL COMPANY
3 CHEHALIS ST.
WENATCHEE, WA.

I:\Autocad Files\Hydrocon-Autocad\10019-001.00 Coleman Oil\2024\Jan 2024\2017-074_PP-011824.dwg

APPENDIX B

WELL ABANDONMENT LOG

DEPARTMENT OF ECOLOGY
State of Washington

Resource Protection Well Report

Submit one well report per well installed. See page two for instructions.

Type of Work:

☐ Construction
■ Decommission ⇨ Original NOI No. RE15764

Ecology Well ID Tag No. BIU 610

Site Well Name Coleman Oil

Consulting Firm

Was a variance approved for this well/boring? ☐ Yes ☐ No

If yes, what was the variance for?

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported are true to my best knowledge and belief.

☐ Driller ☐ Trainee ☒ Engineer

Name (Print Last, First Name) John Finnegan, PE

Driller/Engineer/Trainee Signature

License No. PE 33932

Company Name Budinger & Associates

If trainee box is checked, sponsor's license number:

Sponsor's signature

Notice of Intent No. AE81090

Type of Well:

■ Resource Protection Well ☐ Injection Point
☐ Remediation Well ☐ Grounding Well
☐ Geotechnical Soil Boring ☐ Ground Source Heat Pump
☐ Environmental Boring ☐ Other

↳ ☐ Soil- ☐ Vapor- ☐ Water-sampling

Property Owner Coleman Oil

Well Street Address Chehalis & Washington

City Wentachee County Chelan

Tax Parcel No.

Location (see instructions): WWM ☐ or EWM ■

SE ¼-¼ NE ¼, Section 10 Town 22N Range 20

Latitude (Example: 47.12345)

Longitude (Example: -120.12345)

(WGS 84 Coordinate System)

Borehole diameter 8" inches Casing diameter inches

Static water level 7.5' ft below top of casing Date

☐ Above-ground completion with bollards ☐ Flush monument

↳ Stick-up of top of well casing ft above ground surface

Start Date 10/27/2023 Completed Date 10/27/2023

Construction Design	Well Data	Driller's Log
Sealed with bentonite	Monument: 12" flush mount set in concrete Riser: 4" sched 40 pvc to 5.2' Screen: 4" sched 40 pvc (0.010" slot) from 5.2' to 20.5' with end cap Seal: Bentonite to 4' and from 23' to 35' Filter pack: #10/20 silica sand from 4' to 23'	0 to 17.5' Sand & Silt 17.5-35' Sandstone/mudstone

RESOURCE PROTECTION WELL CONSTRUCTION PROCESS

After a well is constructed, modified or decommissioned, a well report must be filed within 30 days to the Department of Ecology. Well reports are completed by the person who constructed the well. This is typically a Washington State licensed well operator.

This well report form is used for resource protection wells and borings as indicated on the *Type of Well* section on page 1. Ecology also offers a web-based well reporting option for environmental investigation and geotechnical soil borings. Visit our website to learn more about the Well Report Gateway.

Below are the instructions for filling out this well report. After the form has been printed and filled out, it should be mailed to the Department of Ecology regional office responsible for the area the well work was conducted.

INSTRUCTIONS

Type of Work: Construction/Decommission – This form is used for BOTH construction and decommissioning of a well. Please check the appropriate box. For decommissioning – enter the original construction Notice of Intent No. here (if available).
Ecology Well ID Tag No. – The number issued by the Department of Ecology that is stamped on a metal tag that is attached to the actual well. (e.g., AAA-000)
Site Well Name (if more than one well): If there is more than one well on the site, you may identify each well with a site well name or number and place it in this space. This is different from the Ecology Well ID Tag Number.
Consulting Firm – Which consulting firm managed the project?
Was a variance approved? – A variance request is submitted to a regional well coordinator if the regulations cannot be met. Explain the request here.
Well Construction Certification – Read the statements; enter the Driller and Drilling Company information; sign and date in the blanks provided.
Notice of Intent No. – The number issued by the Department of Ecology for tracking purposes (e.g., RE12345). Should start with an R, G, S, E or A for this form.
Type of Well – Check the appropriate box. An example of an *Other* well is a vibrating wire piezometer or instrumentation well. You can check more than one environmental boring type.
Property Owner Name – The person or business that owns the property.
Well Street Address – The physical address where the well is located. (Note: NOT the mailing address.)
City – City where the well is located.
County – County where the well is located.
Tax Parcel No. – County tax parcel number - enter *ROW* for right-of-way.
Location – The quarter-quarter, quarter, section, township and range (TRS) of the well. For example: the SE ¼-¼ of the NE ¼, S10, T20N, R05 – check box for East or West of the Willamette Meridian [*EWM/WWM]* for range. The web-based State Well Report Viewer in *map view* is one of the best places to determine well location using the TRS system.
Latitude/Longitude – Using a GPS or web-derived (Google Maps, Bing Maps, etc.) coordinates, enter the latitude and longitude of the well. Use the WGS84 coordinate system.
Borehole Diameter – The size of the bit used while drilling, in inches.
Casing Diameter – The nominal size of the installed casing, in inches.
Static water level – The depth in feet to water surface inside the well or boring, preferably to the hundredth (ie. 6.78 ft). A *static* water level implies the measurement is not disturbed by pumping or drilling. Include the date the measurement was taken.
Casing Stick-up – Indicate the distance in feet the casing rises above ground surface, preferably to the hundredth (ie. 2.34 ft).
Construction Design – Draw a schematic of the well construction design.
Well Data – Explain the materials used and installation depths from the Construction Design section.
Driller's Log – Describe the thickness and composition of geologic materials, water bearing strata, or other details noted while drilling. Also, decommissioning procedures and additional location information can be written here.

