

Bury Crandell C Unit 1

NENE Sec. 23-T1N-R68W

API #: 014-12407

Remediation Project #: 33233

Wellhead & Flowline Decommissioning Data Package

February 2024

Prepared by Tasman, Inc.



On behalf of Crestone Peak Resources Operating, LLC



FIELD NOTES AND PHOTO LOG

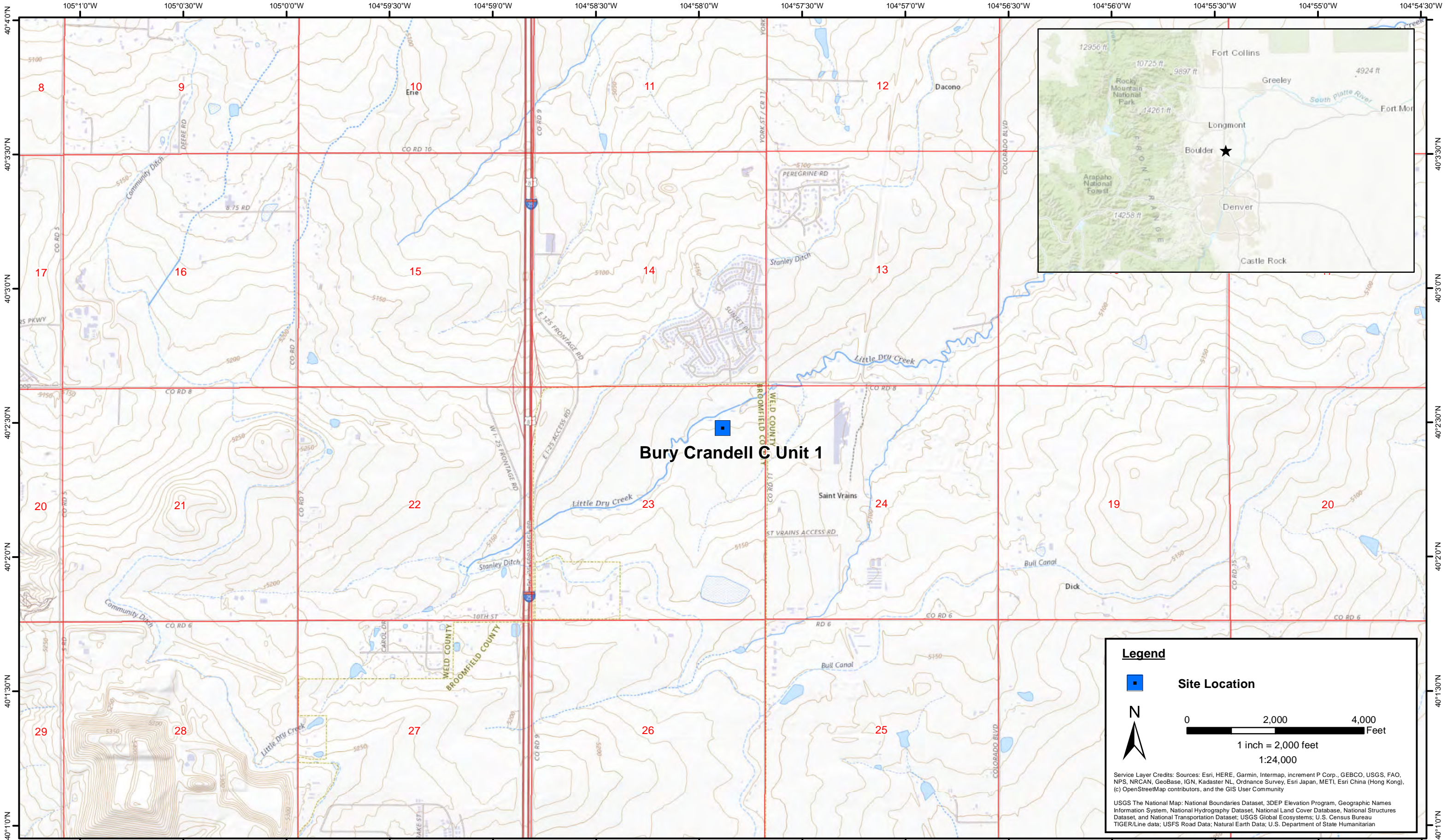
SITE NAME: Bury Crandell C Unit 1								DATE: 2/14/2024		REM. PROJECT #: 33233		WEATHER: 50 F Windy	
SITE DIRECTIONS: Weld County Rd 8 and County Road 11 - S 0.24mi, NW 0.15mi INTO								CLIENT: Crestone Peak Resources Operating, LLC					
LEGALS AND LAT/LONG: 40.041358, -104.964768								TASMAN PERSONNEL: Sean Clarke					
SOIL TYPES: CL - lean clay								SURFACE GRADIENT: Northeast					
SURROUNDING LAND USE: Other								CROP: None					
SOIL SAMPLING								FACILITY INFRASTRUCTURE					
Date/Time	Soil Sample ID	PID (ppm)	Visual	Olfactory	Photo? (Y/N)	USCS	Lab (Y/N)	EQUIPMENT		Quantity			
								Above Ground Storage Tank (AST)					
