Groundwater Recirculation System Evaluation Work Plan

Coleman Oil Biodiesel Spill Site - 600 South Worthen Street, Wenatchee, WA

Facility/Site ID 83844381
Cleanup Site ID 13215

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

June 18, 2025

Prepared by:

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Prepared for:

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Under:

Agreed Order DE 15389

HydroCon Project No: 2017-074

Prepared by:

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Table of Contents

Figures

Appendices

Acronyms

Able	Able Clean-up Technologies, Inc.
ACC	ACC Environmental Consultants, LLC
AST	Aboveground Storage Tank
bgs	below ground surface
BNSF	Burlington Northern – Santa Fe Railroad
BTEX	benzene, toluene, ethylbenzene, and total xylenes
cPAHs	carcinogenic polynuclear aromatic hydrocarbons
COC	Chemical of Concern
Coleman Oil	Coleman Oil Company
CUL	cleanup level
DRPH	diesel range petroleum hydrocarbons
Ecology	Washington Department of Ecology
EDB	1,2-dibromoethane
EDC	1,2-dichloroethane
EDR	Environmental Data Resources
EEC	Environmental Engineering & Consulting, Inc.
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
ESPR	Emergency Spill Response Plan
FS	Feasibility Study
GRPH	gasoline range petroleum hydrocarbons
HydroCon	HydroCon Environmental LLC
µg/L	micrograms per liter
mg/Kg	milligrams per Kilogram
LNAPL	light nonaqueous-phase liquid
MTBE	Methyl tert-butyl ether
MTCA	Model Toxics Control Act
NRCES	NRC Environmental Services, Inc.
ORPH	oil range petroleum hydrocarbons
PID	photoionization detector
PUD	Public Utilities District
QAPP	Quality Assurance Project Plan
SAP	Sampling and Analysis Plan
SRI	Supplemental Remedial Investigation
TPH	total petroleum hydrocarbons
UST	underground storage tank
VCP	Voluntary Cleanup Program
VOCs	volatile organic compounds
WAC	Washington Administrative Code

1.0 INTRODUCTION

ACC Environmental Consultants, LLC (ACC)[1], has prepared this Groundwater Recirculation System Evaluation Work Plan (Work Plan) on behalf of Coleman Oil Company (Coleman Oil) under Agreed Order DE 15389 for the site known as Coleman Oil Biodiesel Spill Site (Site). This Work Plan conforms with the requirements of this Order, which was entered into by Coleman Oil Company, LLC; Coleman, Services IV, LLC; and the Washington State Department of Ecology (Ecology), effective September 18, 2017 (Agreed Order Ecology 2017a).

Following the discovery of the oil sheen on the Columbia River, remedial actions at the Site initially began with oil spill response activities and removal actions conducted under the authority of Section 311(b)(6) of the Clean Water Act (CWA), 33 U.S.C. § 1321(b)(6). Under this authority, EPA issued two consent agreements[2]. In 2017, the remedial actions at the Site then transitioned to state oversight under Agreed Order DE 15389 with the Department of Ecology.

The initial petroleum releases originated at the former fuel storage facility at 600 South Worthen Street[3] in Wenatchee, Washington near the west shoreline of the Columbia River. Investigations revealed that the hazardous substances had spread across four property parcels. Figure 1 shows the location of the Site. Petroleum contamination was found in soil, groundwater, and surface water at concentrations that exceeded applicable state or federal cleanup levels (CULs) at the Site.

Since 2017, several remedial actions have been completed to (1) characterize the nature and extent of contamination related to the releases at the facility and (2) to recover and treat the released product.

More specifically, these remedial actions included product recovery in the Columbia River and in upland wells and sumps, removal of source material in the subsurface via remedial excavations at several locations in the uplands, and the installation and operation of groundwater treatment systems that controlled water levels in the water-bearing units and captured and treated contaminated groundwater.

The groundwater treatment system has evolved during the investigation, expanding in size with an increased number of extraction wells and volume of water being treated. In 2020, the groundwater treatment system was upgraded to its current form which involves recirculating the treated groundwater

[1] Formerly HydroCon, Inc.

[2] These two federal cases were settled in 2019.

[3] https://pacs.co.chelan.wa.us/PropertyAccess/Property.aspx?cid=91&year=2024&prop_id=55798

back into selected locations in the uplands. The treated water is supplemented with hydrogen peroxide to increase the available oxygen content to enhance the biodegradation rate of any petroleum organics.

After five years of operation, an evaluation of the groundwater recirculation system is warranted. Ecology will assess the effectiveness of the system in treating petroleum contamination as separate phase product and as dissolved phase product. The findings will determine if further remedial action is needed

1.1 Purpose and Objectives

This Work Plan discusses the history of site investigation, subsurface conditions, interim remedial actions including product recovery, and the construction and operation of the groundwater pump and treat system.

Implementation of this Work Plan will evaluate the performance of the groundwater recirculation system, which was originally installed as an interim action, and the system's effectiveness in addressing petroleum products in the substrate and with associated groundwater contamination. To do so requires the system to be shut down.

Note that a restoration time frame was not initially established during the design and construction phase of this remedial system that was primarily intended to prevent surface water impacts. This factor is an important element in selecting an appropriate cleanup action for a site under an agreed order. In lieu of this, Ecology in consultation with Coleman Oil and HydroCon determined that the five-year mark of system operation presents an appropriate time to evaluate the system.

The performance and effectiveness of the system will be judged on the following questions that are related to the remedial action objectives:

- Has any rebound of contamination as separate phase product and/or as dissolved phase contamination occurred after a sufficient period of system shutdown?
- Has recoverable free product been removed to the maximum extent practicable in all targeted treatment areas over the 5-year operating period?

1.2 Document Organization

Section 1, Introduction, gives a summary overview of the Site

Section 2, Background Information, describes the Site, and Site ownership and improvements.

Section 3, Previous Investigations and Remedial Actions summarizes the environmental investigations completed and the geologic and hydrogeologic conditions documented in the characterization activities completed to date.

Section 4, Evaluating the Performance and Effectiveness of the Groundwater Recirculation System, summarizes the groundwater recirculation system's design elements and treatment objectives that began with full-scale system operation in August 2020. This section presents proposed tasks to properly evaluate the effectiveness of the Groundwater Recirculation System.

The work required by this plan will be performed under the authority of the Model Toxics Control Act as provided for under WAC 173-340-110 and WAC 173-340-430 as well as any other relevant sections in that regulation.

Section 5, References

Appendix A - Field Forms that will be used during system shut down and groundwater monitoring.

1.3 Responsible Agency

Cleanup actions are conducted under Ecology supervision per Agreed Order No. DE 15389. Ecology will determine if the appropriate cleanup standards in WAC 173-340-700 through WAC 173-340-760 and any other applicable requirements under MTCA have been met or are being met.

1.4 Project Organization

The names and responsibilities of key project representatives and personnel involved in the cleanup action at the Property are listed below:

- John Mefford, LHG - Ecology’s Project Manager
- Jim Cach - Coleman Oil Company’s Project Manager
- Craig Hultgren, LHG, Project Manager
- Mark Selman, PE, Senior Engineer
- Kurt Johnson, APEX Laboratory, Forensic Chemist and Quality Assurance Officer

2.0 BACKGROUND INFORMATION

This section summarizes site information, the facility's ownership and operational history, the geologic and hydrogeologic setting, and groundwater monitoring at the Site. Further details are discussed in the Supplemental Remedial Investigation (SRI) Work Plan (HydroCon[4] 2018a) and the SRI Report (HydroCon 2018b) as well as previous groundwater monitoring reports.

2.1 Site Description

The Site is generally located at 600 South Worthen Street in Wenatchee, Washington (Figure 1)[5]. The legal description of the property on which the former bulk fuel facility existed is Manufacturers Amended Block 4 Lots 1-9. The facility property comprises 1.27 acres.

The Site, which is characterized by more than one release at the former facility, encroaches across four parcels. The current property ownership is listed below:

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

2.2 Property Ownership and Operational History

Beginning in 1921, the facility and its associated property were owned and developed by Standard Oil Company as a bulk fuel facility. Various changes in the facility configuration, including number and types of tanks, and their locations, occurred from that time until the 1950s.

