

Hunt 8-60 17A

SWNW Sec. 17-T8N-R60W

Facility ID: 484370

Remediation Project #: 30690

Remediation Progress Report

March and April 2024

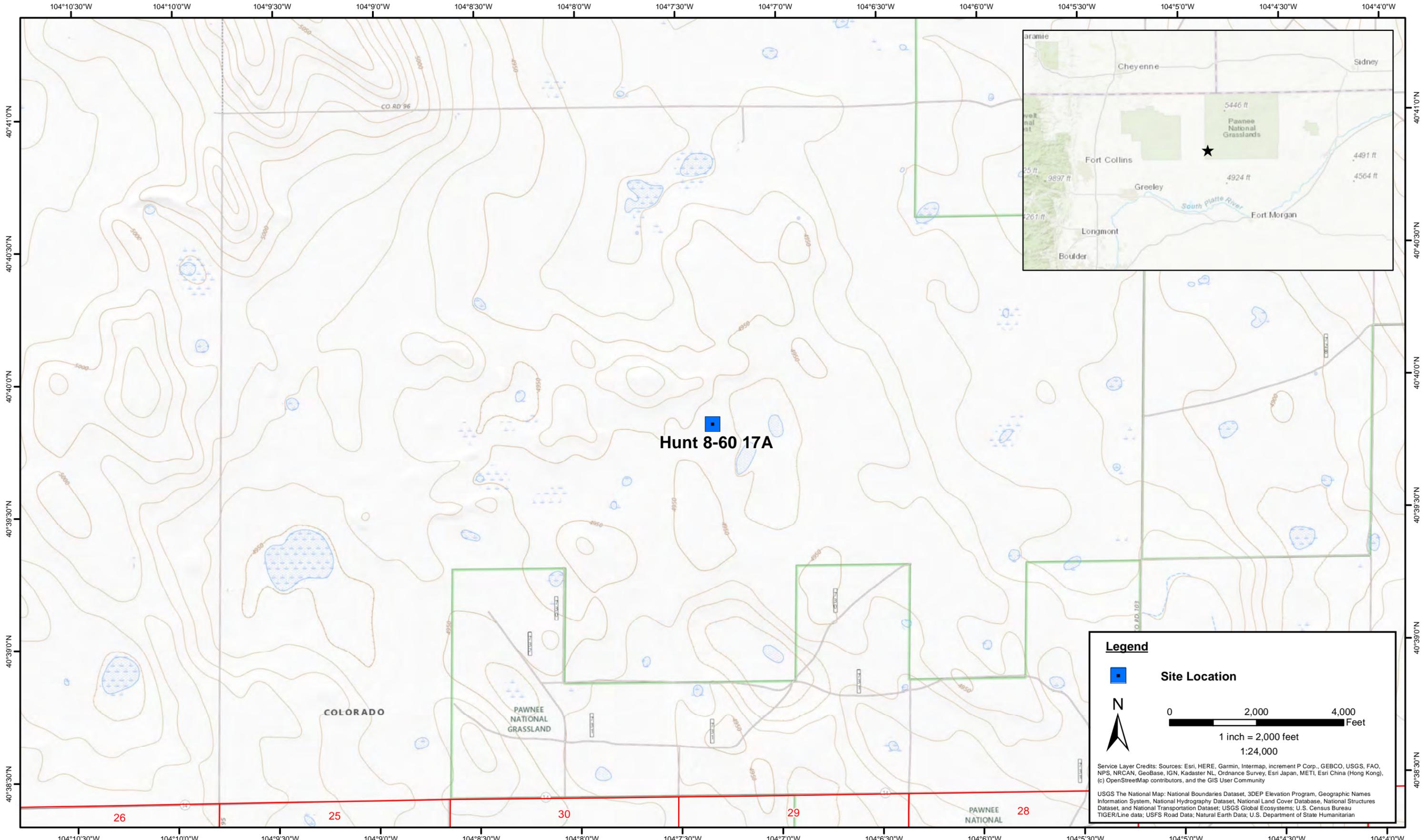
Prepared by Tasman, Inc.



On behalf of Civitas North LLC



FIGURES



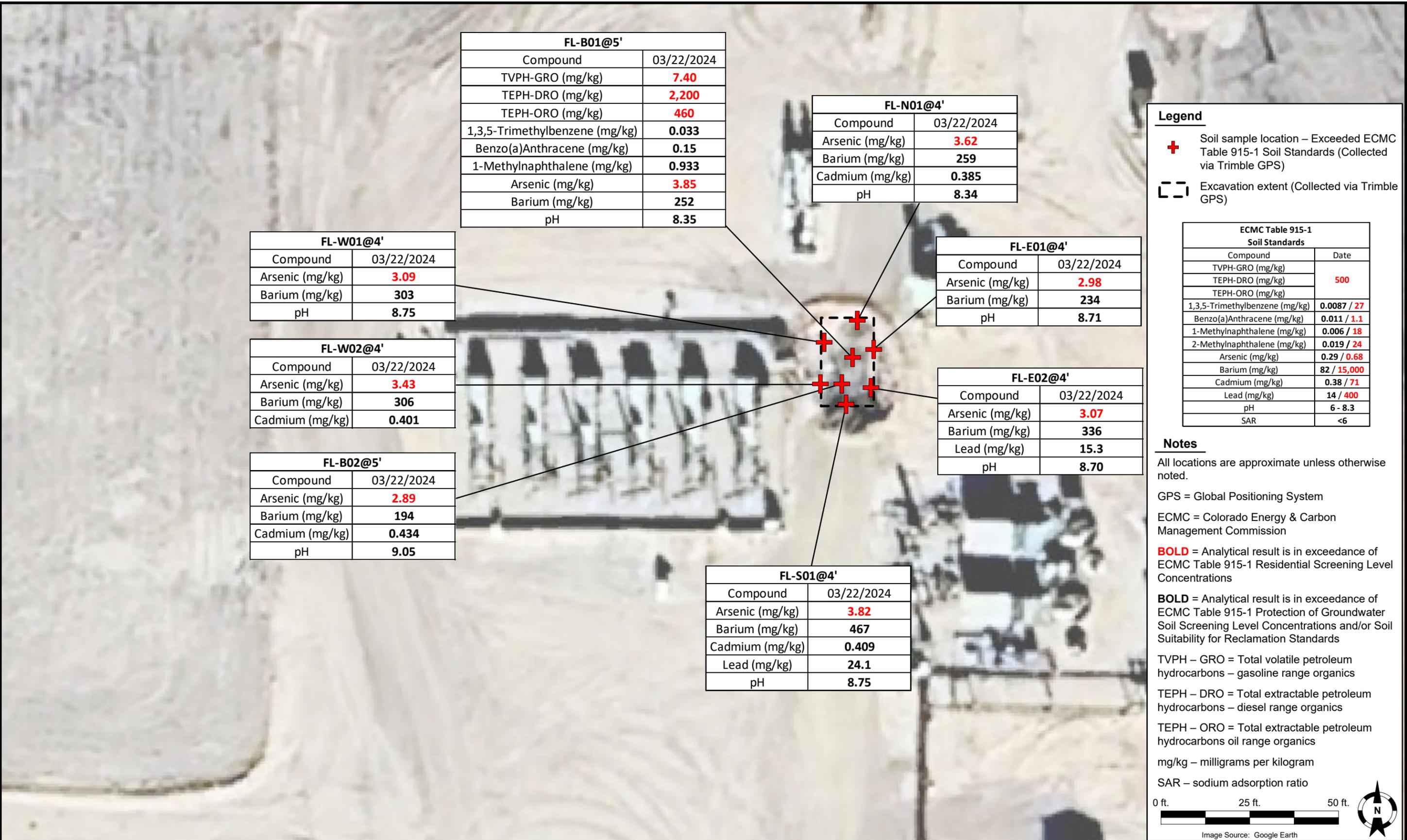
DATE: March 2024
 DESIGNED BY: S. Vogt
 DRAWN BY: J. Woffinden

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

Extraction Oil & Gas, Inc.
Hunt 8-60 17A
 SWNW Sec. 17-T8N-R60W
 Weld County, Colorado