2/14/2024 12:20	WH-B01@5'	0.9	No Staining	No Odor	Y	CL	Y	Produced Water Vessel (PWV)					
2/14/2024 12:25	WH-N01@4'	1.7	No Staining	No Odor	Y	CL	N	Separator (SEP)					
2/14/2024 12:30	WH-S01@4'	1.7	No Staining	No Odor	Y	CL	N	Emission Control Device (ECD)					
2/14/2024 12:35	WH-E01@4'	1.1	No Staining	No Odor	Y	CL	N	Dump Line (DL)					
2/14/2024 12:40	WH-W01@4'	1.2	No Staining	No Odor	Y	CL	N	Wellhead (WH)		1			
2/14/2024 12:45	FL-B01@4'	32.3	No Staining	Slight HC Odor	Y	CL	Y	Flowline (FL)		1			
2/14/2024 12:50	FL-B02@4'	38.8	No Staining	Slight HC Odor	Y	CL	Y	FL Method of Closure		Abandoned in place			
2/14/2024 12:55	SP-CS01	2.3	No Staining	No Odor	N	CL	Y	FL Footage Removed					
								Footaged Abandoned in Place		100			
								Other:					
								Soil Loads Removed					
								IMPACTED SOIL IDENTIFIED? Yes					
								ESTIMATED VOLUME OF IMPACTS: Ongoing Assessment					
								Date		Number	CY		
								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:					



