



Facility Closure Investigation and Environmental Summary

Segal 42-24 Wellhead

ECMC Remediation Project #39719

Weld County, Colorado

Attachments:

Figure 1 – General Location Map

Figure 2 – Wellhead Soil Sample and Field Screening Locations

Table 1 – Soil Sample and Field Screening Location Information

Table 2 – Soil Analytical Results Summary Table – Volatile Organics

Table 3 – Soil Analytical Results Summary Table – PAHs

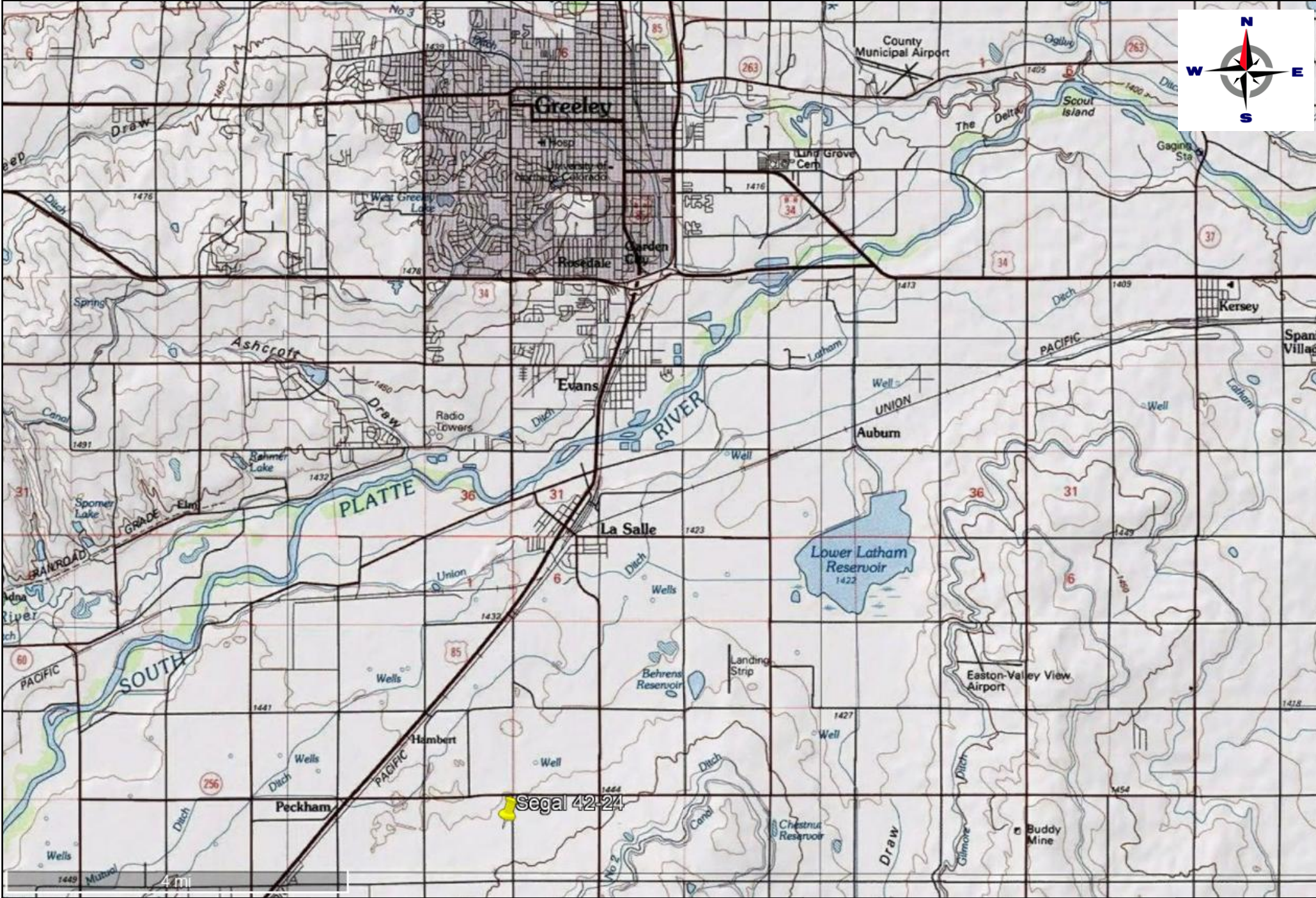
Table 4 – Soil Analytical Results Summary Table – Soil Suitability