In 1980, North Central Petroleum, Inc. purchased the facility property and its operations, according to online records accessed at the Chelan County Assessor's website in 2017.

[4] HydroCon has been retained by Coleman Oil to provide environmental consulting services for this project. ACC Environmental Consultants, LLC (ACC) purchased HydroCon in 2023 and now refers to the company as ACC.

[5] As listed in the Chelan County Assessor's online records.

In the early 1990s, Tank Farm A was installed at the south-central portion of the facility. This unit consisted of 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. Tank Farm B, south of the warehouse and office building, included eight 2,100-gallon petroleum ASTs and associated pumps. Figure 2 depicts the location of these two tank farms. In 1997, an underground storage tank (UST) and cardlock system were installed in 1997.

In January 2007, Coleman Services IV, LLC purchased the facility and the property from North Central Petroleum, Inc. Additional changes to the facility's operating configuration occurred over the next ten years. This involved new installations and replacements as well as decommissioning.

In 2017, the above ground storage tanks and associated distribution system were decommissioned. Existing buildings were also demolished and removed.

Currently, only the card lock pump island, its associated UST, and a fenced truck parking area to the south of the card lock are used in operations conducted on that portion of the facility that remains actively used.

Most of the facility's property is fenced, which includes the area which had the former buildings, bulk fuel tank farms, and the truck fuel loading rack. The card lock pump island is situated at the south end of the facility property just outside of the fence.

More detailed historical information about the former facility is available in the references listed as Blue Mountain Environmental Consulting (2007) and Farallon (2017b). These reports are available online[6]

2.3 Geologic & Hydrogeologic Setting

The Site is situated on a terrace about 150 feet west-southwest of the Columbia River, at an elevation approximately 660 feet above mean sea level (Figure 1). As shown on USGS Wenatchee Quadrangle 7.5 minutes series topographic map, the regional topography slopes from the highlands west of Wenatchee east-northeasterly towards the Columbia River.

According to the United States Department of Agriculture's Natural Resource Conservation Service soil map[7], the soil at the Site is identified as the Peshastin stony loam that developed from parent material deposited on a river terrace. This soil and unconsolidated alluvial deposits overlie the bedrock formed

[6] https://apps.ecology.wa.gov/cleanupsearch/site/13215#site-documents

[7] https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

by the Chumstick Formation. The unconsolidated alluvium consists of outburst flood deposits[8] 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.

In the consolidated portion of the sedimentary sequence, boring logs and drilling observations indicate a massive, well-cemented sandstone unit exists beneath thin layers of mudstone, shale, and sandstone. The sandstone appears to form a perching layer in this area.

The groundwater level is present within a few feet of the top of the Chumstick Formation which likely represents the weathered nature of the upper portion of this formation. The groundwater level is found consistently above the top or near the top of the massive sandstone layer. A localized exception is 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 backfilled with construction debris and other fill materials.

Contaminant transport and groundwater flow occurs on or near the surface of the Chumstick Formation. Field observations paired with analytical data show that 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 cross sections, based on geological interpretation of the boring logs, show that 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 riverbank of the Columbia River, where both are more to the east, as shown in Figures 11 and 22 of the Supplemental Remediation Report (HydroCon, 2018c).

Four seepage discharge points, as shown in Figure 2, (SL01 through SL04), were discovered during site characterization[9]. Separate phase petroleum product entered the Columbia River from these discharge points and initially formed a complete transport and exposure pathway from groundwater to surface water. Likewise, this same pathway served as a conduit for groundwater with contaminant concentrations to enter the surface water. It is hypothesized that the artificially controlled water elevation between the upper and lower hydroelectric dams may mitigate the impact to surface water during times when the groundwater level is low in comparison to the elevation of the impoundment such that the direction of water flow is towards the uplands. This condition is also referred to as a losing stream. The converse of this condition is referred to as a gaining stream.

[8] https://geologyportal.dnr.wa.gov/2d-view#wigm?-14056695,-12882622,5708846,6339298?Surface_Geology,500k_Surface_Geology,Map_Units

[9] https://apps.ecology.wa.gov/cleanupsearch/document/85209

Note that these conditions can vary seasonally. In fact, the influence of precipitation in the uplands may likely be the overriding factor since the pool elevation is controlled over narrowly-constrained operating limits. During seasonal precipitation events, water inputs from overland flow and contributions through tributaries and other routes such as outfalls may locally increase enough that the hydraulic gradient slopes from the uplands to the Columbia River.

In February 2018, a pumping test was performed to collect information necessary to maintain hydraulic containment of the groundwater contaminants. Each pumping well was installed in a boring that had field screening evidence of petroleum impacted soil and/or LNAPL. Pneumatic pumps were placed in these nine pumping wells and set at elevations within the screened intervals that are lower than the lowest seeps so that the groundwater levels in the upland portion of the site could be maintained below the elevation of the seeps.

Evidence that pertains to the comprehensive interpretation of this groundwater – surface water interaction will be more fully described in a subsequent report.

2.4 Groundwater Monitoring at the Site

Quarterly groundwater monitoring has been performed at all site wells (38) since 2018. Beginning in 2021, groundwater monitoring transitioned to an alternating semi-annual basis (spring and fall in 2021 followed by winter and summer in the next year, etc.) at the selected seventeen monitoring wells (MW-6, MW-8, MW09R, MW10R, MW-11, MW13R, MW14, MW17, MW20, MW21, MW24, MW28, MW29, MW30, MW32, BH01R and BH-2).

3.0 EVALUATION OF THE GROUNDWATER RECIRCULATION SYSTEM

Ecology stipulates that the Groundwater Recirculation System Evaluation Work Plan will address the following items:

1. *Discuss and decide when the remedial system will be shut down and the length of time that will be required for groundwater conditions to attain "equilibrium"[10]. The discussion will attempt to ensure that enough time has elapsed for groundwater conditions to reach "equilibrium" before assessing whether groundwater may meet the cleanup standard.*
2. *Originally, we intended to initiate the proposed shutdown based on seasonal changes so that it would occur before the period when the river reaches its highest elevation. The reason for this trigger was that prior to the implementation of the treatment system, the surface water impacts were observed seasonally, typically in the spring. This seasonal period coincided with seepage of petroleum product to the river. In retrospect, we will want to assess contaminant conditions at the points of compliance throughout the full range of groundwater fluctuation and especially when the average groundwater level in the uplands is at its highest level compared to the pool elevation of the river.*
3. *The Work Plan will incorporate a contingency plan ready to implement if nonaqueous phase liquid (NAPL) is observed at any of the monitoring points.*
4. *Observed rebound in separate phase product and/or dissolved phase concentrations will provide information to evaluate the efficacy of the treatment component of the system as well as its primary function in controlling the groundwater level. One function of the recirculation system is to draw down the groundwater levels so that the hydraulic gradient shifts landward to the uplands and away from the river.*
5. *This Work Plan will also formally incorporate the groundwater compliance requirements for the system evaluation period. Note that It will not set the compliance requirements to close out the Site. The final compliance requirements will be addressed in an addendum to this work plan.*

The actions proposed to address these items are described in more detail in the following section.

[10] Equilibrium is a problematic term. In this context, equilibrium refers to a state in which the groundwater regime exists unperturbed artificially by the active operation of a remedial system. It represents a quasi-ambient state normally characteristic of the typical seasonal groundwater conditions at the Site.

4.0 EVALUATING THE PERFORMANCE AND EFFECTIVENESS OF THE GROUNDWATER RECIRCULATION SYSTEM

The proposed tasks in this section will evaluate the effectiveness of the groundwater treatment system, consistent with WAC 173-340-430 (Interim actions). To make this evaluation, the remediation system will be shut off so that the groundwater regime at the Site reaches what is considered typical of seasonal conditions, unperturbed by the operation of the recirculation system. This period of system inactivity will also allow the evaluation of potential back diffusion of the contaminant mass that may be residing in the Chumstick Formation or in the surrounding unconsolidated alluvial deposits.