Site Location Map

Figure 1



DATE: June 24, 2024

DESIGNED BY: S. Vogt

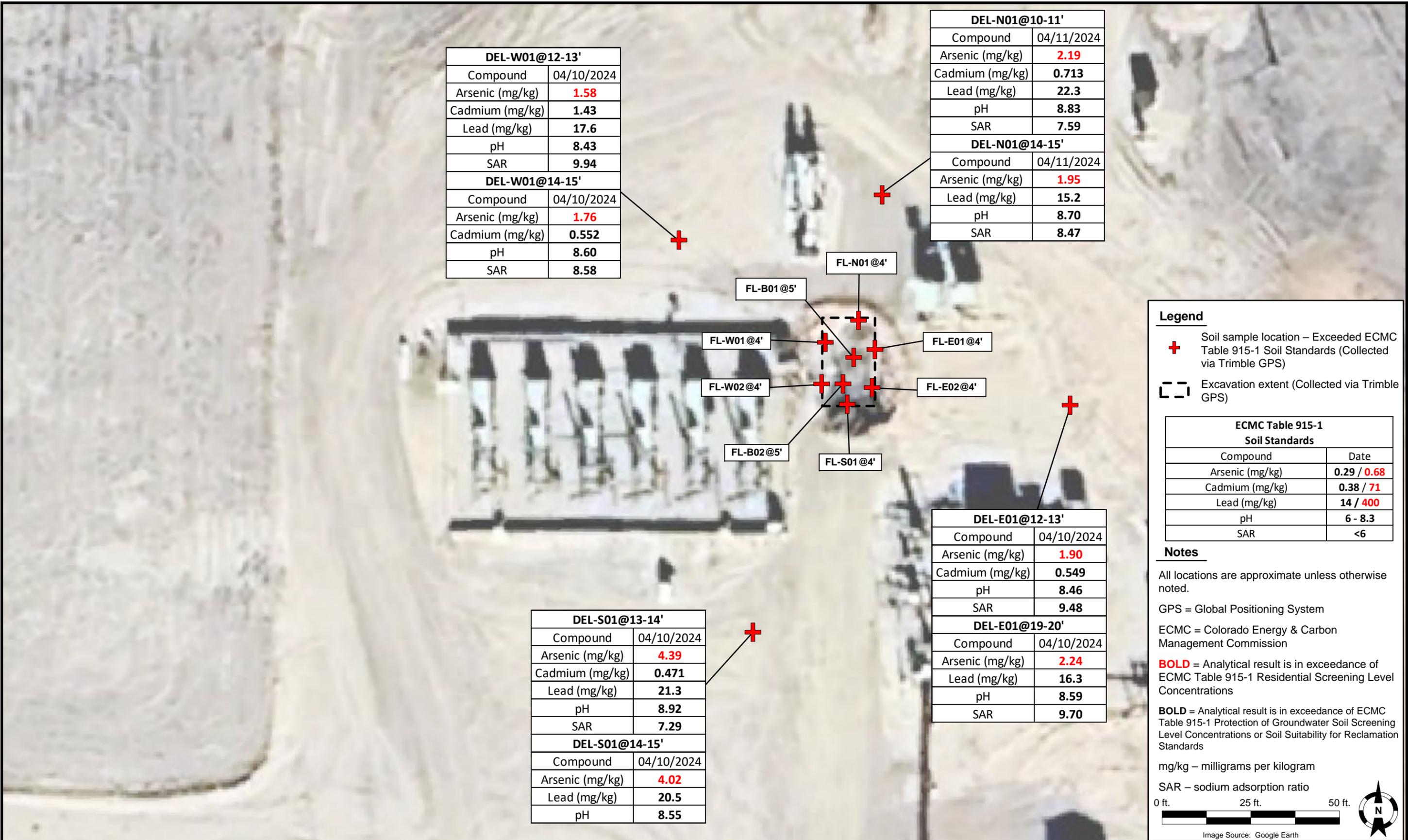
DRAWN BY: T. Smith

Tasman, Inc.
6855 W119th Ave.
Broomfield, CO 80020

Civitas North LLC
Hunt 8-60 17A
SWNW Sec. 17-T8N-R60W
Weld County, Colorado

Soil Sample Location Map
(03/22/2024)

Figure
2



DATE: 06/24/2024
DESIGNED BY: S. Vogt
DRAWN BY: T. Smith



Civitas North LLC
Hunt 8-60 17A
SWNW Sec. 17-T8N-R60W
Weld County, Colorado

Soil Sample Location Map
(04/10/2024 & 04/11/2024)

Figure 3

TABLES

TABLE 1
HUNT 8-60 17A
SOIL SAMPLE LOCATIONS
CIVITAS NORTH LLC



Soil Sample Location	Depth	Date	PID Reading (ppm)	Latitude	Longitude	GPS PDOP Value	Lab (Y/N)
FL-N01@4'	4'	03/22/2024	0.9	40.664011	-104.122161	0.9	Y
FL-S01@4'	4'	03/22/2024	0.3	40.663947	-104.122173	0.9	Y
FL-E01@4'	4'	03/22/2024	0.3	40.663989	-104.122145	0.9	Y
FL-E02@4'	4'	03/22/2024	0.7	40.663959	-104.122147	0.9	Y
FL-W01@4'	4'	03/22/2024	2.1	40.663995	-104.122194	0.8	Y
FL-W02@4'	4'	03/22/2024	0.6	40.663963	-104.122199	0.9	Y
FL-B01@5'	5'	03/22/2024	72.4	40.663983	-104.122166	0.9	Y
FL-B02@5'	5'	03/22/2024	5.7	40.663973	-104.122180	0.8	Y
DEL-N01@10-11'	10-11'	04/11/2024	5.1	40.664107	-104.122135	0.8	Y
DEL-N01@ 14-15'	14-15'	04/11/2024	2.9	40.664107	-104.122135	0.8	Y
DEL-S01@13-14'	13-14'	04/10/2024	1.5	40.663775	-104.122272	0.8	Y
DEL-S01@14-15'	14-15'	04/10/2024	1.6	40.663775	-104.122272	0.8	Y
DEL-E01@12-13'	12-13'	04/10/2024	0.7	40.663946	-104.121945	0.8	Y
DEL-E01@19-20'	19-20'	04/10/2024	0.2	40.663946	-104.121945	0.8	Y
DEL-W01@12-13'	12-13'	04/10/2024	0.9	40.664077	-104.122342	0.8	Y
DEL-W01@14-15'	14-15'	04/10/2024	0.6	40.664077	-104.122342	0.8	Y

Notes:

PID = Photoionization Detector

ppm = parts per million

GPS = Global Positioning System

PDOP = Position Dilution of Precision

- = Not Applicable

TABLE 2
HUNT 8-60 17A
SOIL ANALYTICAL DATA - VOCs
CIVITAS NORTH 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
FL-N01@4'	4'	03/22/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
FL-S01@4'	4'	03/22/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
FL-E01@4'	4'	03/22/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
FL-E02@4'	4'	03/22/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
FL-W01@4'	4'	03/22/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
FL-W02@4'	4'	03/22/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
FL-B01@5'	5'	03/22/2024	<0.0020	<0.0050	<0.0050	0.021	<0.0038	7.40	2,200	460	<0.0050	0.033
FL-B02@5'	5'	03/22/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
DEL-N01@10-11'	10-11'	04/11/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
DEL-N01@14-15'	14-15'	04/11/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
DEL-S01@13-14'	13-14'	04/10/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
DEL-S01@14-15'	14-15'	04/10/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
DEL-E01@12-13'	12-13'	04/10/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
DEL-E01@19-20'	19-20'	04/10/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
DEL-W01@12-13'	12-13'	04/10/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
DEL-W01@14-15'	14-15'	04/10/2024	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050

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

TABLE 2
HUNT 8-60 17A
SOIL ANALYTICAL DATA - VOCs
CIVITAS NORTH 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

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
HUNT 8-60 17A
SOIL ANALYTICAL DATA - PAHs
CIVITAS NORTH 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
FL-N01@4'	4'	03/22/2024	<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-S01@4'	4'	03/22/2024	<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-E01@4'	4'	03/22/2024	<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-E02@4'	4'	03/22/2024	<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-W01@4'	4'	03/22/2024	<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-W02@4'	4'	03/22/2024	<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@5'	5'	03/22/2024	<0.00500	<0.00500	0.15	<0.00500	<0.00500	<0.00500	0.059	<0.00500	<0.00500	0.133	<0.00500	0.933	<0.00500	0.0837
FL-B02@5'	5'	03/22/2024	<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
DEL-N01@10-11'	10-11'	04/11/2024	<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
DEL-N01@ 14-15'	14-15'	04/11/2024	<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
DEL-S01@13-14'	13-14'	04/10/2024	<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
DEL-S01@14-15'	14-15'	04/10/2024	<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
DEL-E01@12-13'	12-13'	04/10/2024	<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
DEL-E01@19-20'	19-20'	04/10/2024	<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
DEL-W01@12-13'	12-13'	04/10/2024	<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
DEL-W01@14-15'	14-15'	04/10/2024	<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

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

TABLE 3
HUNT 8-60 17A
SOIL ANALYTICAL DATA - PAHs
CIVITAS NORTH 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

D (a,h) A = Dibenz(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
HUNT 8-60 17A
SOIL ANALYTICAL DATA - METALS
CIVITAS NORTH 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
FL-N01@4'	4'	03/22/2024	3.62	259	0.385	<0.30	4.41	10.6	5.09	<0.260	0.0334	18.2
FL-S01@4'	4'	03/22/2024	3.82	467	0.409	<0.30	4.59	24.1	5.26	<0.260	0.0333	18.7
FL-E01@4'	4'	03/22/2024	2.98	234	0.336	<0.30	4.39	12.0	4.84	<0.260	0.0257	17.5
FL-E02@4'	4'	03/22/2024	3.07	336	0.343	<0.30	4.17	15.3	4.65	<0.260	0.0316	16.9
FL-W01@4'	4'	03/22/2024	3.09	303	0.350	<0.30	4.60	12.6	4.78	<0.260	0.0282	18.0
FL-W02@4'	4'	03/22/2024	3.43	306	0.401	<0.30	4.90	11.8	5.21	<0.260	0.0296	20.4
FL-B01@5'	5'	03/22/2024	3.85	252	0.362	<0.30	4.67	12.1	5.01	<0.260	0.0322	19.3
FL-B02@5'	5'	03/22/2024	2.89	194	0.434	<0.30	4.52	12.4	4.47	<0.260	0.0432	18.0
DEL-N01@10-11'	10-11'	04/11/2024	2.19	55.9	0.713	<0.30	5.51	22.3	4.56	<0.236	0.0646	14.1
DEL-N01@ 14-15'	14-15'	04/11/2024	1.95	44.5	0.377	<0.30	6.15	15.2	3.49	<0.260	0.0537	16.1
DEL-S01@13-14'	13-14'	04/10/2024	4.39	28.0	0.471	<0.30	6.48	21.3	3.42	<0.260	0.0431	18.2
DEL-S01@14-15'	14-15'	04/10/2024	4.02	34.2	0.278	<0.30	6.61	20.5	3.20	<0.260	0.0492	18.7
DEL-E01@12-13'	12-13'	04/10/2024	1.90	53.0	0.549	<0.30	5.13	10.4	2.48	<0.260	0.0406	14.8
DEL-E01@19-20'	19-20'	04/10/2024	2.24	41.7	0.328	<0.30	5.11	16.3	1.71	<0.260	0.0645	17.4
DEL-W01@12-13'	12-13'	04/10/2024	1.58	30.3	1.43	<0.30	5.59	17.6	2.36	<0.260	0.0468	15.0
DEL-W01@14-15'	14-15'	04/10/2024	1.76	30.8	0.552	<0.30	5.62	13.2	2.56	<0.260	0.0414	15.7