Table 5 – Soil Analytical Results Summary Table – Metals

Attachment A: Photographic Log

Attachment B: Facility Closure Checklists

FIGURES



Project No:
 Drawn By: LB
 Date: 4/17/2025

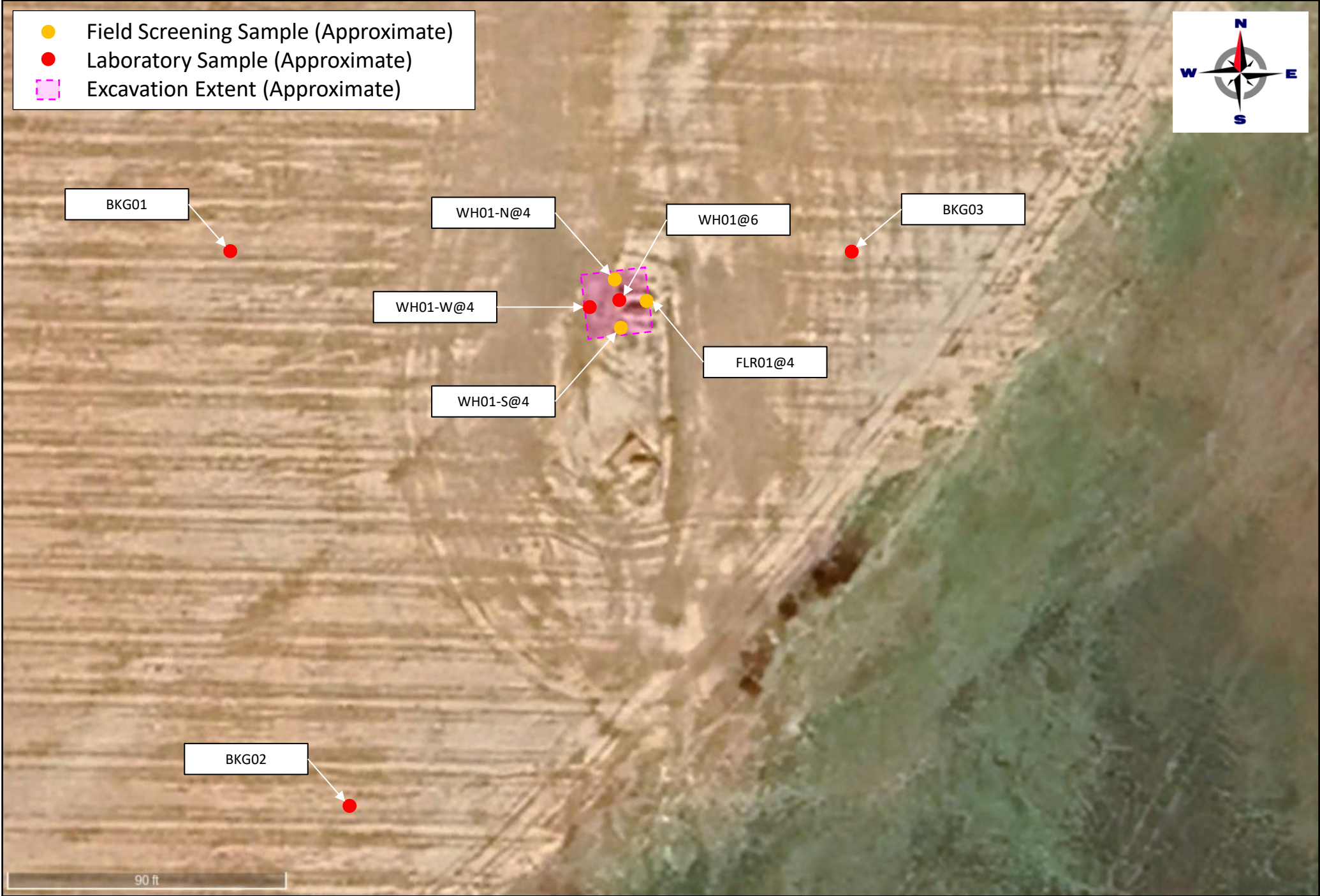
General Location Map
 Segal 42-24 Wellhead
 SENE Sec. 24 4N66W 6 PM


610 Garrison St.
 Unit T
 Lakewood, CO 80215
 303.378.4036

FIGURE
 1



- Field Screening Sample (Approximate)
- Laboratory Sample (Approximate)
- Excavation Extent (Approximate)



Project No:	Soil Sample and Field Screening Locations Segal 42-24 Wellhead SENE Sec. 24 4N66W 6 PM		610 Garrison St. Unit T Lakewood, CO 80215 303.378.4036	FIGURE
Drawn By: LB			2	
Date: 4/24/2025				