During the “equilibrium” period, the Site and its environs will be monitored to assess if free product is mobilized to any of the monitoring wells and/or if a petroleum hydrocarbon sheen is observed in the sheen discharge area along the shoreline of the Columbia River. Once ‘equilibrium” is achieved, quarterly groundwater monitoring will resume to determine if any back diffusion is occurring. After one year of monitoring, Ecology, in consultation with ACC, will evaluate what remedial actions, if any, should be considered for the site.

4.1 Description of Groundwater Recirculation System

The remediation system was originally installed to capture and remove LNAPL from the subsurface and control water levels in the uplands to minimize discharge into the Columbia River. Groundwater is captured in 9 pumping wells (MW09R, MW10R, BH01R, MW17, MW24, MW28, MW29, MW30 and MW32) in three separate zones that pump LNAPL and contaminated groundwater into three oil water separators (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. Contaminated water from each of these pumping zones passes through sand filtration units and granular activated carbon (GAC) vessels before it is treated with hydrogen peroxide for reinjection into the substrate. This type of remedial system is often referred to as dynamic groundwater recirculation. A manifold system with valves allows direction of the treatment to particular areas of the site (sumps).

Originally, the treated water was processed in batches before it was analyzed for compliance purposes and then discharged into the City of Wenatchee’s sanitary sewer system. In 2020, the system was upgraded. The current system treats contaminated groundwater with GAC and then enriches the effluent with oxygen using a metering pump to apply a controlled volume of hydrogen peroxide (H_20_2) into one or more of the sumps and conveyance pipes 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. A map showing the general layout of the groundwater recirculation system is included as Figure 3. Figure 4 shows the details of the treatment portion of the groundwater recirculation system. Figure 5 shows the locations of the sumps, the equipment enclosure shed and the compressor shed.

4.2 Uplands Discharge Points of Treated Groundwater

Treated water that passes through the groundwater recirculation system is applied to one of the discharge points in the Uplands area. These discharge points are conveyance piping placed inside the 2017 and 2019 remedial excavations and Sump 1 through Sump 5 that were used at the site for product recovery. An underground injection control (UIC) permit was obtained to operate the system and discharge treated water to the discharge points in the Uplands. Figure 5 is a map that shows the treated water discharge points in the Uplands. Selection of particular discharge points are based on the analytical results from the semi-annual groundwater monitoring events. Areas exhibiting the highest contamination are selected as the discharge points for treatment.

4.3 Shut Down of Groundwater Recirculation System

The groundwater recirculation system will be shut down during or near the expected seasonal high groundwater period in the uplands. This contrasts with the pool elevation of the impoundment between Rocky Reach Dam and the Rock Island Dam. Storage and discharge from the dams control the pool elevation so that there are only fluctuations of up to a maximum of four feet under normal operating conditions throughout any time of a given year. The seasonal high for the uplands typically corresponds with spring runoff, which occurs in April and May but the pool elevation high can be seen as late as June or July. This is supported by the data on water elevations recorded for the upland wells are shown in the monthly reports.

The shallow water-bearing portion of the alluvium at the Site is primarily recharged by seasonal precipitation. Other contributions include the Columbia River during seasonal high water, irrigation from landscape planters near the subject site, and stormwater drainage from upland areas located at higher elevations.

It is difficult to determine how long the remedial system should be shut off to evaluate whether back diffusion will first occur, if at all, regardless of whether we are dealing with separate phase product or dissolved phased contamination. As a starting point, a time period of 30 days will be used as the baseline for groundwater levels to reach “equilibrium”. Thereafter, the monitoring will continue for completion of four quarters which should allow sufficient time to check for back diffusion.

4.4 Site Monitoring During System Shutdown

Monitoring will be performed to observe and record water levels and to assess for product levels in the wells, including reconnaissance of the Columbia River for the presence of sheen. These actions will be performed to assess if product or dissolved phase rebound is observed after the remediation system is turned off. The following steps will be taken:

4.4.1 Water and Product Level Monitoring

ACC will visit the site weekly to perform water and product level monitoring. A clean electronic oil/water interface probe will be used to measure water and product levels relative to the surveyed reference

point on the top of each respective PVC well casing. The measurements will be recorded on a field form. All data collected in the field will be presented in a data summary table, which will be included in the report.

4.4.2 Sheen Monitoring in the Columbia River

Coleman Oil's representative, Mr. Jim Clayson, will perform daily sheen monitoring at the observation points in the sheen discharge area identified during site characterization. Mr. Clayson will record the data in the *River Level and Sheen Assessment Form* he prepares daily for the Monthly Progress Reports (Appendix A). These documents will also be included in the report. Mr. Clayson will immediately contact Ecology, ACC and Mr. Jim Cach if he notices any sheen.

Ecology requires placement of the containment booms in the vicinity of the previous seep area or before the shutdown period and during the performance evaluation compliance monitoring.

4.5 Contingency Plan

If product reappears in any of the monitoring wells, the thickness of the in-well product will be assessed. The intent is to compare the thicknesses, if present, to determine if certain locations within the monitoring well network coverage area are proximate to product that is residing in the alluvial deposits and/or in the Chumstick Formation.

System components will be evaluated if sufficient time is available between shut down and observation of product in the wells or the river. This will allow the system to be checked for biofouling.

The system will be immediately restarted if a sheen is observed in the river and Ecology will be notified. Reappearance of product in wells by itself does not necessitate reactivation of the system, provided the wells nearest the shoreline are not impacted. Ecology, Coleman Oil and ACC will discuss the next steps.

In any case, the information collected during shutdown of the recirculation system will then be evaluated. After discussion with Ecology, the decision will be made to optimize the system operation or to incorporate additional measures to be described in the Cleanup Action Plan (CAP). Note that the recirculation system was initiated as an interim action and was not formally selected as a final cleanup action in a CAP.

4.6 Resume Groundwater Monitoring

Once groundwater levels have reached "equilibrium" and there's been no reappearance of product in the site monitoring wells and hydrocarbon sheen in the Columbia River in the interim, ACC will resume groundwater monitoring at the Site. If separate phase product reappears in any well, the location or locations will be evaluated to determine if the appearance is localized or widespread.

Groundwater monitoring will be performed on a quarterly basis for one year. The performance criteria will cover one year of groundwater analytical data to determine if all groundwater samples are below the respective CULs for the Site COCs[11].

Following data collection, a summary report will be produced and submitted to Ecology that discusses an interpretation of the performance and effectiveness of the recirculation system. This report will be provided after the completion of the fourth quarterly groundwater monitoring event.

ACC will replicate site monitoring that was previously followed which included collected depth to water and product measurements at all thirty-eight (38) wells at the Site followed by the collection of groundwater samples from seventeen (17) monitoring wells at the site (MW-6, MW-8, MW09R, MW10R, MW11, MW13R, MW14R, MW17, MW20, MW21, MW24, MW28, MW29, MW30, MW32, BH01R and BH-2). The location of the Site monitoring wells is shown on Figure 6.

Note that this groundwater sampling will not demonstrate the necessary compliance requirements to close out the Site. An addendum to this Work Plan can be developed that addresses the requirements to be met for demonstrating groundwater compliance for the Site. This will require for all thirty-eight wells to be sampled and establish criteria for what to do in the event of an exceedance of applicable CULs in any Site well.

Additionally, a Remedial Action Completion Report (RACR) can be drafted and submitted to Ecology at a future time if the cleanup standards can be demonstrated to have been met throughout all media. Ecology will evaluate the RACR to see if it meets the cleanup standards and requirements under MTCA. If the cleanup standards have not been met, then a DCAP will be developed to address further steps to complete the remedial actions necessary to reach site closure (final cleanup action).

A summary of the groundwater monitoring procedure is provided below.

4.6.1 **Depth to Water and Product Measurements**

Prior to initiating the measuring, the well caps of each well will be removed to allow water levels to equilibrate. ACC will measure water and product levels at the thirty-eight (38) Site wells using a clean oil/water interface probe. The field geologist will measure the depth of water and product relative to the scribed (and surveyed) reference mark on the top of casing at each well. The measurements will be recorded on a field form (Appendix A). All measurement data will be entered into a data summary spreadsheet which will be included in each quarterly groundwater monitoring report.

