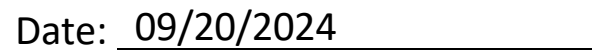




SITE NAME: Watson-66N65W-28SWNW							DATE: 9/20/2024	REM. PROJECT #: 33995	WEATHER: SUNNY 65	
SITE DIRECTIONS: CR-41 and CR-66, 0.5 miles south on CR-41, 0.25 miles east, north into site.							CLIENT: NOBLE			
LEGALS AND LAT/LONG: 40.459171, 104.675600							TASMAN PERSONNEL: JM KM			
SOIL TYPES: Well Graded Sand - SW							SURFACE GRADIENT: East			
SOIL SAMPLING							FACILITY INFRASTRUCTURE			
Date/Time	Soil Sample ID	PID (ppm)	Visual	Olfactory	Photo?	Grab or Lab Sample?	EQUIPMENT	Quantity	Photo?	
							Above Ground Storage Tank (AST)	1		
9/20/2024 10:00	AST01@0-0.5'	0.1	No Staining	No Odor	Yes	Lab	Buried or Partially Buried Vessel	1		
9/20/2024 10:05	PWV01-B@5'	0.3	No Staining	No Odor	Yes	Lab	Separator	1		
9/20/2024 10:07	PWV01-N@3'	0.0	No Staining	No Odor	Yes	On-hold	Emission Control Device (ECD)			
9/20/2024 10:09	PWV01-S@3'	0.1	No Staining	No Odor	Yes	On-hold	Dump Line	1		
9/20/2024 10:11	PWV01-E@3'	0.2	No Staining	No Odor	Yes	Lab	Wellhead			
9/20/2024 10:13	PWV01-W@3'	0.1	No Staining	No Odor	Yes	On-hold	Flowline			
9/20/2024 10:51	MH01@0-0.5'	0.0	No Staining	No Odor	Yes	Grab	Other: FLARE/METER HOUSE	1		
9/20/2024 10:53	FLARE01@0-0.5'	0.0	No Staining	No Odor	Yes	Grab	Soil Loads Removed			
9/20/2024 10:55	SEP01-DL@3'	0.0	No Staining	No Odor	Yes	Lab	IMPACTED SOIL IDENTIFIED?			
9/20/2024 11:08	SEP01-FL@3'	0.0	No Staining	No Odor	Yes	Lab	ESTIMATED VOLUME OF IMPACTS:			
9/20/2024 11:30	BKG01@0-0.5'	0.2	No Staining	No Odor	Yes	Lab	Date	Number	CY	
9/20/2024 11:32	BKG01@3'	0.2	No Staining	No Odor	Yes	Lab				
9/20/2024 11:34	BKG01@5'	0.1	No Staining	No Odor	Yes	Lab				
							Total Removed	0	0	
							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?				
							Total Removed	0		
							Disposal Facility:			



Site Area/AOC: Watson-66N65W-28SWNW Client: NOBLE

Daily Forecast/Weather: SUNNY 65 Personnel: JM KM

Task/Location Description: Decommissioning soil sampling

Need photo log?




											
<b>Equipment ID:</b> AST01@0-0.5'		<b>Equipment Type:</b>		<b>Equipment ID:</b> PWV01-W@3		<b>Equipment Type:</b>					
<b>Material:</b>		<b>Volume:</b>		<b>Contents:</b>		<b>Material:</b>		<b>Volume:</b>		<b>Contents:</b>	
<b>Notes/Conditions:</b>						<b>Notes/Conditions:</b>					



							
<b>Equipment ID:</b> PWV01-S@3'		<b>Equipment Type:</b>		<b>Equipment ID:</b> PWV01-E@3'		<b>Equipment Type:</b>	
<b>Material:</b>		<b>Volume:</b>		<b>Contents:</b>		<b>Material:</b>	
<b>Volume:</b>		<b>Contents:</b>		<b>Material:</b>		<b>Volume:</b>	
<b>Notes/Conditions:</b>				<b>Notes/Conditions:</b>			