TABLES

TABLE 1
FIELD DATA SUMMARY TABLE
PDC 69175
SEGAL 42-24 WELLHEAD, WELD COUNTY, COLORADO
REM # 39719

Sample ID	Sample Date	Depth (ft-bgs)	GPS Data Latitude/Longitude		VOC Concentration (ppm)
WH01@6	4/17/2025	6	40.299819	-104.717601	4.5
FLR01@4	4/17/2025	4	40.299822	-104.717570	1.0
WH01-N@4	4/17/2025	4	40.299839	-104.717604	22.5
WH01-W@4	4/17/2025	4	40.299813	-104.717636	48.8
WH01-S@4	4/17/2025	4	40.299796	-104.717596	4.7
BKG01@4	4/17/2025	4	40.299866	-104.718051	0.4
BKG01@6	4/17/2025	6	40.299866	-104.718051	0.1
BKG02@4	4/17/2025	4	40.299375	-104.717911	1.4
BKG02@6	4/17/2025	6	40.299375	-104.717911	0.5
BKG03@4	4/17/2025	4	40.299862	-104.717330	0.7
BKG03@6	4/17/2025	6	40.299862	-104.717330	1.2

1. Global Positioning System (GPS) data is provided in decimal degrees using North American Datum (NAD) 83 UTMZone 13 North.

2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

ppm - Parts per million

ft-bgs - feet below ground surface

TABLE 2
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
PDC 69175
SEGAL 42-24 WELLHEAD, WELD COUNTY, COLORADO
REM # 39719

Sample ID	Sample Date	Depth (ft-bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4-Trimethyl-Benzene (mg/kg)	1,3,5-Trimethyl-Benzene (mg/kg)	Naphthalene (mg/kg)	TPH (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500	500**		
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	500**		
WH01@6	4/17/2025	6	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<100.50	<0.50	<50	<50
WH01-W@4	4/17/2025	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<100.50	<0.50	<50	<50

1. Grey highlighted soil analytical values indicate result is less than laboratory reporting limit

2. ** Summation of GRO+DRO+ORO must be less than 500 mg/kg

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

TPH-ORO = Total petroleum hydrocarbons - oil range organics

ft-bgs - feet below ground surface

mg/kg - milligrams per kilogram

TABLE 3
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
PDC 69175
SEGAL 42-24 WELLHEAD, WELD COUNTY, COLORADO
REM # 39719

Sample ID	Sample Date	Depth (ft-bgs)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
WH01@6	4/17/2025	6	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
WH01-W@4	4/17/2025	4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

1. Grey highlighted soil analytical values indicate result is less than laboratory reporting limit
ft-bgs - feet below ground surface
mg/kg - milligrams per kilogram

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
PDC 69175
SEGAL 42-24 WELLHEAD, WELD COUNTY, COLORADO
REM # 39719

Sample ID	Sample Date	Depth (ft-bgs)	pH (Standard Units)	EC (mmhos/cm)	SAR (Standard Units)	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
WH01@6	4/17/2025	6	8.83	0.291	1.36	<2.00
WH01-W@4	4/17/2025	4	8.65	0.506	2.46	<2.00
BKG01@4	4/17/2025	4	8.28	0.685	2.24	<2.00
BKG01@6	4/17/2025	6	8.83	0.577	1.84	<2.00
BKG02@4	4/17/2025	4	8.55	0.663	3.47	<2.00
BKG02@6	4/17/2025	6	8.72	0.566	3.34	<2.00
BKG03@4	4/17/2025	4	8.53	0.705	2.53	<2.00
BKG03@6	4/17/2025	6	8.37	0.855	2.18	<2.00
Maximum Background Concentration			8.83	0.86	3.47	-

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within background concentrations.

2. **Brown** highlighted soil analytical values indicate a regulatory exceedance.

3. **Grey** highlighted soil analytical values indicate result is less than laboratory reporting limit

ft-bgs - feet below ground surface

EC - Electrical Conductivity

SAR - Sodium adsorption ratio

mmhos/cm - millimhos per centimeter

mg/L - milligrams per liter

TABLE 5
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
PDC 69175
SEGAL 42-24 WELLHEAD, WELD COUNTY, COLORADO
REM # 39719