[11] See Table 10.2 in Guidance for Remediation of Petroleum Contaminated Sites, Ecology Publ. No. 10-09-057, June 2017.

4.6.2 Groundwater Sample Collection

Groundwater samples will be collected from seventeen (17) monitoring wells at the site (MW-6, MW-8, MW09R, MW10R, MW11, MW13R, MW14R, MW17, MW20, MW21, MW24, MW28, MW29, MW30, MW32, BH01R and BH-2). These wells have been included in the semi-annual groundwater monitoring and were selected based on the detection of petroleum contaminants during previous groundwater sampling events.

Before groundwater sampling, monitoring wells will be purged with a low-flow peristaltic pump or bladder pump equipped with a new length of low-density polyethylene tubing attached to a new length of silicone tubing in accordance with U.S. Environmental Protection Agency (EPA) guidance for low-flow sampling[12]. The tubing intake will be placed approximately 2 to 3 feet below the surface of the groundwater or midpoint of the submerged portion of the well screen in each well.

During purging, water quality will be monitored using a Quanta multi-parameter water quality meter equipped with a flow-through cell. The water quality parameters monitored will include temperature, pH, specific conductance, dissolved oxygen, turbidity, and oxidation-reduction potential. Each well will be purged until all six water quality parameters have stabilized, or a maximum of 30 minutes, whichever occurs first, before collecting the sample. Stability is defined as the following:

- pH: +/- 0.1 pH units
- Specific conductivity: +/- 3 percent millisiemens per centimeter (mS/cm)
- ORP: +/- 10 millivolts (mV)
- Turbidity: less than 10 NTUs or +/- 10 percent NTUs when turbidity is greater than 10 NTUs
- DO: +/- 0.3 milligrams per Liter (mg/L)
- Temperature: +/- 3 percent degrees Celsius

Samples will not be collected from a monitoring well that has measurable free product. All measurements will be recorded on *Groundwater Sample Collection Forms (*Appendix A).

Following purging, groundwater samples will be collected from the pump outlet tubing located upstream of the flow-through cell and placed directly into clean, laboratory-prepared sample containers. Each container will be labeled with a unique sample identification number, placed on ice in a cooler, and transported under chain-of-custody to APEX laboratory of Tigard, Oregon, for laboratory analysis. A copy of the chain-of-custody form is included in Appendix A.

Purge water will be collected and transferred to 16-gallon or 55-gallon steel drums, pending analysis. Groundwater that is contaminated above Method A groundwater CULs cannot be redeposited into the

[12] *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures (April 1996).* EPA/540/S-95/504

ground unless previously treated to below levels that are consistent with MTCA, or any other state or federal laws or regulations otherwise known as Applicable or Relevant and Appropriate Requirements or ARARs.

4.6.3 **Quality Control Samples**

Duplicate groundwater samples will be collected during each monitoring event. A trip blank will be transported with each cooler that contains groundwater samples that will be assessed for volatile organic compounds. These trip blanks will be analyzed for quality assurance/quality control (QA/QC) purposes.

Two duplicate samples (identified in the field and on the chain of custody sheet as MW101 and MW102) will be collected from select monitoring wells that have previously tended to show high dissolved phase contaminant concentrations. The duplicate samples will be analyzed for the same set of parameters as the other groundwater samples collected at the site. Since disposable tubing is used at each well, there's no need for equipment blank sampling.

Trip blanks prepared by the laboratory will be placed inside the sample cooler and analyzed during the bottle order and will remain in the cooler until they analyzed in the laboratory for BTEX. This will be done to assess if cross contamination occurred during bottle preparation, transportation or at the laboratory.

Validation of the laboratory results will be performed for each groundwater sampling event to assess if the data is usable and valid, as reported. The review of the analytical results included the following:

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

The laboratory data validation report will be included in each quarterly groundwater monitoring report.

4.6.4 **Laboratory Analysis**

The analytical methods for the groundwater samples will address the Site's chemicals of concern (COCs). The COCs and their analytical methods include:

- GRPH using NWTPH-Gx

- DRPH and ORPH using NWTPH-Dx with and without silica gel cleanup[13]
- BTEX and naphthalene using EPA Method 8260D

4.6.5 **Review and Assessment of Laboratory Analysis and Field Study**

The sample results will be inserted into the project's data summary spreadsheet and compared to their respective MTCA Method A cleanup levels (CULs). Water levels will be entered and subtracted from the known elevation of the measuring point (scribed reference mark) of the top of casing at each respective well so that the groundwater elevations will be calculated from the water level data collected from each monitoring well. A potentiometric map will be prepared from the depth to water measurements collected with each monitoring event. The potentiometric map showing direction of groundwater flow and the calculated hydraulic gradient will be reported for each quarterly monitoring event.

Vertical hydraulic gradients will also be calculated for well pairs MW-1/MW01S and MW-3/MW03S located in the southern portion of the Site. These well pairs are located within 10 horizontal feet of each other, so they are suitable for calculating the vertical gradient. The vertical hydraulic gradient within an aquifer is calculated by dividing the difference in hydraulic head (or water level elevation) by the vertical (elevation) distance between the well screen midpoints. The depth to water must also be considered for those screened intervals that intersect the water table.[14] The data will be presented in a table in the summary report.

Following Ecology's silica gel guidance[15], the diesel analytical results with and without silica gel cleanup (SGC) will be compared and the percentage of polar compounds calculated to assess how much of the remaining DRPH reported by the laboratory are polar compounds.

Graphs showing the trend plots of DRPH and GRPH concentrations will be prepared for each well to determine if the concentrations are increasing, decreasing, or asymptotic. One vertical axis of the graph will plot the contaminant concentrations over time. The other vertical axis will plot the groundwater elevations. This will allow evaluation of the influence of groundwater fluctuations on contaminant concentrations over time.

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[13] The procedures to be followed are described in the *Guidance for Silica Gel Cleanup in Washington State*, Ecology Publication No 22-09-059, November 2023.

[14] Refer to the following link for more information about calculating vertical gradient: https://www3.epa.gov/ceampubl/learn2model/part-two/onsite/vgradient.html

[15] Ecology, *Guidance for Silica Gel Cleanup in Washington State* (Publication #.22-09-059), November 2023.

Time series data will be also be plotted using a Mann-Kendall test to check for a monotonic trend that is consequent of changes in contaminant concentrations resulting from remedial action and degradation processes versus changes solely due to groundwater fluctuations. A requirement for using a Mann-Kendall test is the data must be nonparametric. Use EPA's ProUCL or equivalent program to see if the data follows a nonparametric distribution.

ACC will also prepare a colored iso-concentration plot of GRPH and DRPH in groundwater at the site. These plots will illustrate which areas of the site have the highest concentrations of each respective constituent and how extensive the plume of each constituent above their respective CUL is at the site.

4.7 Handling of Investigation-Derived Waste (IDW)

Non-hazardous waste such as used nitrile gloves and tubing can be disposed of as solid waste. However, any groundwater extracted from a well shall be containerized, pending analysis for proper disposal per the hazardous waste regulation, WAC 173-303 or other applicable state or federal regulations. Ecology prohibits the improper disposal of any extracted groundwater that exceeds the applicable water quality criteria or violates any conditions set under the Underground Injection Control (UIC) program.

4.8 Reporting

Data collected during each quarterly groundwater monitoring event will be summarized in a quarterly report that will include the following:

- Descriptions of field sampling activities.
- Field forms of groundwater sampling.
- Potentiometric map displaying the direction and gradient of groundwater flow at the Site.
- Tabulated analytical results, figures showing sampling locations with posted laboratory results, and a narrative discussion of investigation methods and results.
- Delineation of groundwater impacts.
- Comparison of Site analytical data to the applicable MTCA cleanup standards.
- Consider restarting the groundwater treatment system or recommending alternative remedial action, if warranted.

The report will also address what causes may have contributed to the failure of the system to perform optimally, e.g., in preventing back diffusion or having a reduced radius of influence. It is not uncommon

for biofouling to occur in recovery wells and other parts of the system that may be affected by biomass growth that results in biofouling[16].