APPENDIX C

SOIL DISPOSAL DOCUMENTATION

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA 98802

Original
Ticket# 969670

Ph: (509) 884-2802

Customer Name COLEMAN OIL COMPANY LLC
Ticket Date 11/03/2023
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 112215wa
Profile 112215WA (DIESEL FUEL IMPACTED SOIL)
Generator WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC_3 EAST CHEHALIS, WENATCH
PO#

Carrier KISSLER
Vehicle# 0
Container
Driver
Check#
Billing# 0508602
Grid

	Time	Scale	Operator	Inbound	Gross	118460 lb
In	11/03/2023 13:24:00	Inbound	jvanhov		Tare	42720 lb*
Out	11/03/2023 13:51:28	Outbound	jvanhov		Net	75740 lb
			* Manual Weight		Tons	37.87

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Cont Soil Pet-RGC-Tons-	100	37.87	Tons				CHELAN
2	ENERGY-Energy Surcharge	100		%				CHELAN
3	CDHD FEE-Chelan Douglas	100	37.87	Tons				CHELAN

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA 98802
Ph: (509) 884-2802

Original
Ticket# 969662

Customer Name COLEMAN OIL COMPANY LLC
Ticket Date 11/03/2023
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 112215wa
Profile 112215WA (DIESEL FUEL IMPACTED SOIL)
Generator WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC_3 EAST CHEHALIS, WENATCH
PO#

Carrier KISSLER
Vehicle# 15
Container
Driver
Check#
Billing# 0508602
Grid

	Time	Scale	Operator	Inbound		
In	11/03/2023 12:59:50	Inbound	jvanhov		Gross	116660 lb
Out	11/03/2023 13:10:24	Outbound	jvanhov		Tare	43020 lb*
			* Manual Weight		Net	73640 lb
					Tons	36.82

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Cont Soil Pet-RGC-Tons-	100	36.82	Tons				CHELAN
2	ENERGY-Energy Surcharge	100		%				CHELAN
3	CDHD FEE-Chelan Douglas	100	36.82	Tons				CHELAN

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA 98802

Original
Ticket# 969650

Ph: (509) 884-2802

Customer Name COLEMAN OIL COMPANY LLC
Ticket Date 11/03/2023
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 112215wa
Profile 112215WA (DIESEL FUEL IMPACTED SOIL)
Generator WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC_3 EAST CHEHALIS, WENATCH
PO#

Carrier KISSLER
Vehicle# 0
Container
Driver
Check#
Billing# 0508602
Grid

	Time	Scale	Operator	Inbound		
In	11/03/2023 11:48:55	Inbound	jvanhov		Gross	111420 lb
Out	11/03/2023 11:59:27	Outbound	jvanhov		Tare	43080 lb*
			* Manual Weight		Net	68340 lb
					Tons	34.17

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Cont Soil Pet-RGC-Tons-	100	34.17	Tons				CHELAN
2	ENERGY-Energy Surcharge	100		%				CHELAN
3	CDHD FEE-Chelan Douglas	100	34.17	Tons				CHELAN

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA 98802
Ph: (509) 884-2802

Original
Ticket# 969635

Customer Name COLEMAN OIL COMPANY LLC
Ticket Date 11/03/2023
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 112215wa
Profile 112215WA (DIESEL FUEL IMPACTED SOIL)
Generator WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC_3 EAST CHEHALIS, WENATCH
PO#

Carrier KISSLER
Vehicle# 0
Container
Driver
Check#
Billing# 0508602
Grid

	Time	Scale	Operator	Inbound		
In	11/03/2023 10:39:19	Inbound	jvanhov		Gross	116260 lb
Out	11/03/2023 10:50:38	Outbound	jvanhov		Tare	43180 lb*
			* Manual Weight		Net	73080 lb
					Tons	36.54

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Cont Soil Pet-RGC-Tons-	100	36.54	Tons				CHELAN
2	ENERGY-Energy Surcharge	100		%				CHELAN
3	CDHD FEE-Chelan Douglas	100	36.54	Tons				CHELAN

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA 98802
Ph: (509) 884-2802

Original
Ticket# 969611

Customer Name COLEMAN OIL COMPANY LLC
Ticket Date 11/03/2023
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 112215wa
Profile 112215WA (DIESEL FUEL IMPACTED SOIL)
Generator WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC_3 EAST CHEHALIS, WENATCH
PO#

Carrier KISSLER
Vehicle# 0
Container
Driver
Check#
Billing# 0508602
Grid

	Time	Scale	Operator	Inbound		
In	11/03/2023 09:28:51	Inbound	jvanhov		Gross	114660 lb
Out	11/03/2023 09:42:43	Outbound	jvanhov		Tare	43200 lb*
			* Manual Weight		Net	71460 lb
					Tons	35.73