Sample ID	Sample Date	Depth (ft-bgs)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
WH01@6	4/17/2025	6	3.85	81.8	0.277	<0.30*	7.74	17.8	6.30	<0.260	0.0231	21.6
WH01-W@4	4/17/2025	4	2.93	142	0.303	<0.30*	7.19	10.4	5.93	<0.260	0.0659	23.9
BKG01@4	4/17/2025	4	2.99	69.8	0.400	<0.30*	13.9	20.8	4.75	<0.260	0.231	38.0
BKG01@6	4/17/2025	6	3.11	83.9	0.284	<0.30*	4.42	8.02	5.19	<0.260	0.0339	15.6
BKG02@4	4/17/2025	4	2.29	79.6	0.262	<0.30*	6.53	9.21	5.83	<0.260	0.0852	22.6
BKG02@6	4/17/2025	6	2.45	66.8	<0.200	<0.30*	4.09	6.28	5.16	<0.260	<0.0200	18.1
BKG03@4	4/17/2025	4	2.87	98.4	0.364	<0.30*	8.16	13.7	5.60	<0.260	0.125	27.9
BKG03@6	4/17/2025	6	1.99	80.1	0.226	<0.30*	5.27	8.61	5.76	<0.260	0.0610	20.8
1.25x Maximum Background Concentration			3.89	123	0.500	-	17.4	26.0	7.29	-	0.289	47.5

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within 1.25x background concentrations.

2. **Bold** faced values exceed the ECMC Table 915-1 limit(s)

3. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)