The results of the four quarterly monitoring events will form the basis for assembling and evaluating remedial alternatives (revised feasibility study) and developing a cleanup action plan for the Property.

4.9 Schedule and Implementation

A summary of the proposed tasks and implementation schedule is presented in the following table.

Task	Schedule
Prepare GW Recirculation Evaluation WP	Submit Draft by March 25, 2025
Shutdown GW Recirculation and Treatment System	30-day duration commencing in June 2025
Site Monitoring During Shutdown	
ACC measures and records water and product levels	Weekly during system shutdown
Coleman Oil looks for seeps and sheen	Daily during system shutdown
Implement Contingency Plan if Necessary	Immediately upon discovery of sheen or product in wells
Commence Quarterly GW Monitoring for Target Wells	Quarterly for a year after the initial 30-day shutdown period
Prepare Quarterly GW Monitoring Reports	Submitted after each event
Prepare Final GW Recirculation Evaluation Report	Submitted after completion of the last quarterly monitoring event

[16]Refer to Chapter 6 (Recirculation Systems), Delivery and Mixing in the Subsurface: Processes and Design Principles for *In Situ* Remediation, Springer New York, New York, pages 149-168 and Section 3.4.3.1 (Fouling of Wells and Equipment) and Section 3.4.3.2 (Porosity Reductions in the Aquifer), Remediation Engineering: Design Concepts, CRC Press, 2017, pages 87-

5.0 REFERENCES

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Blue Mountain Environmental Consulting, Inc. 2007. *Environmental Site Assessment/ASTM E1527-05 at Coleman Oil Company Wenatchee Cardlock/Bulk Facility, 3 Chehalis St./600 Worthen St., Wenatchee, Washington 98801.* Prepared for Bank of Whitman. February 28.

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_____. 2018c. *Supplemental Remedial Investigation Report*. October 1.

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_____. 2019a. *Additional Interim Action Addendum #2 Report*. January 10.

_____. 2019b. *Annual Operations and Maintenance Report - 2018*. April 26.

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_____. 2020. *Annual Operations and Maintenance Report - 2019*. March 31.

_____. 2024. *Additional Interim Action Addendum #4 – Remedial Excavation Near MW-14 Report*. April 10.

Kitanidis, P.K. and McCarty, P.L., editors, Delivery and Mixing in the Subsurface: Processes and Design Principles for *In Situ* Remediation. Springer New York, New York, pages 325 p.

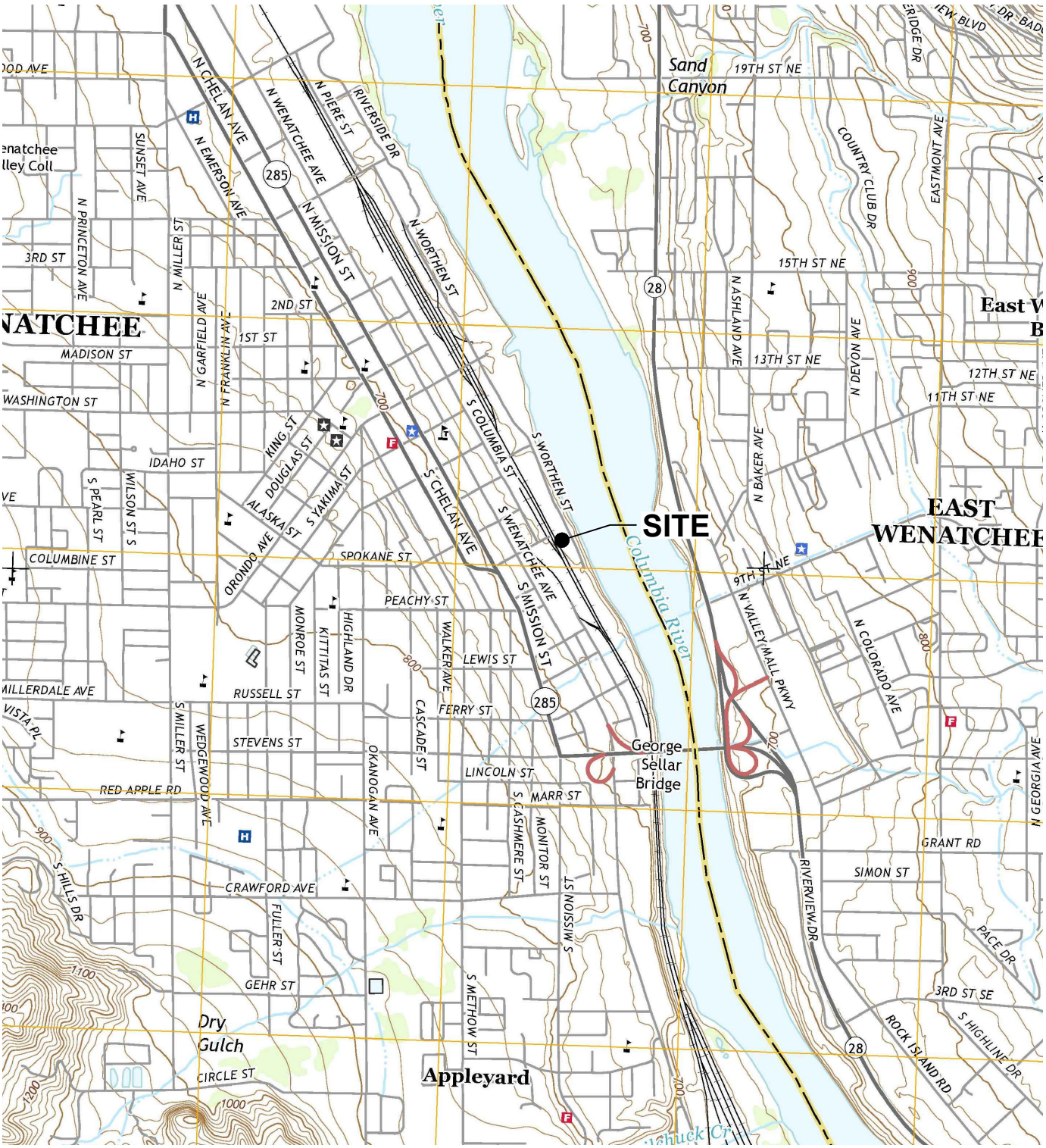
Washington State Department of Ecology (Ecology). 2015. Letter Regarding No Further Action at the Following Site: Coleman Oil Company 1, 3 East Chehalis Street, Wenatchee. From Jennifer Lind. To Jim Cach, Coleman Oil Company. March 13.

———. 2017a. Agreed Order No. DE 15389 RE: Coleman Oil Biodiesel Spill. September 18.

———. 2023. *Guidance for Silica Gel Cleanup in Washington State*, Ecology Publication No 22-09-059, November 2023.

_____ 2025. Letter Regarding: Next Steps under the Existing Agreed Order for the following Site: Site Name: Coleman Oil Biodiesel Spill; Site Address: 600 South Worthen Street, Wenatchee, Facility Site ID: 83844381; Cleanup Site ID:13215; Agreed Order: DE15389. From John Mefford, To: Jim Cach, Coleman Oil Company. February 25.

FIGURES



NOTE(S):

USGS, WENATCHEE QUADRANGLE
WASHINGTON
7.5 MINUTE SERIES (TOPOGRAPHIC)

0 2000 4000

SCALE IN FEET
1" = 2000'

N
W E
S

Hydro Con
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.