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

(SP-GP)

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

TABLE 5
HUNT 8-60 17A
SOIL ANALYTICAL DATA - SOIL RECLAMATION
CIVITAS NORTH 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
FL-N01@4'	4'	03/22/2024	8.34	0.993	0.261	<2.00
FL-S01@4'	4'	03/22/2024	8.75	0.391	0.159	<2.00
FL-E01@4'	4'	03/22/2024	8.71	0.336	0.147	<2.00
FL-E02@4'	4'	03/22/2024	8.70	0.326	0.149	<2.00
FL-W01@4'	4'	03/22/2024	8.75	0.289	0.172	<2.00
FL-W02@4'	4'	03/22/2024	8.11	0.157	0.348	<2.00
FL-B01@5'	5'	03/22/2024	8.35	0.380	0.219	<2.00
FL-B02@5'	5'	03/22/2024	9.05	0.880	0.215	<2.00
DEL-N01@10-11'	10-11'	04/11/2024	8.83	7.59	0.651	<2.00
DEL-N01@ 14-15'	14-15'	04/11/2024	8.70	8.47	0.720	<2.00
DEL-S01@13-14'	13-14'	04/10/2024	8.92	7.29	0.526	<2.00
DEL-S01@14-15'	14-15'	04/10/2024	8.55	5.09	0.523	<2.00
DEL-E01@12-13'	12-13'	04/10/2024	8.46	9.48	1.18	<2.00
DEL-E01@19-20'	19-20'	04/10/2024	8.59	9.70	0.632	<2.00
DEL-W01@12-13'	12-13'	04/10/2024	8.43	9.94	1.26	<2.00
DEL-W01@14-15'	14-15'	04/10/2024	8.60	8.58	0.963	<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

**ATTACHMENT A
FIELD NOTES AND PHOTO LOG**



Photographic Log

<p>☀ 359°N (T) ● 40°39'50"N, 104°7'20"W ±45ft ▲ 4949ft</p>			<p>☀ 181°S (T) ● 40°39'50"N, 104°7'20"W ±22ft ▲ 4949ft</p>		
<p>22 Mar 2024, 12:37:14</p>			<p>22 Mar 2024, 12:37:20</p>		
<p>Equipment ID:</p>		<p>Equipment Type:</p>	<p>Equipment ID:</p>		<p>Equipment Type:</p>
<p>Material:</p>	<p>Volume:</p>	<p>Contents:</p>	<p>Material:</p>	<p>Volume:</p>	<p>Contents:</p>
<p>Notes/Conditions: Surrounding land use facing N</p>			<p>Notes/Conditions: Surrounding land use facing S</p>		



Photographic Log

<p>☉ 88°E (T) ● 40°39'51"N, 104°7'20"W ±16ft ▲ 4949ft</p>	<p>☉ 270°W (T) ● 40°39'50"N, 104°7'20"W ±26ft ▲ 4949ft</p>	
<p>22 Mar 2024, 12:37:28</p>	<p>22 Mar 2024, 12:37:17</p>	
<p>Equipment ID:</p>	<p>Equipment Type:</p>	
<p>Material:</p>	<p>Volume:</p>	<p>Contents:</p>
<p>Notes/Conditions: Surrounding land use facing E</p>		
<p>Equipment ID:</p>	<p>Equipment Type:</p>	
<p>Material:</p>	<p>Volume:</p>	<p>Contents:</p>
<p>Notes/Conditions: Surrounding land use facing W</p>		



Photographic Log

Equipment ID:		Equipment Type:		Equipment ID:		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions: Soil sampling locations				Notes/Conditions: Soil sampling locations			



Photographic Log

						Equipment ID:	
Material:		Volume:	Contents:		Equipment ID:	Equipment Type:	
Notes/Conditions: Soil sampling locations			Notes/Conditions:				

ATTACHMENT B
LABORATORY ANALYTICAL DATA

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 29, 2024

Sam Vogt

Tasman Geosciences

6855 W. 119th Ave.

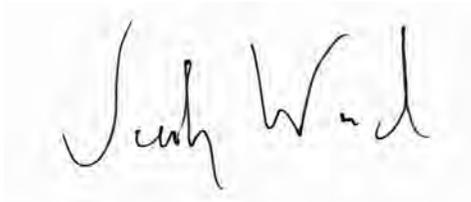
Broomfield, CO 80020

RE: Civitas - Hunt 8-60 17A

Work Order #2403360

Enclosed are the results of analyses for samples received by Summit Scientific on 03/22/24 18:23. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial 'J' and a long horizontal stroke at the end.

Jacob Wood For Paul Shrewsbury

President



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL-N01@4'	2403360-01	Soil	03/22/24 11:33	03/22/24 18:23
FL-S01@4'	2403360-02	Soil	03/22/24 11:38	03/22/24 18:23
FL-E01@4'	2403360-03	Soil	03/22/24 11:44	03/22/24 18:23
FL-W01@4'	2403360-04	Soil	03/22/24 11:53	03/22/24 18:23
FL-E02@4'	2403360-05	Soil	03/22/24 11:47	03/22/24 18:23
FL-W02@4'	2403360-06	Soil	03/22/24 11:55	03/22/24 18:23
FL-B01@5'	2403360-07	Soil	03/22/24 11:57	03/22/24 18:23
FL-B02@5'	2403360-08	Soil	03/22/24 11:59	03/22/24 18:23

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SUMMIT SCIENTIFIC

4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of 1
2403360	

Send Data To:		Send Invoice To:
Client: Civitas/Tasman	Project Manager: Sam Vogt/Jacob Evans	Company: Civitas
Address: 6855 W. 119th Ave	E-Mail: svgot@tasman-geo.com; jevens@civiresources.com	Project Name/Location:
City/State/Zip: Broomfield, CO 80020		APP#: C/L: P1647
Phone: PM (610) 405-9078	Project Name: Hunt 8-60 17A	PO/Billing Codes: 8520-162
Sampler Name: Daniel Hense	Project Number:	Contact:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN	1,2,4 + 1,3,5 TMBs	TPH (GRO, DRO, ORO)	PAHs	pH, EC, SAR	Boron	Metals		
1	FL-N01e4	3/22/24	11:33	2			X			X				X	X	X	X	X	X	X	pH, EC, SAR by Saturated paste preparation method Boron by Hot Water Soluble preparation Method Table 915 Metals - As, Ba, Cd, Cu, Pb, Ni, Se, Ag, Zn, Cr VI
2	FL-S01e4		11:38				X			X			X	X	X	X	X	X	X		
3	FL-E01e4		11:44				X			X			X	X	X	X	X	X	X		
4	FL-W01e4		11:53				X			X			X	X	X	X	X	X	X		
5	FL-E02e4		11:47				X			X			X	X	X	X	X	X	X		
6	FL-W02e4		11:55				X			X			X	X	X	X	X	X	X		
7	FL-B01e5		11:57				X			X			X	X	X	X	X	X	X		
8	FL-B02e5		11:59				X			X			X	X	X	X	X	X	X		
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: <i>[Signature]</i>	Date/Time: 15:05	Received by: Tasman Lockbox	Date/Time: 15:05	TAT Business Days	Field DO	Notes:
Relinquished by: <i>[Signature]</i>	Date/Time: 32224	Received by: <i>[Signature]</i>	Date/Time: 32224	Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by: <i>[Signature]</i>	Date/Time: 1823	Received by: <i>[Signature]</i>	Date/Time: 1823	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 9.6	Corrected Temperature: 8	IR gun #:		HNO3 lot #:		

S₂

Sample Receipt Checklist

S2 Work Order# 2403360

Client: Andrew (Asman) Client Project ID: Hunt 8-60 MA

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) 9.6

Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? (1) NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on COC</u>
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Same day</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? (1) Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? (1) Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

(1) If NO, then contact the client before proceeding with analysis and note in case narrative.

