

Flowline Closure Checklist

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

Additional Attachments:	Tank Battery Closure 10/30/2025	Wellhead Closure	Pit Closure	Partially Buried Vault Closure <small>10/30/2025</small>
Site Name & COGCC Facility Number: Great Western Sugar 1		Date: 10/30/2025		Remediation Project #: 42731
Associated Wells: 05-123-07599		Age of Site: 12/30/1981		Number of Photos Attached: 3

Starting point: (GPS coordinates and descriptions)
40.3325427/-104.8914071

End point: (GPS coordinates and descriptions)
40.3328535/-104.8915495

USCS Soil Type: SW (well-graded sand) Estimated Depth to Groundwater: >20 feet

Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)
Spots of dark visual staining and petroleum odor observed at all sample locations.

Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)
None Observed

Flowlines

Flowline type	OCG	OCG	OCG				
Depth	2 feet	Composite Sample	3 feet				
Age							
Length	126 feet	126 feet	126 feet				
Construction Material	Steel	Steel	Steel				
Were flowlines pulled?	Yes	Yes	Yes				
Visual Integrity of lines	Good	Good	Good				
Visual impacts if trenched	Staining & Odor Observed	Heavy staining & odor observed	Staining & Odor Observed				
PID Readings if trenched	30.2 ppm	544.7 ppm	0.2 ppm				
Sample taken? Location/Sample ID#	FLR01@2'	FLR01-COMP	FLR02@3'				
Photo Number(s)	Photo 1	Photo 2	Photo 3				

Other observations regarding on location flowlines:

Summary

Was impacted soil identified?
 No **Yes - less than 10 cubic yards** Yes - more than 10 cubic yards

Total number of samples field screened: 0 Total number of samples collected: 3

Highest PID Reading: 544.7 ppm Total number of samples submitted to lab for analysis: 3

~~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?
No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils

~~Measured depth to groundwater: Was remedial groundwater removal conducted? Yes No~~

~~Date Groundwater was encountered: Commencement date of removal:~~

~~Sheen on groundwater? Yes No Volume of groundwater removed prior to sampling:~~

~~Free product observed? Yes 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:~~

SITE NAME/ REM: Great Western Sugar 1/REM 42731								DATE: 10/30/25	WEATHER:	
TYPE OF WORK: Decommissioning flowline								CLIENT: Chevron		
LAT/LONG: 40.332500, -104.8914000								PERSONNEL: AP, MK, LR		
ESTIMATED DEPTH TO GROUNDWATER: >20'				SOIL TYPE: SW				OTHER OBSERVATIONS: (if FL: ABIP or removed?) 126' removed		
SOIL SAMPLING								FACILITY INFRASTRUCTURE		
Date	Soil Sample ID	PDOP	PID (ppm)	Staining (Y/N)	Odor (Y/N)	Time	Sent to lab	EQUIPMENT	QUANTITY	
10/30/2025	FLR01@2'	0.9	30.2	Y	Y	0948	Y	Above Ground Storage Tank (AST)		
10/30/2025	FLR01-COMP	1.0	544.7	Y	Y	0958	Y	Buried or Partially Buried Vessel (PWV)		
10/30/2025	FLR02@3'	1.1	0.2	Y	Y	1050	Y	Separator (SEP)		
								Flare (FLARE)		
								Dump Line (SEP-DL)		
								Wellhead		
								Flowline	126'	
								Third Party Equipment: Meter House		
								Other:		
								Soil Loads Removed		
								IMPACTED SOIL IDENTIFIED?		
								ESTIMATED VOLUME OF IMPACTS:		
								DATE	NUMBER	CY
								Total Removed		
								Disposal Facility:		
								Groundwater Recovery		
								DATE GW ENCOUNTERED:	DEPTH:	
								GROUNDWATER IN CONTACT WITH IMPACTED SOIL?		
								LNAPL OR SHEEN OBSERVED ON GW?		
GROUNDWATER SAMPLING								Date	BBLS	
Date/Time	Groundwater sample ID	Depth Collected	Turbid?	Sheen?	Odor?	Photo?	Sent to lab on ice? (Y/N)			
								Total Removed		
								Disposal Facility:		
NOTES:										



TABLE 1
FIELD DATA SUMMARY TABLE
PDC 69175
GREAT WESTERN SUAGR 1, WELD COUNTY, COLORADO
REM #42731

Sample ID	Sample Date	Depth (ft)	GPS Data		PDOP Value	VOC Concentration (ppm)
			Latitude/Longitude			
FLR01@2'	10/30/2025	2	40.332560	-104.891436	0.9	30.2
FLR01-COMP	10/30/2025	0-2	-	-	1.0	544.7
FLR02@3'	10/30/2025	3	40.332850	-104.891570	1.1	0.2

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).

