TECHNICAL MEMORANDUM

DATE: June 30, 2021

TO: Jim Cach – Coleman Oil – PLP Project Coordinator

FROM: Ken Nogeire – PBS: Consultant to Coleman Oil

Site Name: Coleman Oil Yakima Bulk Fuel
Site Address: 1 East I Street, Yakima
Ecology Site Cleanup ID: 13200
Facility/Site ID: 4233
Agreed Order: DE 15639
PBS Project No: 41392

RE: Remedial Investigation – 2nd Quarter 2021 Update

PBS has prepared this technical memorandum to summarize remedial investigation (RI) and interim action (IA) tasks performed for the Coleman Oil Bulk Fuel Site at 1 East I Street in Yakima, Washington (Site) during 2021.

2021 Completed RI/IA Activities

The following are RI and IA activities completed to date in 2021:

- January 20: RI Report submitted.
- March 9: Full gauging round and Multiphase Extraction Event (MPE), (wells RW1, MW3, MW12), removal of 300-gallons groundwater and product.
- April 8: Installation of monitoring well MW15.
- May 6: Full gauging round and MPE (wells RW1, MW3, MW12), removal of 250-gallons groundwater and product.
- May 27: MPE (wells RW1, MW3, MW12), removal of 325-gallons groundwater and product.
- June 18: MPE (wells RW1, MW3, MW15), removal of 250-gallons groundwater and product.

Scheduled Work

July 13-14: Groundwater and product sampling event.
A quarterly progress report will be provided by September 30, 2021.

Deviations

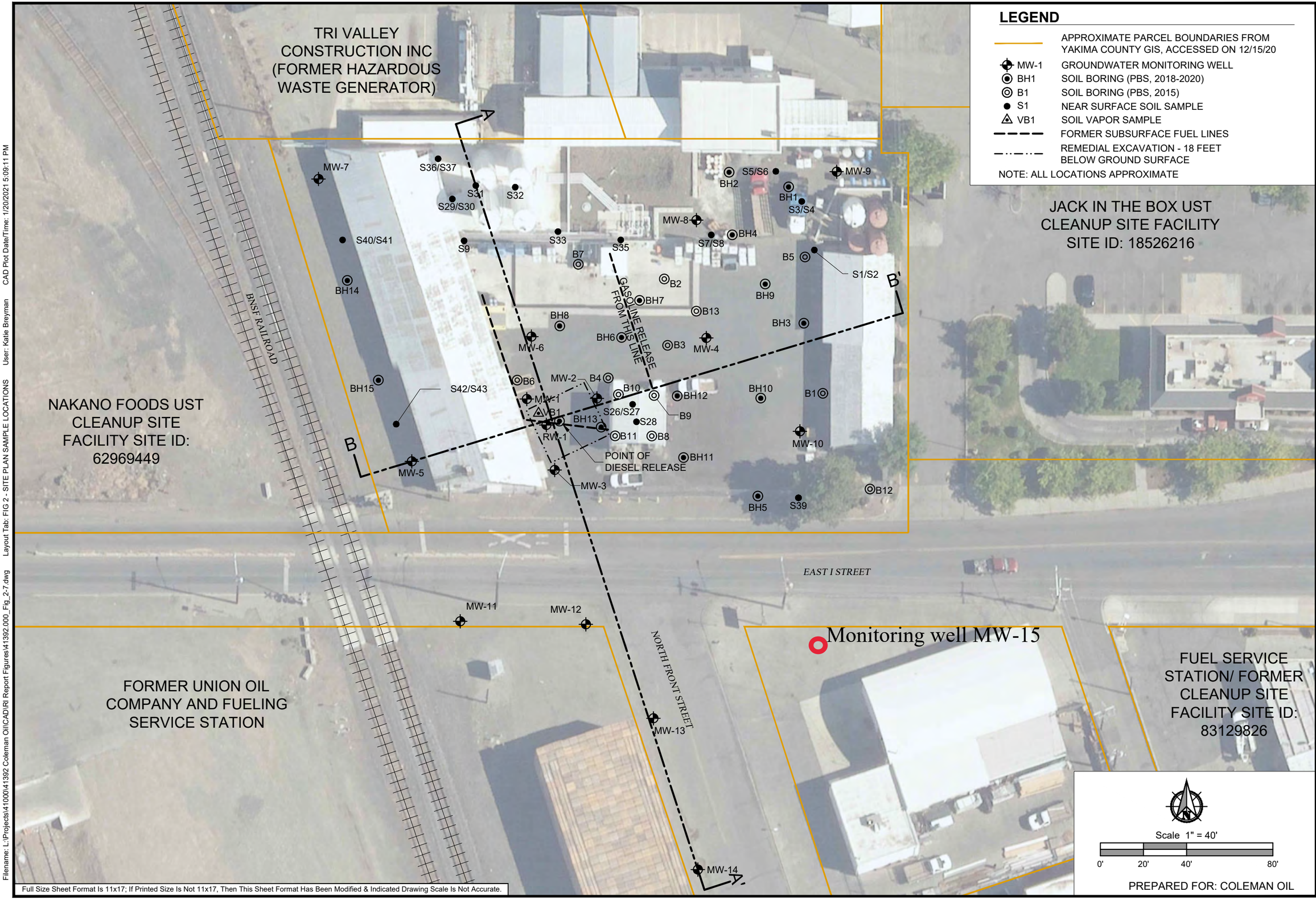
Deviations from the planned scope of work and/or schedule did not occur during the first two quarters of 2021.