AS
Custodian Printed Name

3/22/24
Date/Time

4.0



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-N01@4'
2403360-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/22/24 11:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHC0877	03/22/24	03/23/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/22/24 11:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0385	96.2 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0408	102 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/22/24 11:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHC0878	"	03/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/22/24 11:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.40	67.2 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-N01@4'
2403360-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/22/24 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0899	03/25/24	03/25/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/22/24 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0154	46.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0179	53.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/22/24 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0917	03/25/24	04/24/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/22/24 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-N01@4'
2403360-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	3.62	0.200	mg/kg dry	1	BHC0923	03/25/24	03/26/24	EPA 6020B
Barium	259	0.400	"	"	"	"	"	"
Cadmium	0.385	0.200	"	"	"	"	"	"
Copper	4.41	0.400	"	"	"	"	"	"
Lead	10.6	0.200	"	"	"	"	"	"
Nickel	5.09	0.400	"	"	"	"	"	"
Silver	0.0334	0.0200	"	"	"	"	"	"
Zinc	18.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/22/24 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0912	03/25/24	03/29/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/22/24 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	121	0.0500	mg/L dry	1	BHC1095	03/31/24	04/26/24	EPA 6020B	
Magnesium	14.0	0.0500	"	"	"	"	"	"	
Sodium	43.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/22/24 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.993	0.00100	units	1	BHD1019	04/29/24	04/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/22/24 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-N01@4'
2403360-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	78.9	%	1	BHC0902	03/25/24	03/27/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/22/24 11:33**

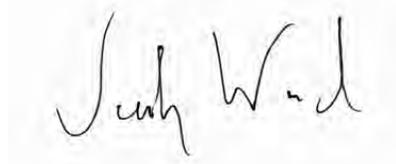
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.261	0.0100	mmhos/cm	1	BHC1097	03/31/24	04/01/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/22/24 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.34		pH Units	1	BHC1096	03/31/24	04/01/24	EPA 9045D	

Summit Scientific



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-S01@4'
2403360-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/22/24 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHC0877	03/22/24	03/23/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/22/24 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0378	94.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0387	96.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/22/24 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0878	"	03/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/22/24 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.44	75.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-S01@4'
2403360-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/22/24 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0899	03/25/24	03/26/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/22/24 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0188	56.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0211	63.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/22/24 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0917	03/25/24	04/24/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/22/24 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-S01@4'
2403360-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	3.82	0.200	mg/kg dry	1	BHC0923	03/25/24	03/26/24	EPA 6020B
Barium	467	0.400	"	"	"	"	"	"
Cadmium	0.409	0.200	"	"	"	"	"	"
Copper	4.59	0.400	"	"	"	"	"	"
Lead	24.1	0.200	"	"	"	"	"	"
Nickel	5.26	0.400	"	"	"	"	"	"
Silver	0.0333	0.0200	"	"	"	"	"	"
Zinc	18.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/22/24 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0912	03/25/24	03/29/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/22/24 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	217	0.0500	mg/L dry	1	BHC1095	03/31/24	04/26/24	EPA 6020B	
Magnesium	12.5	0.0500	"	"	"	"	"	"	
Sodium	21.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/22/24 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.391	0.00100	units	1	BHD1019	04/29/24	04/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/22/24 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-S01@4'
2403360-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.7	%	1	BHC0902	03/25/24	03/27/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/22/24 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.159	0.0100	mmhos/cm	1	BHC1097	03/31/24	04/01/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/22/24 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.75		pH Units	1	BHC1096	03/31/24	04/01/24	EPA 9045D	

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-E01@4'
2403360-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/22/24 11:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHC0877	03/22/24	03/23/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/22/24 11:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0371	92.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0389	97.4 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.5 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/22/24 11:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHC0878	"	03/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/22/24 11:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.29	74.3 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-E01@4'
2403360-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/22/24 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0899	03/25/24	03/26/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/22/24 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0243	72.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0232	69.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/22/24 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0917	03/25/24	04/24/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/22/24 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-E01@4'
2403360-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.98	0.200	mg/kg dry	1	BHC0923	03/25/24	03/26/24	EPA 6020B
Barium	234	0.400	"	"	"	"	"	"
Cadmium	0.336	0.200	"	"	"	"	"	"
Copper	4.39	0.400	"	"	"	"	"	"
Lead	12.0	0.200	"	"	"	"	"	"
Nickel	4.84	0.400	"	"	"	"	"	"
Silver	0.0257	0.0200	"	"	"	"	"	"
Zinc	17.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/22/24 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0912	03/25/24	03/29/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/22/24 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	144	0.0500	mg/L dry	1	BHC1095	03/31/24	04/26/24	EPA 6020B	
Magnesium	8.25	0.0500	"	"	"	"	"	"	
Sodium	15.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/22/24 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.336	0.00100	units	1	BHD1019	04/29/24	04/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/22/24 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-E01@4'
2403360-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	84.1	%	1	BHC0902	03/25/24	03/27/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/22/24 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.147	0.0100	mmhos/cm	1	BHC1097	03/31/24	04/01/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/22/24 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.71		pH Units	1	BHC1096	03/31/24	04/01/24	EPA 9045D	

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-W01@4'
2403360-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/22/24 11:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHC0877	03/22/24	03/23/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/22/24 11:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0371	92.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	99.0 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0395	98.7 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/22/24 11:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHC0878	"	03/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/22/24 11:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.77	78.1 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-W01@4'
2403360-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/22/24 11:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0899	03/25/24	03/26/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/22/24 11:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0212	63.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0237	71.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/22/24 11:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0917	03/25/24	04/24/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/22/24 11:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-W01@4'
2403360-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	3.09	0.200	mg/kg dry	1	BHC0923	03/25/24	03/26/24	EPA 6020B
Barium	303	0.400	"	"	"	"	"	"
Cadmium	0.350	0.200	"	"	"	"	"	"
Copper	4.60	0.400	"	"	"	"	"	"
Lead	12.6	0.200	"	"	"	"	"	"
Nickel	4.78	0.400	"	"	"	"	"	"
Silver	0.0282	0.0200	"	"	"	"	"	"
Zinc	18.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/22/24 11:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0912	03/25/24	03/29/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/22/24 11:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	484	0.0500	mg/L dry	1	BHC1095	03/31/24	04/26/24	EPA 6020B	
Magnesium	34.7	0.0500	"	"	"	"	"	"	
Sodium	24.4	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/22/24 11:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.289	0.00100	units	1	BHD1019	04/29/24	04/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/22/24 11:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-W01@4'
2403360-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	82.1	%	1	BHC0902	03/25/24	03/27/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/22/24 11:53**

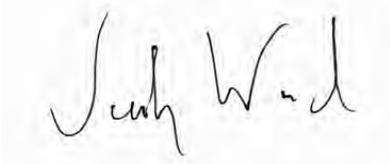
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.172	0.0100	mmhos/cm	1	BHC1097	03/31/24	04/01/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/22/24 11:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.75		pH Units	1	BHC1096	03/31/24	04/01/24	EPA 9045D	

Summit Scientific



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-E02@4'
2403360-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/22/24 11:47**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHC0877	03/22/24	03/23/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/22/24 11:47**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0378	94.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.0 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0399	99.8 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/22/24 11:47**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHC0878	"	03/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/22/24 11:47**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.29	74.3 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-E02@4'
2403360-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/22/24 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0899	03/25/24	03/26/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/22/24 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0239	71.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0263	78.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/22/24 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0917	03/25/24	04/24/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/22/24 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-E02@4'
2403360-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.07	0.200	mg/kg dry	1	BHC0923	03/25/24	03/26/24	EPA 6020B	
Barium	336	0.400	"	"	"	"	"	"	
Cadmium	0.343	0.200	"	"	"	"	"	"	
Copper	4.17	0.400	"	"	"	"	"	"	
Lead	15.3	0.200	"	"	"	"	"	"	
Nickel	4.65	0.400	"	"	"	"	"	"	
Silver	0.0316	0.0200	"	"	"	"	"	"	
Zinc	16.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/22/24 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0912	03/25/24	03/29/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/22/24 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	200	0.0500	mg/L dry	1	BHC1095	03/31/24	04/26/24	EPA 6020B	
Magnesium	12.7	0.0500	"	"	"	"	"	"	
Sodium	17.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/22/24 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.326	0.00100	units	1	BHD1019	04/29/24	04/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/22/24 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-E02@4'
2403360-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.5	%	1	BHC0902	03/25/24	03/27/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/22/24 11:47**

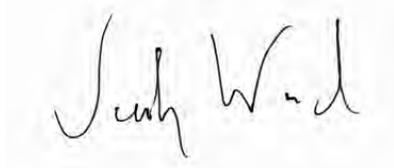
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.149	0.0100	mmhos/cm	1	BHC1097	03/31/24	04/01/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/22/24 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.70		pH Units	1	BHC1096	03/31/24	04/01/24	EPA 9045D	

Summit Scientific



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-W02@4'
2403360-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/22/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHC0877	03/22/24	03/23/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/22/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0392	98.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	99.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0395	98.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/22/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0878	"	03/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/22/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.93	71.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-W02@4'
2403360-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/22/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0899	03/25/24	03/26/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/22/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0185	55.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0202	60.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/22/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0917	03/25/24	04/24/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/22/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-W02@4'
2403360-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	3.43	0.200	mg/kg dry	1	BHC0923	03/25/24	03/26/24	EPA 6020B
Barium	306	0.400	"	"	"	"	"	"
Cadmium	0.401	0.200	"	"	"	"	"	"
Copper	4.90	0.400	"	"	"	"	"	"
Lead	11.8	0.200	"	"	"	"	"	"
Nickel	5.21	0.400	"	"	"	"	"	"
Silver	0.0296	0.0200	"	"	"	"	"	"
Zinc	20.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/22/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0912	03/25/24	03/29/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/22/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1740	0.0500	mg/L dry	1	BHC1095	03/31/24	04/26/24	EPA 6020B	
Magnesium	86.8	0.0500	"	"	"	"	"	"	
Sodium	24.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/22/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.157	0.00100	units	1	BHD1019	04/29/24	04/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/22/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-W02@4'
2403360-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	79.9	%	1	BHC0902	03/25/24	03/27/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/22/24 11:55**