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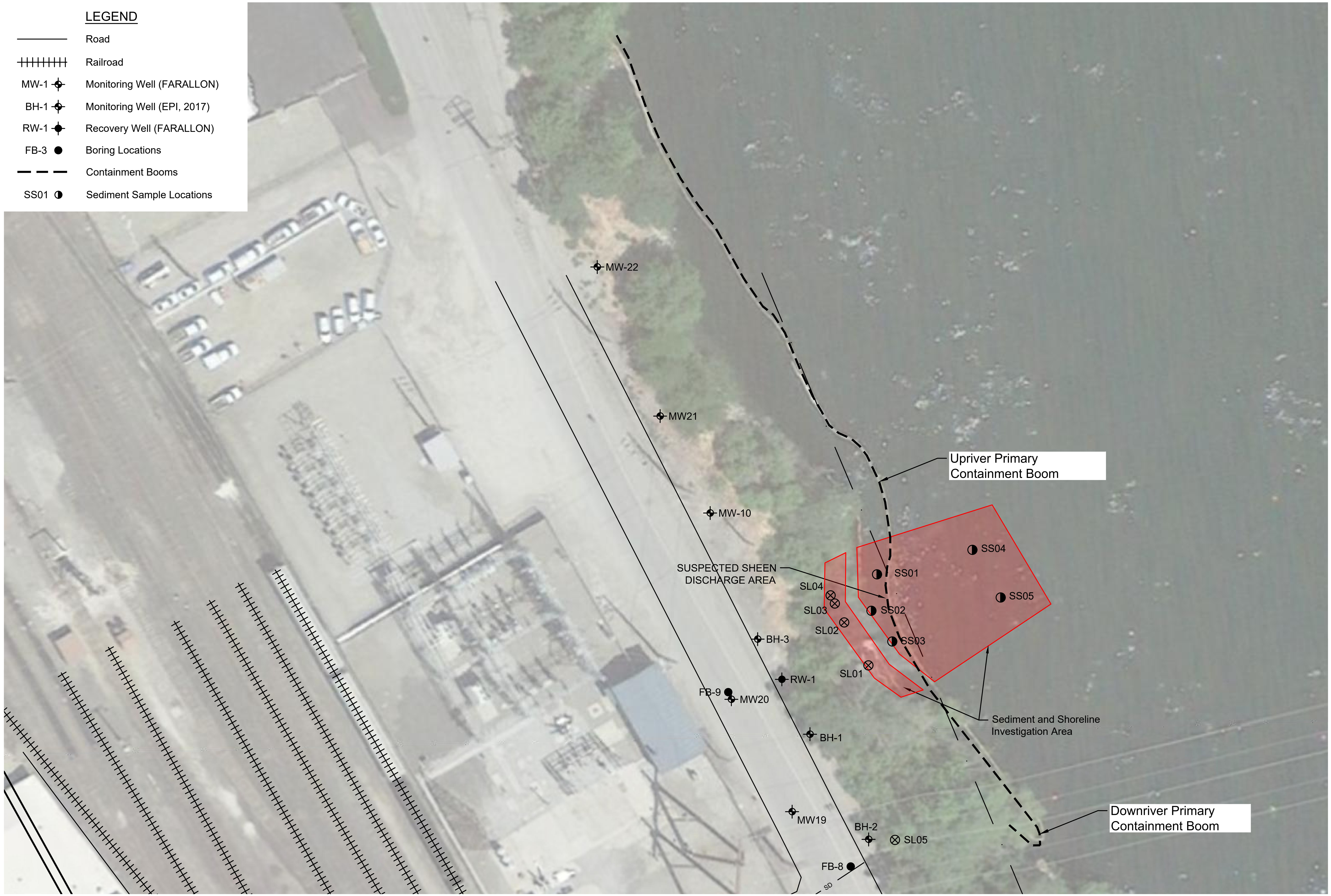

FIGURE 2
LOCATION OF BOOMS IN COLUMBIA RIVER

COLEMAN OIL COMPANY
3 CHEHALIS ST.
WINATCHEE, WA.

DATE: 2-8-18
DWN: JJT
CHK: CH
APPROVED: CH
PRJ. MGR: CH
PROJECT NO: 10019-001.00

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

SCALE IN FEET
0 50 100
1" = 50'

N W E S

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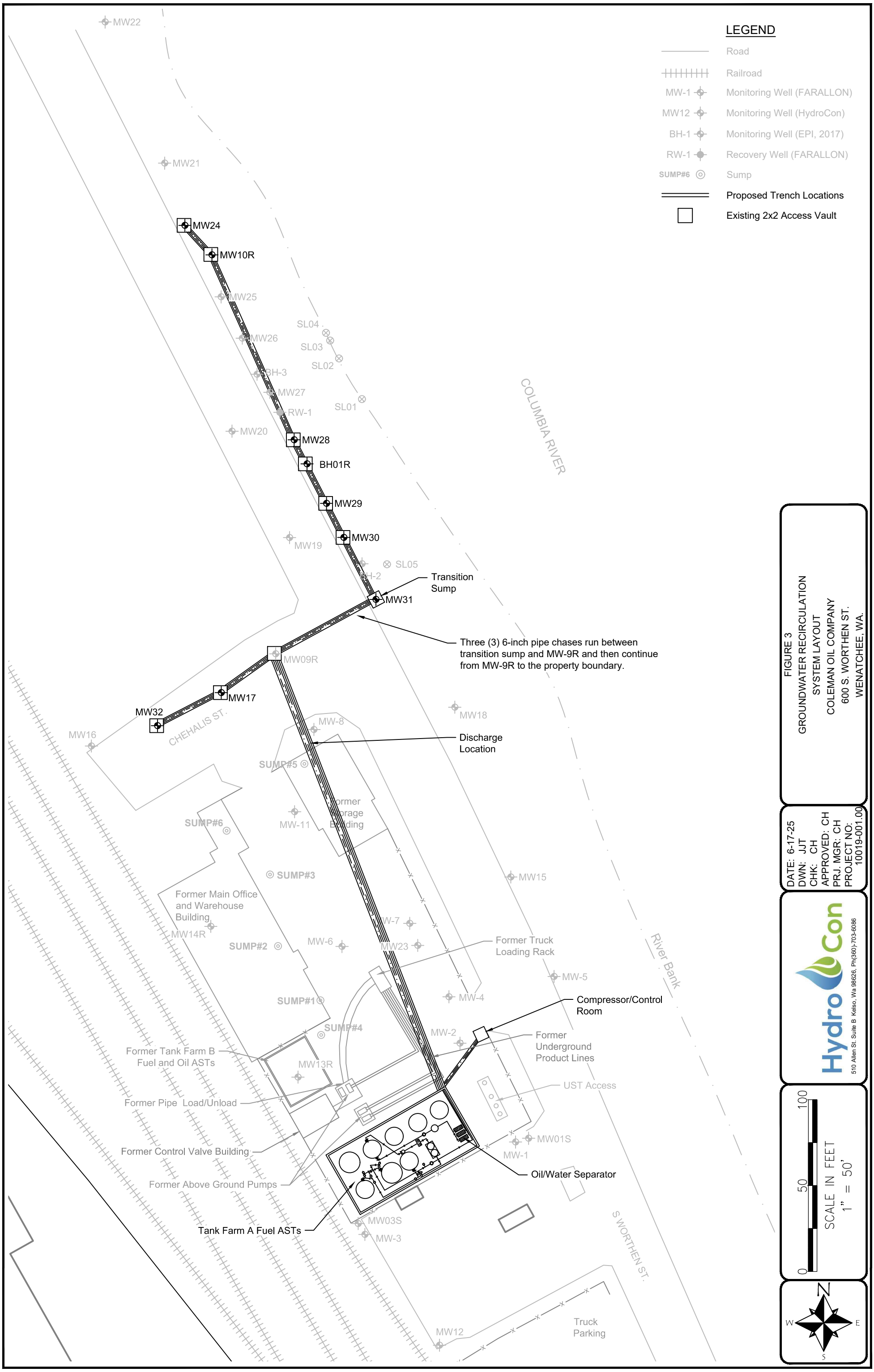