PDOP = Position Dilution of Precision

ppm = Parts per million

in. = Inches

ft. = Feet

bgs = Below ground surface

TABLE 2
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
PDC 69175
GREAT WESTERN SUAGR 1, WELD COUNTY, COLORADO
REM #42731

Sample ID	Sample Date	Depth (ft)	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**		
FLR01@2'	10/30/2025	2	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<500	0.260	<28.7	<115
FLR01-COMP	10/30/2025	0-2	<0.003	<0.003	0.003	<0.003	0.067	<0.003	0.014	871	436.000	271.0	164
FLR02@3'	10/30/2025	3	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<500	<0.238	<29.9	<120

1. Bold values exceed the ECMC Table 915-1 limit(s)
 2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)
 3. * Indicates laboratory minimum detection limit in excess of SSL
 4. ** Summation of GRO+DRO+ORO must be less than 500 mg/kg
- (<) = Analytical result is less than the indicated laboratory reporting limit.
TPH-GRO = Total petroleum hydrocarbons - gasoline range organics
TPH-DRO = Total petroleum hydrocarbons - diesel range organics
TPH-ORO = Total petroleum hydrocarbons - oil range organics
mg/kg = Milligrams per kilogram
ft. = Feet
bgs = Below ground surface
NA = Not analyzed

TABLE 3
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
PDC 69175
GREAT WESTERN SUAGR 1, WELD COUNTY, COLORADO
REM #42731

Sample ID	Sample Date	Depth (ft)	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
FLR01@2'	10/30/2025	2	<0.023	<0.023	<0.006	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	0.009	0.007
FLR01-COMP	10/30/2025	0-2	<0.025	0.063	<0.006	<0.025	<0.025	<0.025	0.039	<0.025	<0.025	0.792	<0.025	0.044	0.299	0.079
FLR02@3'	10/30/2025	3	<0.024	<0.024	<0.006	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.002	<0.002

1. Bold values exceed the ECMC Table 915-1 limit(s)
 2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)
 3. * Indicates laboratory minimum detection limit in excess of SSL
 4. ** Summation of GRO+DRO+ORO must be less than 500 mg/kg
- (<) = Analytical result is less than the indicated laboratory reporting limit.
TPH-GRO = Total petroleum hydrocarbons - gasoline range organics
TPH-DRO = Total petroleum hydrocarbons - diesel range organics
TPH-ORO = Total petroleum hydrocarbons - oil range organics
mg/kg = Milligrams per kilogram
ft. = Feet
bgs = Below ground surface
NA = Not analyzed

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
PDC 69175
GREAT WESTERN SUAGR 1, WELD COUNTY, COLORADO
REM #42731

Sample ID	Sample Date	Depth (ft)	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
FLR01@2'	10/30/2025	2	8.19	0.471	0.356	0.286
FLR01-COMP	10/30/2025	0-2	8.18	0.373	0.290	0.304
FLR02@3'	10/30/2025	3	8.19	0.354	0.275	0.451
Maximum Background Concentration			-	-	-	-

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within background concentrations.
2. **Bold** faced values exceed the ECMC Table 915-1 limit(s) and native background concentrations.
3. **Brown** highlighted soil analytical values indicate a regulatory exceedance.

NA - Not analyzed

TABLE 5
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
PDC 69175
GREAT WESTERN SUAGR 1, WELD COUNTY, COLORADO
REM #42731

Sample ID	Sample Date	Depth (ft)	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
FLR01@2'	10/30/2025	2	5.04	3060	0.294	<0.232	<34.5	38.8	<19.5	0.244	<0.600	<277
FLR01-COMP	10/30/2025	0-2	6.67	229	<0.305	<0.247	<36.9	<11.2	<20.9	<0.197	<0.642	<297
FLR02@3'	10/30/2025	3	3.37	367	<0.301	<0.230	<36.4	<11.1	<20.6	<0.195	<0.634	<293
1.25x Maximum Background Concentration			-	-	-	-	-	-	-	-	-	-

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) and native background concentrations.
3. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL).
4. Non-detect background results accounted for in the highest background concentration by using the reporting limit.

ECMC = Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface

* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed

Client Name: Chevron	Project Name: Great Western Sugar 1	Project Location: 40.332530, -104.891400	REM Number: 42731
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Photo: 1	Date: 10/30/2025	Description: Representative picture of general conditions at soil sampling location FLR01@2' (40.332560, -104.891436) in well graded sand (SW) along the flowline at a depth of approximately two (2) feet bgs (PID: 30.2 ppm). Staining and odor were present.
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Photo: 2	Date: 10/30/2025	Description: Representative picture of general conditions at soil sampling location FLR01-COMP (40.332569, -104.891498) in well graded sand (SW) along the flowline (PID: 544.7 ppm). Staining and odor were present.
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Client Name: Chevron	Project Name: Great Western Sugar 1	Project Location: 40.332530, -104.891400	REM Number: 42731
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Photo: 3	Date: 10/30/2025	Description: Representative picture of general conditions at soil sampling location FLR02@3' (40.332850, -104.891570) in well graded sand (SW) along the flowline at a depth of approximately three (3) feet bgs (PID: 0.2 ppm). Staining and odor were present. The sample ID in the attached photo was edited to read the correct depth the sample was taken.
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