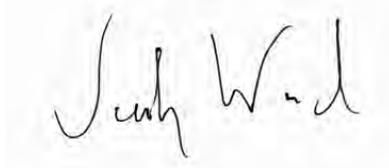
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.348	0.0100	mmhos/cm	1	BHC1097	03/31/24	04/01/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/22/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.11		pH Units	1	BHC1096	03/31/24	04/01/24	EPA 9045D	

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-B01@5'
2403360-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/22/24 11:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHC0877	03/22/24	03/23/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.021	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.033	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	7.4	0.50	"	"	"	"	"	"	

Date Sampled: **03/22/24 11:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0380	95.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	99.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0502	125 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/22/24 11:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	2200	50	mg/kg	1	BHC0878	"	03/23/24	EPA 8015M	
C28-C36 (ORO)	460	50	"	"	"	"	"	"	

Date Sampled: **03/22/24 11:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	14.4	115 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
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Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-B01@5'
2403360-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/22/24 11:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0899	03/25/24	03/26/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.150	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.0590	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.133	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0837	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.933	0.00500	"	"	"	"	"	"	E
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/22/24 11:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0208	62.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0362	109 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/22/24 11:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0917	03/25/24	04/24/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/22/24 11:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-B01@5'
2403360-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	3.85	0.200	mg/kg dry	1	BHC0923	03/25/24	03/26/24	EPA 6020B
Barium	252	0.400	"	"	"	"	"	"
Cadmium	0.362	0.200	"	"	"	"	"	"
Copper	4.67	0.400	"	"	"	"	"	"
Lead	12.1	0.200	"	"	"	"	"	"
Nickel	5.01	0.400	"	"	"	"	"	"
Silver	0.0322	0.0200	"	"	"	"	"	"
Zinc	19.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/22/24 11:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0912	03/25/24	03/29/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/22/24 11:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	458	0.0500	mg/L dry	1	BHC1095	03/31/24	04/26/24	EPA 6020B	
Magnesium	32.8	0.0500	"	"	"	"	"	"	
Sodium	31.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/22/24 11:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.380	0.00100	units	1	BHD1019	04/29/24	04/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/22/24 11:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-B01@5'
2403360-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.9	%	1	BHC0902	03/25/24	03/27/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/22/24 11:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.219	0.0100	mmhos/cm	1	BHC1097	03/31/24	04/01/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/22/24 11:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.35		pH Units	1	BHC1096	03/31/24	04/01/24	EPA 9045D	

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-B02@5'
2403360-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/22/24 11:59**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHC0877	03/22/24	03/23/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/22/24 11:59**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0391	97.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0441	110 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/22/24 11:59**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHC0878	"	03/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/22/24 11:59**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.49	67.9 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-B02@5'
2403360-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/22/24 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0899	03/25/24	03/26/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/22/24 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0220	66.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0244	73.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/22/24 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0917	03/25/24	04/24/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/22/24 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-B02@5'
2403360-08 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.89	0.200	mg/kg dry	1	BHC0923	03/25/24	03/26/24	EPA 6020B
Barium	194	0.400	"	"	"	"	"	"
Cadmium	0.434	0.200	"	"	"	"	"	"
Copper	4.52	0.400	"	"	"	"	"	"
Lead	12.4	0.200	"	"	"	"	"	"
Nickel	4.47	0.400	"	"	"	"	"	"
Silver	0.0432	0.0200	"	"	"	"	"	"
Zinc	18.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/22/24 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0912	03/25/24	03/29/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/22/24 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	332	0.0500	mg/L dry	1	BHC1095	03/31/24	04/26/24	EPA 6020B	
Magnesium	53.6	0.0500	"	"	"	"	"	"	
Sodium	65.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/22/24 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.880	0.00100	units	1	BHD1019	04/29/24	04/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/22/24 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

FL-B02@5'
2403360-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	75.0	%	1	BHC0902	03/25/24	03/27/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/22/24 11:59**

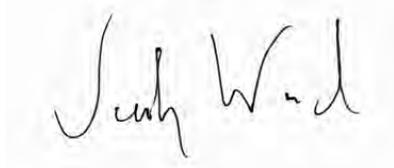
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.215	0.0100	mmhos/cm	1	BHC1097	03/31/24	04/01/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/22/24 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.05		pH Units	1	BHC1096	03/31/24	04/01/24	EPA 9045D	

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHC0877 - EPA 5030 Soil MS

Blank (BHC0877-BLK1)

Prepared: 03/22/24 Analyzed: 03/23/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0372		"	0.0400		92.9	50-150			
<i>Surrogate: Toluene-d8</i>	0.0408		"	0.0400		102	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0409		"	0.0400		102	50-150			

LCS (BHC0877-BS1)

Prepared: 03/22/24 Analyzed: 03/23/24

Benzene	0.112	0.0020	mg/kg	0.100		112	70-130			
Toluene	0.105	0.0050	"	0.100		105	70-130			
Ethylbenzene	0.0947	0.0050	"	0.100		94.7	70-130			
m,p-Xylene	0.189	0.010	"	0.200		94.6	70-130			
o-Xylene	0.0916	0.0050	"	0.100		91.6	70-130			
1,2,4-Trimethylbenzene	0.0882	0.0050	"	0.100		88.2	70-130			
1,3,5-Trimethylbenzene	0.0871	0.0050	"	0.100		87.1	70-130			
Naphthalene	0.0721	0.0038	"	0.100		72.1	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0362		"	0.0400		90.4	50-150			
<i>Surrogate: Toluene-d8</i>	0.0410		"	0.0400		102	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0390		"	0.0400		97.4	50-150			

Matrix Spike (BHC0877-MS1)

Source: 2403352-01

Prepared: 03/22/24 Analyzed: 03/23/24

Benzene	0.0924	0.0020	mg/kg	0.100	ND	92.4	70-130			
Toluene	0.0850	0.0050	"	0.100	ND	85.0	70-130			
Ethylbenzene	0.0770	0.0050	"	0.100	ND	77.0	70-130			
m,p-Xylene	0.152	0.010	"	0.200	ND	76.1	70-130			
o-Xylene	0.0745	0.0050	"	0.100	ND	74.5	70-130			
1,2,4-Trimethylbenzene	0.0929	0.0050	"	0.100	ND	92.9	70-130			
1,3,5-Trimethylbenzene	0.0968	0.0050	"	0.100	ND	96.8	70-130			
Naphthalene	0.0781	0.0038	"	0.100	ND	78.1	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0364		"	0.0400		91.1	50-150			
<i>Surrogate: Toluene-d8</i>	0.0404		"	0.0400		101	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0400		"	0.0400		99.9	50-150			

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHC0877 - EPA 5030 Soil MS

Matrix Spike Dup (BHC0877-MSD1)	Source: 2403352-01			Prepared: 03/22/24 Analyzed: 03/23/24						
Benzene	0.104	0.0020	mg/kg	0.100	ND	104	70-130	11.5	30	
Toluene	0.0962	0.0050	"	0.100	ND	96.2	70-130	12.3	30	
Ethylbenzene	0.0851	0.0050	"	0.100	ND	85.1	70-130	10.0	30	
m,p-Xylene	0.168	0.010	"	0.200	ND	83.9	70-130	9.84	30	
o-Xylene	0.0803	0.0050	"	0.100	ND	80.3	70-130	7.56	30	
1,2,4-Trimethylbenzene	0.0983	0.0050	"	0.100	ND	98.3	70-130	5.68	30	
1,3,5-Trimethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130	4.58	30	
Naphthalene	0.0832	0.0038	"	0.100	ND	83.2	70-130	6.33	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0401</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0412</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0402</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>50-150</i>			

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHC0878 - EPA 3550A

Blank (BHC0878-BLK1)

Prepared: 03/22/24 Analyzed: 03/23/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	15.4		"	12.5		123		30-150			

LCS (BHC0878-BS1)

Prepared: 03/22/24 Analyzed: 03/23/24

C10-C28 (DRO)	517	50	mg/kg	500		103		70-130			
Surrogate: <i>o</i> -Terphenyl	13.3		"	12.5		106		30-150			

Matrix Spike (BHC0878-MS1)

Source: 2403352-01

Prepared: 03/22/24 Analyzed: 03/23/24

C10-C28 (DRO)	427	50	mg/kg	500	32.0	79.0		70-130			
Surrogate: <i>o</i> -Terphenyl	8.55		"	12.5		68.4		30-150			

Matrix Spike Dup (BHC0878-MSD1)

Source: 2403352-01

Prepared: 03/22/24 Analyzed: 03/23/24

C10-C28 (DRO)	384	50	mg/kg	500	32.0	70.4		70-130	10.5	20	
Surrogate: <i>o</i> -Terphenyl	9.10		"	12.5		72.8		30-150			

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHC0899 - EPA 5030 Soil MS

Blank (BHC0899-BLK1)

Prepared & Analyzed: 03/25/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0260</i>		"	<i>0.0333</i>		<i>78.0</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0322</i>		"	<i>0.0333</i>		<i>96.5</i>		<i>40-150</i>		

LCS (BHC0899-BS1)