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Cont Soil Pet-RGC-Tons-	100	35.73	Tons				CHELAN
2	ENERGY-Energy Surcharge	100		%				CHELAN
3	CDHD FEE-Chelan Douglas	100	35.73	Tons				CHELAN

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA 98802

Original
Ticket# 969592

Ph: (509) 884-2802

Customer Name	COLEMAN OIL COMPANY LLC	Carrier	KISSLER
Ticket Date	11/03/2023	Vehicle#	0
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	
Route		Check#	
Hauling Ticket#		Billing#	0508602
Destination		Grid	

Manifest 112215wa
Profile 112215WA (DIESEL FUEL IMPACTED SOIL)
Generator WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC_3 EAST CHEHALIS, WENATCH
PO#

	Time	Scale	Operator	Inbound		
In	11/03/2023 08:21:58	Inbound	jvanhov		Gross	109820 lb
Out	11/03/2023 08:32:32	Outbound	jvanhov		Tare	43280 lb*
			* Manual Weight		Net	66540 lb
					Tons	33.27

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Cont Soil Pet-RGC-Tons-	100	33.27	Tons				CHELAN
2	ENERGY-Energy Surcharge	100		%				CHELAN
3	CDHD FEE-Chelan Douglas	100	33.27	Tons				CHELAN

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA 98802
Ph: (509) 884-2802

Original
Ticket# 969579

Customer Name COLEMAN OIL COMPANY LLC
Ticket Date 11/03/2023
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 112215wa
Profile 112215WA (DIESEL FUEL IMPACTED SOIL)
Generator WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC_3 EAST CHEHALIS, WENATCH
PO#

Carrier KISSLER
Vehicle# 0
Container
Driver
Check#
Billing# 0508602
Grid

	Time	Scale	Operator	Inbound		
In	11/03/2023 07:17:12	Inbound	jvanhov		Gross	110340 lb
Out	11/03/2023 07:27:52	Outbound	jvanhov		Tare	43320 lb*
			* Manual Weight		Net	67020 lb
					Tons	33.51

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Cont Soil Pet-RGC-Tons-	100	33.51	Tons				CHELAN
2	ENERGY-Energy Surcharge	100		%				CHELAN
3	CDHD FEE-Chelan Douglas	100	33.51	Tons				CHELAN

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA 98802
Ph: (509) 884-2802

Original
Ticket# 969567

Customer Name COLEMAN OIL COMPANY LLC
Ticket Date 11/03/2023
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 112215wa
Profile 112215WA (DIESEL FUEL IMPACTED SOIL)
Generator WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC_3 EAST CHEHALIS, WENATCH
PO#

Carrier KISSLER
Vehicle# 0
Container
Driver
Check#
Billing# 0508602
Grid

	Time	Scale	Operator	Inbound		
In	11/03/2023 06:05:41	Inbound	jvanhov		Gross	109820 lb
Out	11/03/2023 06:19:15	Outbound	jvanhov		Tare	43360 lb*
			* Manual Weight		Net	66460 lb
					Tons	33.23

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Cont Soil Pet-RGC-Tons-	100	33.23	Tons				CHELAN
2	ENERGY-Energy Surcharge	100		%				CHELAN
3	CDHD FEE-Chelan Douglas	100	33.23	Tons				CHELAN

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA 98802

Original
Ticket# 969562

Ph: (509) 884-2802

Customer Name COLEMAN OIL COMPANY LLC
Ticket Date 11/02/2023
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 112215wa
Profile 112215WA (DIESEL FUEL IMPACTED SOIL)
Generator WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC_3 EAST CHEHALIS, WENATCH
PO#

Carrier KISSLER
Vehicle# 15
Container
Driver
Check#
Billing# 0508602
Grid

	Time	Scale	Operator	Inbound		
In	11/02/2023 15:29:57	Inbound	Janelle		Gross	109540 lb
Out	11/02/2023 15:42:08	Outbound	Janelle		Tare	43000 lb*
			* Manual Weight		Net	66540 lb
					Tons	33.27

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Cont Soil Pet-RGC-Tons-	100	33.27	Tons				CHELAN
2	ENERGY-Energy Surcharge	100		%				CHELAN
3	CDHD FEE-Chelan Douglas	100	33.27	Tons				CHELAN

Total Tax/Fees
Total Ticket

Driver`s Signature JL for Kissler

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA 98802

Original
Ticket# 969549

Ph: (509) 884-2802

Customer Name COLEMAN OIL COMPANY LLC
Ticket Date 11/02/2023
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 112215wa
Profile 112215WA (DIESEL FUEL IMPACTED SOIL)
Generator WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC_3 EAST CHEHALIS, WENATCH
PO#

Carrier KISSLER
Vehicle# 15
Container
Driver
Check#
Billing# 0508602
Grid

	Time	Scale	Operator	Inbound		
In	11/02/2023 14:21:07	Inbound	Janelle		Gross	109640 lb
Out	11/02/2023 14:32:49	Outbound	Janelle		Tare	43000 lb*
			* Manual Weight		Net	66640 lb
					Tons	33.32