4. Grey highlighted soil analytical values indicate result is less than laboratory reporting limit

* Indicates laboratory reporting or minimum detection limit in excess of SSL

ft-bgs - feet below ground surface

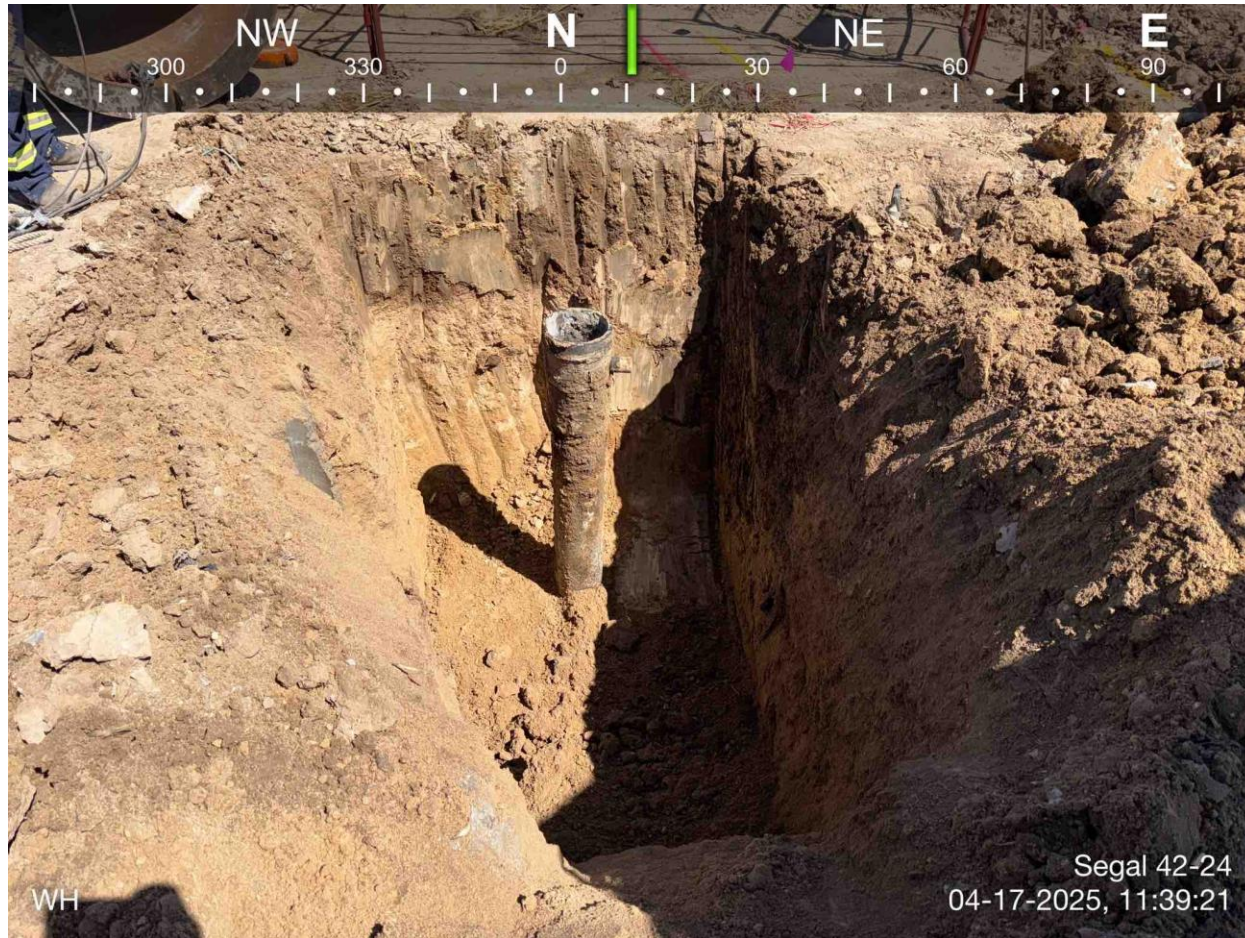
mg/kg - milligrams per kilogram

**ATTACHMENT A
PHOTOGRAPHIC LOG**

Segal 42-24 Wellhead Photographic Log



Segal 42-24 Wellhead Photographic Log



Segal 42-24 Wellhead Photographic Log



**ATTACHMENT B
FACILITY CLOSURE CHECKLISTS**

Chevron Rockies Business Unit

Field Qualitative Criteria for ECMC Reporting Associated with the Discovery of Potentially Impacted Material

If answered **Yes** to any of the questions listed below, this may suggest the presence of potentially impacted materials as outlined in ECMC Rule 912. Out of an abundance of caution, a "Yes" response will be reported to the ECMC within 24 hours after discovery, regardless of laboratory results. **Immediately notify the RBU Remediation Team.** Include a copy of this Field Qualitative Spill Criteria Checklist in the field Report.

Please answer the following questions when on-site:

1. Is there visible petroleum hydrocarbon staining in the soil?
 (Yes) / (No)
2. Does the soil sample from the stained area have a petroleum odor?
 (Yes) / (No)
3. Is there a petroleum hydrocarbon sheen on the nearby surface water?
 (Yes) / (No)
4. Does there appear to be a sheen of the surface of accumulated groundwater or seeps within the excavation indicative of petroleum?
 (Yes) / (No)
5. Is stained soil in contact with groundwater?
 (Yes) / (No)

Please Include relevant photos of the site conditions for items 1-5.

See attached photolog

Segal 42-24

Location name

Please Circle Facility Type: Well / Flowline / Production Facility / Other

Wellhead Closure Checklist

COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional attachments (optional):		Pit Closure		Tank Battery Closure		Flowline Closure		Partially Buried Vault Closure	
Site Name & COGCC Facility Number: Segal 42-24, 284196		Date: 4/17/2025				Remediation Project #: 39719			
Associated Wells: N/A		Age of Site: 1/18/2007 - spud date				Number of Photos Attached: 3			
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple) 40.299610 / -104.717580						Estimated Facility Size (acres): ~0.01			
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.) Overall good.									
USCS Soil Type: SM					Estimated Depth to Groundwater: Unknown/Not Encountered				
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) Staining and odor were observed during wellhead decommissioning activities, but the final analytical report indicated there were no organic exceedances									
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) None encountered or observed									
Wellhead(s)									
Well API	05-123-23771								
Age	1/18/2007 - spud date								
Condition of surface around wellhead	Good								
PID Readings	1.0 - 48.8 ppm								
Condition of subsurface (staining present)	Good								
PID Readings	1.0 - 48.8 ppm								
Sample taken? Location/Sample ID#	WH01@6, WH01-W@4								
Photo Number(s)	1-3								
Other observations regarding wellheads: NA									
Summary									
Was impacted soil identified? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - less than 10 cubic yards <input type="checkbox"/> Yes - more than 10 cubic yards									
Total number of samples field screened: 5				Total number of samples collected: 5					
Highest PID Reading: 48.8 ppm				Total number of samples submitted to lab for analysis: 2					
If more than 10 cubic yards of impacted soil were observed:									
Vertical extent:				Estimated spill volume:					
Lateral extent:				Volume of soil removed:					
Is additional investigation required?									
Was groundwater encountered during the investigation? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - not impacted or in contact with impacted soils <input type="checkbox"/> Yes - groundwater impacted and/or in contact with impacted soils									
Measured depth to groundwater:				Was remedial groundwater removal conducted? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Date Groundwater was encountered:				Commencement date of removal:					
Sheen on groundwater? <input type="checkbox"/> Yes <input type="checkbox"/> No				Volume of groundwater removed prior to sampling:					
Free product observed? <input type="checkbox"/> Yes <input type="checkbox"/> No				Volume of groundwater removed post sampling:					
Total number of samples collected:				Total Volume of groundwater removed:					
Total number of samples submitted to lab for analysis:									