Prepared & Analyzed: 03/25/24

Acenaphthene	0.0332	0.00500	mg/kg	0.0333		99.6		31-137		
Anthracene	0.0328	0.00500	"	0.0333		98.3		30-120		
Benzo (a) anthracene	0.0307	0.00500	"	0.0333		92.0		30-120		
Benzo (a) pyrene	0.0254	0.00500	"	0.0333		76.3		30-120		
Benzo (b) fluoranthene	0.0301	0.00500	"	0.0333		90.3		30-120		
Benzo (k) fluoranthene	0.0353	0.00500	"	0.0333		106		30-120		
Chrysene	0.0353	0.00500	"	0.0333		106		30-120		
Dibenz (a,h) anthracene	0.0250	0.00500	"	0.0333		75.1		30-120		
Fluoranthene	0.0332	0.00500	"	0.0333		99.5		30-120		
Fluorene	0.0290	0.00500	"	0.0333		86.9		30-120		
Indeno (1,2,3-cd) pyrene	0.0184	0.00500	"	0.0333		55.2		30-120		
Pyrene	0.0377	0.00500	"	0.0333		113		35-142		
1-Methylnaphthalene	0.0371	0.00500	"	0.0333		111		35-142		
2-Methylnaphthalene	0.0367	0.00500	"	0.0333		110		35-142		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0346</i>		"	<i>0.0333</i>		<i>104</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0318</i>		"	<i>0.0333</i>		<i>95.5</i>		<i>40-150</i>		

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHC0899 - EPA 5030 Soil MS

Matrix Spike (BHC0899-MS1)	Source: 2403339-01			Prepared & Analyzed: 03/25/24						
Acenaphthene	0.0153	0.00500	mg/kg	0.0333	ND	46.0	31-137			
Anthracene	0.0167	0.00500	"	0.0333	ND	50.0	30-120			
Benzo (a) anthracene	0.0169	0.00500	"	0.0333	ND	50.7	30-120			
Benzo (a) pyrene	0.0145	0.00500	"	0.0333	ND	43.6	30-120			
Benzo (b) fluoranthene	0.0152	0.00500	"	0.0333	ND	45.6	30-120			
Benzo (k) fluoranthene	0.0150	0.00500	"	0.0333	ND	45.1	30-120			
Chrysene	0.0168	0.00500	"	0.0333	ND	50.4	30-120			
Dibenz (a,h) anthracene	0.0214	0.00500	"	0.0333	ND	64.1	30-120			
Fluoranthene	0.0183	0.00500	"	0.0333	ND	55.0	30-120			
Fluorene	0.0160	0.00500	"	0.0333	ND	47.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0149	0.00500	"	0.0333	ND	44.6	30-120			
Pyrene	0.0198	0.00500	"	0.0333	ND	59.3	35-142			
1-Methylnaphthalene	0.0155	0.00500	"	0.0333	ND	46.6	15-130			
2-Methylnaphthalene	0.0194	0.00500	"	0.0333	ND	58.3	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0143</i>		<i>"</i>	<i>0.0333</i>		<i>42.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0182</i>		<i>"</i>	<i>0.0333</i>		<i>54.7</i>	<i>40-150</i>			

Matrix Spike Dup (BHC0899-MSD1)	Source: 2403339-01			Prepared & Analyzed: 03/25/24						
Acenaphthene	0.0170	0.00500	mg/kg	0.0333	ND	50.9	31-137	10.2	30	
Anthracene	0.0185	0.00500	"	0.0333	ND	55.6	30-120	10.7	30	
Benzo (a) anthracene	0.0187	0.00500	"	0.0333	ND	56.2	30-120	10.2	30	
Benzo (a) pyrene	0.0163	0.00500	"	0.0333	ND	48.9	30-120	11.5	30	
Benzo (b) fluoranthene	0.0173	0.00500	"	0.0333	ND	51.8	30-120	12.8	30	
Benzo (k) fluoranthene	0.0158	0.00500	"	0.0333	ND	47.3	30-120	4.90	30	
Chrysene	0.0172	0.00500	"	0.0333	ND	51.7	30-120	2.55	30	
Dibenz (a,h) anthracene	0.0234	0.00500	"	0.0333	ND	70.3	30-120	9.13	30	
Fluoranthene	0.0196	0.00500	"	0.0333	ND	58.8	30-120	6.70	30	
Fluorene	0.0168	0.00500	"	0.0333	ND	50.5	30-120	5.34	30	
Indeno (1,2,3-cd) pyrene	0.0153	0.00500	"	0.0333	ND	46.0	30-120	3.12	30	
Pyrene	0.0210	0.00500	"	0.0333	ND	63.0	35-142	6.16	30	
1-Methylnaphthalene	0.0159	0.00500	"	0.0333	ND	47.6	15-130	2.15	50	
2-Methylnaphthalene	0.0175	0.00500	"	0.0333	ND	52.4	15-130	10.7	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0139</i>		<i>"</i>	<i>0.0333</i>		<i>41.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0192</i>		<i>"</i>	<i>0.0333</i>		<i>57.5</i>	<i>40-150</i>			

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD	Limit	Notes
		Limit	Units			%REC	Limits			

Batch BHC0917 - EPA 3050B

Blank (BHC0917-BLK1)

Prepared: 03/25/24 Analyzed: 04/24/24

Boron ND 2.00 mg/L

LCS (BHC0917-BS1)

Prepared: 03/25/24 Analyzed: 04/24/24

Boron 4.09 2.00 mg/L 5.00 81.7 80-120

Duplicate (BHC0917-DUP1)

Source: 2403322-17

Prepared: 03/25/24 Analyzed: 04/24/24

Boron 0.258 2.00 mg/L 0.157 49.1 20 QR-01

Matrix Spike (BHC0917-MS1)

Source: 2403322-17

Prepared: 03/25/24 Analyzed: 04/24/24

Boron 4.08 2.00 mg/L 5.00 0.157 78.4 75-125

Matrix Spike Dup (BHC0917-MSD1)

Source: 2403322-17

Prepared: 03/25/24 Analyzed: 04/24/24

Boron 4.53 2.00 mg/L 5.00 0.157 87.5 75-125 10.6 25

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHC0923 - EPA 3050B

Blank (BHC0923-BLK1)

Prepared: 03/25/24 Analyzed: 03/26/24

Arsenic	ND	0.200	mg/kg wet							
Barium	ND	0.400	"							
Cadmium	ND	0.200	"							
Copper	ND	0.400	"							
Lead	ND	0.200	"							
Nickel	ND	0.400	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
Selenium	ND	0.260	"							

LCS (BHC0923-BS1)

Prepared: 03/25/24 Analyzed: 03/26/24

Arsenic	47.5	0.200	mg/kg wet	40.0	119	80-120
Barium	47.2	0.400	"	40.0	118	80-120
Cadmium	2.35	0.200	"	2.00	118	80-120
Copper	48.1	0.400	"	40.0	120	80-120
Lead	23.5	0.200	"	20.0	117	80-120
Nickel	47.7	0.400	"	40.0	119	80-120
Silver	2.32	0.0200	"	2.00	116	80-120
Zinc	47.7	0.400	"	40.0	119	80-120
Selenium	4.74	0.260	"	4.00	119	80-120

Duplicate (BHC0923-DUP1)

Source: 2403272-01

Prepared: 03/25/24 Analyzed: 03/26/24

Arsenic	19.0	0.200	mg/kg dry	23.9	23.1	20	QR-04
Barium	66.2	0.400	"	77.0	15.1	20	
Cadmium	0.369	0.200	"	0.428	14.8	20	
Copper	9.29	0.400	"	10.9	15.7	20	
Lead	30.6	0.200	"	33.4	8.70	20	
Nickel	2.57	0.400	"	2.85	10.4	20	
Silver	0.0956	0.0200	"	0.104	8.22	20	
Zinc	17.6	0.400	"	19.1	7.98	20	
Selenium	0.549	0.260	"	0.621	12.2	20	

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch BHC0923 - EPA 3050B

Matrix Spike (BHC0923-MS1)

Source: 2403272-01

Prepared: 03/25/24 Analyzed: 03/26/24

Arsenic	75.0	0.200	mg/kg dry	54.6	23.9	93.4	75-125				
Barium	118	0.400	"	54.6	77.0	75.4	75-125				
Cadmium	3.38	0.200	"	2.73	0.428	108	75-125				
Copper	44.6	0.400	"	54.6	10.9	61.7	75-125				QM-07
Lead	52.4	0.200	"	27.3	33.4	69.7	75-125				QM-07
Nickel	39.6	0.400	"	54.6	2.85	67.2	75-125				QM-07
Silver	3.07	0.0200	"	2.73	0.104	109	75-125				
Zinc	54.5	0.400	"	54.6	19.1	64.7	75-125				QM-07
Selenium	6.15	0.260	"	5.46	0.621	101	75-125				

Matrix Spike Dup (BHC0923-MSD1)

Source: 2403272-01

Prepared: 03/25/24 Analyzed: 03/26/24

Arsenic	72.2	0.200	mg/kg dry	54.6	23.9	88.4	75-125	3.73	25		
Barium	115	0.400	"	54.6	77.0	69.9	75-125	2.56	25		QM-07
Cadmium	3.33	0.200	"	2.73	0.428	106	75-125	1.38	25		
Copper	44.3	0.400	"	54.6	10.9	61.2	75-125	0.592	25		QM-07
Lead	52.0	0.200	"	27.3	33.4	68.0	75-125	0.895	25		QM-07
Nickel	39.2	0.400	"	54.6	2.85	66.6	75-125	0.825	25		QM-07
Silver	3.02	0.0200	"	2.73	0.104	107	75-125	1.80	25		
Zinc	54.0	0.400	"	54.6	19.1	63.9	75-125	0.856	25		QM-07
Selenium	5.93	0.260	"	5.46	0.621	97.2	75-125	3.65	25		

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHC0912 - 3060A Mod

Blank (BHC0912-BLK1)