Photographic Log

Equipment ID:			Equipment Type:		
Material:	Volume:	Contents:	Material:	Volume:	Contents:
Notes/Conditions: Soil sample and screening locations.			Notes/Conditions: Soil sample location.		

FIGURES



DATE:
February 2024

DESIGNED BY:
S. Vogt

DRAWN BY:
L. Reed

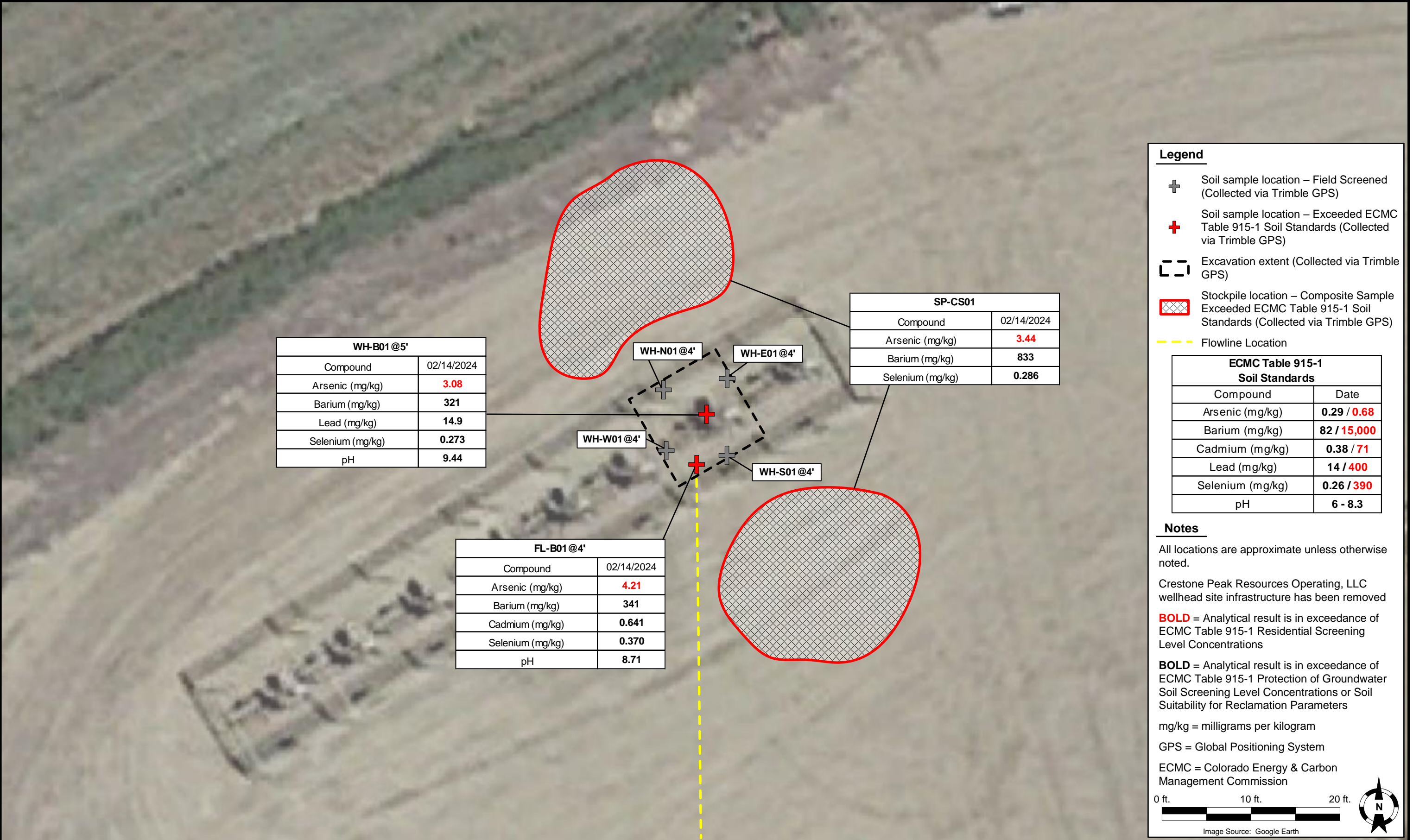


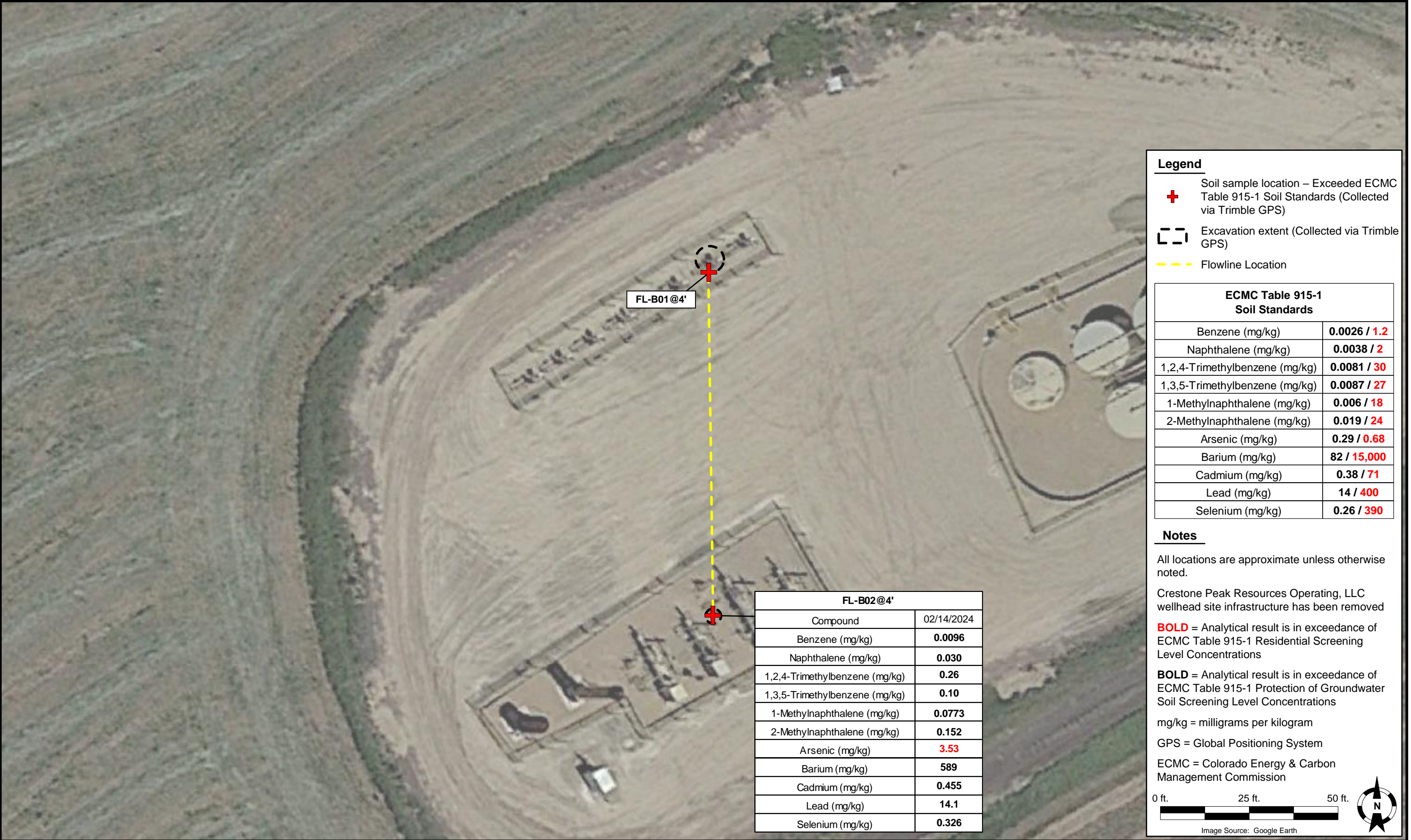
Tasman, Inc.
6855 W. 119th Ave
Broomfield, CO 80020

Crestone Peak Resources Operating, LLC
Bury Crandell C Unit 1
NENE Sec. 23-T1N-R68W
Broomfield County, Colorado

Site Location Map

Figure
1





TABLES

TABLE 1
BURY CRANDELL C UNIT 1
SOIL SAMPLE LOCATIONS
CRESTONE PEAK RESOURCES OPERATING, LLC



Soil Sample Location	Depth	Date	PID Reading (ppm)	Latitude	Longitude	GPS PDOP Value	Lab (Y/N)
WH-B01@5'	5'	02/14/2024	0.9	40.041351	-104.964761	1.0	Y
WH-N01@4'	4'	02/14/2024	1.7	40.041358	-104.964774	1.2	N
WH-S01@4'	4'	02/14/2024	1.7	40.041344	-104.964752	1.1	N
WH-E01@4'	4'	02/14/2024	1.1	40.041364	-104.964755	1.2	N
WH-W01@4'	4'	02/14/2024	1.2	40.041337	-104.964768	1.1	N
SP-CS01	-	02/14/2024	2.3	40.041402	-104.964789	-	Y
FL-B01@4'	4'	02/14/2024	32.3	40.041340	-104.964776	1.1	Y
FL-B02@4'	4'	02/14/2024	38.8	40.041077	-104.964758	0.9	Y

Notes:

PID = Photoionization Detector

ppm = parts per million

GPS = Global Positioning System

PDOP = Position Dilution of Precision

- = Not Applicable

TABLE 2
BURY CRANDELL C UNIT 1
SOIL ANALYTICAL DATA - VOCs
CRESTONE PEAK RESOURCES OPERATING, LLC

Soil Sample Location	Depth	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	TVPH-GRO (mg/kg)	TEPH-DRO (mg/kg)	TEPH-ORO (mg/kg)	1,2,4-TMB (mg/kg)	1,3,5-TMB (mg/kg)
ECMC Organic Compounds in Soils - GSSL ⁽¹⁾			0.0026	0.69	0.78	9.9	0.0038	500			0.0081	0.0087
ECMC Organic Compounds in Soils - RSL ⁽²⁾			1.2	490	5.8	58	2	500			30	27
WH-B01@5'	5'	02/14/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
SP-CS01	-	02/14/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
FL-B01@4'	4'	02/14/2024	<0.0020	0.11	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
FL-B02@4'	4'	02/14/2024	0.0096	0.14	0.041	0.61	0.030	5.4	<50	<50	0.26	0.10

Notes:

VOCs = Volatile Organic Compounds

(1) Standards for soil are taken from ECMC Table 915-1: Organic Compounds in Soils - Protection of Groundwater Soil Screening Level Concentrations (Effective January 15, 2021)

(2) Standards for soil are taken from ECMC Table 915-1: Organic Compounds in Soils - Residential Soil Screening Level Concentrations (Effective January 15, 2021)

ECMC = Colorado Energy & Carbon Management Commission

GSSL = Protection of Groundwater Screening Level

RSL = Residential Soil Screening Level

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

mg/kg = milligrams per kilogram

TVPH - GRO = Total Volatile Petroleum Hydrocarbons - Gasoline Range Organics

TEPH - DRO = Total Extractable Petroleum Hydrocarbons - Diesel Range Organics

TEPH - ORO = Total Extractable Petroleum Hydrocarbons - Oil Range Organics

1,2,4 - TMB = 1,2,4 - Trimethylbenzene

1,3,5 - TMB = 1,3,5 - Trimethylbenzene

BOLD = Analytical result is in exceedance of ECMC Table 915-1: Organic Compounds in Soils - Protection of Groundwater Soil Screening Level Concentrations

BOLD = Analytical result is in exceedance of ECMC Table 915-1: Organic Compounds in Soils - Residential Soil Screening Level Concentrations

TABLE 3
BURY CRANDELL C UNIT 1
SOIL ANALYTICAL DATA - PAHs
CRESTONE PEAK RESOURCES OPERATING, LLC

Soil Sample Location	Depth	Date	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo(a)A (mg/kg)	Benzo(b)F (mg/kg)	Benzo(k)F (mg/kg)	Benzo(a)P (mg/kg)	Chrysene (mg/kg)	D (a,h) A (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	1-M (mg/kg)	2-M (mg/kg)	Pyrene (mg/kg)
ECMC Organic Compounds in Soils - GSSL ⁽¹⁾			0.55	5.8	0.011	0.3	2.9	0.24	9	0.96	8.9	0.54	0.98	0.006	0.019	1.3
ECMC Organic Compounds in Soils - RSL ⁽²⁾			360	1,800	1.1	1.1	11	0.11	110	0.11	240	240	1.1	18	24	180
WH-B01@5'	5'	02/14/2024	<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
SP-CS01	-	02/14/2024	<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
FL-B01@4'	4'	02/14/2024	<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
FL-B02@4'	4'	02/14/2024	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00611	<0.00500	0.0773	0.152	<0.00500

Notes:

PAHs = Polycyclic Aromatic Hydrocarbons

(1) Standards for soil are taken from ECMC Table 915-1: Organic Compounds in Soils - Protection of Groundwater Soil Screening Level Concentrations (Effective January 15, 2021)

(2) Standards for soil are taken from ECMC Table 915-1: Organic Compounds in Soils - Residential Soil Screening Level Concentrations (Effective January 15, 2021)