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Cont Soil Pet-RGC-Tons-	100	33.32	Tons				CHELAN
2	ENERGY-Energy Surcharge	100		%				CHELAN
3	CDHD FEE-Chelan Douglas	100	33.32	Tons				CHELAN

Total Tax/Fees
Total Ticket

Driver's Signature JL for Kissler

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA 98802
Ph: (509) 884-2802

Original
Ticket# 969536

Customer Name COLEMAN OIL COMPANY LLC
Ticket Date 11/02/2023
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 112215wa
Profile 112215WA (DIESEL FUEL IMPACTED SOIL)
Generator WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC_3 EAST CHEHALIS, WENATCH
PO#

Carrier KISSLER
Vehicle# 15
Container
Driver
Check#
Billing# 0508602
Grid

	Time	Scale	Operator	Inbound		
In	11/02/2023 13:12:23	Inbound	Janelle		Gross	101260 lb
Out	11/02/2023 13:24:08	Outbound	Janelle		Tare	43020 lb*
			* Manual Weight		Net	58240 lb
					Tons	29.12

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Cont Soil Pet-RGC-Tons-	100	29.12	Tons				CHELAN
2	ENERGY-Energy Surcharge	100		%				
3	CDHD FEE-Chelan Douglas	100	29.12	Tons				

Total Tax/Fees
Total Ticket

Driver`s Signature JL for Kissler

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA 98802

Original
Ticket# 969526

Ph: (509) 884-2802

Customer Name	COLEMAN OIL COMPANY LLC	Carrier	KISSLER
Ticket Date	11/02/2023	Vehicle#	15
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	
Route		Check#	
Hauling Ticket#		Billing#	0508602
Destination		Grid	
Manifest	112215wa		
Profile	112215WA (DIESEL FUEL IMPACTED SOIL)		
Generator	WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC_3 EAST CHEHALIS, WENATCH		
PO#			

	Time	Scale	Operator	Inbound		
In	11/02/2023 12:05:26	Inbound	Janelle		Gross	119720 lb
Out	11/02/2023 12:17:57	Outbound	Janelle		Tare	43020 lb*
			* Manual Weight		Net	76700 lb
					Tons	38.35

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Cont Soil Pet-RGC-Tons-	100	38.35	Tons				CHELAN
2	ENERGY-Energy Surcharge	100		%				CHELAN
3	CDHD FEE-Chelan Douglas	100	38.35	Tons				CHELAN

Total Tax/Fees
Total Ticket

Driver's Signature JL for Kissler

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA 98802
Ph: (509) 884-2802

Original
Ticket# 969519

Customer Name COLEMAN OIL COMPANY LLC
Ticket Date 11/02/2023
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 112215wa
Profile 112215WA (DIESEL FUEL IMPACTED SOIL)
Generator WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC_3 EAST CHEHALIS, WENATCH
PO#

Carrier KISSLER
Vehicle# 15
Container
Driver
Check#
Billing# 0508602
Grid

	Time	Scale	Operator	Inbound		
In	11/02/2023 10:42:43	Inbound	Janelle		Gross	123760 lb
Out	11/02/2023 11:08:00	Outbound	Janelle		Tare	43040 lb*
			* Manual Weight		Net	80720 lb
					Tons	40.36

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Cont Soil Pet-RGC-Tons-	100	40.36	Tons				CHELAN
2	ENERGY-Energy Surcharge	100		%				CHELAN
3	CDHD FEE-Chelan Douglas	100	40.36	Tons				CHELAN

Total Tax/Fees
Total Ticket

Driver`s Signature W. for Kissler

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA 98802
Ph: (509) 884-2802

Original
Ticket# 969498

Customer Name COLEMAN OIL COMPANY LLC
Ticket Date 11/02/2023
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 112215wa
Profile 112215WA (DIESEL FUEL IMPACTED SOIL)
Generator WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC_3 EAST CHEHALIS, WENATCH
PO#

Carrier KISSLER
Vehicle# 15
Container
Driver
Check#
Billing# 0508602
Grid

	Time	Scale	Operator	Inbound		
In	11/02/2023 09:24:36	Inbound	Janelle		Gross	109620 lb
Out	11/02/2023 09:41:04	Outbound	Janelle		Tare	43080 lb*
			* Manual Weight		Net	66540 lb
					Tons	33.27

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Cont Soil Pet-RGC-Tons-	100	33.27	Tons				CHELAN
2	ENERGY-Energy Surcharge	100		%				CHELAN
3	CDHD FEE-Chelan Douglas	100	33.27	Tons				CHELAN

Total Tax/Fees
Total Ticket

Driver`s Signature JL for Kissler

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA 98802

Original
Ticket# 969482

Ph: (509) 884-2802

Customer Name COLEMAN OIL COMPANY LLC
Ticket Date 11/02/2023
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 112215wa
Profile 112215WA (DIESEL FUEL IMPACTED SOIL)
Generator WA-COLEMAN OIL COMPANY LLC COLEMAN OIL COMPANY LLC_3 EAST CHEHALIS, WENATCH
PO#

Carrier KISSLER
Vehicle# 15
Container
Driver
Check#
Billing# 0508602
Grid

	Time	Scale	Operator	Inbound		
In	11/02/2023 08:07:53	Inbound	Janelle		Gross	112540 lb
Out	11/02/2023 08:29:40	Outbound	Janelle		Tare	43100 lb*
			* Manual Weight		Net	69440 lb
					Tons	34.72

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Cont Soil Pet-RGC-Tons-	100	34.72	Tons				CHELAN
2	ENERGY-Energy Surcharge	100		%				CHELAN
3	CDHD FEE-Chelan Douglas	100	34.72	Tons				CHELAN

Total Tax/Fees
Total Ticket

Driver's Signature JL for Kissler

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.