Thank you.
PBS Engineering and Environmental

Coleman Oil Yakima Bulk Fuel
2nd Quarter 2021 Update
June 30, 2021

Attachments:
Figure including monitoring well MW15 location
Laboratory report: soil samples collected during MW15 installation

Cc:
Frank Winslow – Ecology Project Coordinator
John Shultz – Wondrack Lead
Shane DeGross – BNSF Lead
Erik Hetrick – Chevron Lead



LEGEND

- APPROXIMATE PARCEL BOUNDARIES FROM YAKIMA COUNTY GIS, ACCESSED ON 12/15/20
- MW-1 GROUNDWATER MONITORING WELL
- BH1 SOIL BORING (PBS, 2018-2020)
- B1 SOIL BORING (PBS, 2015)
- S1 NEAR SURFACE SOIL SAMPLE
- VB1 SOIL VAPOR SAMPLE
- FORMER SUBSURFACE FUEL LINES
- REMEDIAL EXCAVATION - 18 FEET BELOW GROUND SURFACE

NOTE: ALL LOCATIONS APPROXIMATE

Scale 1" = 40'

0' 20' 40' 80'

PREPARED FOR: COLEMAN OIL

PBS Engineering and Environmental Inc.
214 East Galer Street, Ste. 300
Seattle, WA 98102
206.233.9639
pbsusa.com

SITE PLAN: SAMPLE LOCATIONS
COLEMAN OIL
1 EAST I STREET, YAKIMA, WASHINGTON

PROJECT
41392.000
DATE
JAN 2021
SHEET ID
2

Full Size Sheet Format Is 11x17; If Printed Size Is Not 11x17, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.

Filename: L:\Projects\41000\41392 Coleman Oil\CAD\RI Report Figures\41392.000_Fig_2-7.dwg Layout Tab: FIG 2 - SITE PLAN SAMPLE LOCATIONS User: Katie Breyman CAD Plot Date/Time: 1/20/2021 5:09:11 PM

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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April 20, 2021

Ken Nogeire, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

Dear Mr Nogeire:

Included are the results from the testing of material submitted on April 9, 2021 from the Coleman Oil Yakima 41392, F&BI 104165 project. There are 6 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
PBS0420R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 9, 2021 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental Coleman Oil Yakima 41392, F&BI 104165 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
104165 -01	MW15-5
104165 -02	MW15-12

All quality control requirements were acceptable.

Date of Report: 04/20/21
Date Received: 04/09/21
Project: Coleman Oil Yakima 41392, F&BI 104165
Date Extracted: 04/16/21
Date Analyzed: 04/16/21

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

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

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
MW15-5 104165-01	<0.02	<0.02	<0.02	<0.06	<5	78
MW15-12 104165-02	<0.02	<0.02	<0.02	<0.06	<5	79
Method Blank 01-900 MB2	<0.02	<0.02	<0.02	<0.06	<5	78

Date of Report: 04/20/21
Date Received: 04/09/21
Project: Coleman Oil Yakima 41392, F&BI 104165
Date Extracted: 04/09/21
Date Analyzed: 04/09/21 and 04/12/21

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 56-165)
MW15-5 104165-01	<50	<250	80
MW15-12 104165-02	<50	<250	80
Method Blank 01-883 MB	<50	<250	76

Date of Report: 04/20/21
Date Received: 04/09/21
Project: Coleman Oil Yakima 41392, F&BI 104165

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 104076-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	0.025	nm
Toluene	mg/kg (ppm)	0.029	0.056	64 hr
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	22	43	65 hr

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	100	69-120
Toluene	mg/kg (ppm)	0.5	104	70-117
Ethylbenzene	mg/kg (ppm)	0.5	102	65-123
Xylenes	mg/kg (ppm)	1.5	107	66-120
Gasoline	mg/kg (ppm)	20	110	71-131

Date of Report: 04/20/21
Date Received: 04/09/21
Project: Coleman Oil Yakima 41392, F&BI 104165

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

Laboratory Code: 104164-01 (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	6,500	97	103	73-135	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	80	74-139

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. 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 lowest calibration standard. 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.

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.

104165

SAMPLE CHAIN OF CUSTODY

ME 04-09-21

Page # 1 of 1

02

Report To Ken Nogeire

Company PBS Engineering + Environmental

Address 214 E Galer St. Suite 300

City, State, ZIP Seattle, WA 98102

Phone 509-572-8163 Email Ken.Nogeire@PBSUSA.com

SAMPLERS (*signature*)

PROJECT NAME: Coleman Oil Yakima

PO #: 41392

REMARKS

Project Specific RLs - Yes / No

INVOICE TO

TURNAROUND TIME
(Standard Turnaround)
RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
(Dispose after 30 days)
Archive Samples
Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082						Notes
						ANALYSES REQUESTED											
MW15-5	01 A-E	4/8/21	0920	Soil	5	X	X	X									
MW15-12	02	4/8/21	1005	Soil	5	X	X	X									
															Samples		received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Patrick Brica	PBS Engineering	4/8/21	1430
Received by: Fed Ex				
Relinquished by:				
Received by:	Nhan Phan	Fe BI	4/9/21	1000

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Ph. (206) 285-8282