ECMC = Colorado Energy & Carbon Management Commission

GSSL = Protection of Groundwater Screening Level

RSL = Residential Soil Screening Level

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

mg/kg = milligrams per kilogram

Benzo(a)A = Benzo(a)Anthracene

Benzo(b)F = Benzo(b)Fluoranthene

Benzo(k)F = Benzo(k)Fluoranthene

Benzo(a)P = Benzo(a)Pyrene

D (a,h) A = Dibenzo(a,h)Anthracene

1,2,3-CD = Indeno(1,2,3-cd)Pyrene

1-M = 1-Methylnaphthalene

2-M = 2-Methylnaphthalene

BOLD = Analytical result is in exceedance of ECMC Table 915-1: Organic Compounds in Soils - Protection of Groundwater Soil Screening Level Concentrations

BOLD = Analytical result is in exceedance of ECMC Table 915-1: Organic Compounds in Soils - Residential Soil Screening Level Concentrations

TABLE 4
BURY CRANDELL C UNIT 1
SOIL ANALYTICAL DATA - METALS
CRESTONE PEAK RESOURCES OPERATING, LLC

Soil Sample Location	Depth	Date	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 Metals in Soils - GSSL ⁽¹⁾			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
ECMC Metals in Soils - RSL ⁽²⁾			0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
WH-B01@5'	5'	02/14/2024	3.08	321	0.265	-	4.11	14.9	3.65	0.273	0.0598	18.5
SP-CS01	-	02/14/2024	3.44	833	0.279	-	6.63	10.4	2.94	0.286	0.0516	11.0
FL-B01@4'	4'	02/14/2024	4.21	341	0.641	-	3.93	12.3	5.15	0.370	0.0678	12.7
FL-B02@4'	4'	02/14/2024	3.53	589	0.455	-	5.50	14.1	4.84	0.326	0.0601	16.7

Notes:

(1) Standards for soil are taken from ECMC Table 915-1: Metals in Soils - Protection of Groundwater Soil Screening Level Concentrations (Effective January 15, 2021)

(2) Standards for soil are taken from ECMC Table 915-1: Metals in Soils - Residential Soil Screening Level Concentrations (Effective January 15, 2021)

ECMC = Colorado Energy & Carbon Management Commission

GSSL = Protection of Groundwater Screening Level

RSL = Residential Soil Screening Level

(<) = Analytical result is less than the indicated laboratory minimum detection limit

mg/kg = milligrams per kilogram

BOLD = Analytical result is in exceedance of ECMC Table 915-1: Metals in Soils - Protection of Groundwater Soil Screening Level Concentrations

BOLD = Analytical result is in exceedance of ECMC Table 915-1: Metals in Soils - Residential Soil Screening Level Concentrations

- = Constituent not analyzed, hexavalent chromium hold time expired for these samples, therefore analysis was cancelled.

TABLE 5
BURY CRANDELL C UNIT 1
SOIL ANALYTICAL DATA - SOIL RECLAMATION
CRESTONE PEAK RESOURCES OPERATING, LLC



Soil Sample Location	Depth	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
ECMC Soil Suitability for Reclamation ⁽¹⁾			6 - 8.3	< 6	< 4	2
WH-B01@5'	5'	02/14/2024	9.44	1.33	1.69	<2.00
SP-CS01	-	02/14/2024	8.25	1.79	0.808	<2.00
FL-B01@4'	4'	02/14/2024	8.71	1.12	0.359	<2.00
FL-B02@4'	4'	02/14/2024	8.14	0.432	1.04	<2.00

Notes:

(1) Standards for soil are taken from ECMC Table 915-1: Soil Suitability for Reclamation (Effective January 15, 2021)

ECMC = Colorado Energy & Carbon Management Commission

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

mmhos/cm = millimhos per centimeter

mg/L = milligrams per liter

pH = Potential of Hydrogen

SAR = Sodium Adsorption Ratio

EC = Electrical Conductivity

BOLD = Analytical result is in exceedance of ECMC Table 915-1: Soil Suitability for Reclamation Concentrations