APPENDIX D

BORING LOG

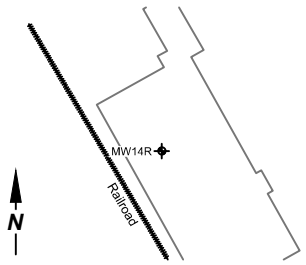
Hydro Con

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

WELL/BORING NUMBER: MW14R

PROJECT NAME: Coleman Oil
PROJECT NUMBER: 10019-001.00
PROJECT LOCATION: Wenatchee, WA
LOGGED BY: R. Honsberger
REVIEWED BY: C. Hultgren
DATE: 12-20-23

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), Light brown, 50% fine sand, 40% subangular gravel and cobbles up to 6" diameter, and 10% non plastic silt, dry, no odor. Fill Material	5				0			
	10				0			
Sandstone, light brownish grey, medium grained, quartz, mica, hard and compentent. **Chumstick Formation at 16'bgs.**	15				0			
End of boring at 17.1' bgs.	20				0			
	25							
	30							

WELL CONSTRUCTION

Depths (feet bgs)

Borehole: 17.1
Sump: 17.05 - 16.85
Screen: 16.85 - 4.85
Casing: 4.85 - 0
Backfill:
Sand Pack: 17.05 - 3.85
Bentonite: 3.85 - 1.5
Concrete: 1.5 - 0
Stabilizers:

MATERIALS USED

Casing: 4" PVC
Well Screen: 14' 0.010-inch slot
End Cap: Flat sump
Sand Pack: 7 50lbs bags 10-20
Bentonite: 1 50lb bag
Concrete: 2 50lbs bags
Monument: Flush Mount
Well Cap: J-plug
Other:

DRILLING CONTRACTOR: Budinger
DRILLING METHOD: Sonic
BOREHOLE DIAMETER: 8 Inch
SAMPLING METHOD: Core Barrel
WELL TAG ID: BUI-700

CASING ELEVATION: 657.46
GROUND SURFACE ELEVATION: 657.68
NORTHING: 152849.14
EASTING: 1771727.78

APPENDIX E

LABORATORY REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Avenue South
Seattle, WA 98108
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

November 21, 2023

Craig Hultgren, Project Manager
HydroCon
1339 Commerce Ave, Suite 211
Longview, WA 98632

Dear Mr Hultgren:

Included are the results from the testing of material submitted on November 3, 2023 from the Coleman Oil 10019-001.00, F&BI 311080 project. There are 28 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Rob Honsberger
HDC1121R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on November 3, 2023 by Friedman & Bruya, Inc. from the HydroCon Coleman Oil 10019-001.00, F&BI 311080 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	HydroCon
311080 -01	B01-16
311080 -02	NWSW01-13
311080 -03	NESW01-13
311080 -04	CB01-16
311080 -05	CESW01-13
311080 -06	CWSW01-13
311080 -07	SWSW01-12
311080 -08	SB01-15
311080 -09	SESW01-12
311080 -10	SSW01-10
311080 -11	SWSW02-10
311080 -12	SB02-13
311080 -13	SESW02-10

Sample SSW01-10 was analyzed outside of holding time. The data were flagged accordingly.

All other quality control requirements were acceptable.

Date of Report: 11/21/23
Date Received: 11/03/23
Project: Coleman Oil 10019-001.00, F&BI 311080
Date Extracted: 11/06/23
Date Analyzed: 11/07/23

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
B01-16 311080-01	6.6	83
NWSW01-13 311080-02	<5	81
NESW01-13 311080-03	38	97
CB01-16 311080-04	31	96
CESW01-13 311080-05	<5	82
CWSW01-13 311080-06 1/5	38	83
SWSW01-12 311080-07 1/5	90	85
SB01-15 311080-08 1/5	110	90
SESW01-12 311080-09	15	82
SSW01-10 ht 311080-10 1/5	690	ip

Date of Report: 11/21/23
Date Received: 11/03/23
Project: Coleman Oil 10019-001.00, F&BI 311080
Date Extracted: 11/06/23
Date Analyzed: 11/07/23

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SWSW02-10 311080-11 1/5	470	126
SB02-13 311080-12 1/5	100	89
SESW02-10 311080-13	<5	80
Method Blank 03-2494 MB	<5	80
Method Blank 03-2495 MB	<5	81
Method Blank 03-2509 MB	<5	102