Prepared: 03/25/24 Analyzed: 03/29/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHC0912-BS1)

Prepared: 03/25/24 Analyzed: 03/29/24

Chromium, Hexavalent 24.7 0.30 mg/kg wet 25.0 98.8 80-120

Duplicate (BHC0912-DUP1)

Source: 2403272-01

Prepared: 03/25/24 Analyzed: 03/29/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHC0912-MS1)

Source: 2403272-01

Prepared: 03/25/24 Analyzed: 03/29/24

Chromium, Hexavalent 34.1 0.30 mg/kg dry 34.1 ND 99.8 75-125

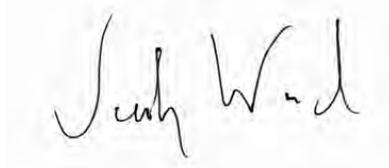
Matrix Spike Dup (BHC0912-MSD1)

Source: 2403272-01

Prepared: 03/25/24 Analyzed: 03/29/24

Chromium, Hexavalent 34.1 0.30 mg/kg dry 34.1 ND 99.8 75-125 0.00 20

Summit Scientific



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHC1095 - General Preparation

Blank (BHC1095-BLK1)

Prepared: 03/31/24 Analyzed: 04/26/24

Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BHC1095-BS1)

Prepared: 03/31/24 Analyzed: 04/26/24

Calcium	5.06	0.0500	mg/L wet	5.00		101	70-130			
Magnesium	4.58	0.0500	"	5.00		91.7	70-130			
Sodium	4.67	0.0500	"	5.00		93.4	70-130			

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
 Project Manager: Sam Vogt

Reported:
 04/29/24 14:53

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

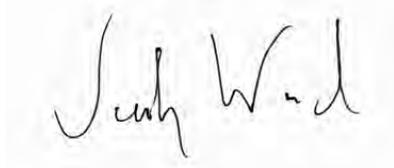
Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC			RPD	Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHC0902 - General Preparation

Duplicate (BHC0902-DUP1)	Source: 2401098-01	Prepared: 03/25/24	Analyzed: 03/27/24		
% Solids	95.6	%	94.9	0.710	20

Summit Scientific



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHC1097 - General Preparation

Blank (BHC1097-BLK1)

Prepared: 03/31/24 Analyzed: 04/01/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHC1097-BS1)

Prepared: 03/31/24 Analyzed: 04/01/24

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 99.7 95-105

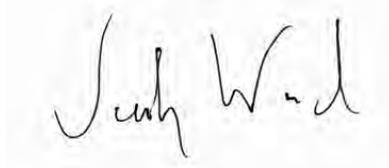
Duplicate (BHC1097-DUP1)

Source: 2403244-01

Prepared: 03/31/24 Analyzed: 04/01/24

Specific Conductance (EC) 0.184 0.0100 mmhos/cm 0.188 2.42 20

Summit Scientific



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
 Project Manager: Sam Vogt

Reported:
 04/29/24 14:53

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC			RPD	Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHC1096 - General Preparation

LCS (BHC1096-BS1)

Prepared: 03/31/24 Analyzed: 04/01/24

pH	8.99	pH Units	9.18	97.9	95-105
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Duplicate (BHC1096-DUP1)

Source: 2403244-01

Prepared: 03/31/24 Analyzed: 04/01/24

pH	8.17	pH Units	8.33	1.94	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
04/29/24 14:53

Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 01, 2024

Sam Vogt

Tasman Geosciences

6855 W. 119th Ave.

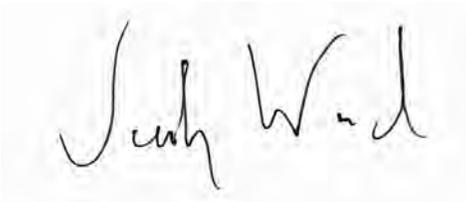
Broomfield, CO 80020

RE: Civitas - Hunt 8-60 17A

Work Order #2404209

Enclosed are the results of analyses for samples received by Summit Scientific on 04/11/24 17:41. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a long horizontal stroke at the end.

Jacob Wood For Paul Shrewsbury

President



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DEL-N01@10-11'	2404209-01	Soil	04/11/24 10:30	04/11/24 17:41
DEL-N01@14-15'	2404209-02	Soil	04/11/24 11:00	04/11/24 17:41

Summit Scientific

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S₂

Sample Receipt Checklist

S2 Work Order# 2404209

Client: Amelst Gasman Client Project ID: Hunt 8-60 17A

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) 72 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on JCE</u>
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Same day</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

AS
Custodian Printed Name

4/11/24
Date/Time

2404



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

DEL-N01@10-11'
2404209-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/11/24 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHD0383	04/11/24	04/12/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **04/11/24 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0363	90.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0395	98.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0414	103 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/11/24 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHD0382	04/11/24	04/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/11/24 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	4.44	35.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

DEL-N01@10-11'
2404209-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHD0391	04/12/24	04/13/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0227	68.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0204	61.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHD0546	04/17/24	04/27/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

DEL-N01@10-11'
2404209-01 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.19	0.181	mg/kg dry	1	BHD0836	04/23/24	04/27/24	EPA 6020B	
Barium	55.9	0.362	"	"	"	"	"	"	
Cadmium	0.713	0.181	"	"	"	"	"	"	
Copper	5.51	0.362	"	"	"	"	"	"	
Lead	22.3	0.181	"	"	"	"	"	"	
Nickel	4.56	0.362	"	"	"	"	"	"	
Silver	0.0646	0.0181	"	"	"	"	"	"	
Zinc	14.1	0.362	"	"	"	"	"	"	
Selenium	ND	0.236	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0567	04/17/24	04/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **04/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	16.6	0.0500	mg/L dry	1	BHD0778	04/22/24	04/30/24	EPA 6020B	
Magnesium	3.21	0.0500	"	"	"	"	"	"	
Sodium	129	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	7.59	0.00100	units	1	BHE0018	05/01/24	05/01/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

DEL-N01@10-11'
2404209-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	75.2	%	1	BHD0439	04/15/24	04/15/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.651	0.0100	mmhos/cm	1	BHD0779	04/22/24	04/26/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **04/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.83		pH Units	1	BHD0780	04/22/24	04/26/24	EPA 9045D	

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Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

DEL-N01@14-15'
2404209-02 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHD0383	04/11/24	04/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0396	99.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0382	95.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHD0382	04/11/24	04/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	3.79	30.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

DEL-N01@14-15'
2404209-02 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **04/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHD0391	04/12/24	04/13/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0246	73.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0237	71.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHD0546	04/17/24	04/27/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

DEL-N01@14-15'
2404209-02 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.95	0.200	mg/kg dry	1	BHD0836	04/23/24	04/27/24	EPA 6020B
Barium	44.5	0.400	"	"	"	"	"	"
Cadmium	0.377	0.200	"	"	"	"	"	"
Copper	6.15	0.400	"	"	"	"	"	"
Lead	15.2	0.200	"	"	"	"	"	"
Nickel	3.49	0.400	"	"	"	"	"	"
Silver	0.0537	0.0200	"	"	"	"	"	"
Zinc	16.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0567	04/17/24	04/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **04/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	17.8	0.0500	mg/L dry	1	BHD0778	04/22/24	04/30/24	EPA 6020B	
Magnesium	3.45	0.0500	"	"	"	"	"	"	
Sodium	149	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	8.47	0.00100	units	1	BHE0018	05/01/24	05/01/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

DEL-N01@14-15'
2404209-02 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	74.5	%	1	BHD0439	04/15/24	04/15/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/11/24 11:00**

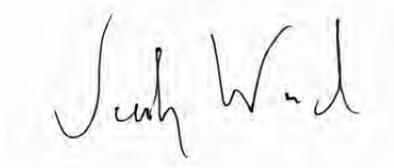
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.720	0.0100	mmhos/cm	1	BHD0779	04/22/24	04/26/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **04/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.70		pH Units	1	BHD0780	04/22/24	04/26/24	EPA 9045D	

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Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHD0383 - EPA 5030 Soil MS

Blank (BHD0383-BLK1)

Prepared: 04/11/24 Analyzed: 04/12/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0326		"	0.0400		81.4	50-150			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.3	50-150			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.7	50-150			

LCS (BHD0383-BS1)

Prepared: 04/11/24 Analyzed: 04/12/24

Benzene	0.0724	0.0020	mg/kg	0.100		72.4	70-130			
Toluene	0.108	0.0050	"	0.100		108	70-130			
Ethylbenzene	0.122	0.0050	"	0.100		122	70-130			
m,p-Xylene	0.242	0.010	"	0.200		121	70-130			
o-Xylene	0.122	0.0050	"	0.100		122	70-130			
1,2,4-Trimethylbenzene	0.116	0.0050	"	0.100		116	70-130			
1,3,5-Trimethylbenzene	0.120	0.0050	"	0.100		120	70-130			
Naphthalene	0.0826	0.0038	"	0.100		82.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0504		"	0.0400		126	50-150			
Surrogate: Toluene-d8	0.0316		"	0.0400		78.9	50-150			
Surrogate: 4-Bromofluorobenzene	0.0537		"	0.0400		134	50-150			

Matrix Spike (BHD0383-MS1)