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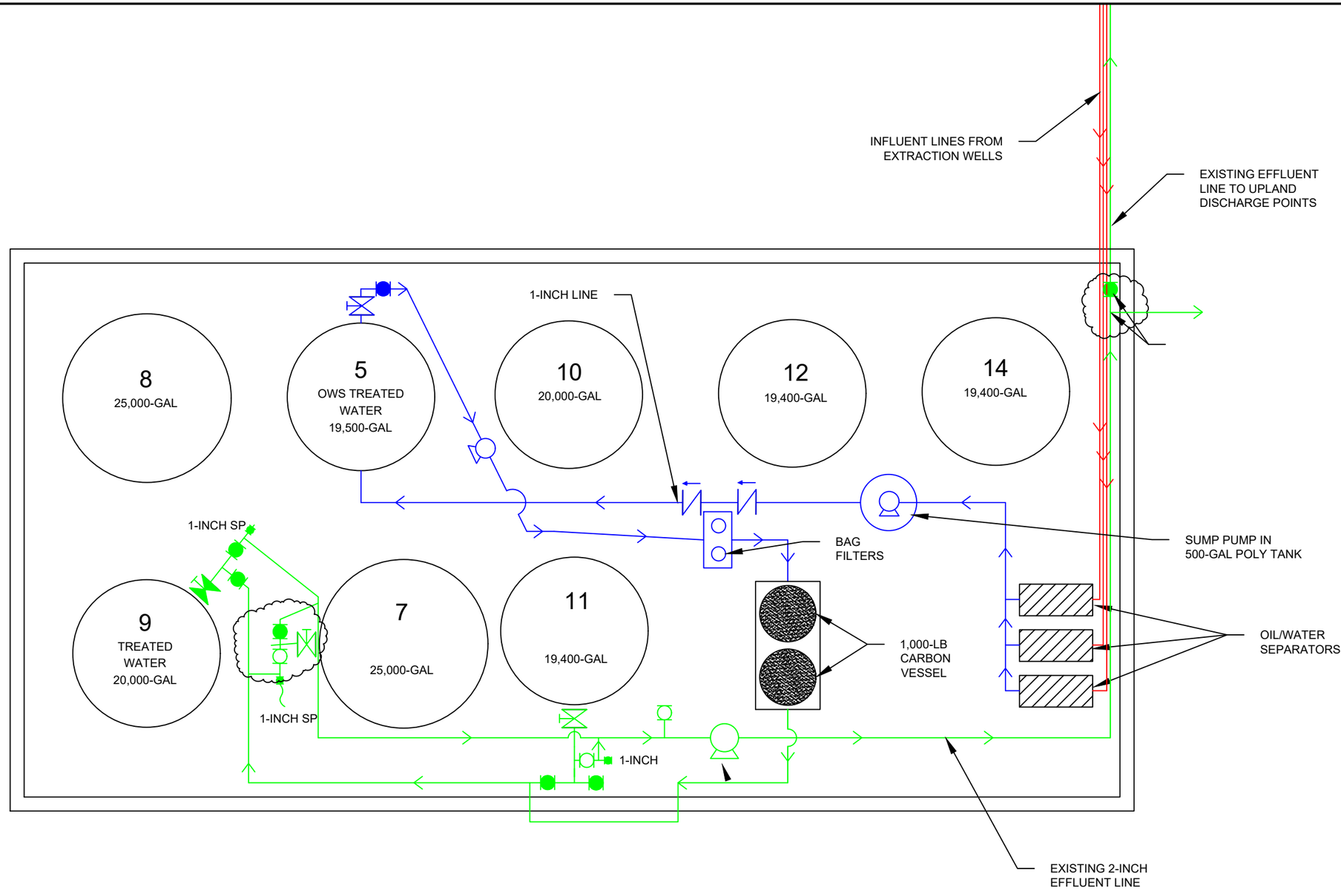


LEGEND

- TANK CONTAINMENT AREA
- INFLUENT LINE (IMPACTED WATER)
- OWS-TREATED WATER
- SYSTEM-TREATED WATER
- CHECK VALVE
- TANK DRAIN VALVE
- TANK DRAIN VALVE

> FLOW DIRECTION ARROW

0 8 16

SCALE IN FEET
1" = 8'

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

DATE: 02-24-20
DWN: JH
CHK: MES
APPROVED: DB
PRJ. MGR: DB
PROJECT NO: 2017-074

FIGURE 4
GROUNDWATER RECIRCULATION SYSTEM DETAILS

COLEMAN OIL COMPANY
600 S. WORTHEN STREET
WENATCHEE, WA.

C:\Users\selma\OneDrive\Documents\Projects\1001 Hydrocon\Coleman Oil\Technical\CAD\Injection Design Dec 2019\2017-074 - R-101_20200302.dwg

LEGEND

SUMP1 ◎ SUMP

□ PUMPING WELL VAULTS

S WORTHEN ST.

CHEHALIS ST.

TRANSITION SUMP

SUMP5

SUMP6

SUMP3

WT-N

EXISTING BURIED EXTRACTION PIPING

SUMP2

WT-N

SUMP1

WT-N

SUMP4

NEW RECIRCULATION EQUIPMENT ENCLOSURE

COMPRESSOR/CONTROL ROOM

2019 REMEDIAL EXCAVATION

RE-EAST

RE-WEST

TANK FARM A

I:\Autocad Files\Hydrocon-Autocad\10019-001.00 Coleman Oil\2020\May 2020\2017-074_2020_C-SHEETS-060425.dwg

N W E S

0 30 60

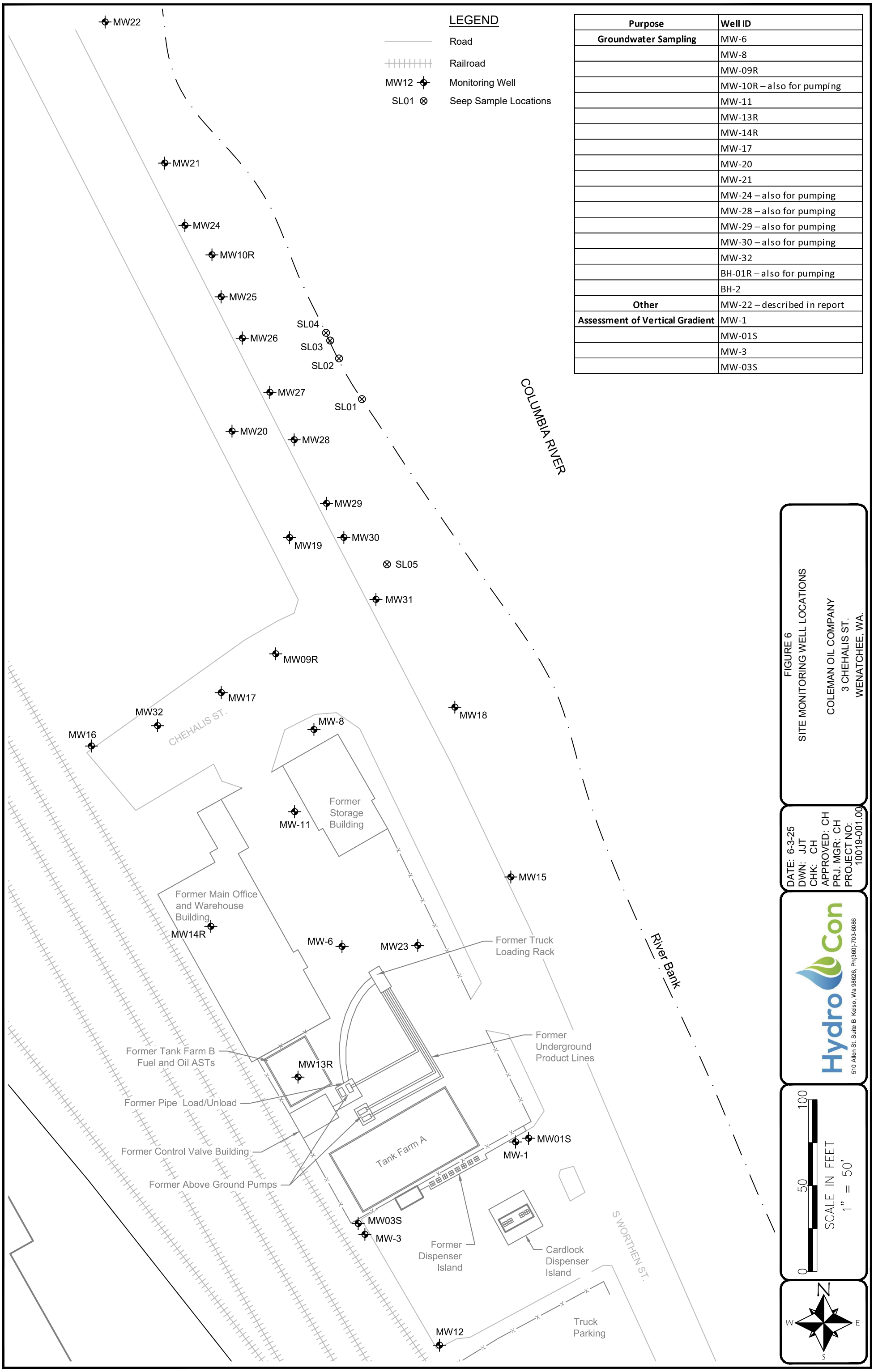
SCALE IN FEET
1" = 30'

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

DATE: 6-4-25
DWN: JJT
CHK: CH
APPROVED: CH
PRJ. MGR: CH
PROJECT NO: 10019-001.00

FIGURE 5
UPLANDS DISCHARGE POINTS

COLEMAN OIL COMPANY
3 CHEHALIS ST.
WINATCHEE, WA.