Date of Report: 11/21/23
Date Received: 11/03/23
Project: Coleman Oil 10019-001.00, F&BI 311080
Date Extracted: 11/08/23 and 11/21/23
Date Analyzed: 11/08/23 and 11/21/23

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
B01-16 311080-01	<50	<250	102
NWSW01-13 311080-02	<50	<250	98
NESW01-13 311080-03	330	<250	103
CB01-16 311080-04	<50	<250	104
CESW01-13 311080-05	<50	<250	102
CWSW01-13 311080-06	<50	<250	99
SWSW01-12 311080-07	230	<250	102
SB01-15 311080-08	<50	<250	102
SESW01-12 311080-09	57	<250	104
SSW01-10 ht 311080-10	4,200	<250	117
SWSW02-10 311080-11	370	<250	103

Date of Report: 11/21/23
Date Received: 11/03/23
Project: Coleman Oil 10019-001.00, F&BI 311080
Date Extracted: 11/08/23 and 11/21/23
Date Analyzed: 11/08/23 and 11/21/23

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SB02-13 311080-12	<50	<250	106
SESW02-10 311080-13	<50	<250	99
Method Blank 03-2679 MB2	<50	<250	97
Method Blank 03-2733 MB2	<50	<250	106

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	B01-16	Client:	HydroCon
Date Received:	11/03/23	Project:	Coleman Oil 10019-001.00
Date Extracted:	11/07/23	Lab ID:	311080-01
Date Analyzed:	11/07/23	Data File:	110712.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	90	109
Toluene-d8	109	86	115
4-Bromofluorobenzene	103	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	NWSW01-13	Client:	HydroCon
Date Received:	11/03/23	Project:	Coleman Oil 10019-001.00
Date Extracted:	11/07/23	Lab ID:	311080-02
Date Analyzed:	11/07/23	Data File:	110713.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	90	109
Toluene-d8	105	86	115
4-Bromofluorobenzene	91	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	NESW01-13	Client:	HydroCon
Date Received:	11/03/23	Project:	Coleman Oil 10019-001.00
Date Extracted:	11/07/23	Lab ID:	311080-03
Date Analyzed:	11/07/23	Data File:	110714.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	101	86	115
4-Bromofluorobenzene	95	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	CB01-16	Client:	HydroCon
Date Received:	11/03/23	Project:	Coleman Oil 10019-001.00
Date Extracted:	11/07/23	Lab ID:	311080-04
Date Analyzed:	11/07/23	Data File:	110715.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	90	109
Toluene-d8	106	86	115
4-Bromofluorobenzene	97	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	0.041
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	CESW01-13	Client:	HydroCon
Date Received:	11/03/23	Project:	Coleman Oil 10019-001.00
Date Extracted:	11/07/23	Lab ID:	311080-05
Date Analyzed:	11/07/23	Data File:	110716.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	90	109
Toluene-d8	103	86	115
4-Bromofluorobenzene	94	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	CWSW01-13	Client:	HydroCon
Date Received:	11/03/23	Project:	Coleman Oil 10019-001.00
Date Extracted:	11/07/23	Lab ID:	311080-06
Date Analyzed:	11/07/23	Data File:	110708.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	110	86	115
4-Bromofluorobenzene	104	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SWSW01-12	Client:	HydroCon
Date Received:	11/03/23	Project:	Coleman Oil 10019-001.00
Date Extracted:	11/07/23	Lab ID:	311080-07
Date Analyzed:	11/07/23	Data File:	110717.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	90	109
Toluene-d8	105	86	115
4-Bromofluorobenzene	96	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SB01-15	Client:	HydroCon
Date Received:	11/03/23	Project:	Coleman Oil 10019-001.00
Date Extracted:	11/07/23	Lab ID:	311080-08
Date Analyzed:	11/07/23	Data File:	110718.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	90	109
Toluene-d8	113	86	115
4-Bromofluorobenzene	97	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SESW01-12	Client:	HydroCon
Date Received:	11/03/23	Project:	Coleman Oil 10019-001.00
Date Extracted:	11/07/23	Lab ID:	311080-09
Date Analyzed:	11/07/23	Data File:	110719.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	90	109
Toluene-d8	102	86	115
4-Bromofluorobenzene	92	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SSW01-10	Client:	HydroCon
Date Received:	11/03/23	Project:	Coleman Oil 10019-001.00
Date Extracted:	11/21/23	Lab ID:	311080-10
Date Analyzed:	11/21/23 14:19	Data File:	112117.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	90	109
Toluene-d8	108	86	115
4-Bromofluorobenzene	92	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SWSW02-10	Client:	HydroCon
Date Received:	11/03/23	Project:	Coleman Oil 10019-001.00
Date Extracted:	11/07/23	Lab ID:	311080-11
Date Analyzed:	11/07/23	Data File:	110722.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	90	109
Toluene-d8	118 ip	86	115
4-Bromofluorobenzene	97	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SB02-13	Client:	HydroCon
Date Received:	11/03/23	Project:	Coleman Oil 10019-001.00
Date Extracted:	11/07/23	Lab ID:	311080-12
Date Analyzed:	11/07/23	Data File:	110720.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	90	109
Toluene-d8	118 ip	86	115
4-Bromofluorobenzene	97	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	0.27
m,p-Xylene	<0.1
o-Xylene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SESW02-10	Client:	HydroCon
Date Received:	11/03/23	Project:	Coleman Oil 10019-001.00
Date Extracted:	11/07/23	Lab ID:	311080-13
Date Analyzed:	11/07/23	Data File:	110721.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	91	90	109
Toluene-d8	100	86	115
4-Bromofluorobenzene	90	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	HydroCon
Date Received:	Not Applicable	Project:	Coleman Oil 10019-001.00
Date Extracted:	11/07/23	Lab ID:	03-2622 mb
Date Analyzed:	11/07/23	Data File:	110706.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	92	90	109
Toluene-d8	102	86	115
4-Bromofluorobenzene	95	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	HydroCon
Date Received:	Not Applicable	Project:	Coleman Oil 10019-001.00
Date Extracted:	11/21/23	Lab ID:	03-2659 mb
Date Analyzed:	11/21/23	Data File:	112110.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	102	86	115
4-Bromofluorobenzene	94	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Date of Report: 11/21/23
Date Received: 11/03/23
Project: Coleman Oil 10019-001.00, F&BI 311080