							
<b>Equipment ID:</b> PWV01-N@3'		<b>Equipment Type:</b>		<b>Equipment ID:</b> PWV01-B@5'		<b>Equipment Type:</b>	
<b>Material:</b>		<b>Volume:</b>		<b>Contents:</b>		<b>Material:</b>	
<b>Volume:</b>		<b>Contents:</b>		<b>Material:</b>		<b>Volume:</b>	
<b>Notes/Conditions:</b>				<b>Notes/Conditions:</b>			





							
<b>Equipment ID:</b> SEP01-DL@3'		<b>Equipment Type:</b>		<b>Equipment ID:</b> DUMP LINES		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>		<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b>				<b>Notes/Conditions:</b>			



							
<b>Equipment ID:</b> SEP01-FL@3'		<b>Equipment Type:</b>		<b>Equipment ID:</b> FLARE01@0-0.5'		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>		<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b>				<b>Notes/Conditions:</b>			



							
<b>Equipment ID:</b> MH01@0-0.5'		<b>Equipment Type:</b>		<b>Equipment ID:</b> BKG01@0.5-5'		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>		<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b>				<b>Notes/Conditions:</b>			



**TABLE 1**  
**FIELD DATA SUMMARY TABLE**  
**NOBLE ENERGY, INC. - 100322**  
**WATSON 66N65W 28SWNW, WELD COUNTY, COLORADO**  
**REM # 33995**

Sample ID	Sample Date	Depth (ft. bgs)	GPS Data Latitude/Longitude		PDOP Value	VOC Concentration (ppm)
AST01@0-0.5'	09/20/24	0-0.5	40.458222	-104.673375	0.9	0.1
FLARE01@0-0.5'	09/20/24	0-0.5	40.458513	-104.673325	0.7	0.0
MH01@0-0.5'	09/20/24	0-0.5	40.458449	-104.673330	0.7	0.0
PWV01-B@5'	09/20/24	5	40.458293	-104.673380	0.8	0.3
PWV01-N@3'	09/20/24	3	40.458318	-104.673369	0.8	0.0
PWV01-E@3'	09/20/24	3	40.458295	-104.673353	0.9	0.2
PWV01-S@3'	09/20/24	3	40.458270	-104.673381	0.8	0.1
PWV01-W@3'	09/20/24	3	40.458289	-104.673410	0.8	0.1
SEP01-DL@3'	09/20/24	3	40.458460	-104.673367	0.7	0.0
SEP01-FL@3'	09/20/24	3	40.458499	-104.673382	0.7	0.0
BKG01@0-0.5'	09/20/24	0-0.5	40.458658	-104.673307	0.8	0.2
BKG01@3'	09/20/24	3	40.458658	-104.673307	0.8	0.2
BKG01@5'	09/20/24	5	40.458658	-104.673307	0.8	0.1

**Notes:**

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

ft. = Feet

bgs = Below ground surface



TABLE 2  
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA  
NOBLE ENERGY, INC. - 100322  
WATSON 66N65W 28SWNW, WELD COUNTY, COLORADO  
REM # 33995

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**		
AST01@0-0.05'	09/20/24	0-0.5	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWV01-B@5'	09/20/24	5	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWV01-E@3'	09/20/24	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP01-DL@3'	09/20/24	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP01-FL@3'	09/20/24	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50

**Notes:**

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

ECMC = Energy & Carbon Management Commission

(<) = 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



TABLE 3  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
NOBLE ENERGY, INC. - 100322  
WATSON 66N65W 28SWNW, WELD COUNTY, COLORADO  
REM # 33995

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	1,800	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
AST01@0-0.5'	09/20/24	0-0.5	<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
PWV01-B@5'	09/20/24	5	<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
PWV01-E@3'	09/20/24	3	<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
SEP01-DL@3'	09/20/24	3	<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
SEP01-FL@3'	09/20/24	3	<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

Notes:

1. **Bold** values exceed the ECMC Table 915-1 limit(s).  
2. Pink & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL).