Purpose	Well ID
Groundwater Sampling	MW-6
	MW-8
	MW-09R
	MW-10R – also for pumping
	MW-11
	MW-13R
	MW-14R
	MW-17
	MW-20
	MW-21
	MW-24 – also for pumping
	MW-28 – also for pumping
	MW-29 – also for pumping
	MW-30 – also for pumping
	MW-32
	BH-01R – also for pumping
	BH-2
Other	MW-22 – described in report
Assessment of Vertical Gradient	MW-1
	MW-01S
	MW-3
	MW-03S

FIGURE 6
SITE MONITORING WELL LOCATIONS

COLEMAN OIL COMPANY
3 CHEHALIS ST.
WENATCHEE, WA.

DATE: 6-3-25
DWN: JJT
CHK: CH
APPROVED: CH
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" = 50'
0 50 100

N W E S

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APPENDIX A

FIELD FORMS

A·C·C
ENVIRONMENTAL
CONSULTANTS
An Employee Owned Company

DAILY FIELD REPORT

ACC Job Number:

Project Name:

Date:

Phone: 360.703.6079 Fax: 360.703.6086
3925 NE 72nd Ave, Suite 103; Vancouver, WA

Client:

Page: Of

Prepared By:

Location:

Arrival:

Departure:

Purpose:

Weather:

Permit:

Depth to Water/Depth to Product Measurments
Coleman Oil
Wenatchee, Washington

Date:

Well ID	Total Well Depth (feet bgs)	Well Diameter (inch)	Screened Interval (feet bgs)	Well Casing Elevation (feet[1])	Depth to Water (feet BTOC)	Depth to Product (feet BTOC)	Sheen Detected (Yes/No)
MW01	35.00	2	20-35	658.01			
MW01S	19.99	4	5.37 - 20.37	657.54			
MW02	40.00	2	25-40	657.76			
MW03	35.00	2	25-35	658.26			
MW03S	19.30	4	4.43 - 19.43	658.17			
MW04	37.00	2	27-37	657.48			
MW05	45.00	2	30-45	656.00			
MW06	18.00	4	8-18	657.70			
MW07	20.00	4	10-20	657.52			
MW08	25.00	4	15-25	656.20			
MW09R	32.60	4	8.59-33.59	653.55			
MW10R	33.59	4	14.64-34.64	644.30			
MW11	22.00	4	12-22	658.00			
MW12	19.52	4	4.63 - 19.63	658.27			
MW13R	18.46	4	4.23 - 18.23	656.67			
MW14R	17.05	4	4.85-16.85	657.46			
MW15	35.10	4	10.33 - 35.33	654.99			
MW16	29.15	4	9.28 - 29.28	656.93			
MW17	29.41	4	9.52 - 29.52	655.55			
MW18	34.65	4	15.86 - 35.86	654.51			
MW19	31.48	4	11.66 - 31.66	653.31			
MW20	29.50	4	9.79 - 29.79	650.85			
MW21	32.10	4	12.30 - 32.30	643.88			
MW22	39.10	4	9.19 - 34.19	641.85			
MW23	22.04	4	7.13 - 22.13	656.91			
MW24	34.25	4	14.17-34.17	644.38			
MW25	32.96	4	12.81-32.81	645.57			
MW26	32.52	4	13.54-33.54	646.65			
MW27	38.74	4	13.56-38.56	649.00			
MW28	38.74	4	13.62-38.62	650.64			
MW29	39.11	4	14.05-39.05	652.34			
MW30	39.79	4	14.67-39.67	652.83			
MW31	39.28	4	14.11-39.11	653.97			
MW32	34.02	4	8.95-33.95	655.83			
BH01R	39.97	4	14.52-39.52	651.03			
BH02	35.00	2	20-35	653.77			
BH03	30.00	2	15-30	648.76			
RW01	30.00	3	15-30	650.42			

NOTES:

feet[1] = Elevation is relative to NGVD88

bgs = below ground surface

BTOC = below top of casing

NOTES:

--- = not detected

PVC = polyvinyl chloride

River Level and Sheen Assessment

A·C·C ENVIRONMENTAL CONSULTANTS
An Employee Owned Company

360.703.6079 / Fax 360.703.6086

3925 NE 72nd Avenue, Suite 103, Vancouver, WA

Prepared By:

Jim Clayson

Coleman Oil Company - R99 Biodiesel Investigation

Agreed Order Number DE 15389

Date:

Page: 1 of 1

DESCRIPTION OF SHEEN

NO SHEEN

Location:

Magnitude:

Description:

Groundwater Recirculation System

On or OFF?

Last time it was turned off? **Quarterly GW Sampling Event October 2024**

Drawdown Level Set at Pumping Wells

MW10R:	27'	MW09R:	28'	BH01R:	34'
MW24:	27'	MW17:	25'	MW29:	33'
MW28:	33'	MW32:	28'	MW30:	33'

Actual Depth to Water at Pumping Wells

MW10R:	MW09R:	BH01R:	
MW24:	MW17:	MW29:	
MW28:	MW32:	MW30:	

Note:

Elevation of Columbia River and Seeps

River Gauge Elevation: 618.57

River Level: Above

Below

Seeps

SL01:	**618.70**
SL02:	**618.57**
SL03:	**619.11**
SL04:	**618.84**

Assessment:

GROUNDWATER PURGE AND SAMPLE COLLECTION

A·C·C ENVIRONMENTAL CONSULTANTS
An Employee Owned Company

Well I.D. Number:_____

Project Name (Number):_____ Sample I.D.:_____ Time:_____
Project Number:_____ Field Duplicate I.D.:_____ Time:_____
Date:_____ Personnel:_____

WELL INFORMATION

Monument condition: ☐ Good ☐ Needs repair:_____ ☐ Water in Monument
Well cap condition: ☐ Good ☐ Replaced ☐ Needs Replacement ☐ Surface Water Well Infiltration
Headspace reading: ☐ Not measured PID Reading _____ ppm ☐ Odor:_____
Well diameter: ☐ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other: _____
Comments _____

PURGING INFORMATION

Total well depth:_____ft Bottom: ☐ Hard ☐ Soft ☐ Not measured Screen Interval(s):_____
Depth to product:_____ft
Depth to water:_____ft Intake Depth (BTOC):_____ Begin Purging Well:_____
Casing volume:_____ft (H_2O) X _____gal/ft = _____gal. X 3 =_____gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☐ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other_____
Bailer type:_____ Water Disposal: ☐ Drummed ☐ Remediation System ☐ Other _____

FIELD PARAMETERS

Odor and/or Sheen:_____

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (^{0}C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)

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

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments:_____

APEX LABS

6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # _____ COC ___of___

Company:	Project Mgr:	Project Name:	Project #:
Address:	Phone:	Email:	PO #
Sampled by:			

ANALYSIS REQUEST

Site Location: State_____ County_____ SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)								Hold Sample	Frozen Archive

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle) **1 Day** **2 Day** **3 Day** **5 Day** **Standard** **Other:** _____

SPECIAL INSTRUCTIONS:

SAMPLES ARE HELD FOR 30 DAYS

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