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

Laboratory Code: 311080-05 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	40	107	70-130

Date of Report: 11/21/23
Date Received: 11/03/23
Project: Coleman Oil 10019-001.00, F&BI 311080

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

Laboratory Code: 311295-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	40	95	70-130

Date of Report: 11/21/23
Date Received: 11/03/23
Project: Coleman Oil 10019-001.00, F&BI 311080

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

Laboratory Code: 311083-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	40	107	70-130

Date of Report: 11/21/23
Date Received: 11/03/23
Project: Coleman Oil 10019-001.00, F&BI 311080

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 311098-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	29,000	180 b	1 b	64-136	200 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	88	78-121

Date of Report: 11/21/23
Date Received: 11/03/23
Project: Coleman Oil 10019-001.00, F&BI 311080

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 311303-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	100	100	63-146	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	100	77-123

Date of Report: 11/21/23
Date Received: 11/03/23
Project: Coleman Oil 10019-001.00, F&BI 311080

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 311080-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	2	<0.03	94	95	29-129	1
Toluene	mg/kg (ppm)	2	<0.05	91	93	35-130	2
Ethylbenzene	mg/kg (ppm)	2	<0.05	93	92	32-137	1
m,p-Xylene	mg/kg (ppm)	4	<0.1	93	91	34-136	2
o-Xylene	mg/kg (ppm)	2	<0.05	93	91	33-134	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	2	95	65-136
Toluene	mg/kg (ppm)	2	96	66-126
Ethylbenzene	mg/kg (ppm)	2	93	64-123
m,p-Xylene	mg/kg (ppm)	4	93	68-128
o-Xylene	mg/kg (ppm)	2	92	67-129

Date of Report: 11/21/23
Date Received: 11/03/23
Project: Coleman Oil 10019-001.00, F&BI 311080

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 311308-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	2	<0.03	90	92	29-129	2
Toluene	mg/kg (ppm)	2	<0.05	95	97	35-130	2
Ethylbenzene	mg/kg (ppm)	2	<0.05	91	95	32-137	4
m,p-Xylene	mg/kg (ppm)	4	<0.1	94	98	34-136	4
o-Xylene	mg/kg (ppm)	2	<0.05	96	98	33-134	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	2	95	65-136
Toluene	mg/kg (ppm)	2	97	66-126
Ethylbenzene	mg/kg (ppm)	2	96	64-123
m,p-Xylene	mg/kg (ppm)	4	95	68-128
o-Xylene	mg/kg (ppm)	2	98	67-129

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY

311080 — 11/03/23 — N2

Page # 1 of 2

Report To Craig Hultgren / Rob Honsberger

Company HydroCon

Address

City, State, ZIP Vancouver WA

Phone Email

SAMPLERS (signature)

PROJECT NAME: Columbia Ck 10019-001.00

PO #

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☑ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	BTEX by 8260				Notes
B01-16	01 A-E	10-31-23	0845	Soil	5	X	X						X				Label NB01-16 AP @ 11/03
NWSW01-13	02		0850		5	X	X						X				
NESW01-13	03		0950		5	X	X						X				
CB01-16	04		1130		5	X	X						X				
CESW01-13	05		1135		5	X	X						X				
CWSW01-13	06		1140		5	X	X						X				
SWSW01-12	07		1400		5	X	X						X				
SB01-15	08		1405		5	X	X						X				
SESW01-12	09		1410		5	X	X						X				analyze SSW01-10
~~SB01~~ SSW01-10	10		1430		5	X	X						Y				~~Hold~~ per RH 11/10/23 ME

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert A. Honsberger	HCE	11-3-23	1533
Received by:	ANHPHAN	FSB	11/03/23	15:33
Relinquished by:		Samples received at 3 °C		
Received by:				

Friedman & Bruya, Inc.
Ph. (206) 285-8282

ACZ

SAMPLE CHAIN OF CUSTODY 11/03/23 N2

3110 80

Report To Craig Haltgren / Rob Horsberger

Company Hydrocon

Address

City, State, ZIP Vancouver WA

Phone Email

SAMPLERS (signature)