ECMC = Colorado Energy & Carbon Management Commission

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

ft. = Feet

bgs = Below ground surface

mg/kg = Milligrams per kilogram



TABLE 4  
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION  
NOBLE ENERGY, INC. - 100322  
WATSON 66N65W 28SWNW, WELD COUNTY, COLORADO  
REM # 33995

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
AST01@0-0.5'	9/20/2024	0-0.5	8.70	0.278	0.219	<2.00
PWV01-B@5'	9/20/2024	5	8.64	0.193	0.0208	<2.00
PWV01-E@3'	9/20/2024	3	8.84	0.122	0.00883	<2.00
SEP01-DL@3'	9/20/2024	3	8.80	0.203	0.105	<2.00
SEP01-FL@3'	9/20/2024	3	8.69	0.171	0.0197	<2.00
BKG01@0-0.5'	9/20/2024	0-0.5	8.15	0.436	0.782	<2.00
BKG01@3'	9/20/2024	3	8.40	0.326	0.629	<2.00
BKG01@5'	9/20/2024	5	8.35	0.318	0.669	<2.00
Maximum Root Background Concentration (0 - 3 ft)			8.40	-	-	-
Maximum Background Concentration			8.40	-	-	-

**Notes:**

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.

ECMC = Colorado Energy & Carbon Management Commission

EC = Electrical conductivity

SAR = Sodium adsorption ratio

mmhos/cm = millimhos per centimeter

mg/L = milligram per liter

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

ft. = Feet

bgs = Below ground surface

TABLE 5  
SUMMARY OF METALS IN SOIL CHEMISTRY DATA  
NOBLE ENERGY, INC. - 100322  
WATSON 66N65W 28WNW, WELD COUNTY, COLORADO  
REM # 33995

Sample ID	Sample Date	Depth (ft. bgs)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) <sup>[4]</sup> (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	15,000	71	0.3	3,100	400	1,500	390	390	23,000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
AST01@0-0.5'	9/20/2024	0-0.5	<b>3.67</b>	72.5	<0.200	<0.30	5.20	5.61	4.75	<0.260	0.0260	18.8
PWV01-B@5'	9/20/2024	5	<b>4.25</b>	<b>86.1</b>	<0.200	<0.30	6.07	7.29	5.44	<0.260	0.0340	22.8
PWV01-E@3'	9/20/2024	3	<b>4.47</b>	<b>95.9</b>	0.223	<0.30	5.72	7.48	5.83	<0.260	0.0365	21.9
SEP01-DL@3'	9/20/2024	3	<b>4.60</b>	<b>87.4</b>	0.208	<0.30	5.70	7.43	5.62	<0.260	0.0334	21.0
SEP01-FL@3'	9/20/2024	3	<b>4.44</b>	77.5	0.259	<0.30	5.49	6.71	5.45	<0.234	0.0320	20.5
BKG01@0-0.5'	9/20/2024	0-0.5	4.58	85.1	0.210	<0.30	7.04	7.20	5.58	<0.260	0.0349	25.5
BKG01@3'	9/20/2024	3	5.07	106	0.266	<0.30	5.07	8.18	6.47	<0.260	0.0388	21.4
BKG01@5'	9/20/2024	5	5.94	181	0.285	<0.30	6.56	10.7	7.49	<0.260	0.0427	23.8
Maximum Background Concentration			5.94	181	-	-	-	-	-	-	-	-
Maximum Background Concentration X 1.25			7.43	226	-	-	-	-	-	-	-	-
Mean Background Concentration			5.20	124	-	-	-	-	-	-	-	-
Mean Background Concentration X 1.25			6.50	155	-	-	-	-	-	-	-	-

**Notes:**

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within 1.25x background concentrations.
2. **Red** 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. Compound falls within ECMC Table 915-1 Footnote 9.
5. 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