PROJECT NAME: Coleman 0.1 10019-001.00

PO #

REMARKS: Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ✓ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	BTEX by 8260				Notes
SWSW02-10	11 A-E	11-1-23	1015	Soil	5	X	X						X				
S1302-13	12		1020		5	X	X						X				
SESW02-10	13		1025		5	X	X						X				
							Samples received at 3 °C										

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert A. Horsberger	HCE	11-3-23	1533
Received by:	ANHPHAN	FSO	11/03/23	15:33
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
Ph. (206) 285-8282

APPENDIX F

DATA QUALITY REVIEW

TO:	Craig Hultgren (HydroCon)
FROM:	Manon Tanner-Dave
DATE:	January 28, 2024
SUBJECT:	Laboratory Validation Report

HydroCon TOC Site No.	Coleman Wenatchee – 10019-001.00		
Sampling Event Type:	Soil Sampling	**Number of Samples:**	13
Laboratory Work Order:	F&BI 311080	**Final Report Date & Time:**	November 21, 2023

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 8260D)
- ☐ Total Lead (EPA 6020A), Organic Lead and Manganese Speciation (GC/ECD)
- ☐ Sulfate (300.0)
- ☐ Other – BTEX & Naphthalene (EPA 8260D)

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 following exceptions:

Sample SSW01-10 (311080-10) was analyzed outside of recommended holding times for all analytes. Results for this sample were qualified as estimated (J/UJ-HT).

Surrogate Compounds:

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

NWTPH-Gx: The surrogate recovery for sample SSW01-10 (311080-10) was outside of control limits due to sample matrix effects. Results were qualified as estimated (J-SSR).

BTEX: The surrogate recovery for samples SWSW02-10 (311080-11) and SB02-13 (311080-12) were outside of control limits due to sample matrix effects. Results were qualified as estimated (J/UJ-SSR).

Associated Matrix Spike/Matrix Spike Duplicate (MS/MSD):

NWTPH-Dx: The MS/MSD %R for 311098-01 (non-project sample) was not applicable since the sample concentration was >4x the spike concentration; no qualifiers were applied. The RPD for 311098-01 (non-project sample) was above the control limit; no qualifiers were applied since this was a non-project sample.

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/LCSD were analyzed at the appropriate frequency and all %R were within the acceptance criteria.

Method Blank:

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

Field Duplicate(s):

Field duplicates were not collected during this sampling event.

Target Analyte List:

All requested analytes were present.

Reporting Limits (MDL and MRL):

Reporting limits were within the acceptance criteria.

Reported Results

All reported results are acceptable.

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.

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 rejected 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:

- ht – The analysis was performed outside the method or client-specified holding time requirement.
- ip – Recovery fell outside of control limits due to sample matrix effects.

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:

- HT – Holding time/sample preservation.
- SSR – Surrogate spike/labeled compound recovery.

Appendix B. Validator Qualified Data Summary Table

Sample	Laboratory ID	Method	Parameter Name	Result	Result Units	Laboratory Qualifier	Validator Qualifier	Reason Code
SSW01-10	311080-10	NWTPH-Gx	NWTPH-Gx	690	mg/kg	ht, ip	J	HT, SSR
SSW01-10	311080-10	NWTPH-Dx	NWTPH-Dx	4,200	mg/kg	ht	J	HT
SSW01-10	311080-10	EPA 8260D	Benzene	< 0.03	mg/kg	ht	UJ	HT
SSW01-10	311080-10	EPA 8260D	Toluene	< 0.05	mg/kg	ht	UJ	HT
SSW01-10	311080-10	EPA 8260D	Ethylbenzene	< 0.05	mg/kg	ht	UJ	HT
SSW01-10	311080-10	EPA 8260D	m,p-Xylene	< 0.1	mg/kg	ht	UJ	HT
SSW01-10	311080-10	EPA 8260D	o-Xylene	< 0.05	mg/kg	ht	UJ	HT
SWSW02-10	311080-11	EPA 8260	Benzene	< 0.03	mg/kg	ip	UJ	SSR
SWSW02-10	311080-11	EPA 8260D	Toluene	< 0.05	mg/kg	ip	UJ	SSR
SWSW02-10	311080-11	EPA 8260D	Ethylbenzene	< 0.05	mg/kg	ip	UJ	SSR
SWSW02-10	311080-11	EPA 8260D	m,p-Xylene	< 0.1	mg/kg	ip	UJ	SSR
SWSW02-10	311080-11	EPA 8260D	o-Xylene	< 0.05	mg/kg	ip	UJ	SSR
SB02-13	311080-12	EPA 8260	Benzene	< 0.03	mg/kg	ip	UJ	SSR
SB02-13	311080-12	EPA 8260D	Toluene	< 0.05	mg/kg	ip	UJ	SSR
SB02-13	311080-12	EPA 8260D	Ethylbenzene	0.27	mg/kg	ip	J	SSR
SB02-13	311080-12	EPA 8260D	m,p-Xylene	< 0.1	mg/kg	ip	UJ	SSR
SB02-13	311080-12	EPA 8260D	o-Xylene	< 0.05	mg/kg	ip	UJ	SSR