Source: 2404209-01

Prepared: 04/11/24 Analyzed: 04/12/24

Benzene	0.0953	0.0020	mg/kg	0.100	ND	95.3	70-130			
Toluene	0.111	0.0050	"	0.100	ND	111	70-130			
Ethylbenzene	0.0886	0.0050	"	0.100	ND	88.6	70-130			
m,p-Xylene	0.176	0.010	"	0.200	ND	87.9	70-130			
o-Xylene	0.0853	0.0050	"	0.100	ND	85.3	70-130			
1,2,4-Trimethylbenzene	0.0812	0.0050	"	0.100	ND	81.2	70-130			
1,3,5-Trimethylbenzene	0.0855	0.0050	"	0.100	ND	85.5	70-130			
Naphthalene	0.0948	0.0038	"	0.100	ND	94.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0491		"	0.0400		123	50-150			
Surrogate: Toluene-d8	0.0464		"	0.0400		116	50-150			
Surrogate: 4-Bromofluorobenzene	0.0445		"	0.0400		111	50-150			

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Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHD0383 - EPA 5030 Soil MS

Matrix Spike Dup (BHD0383-MSD1)	Source: 2404209-01			Prepared: 04/11/24 Analyzed: 04/12/24						
Benzene	0.0887	0.0020	mg/kg	0.100	ND	88.7	70-130	7.18	30	
Toluene	0.124	0.0050	"	0.100	ND	124	70-130	11.2	30	
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130	18.5	30	
m,p-Xylene	0.206	0.010	"	0.200	ND	103	70-130	15.7	30	
o-Xylene	0.0983	0.0050	"	0.100	ND	98.3	70-130	14.2	30	
1,2,4-Trimethylbenzene	0.0926	0.0050	"	0.100	ND	92.6	70-130	13.1	30	
1,3,5-Trimethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130	16.7	30	
Naphthalene	0.110	0.0038	"	0.100	ND	110	70-130	14.7	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0356</i>		<i>"</i>	<i>0.0400</i>		<i>88.9</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0566</i>		<i>"</i>	<i>0.0400</i>		<i>141</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0568</i>		<i>"</i>	<i>0.0400</i>		<i>142</i>	<i>50-150</i>			

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Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHD0382 - EPA 3550A

Blank (BHD0382-BLK1)

Prepared: 04/11/24 Analyzed: 04/12/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	6.76		"	12.5		54.1	30-150				

LCS (BHD0382-BS1)

Prepared: 04/11/24 Analyzed: 04/12/24

C10-C28 (DRO)	498	50	mg/kg	500		99.7	70-130				
Surrogate: <i>o</i> -Terphenyl	6.45		"	12.5		51.6	30-150				

Matrix Spike (BHD0382-MS1)

Source: 2404209-01

Prepared: 04/11/24 Analyzed: 04/12/24

C10-C28 (DRO)	423	50	mg/kg	500	20.2	80.5	70-130				
Surrogate: <i>o</i> -Terphenyl	4.96		"	12.5		39.7	30-150				

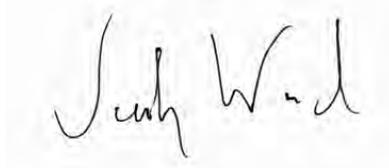
Matrix Spike Dup (BHD0382-MSD1)

Source: 2404209-01

Prepared: 04/11/24 Analyzed: 04/12/24

C10-C28 (DRO)	425	50	mg/kg	500	20.2	80.9	70-130	0.470	20		
Surrogate: <i>o</i> -Terphenyl	5.00		"	12.5		40.0	30-150				

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Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			Limit	RPD	Limit	RPD	

Batch BHD0391 - EPA 5030 Soil MS

Blank (BHD0391-BLK1)

Prepared & Analyzed: 04/12/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0341</i>		"	<i>0.0333</i>		<i>102</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0332</i>		"	<i>0.0333</i>		<i>99.6</i>		<i>40-150</i>		

LCS (BHD0391-BS1)

Prepared & Analyzed: 04/12/24

Acenaphthene	0.0347	0.00500	mg/kg	0.0333	104	31-137
Anthracene	0.0380	0.00500	"	0.0333	114	30-120
Benzo (a) anthracene	0.0260	0.00500	"	0.0333	77.9	30-120
Benzo (a) pyrene	0.0219	0.00500	"	0.0333	65.8	30-120
Benzo (b) fluoranthene	0.0235	0.00500	"	0.0333	70.5	30-120
Benzo (k) fluoranthene	0.0266	0.00500	"	0.0333	79.7	30-120
Chrysene	0.0344	0.00500	"	0.0333	103	30-120
Dibenz (a,h) anthracene	0.0301	0.00500	"	0.0333	90.2	30-120
Fluoranthene	0.0344	0.00500	"	0.0333	103	30-120
Fluorene	0.0270	0.00500	"	0.0333	80.9	30-120
Indeno (1,2,3-cd) pyrene	0.0333	0.00500	"	0.0333	100	30-120
Pyrene	0.0411	0.00500	"	0.0333	123	35-142
1-Methylnaphthalene	0.0365	0.00500	"	0.0333	109	35-142
2-Methylnaphthalene	0.0348	0.00500	"	0.0333	104	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0362</i>		"	<i>0.0333</i>	<i>108</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0330</i>		"	<i>0.0333</i>	<i>98.9</i>	<i>40-150</i>

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHD0391 - EPA 5030 Soil MS

Matrix Spike (BHD0391-MS1)

Source: 2404166-01

Prepared & Analyzed: 04/12/24

Acenaphthene	0.0181	0.00500	mg/kg	0.0333	ND	54.4	31-137			
Anthracene	0.0167	0.00500	"	0.0333	ND	50.0	30-120			
Benzo (a) anthracene	0.0142	0.00500	"	0.0333	ND	42.6	30-120			
Benzo (a) pyrene	0.0143	0.00500	"	0.0333	ND	43.0	30-120			
Benzo (b) fluoranthene	0.0150	0.00500	"	0.0333	ND	44.9	30-120			
Benzo (k) fluoranthene	0.0185	0.00500	"	0.0333	ND	55.6	30-120			
Chrysene	0.0186	0.00500	"	0.0333	ND	55.8	30-120			
Dibenz (a,h) anthracene	0.0135	0.00500	"	0.0333	ND	40.4	30-120			
Fluoranthene	0.0163	0.00500	"	0.0333	ND	48.9	30-120			
Fluorene	0.0159	0.00500	"	0.0333	ND	47.8	30-120			
Indeno (1,2,3-cd) pyrene	0.0203	0.00500	"	0.0333	ND	61.0	30-120			
Pyrene	0.0197	0.00500	"	0.0333	ND	59.0	35-142			
1-Methylnaphthalene	0.0179	0.00500	"	0.0333	ND	53.6	15-130			
2-Methylnaphthalene	0.0156	0.00500	"	0.0333	ND	46.7	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0195		"	0.0333		58.6	40-150			
Surrogate: Fluoranthene-d10	0.0165		"	0.0333		49.4	40-150			

Matrix Spike Dup (BHD0391-MSD1)

Source: 2404166-01

Prepared & Analyzed: 04/12/24

Acenaphthene	0.0273	0.00500	mg/kg	0.0333	ND	81.9	31-137	40.4	30	QR-02
Anthracene	0.0272	0.00500	"	0.0333	ND	81.5	30-120	47.9	30	QR-02
Benzo (a) anthracene	0.0253	0.00500	"	0.0333	ND	76.0	30-120	56.2	30	QR-02
Benzo (a) pyrene	0.0210	0.00500	"	0.0333	ND	63.0	30-120	37.8	30	QR-02
Benzo (b) fluoranthene	0.0213	0.00500	"	0.0333	ND	64.0	30-120	35.1	30	QR-02
Benzo (k) fluoranthene	0.0254	0.00500	"	0.0333	ND	76.2	30-120	31.2	30	QR-02
Chrysene	0.0305	0.00500	"	0.0333	ND	91.5	30-120	48.5	30	QR-02
Dibenz (a,h) anthracene	0.0225	0.00500	"	0.0333	ND	67.4	30-120	50.0	30	QR-02
Fluoranthene	0.0334	0.00500	"	0.0333	ND	100	30-120	68.8	30	QR-02
Fluorene	0.0231	0.00500	"	0.0333	ND	69.2	30-120	36.5	30	QR-02
Indeno (1,2,3-cd) pyrene	0.0303	0.00500	"	0.0333	ND	91.0	30-120	39.4	30	QR-02
Pyrene	0.0387	0.00500	"	0.0333	ND	116	35-142	65.3	30	QR-02
1-Methylnaphthalene	0.0264	0.00500	"	0.0333	ND	79.3	15-130	38.6	50	
2-Methylnaphthalene	0.0281	0.00500	"	0.0333	ND	84.3	15-130	57.4	50	QR-02
Surrogate: 2-Methylnaphthalene-d10	0.0278		"	0.0333		83.5	40-150			
Surrogate: Fluoranthene-d10	0.0264		"	0.0333		79.2	40-150			

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHD0546 - EPA 3050B

Blank (BHD0546-BLK1)

Prepared: 04/17/24 Analyzed: 04/27/24

Boron ND 2.00 mg/L

LCS (BHD0546-BS1)

Prepared: 04/17/24 Analyzed: 04/27/24

Boron 4.94 2.00 mg/L 5.00 98.8 80-120

Duplicate (BHD0546-DUP1)

Source: 2404127-01

Prepared: 04/17/24 Analyzed: 04/27/24

Boron 0.279 2.00 mg/L 0.295 5.39 20

Matrix Spike (BHD0546-MS1)

Source: 2404127-01

Prepared: 04/17/24 Analyzed: 04/27/24

Boron 5.13 2.00 mg/L 5.00 0.295 96.6 75-125

Matrix Spike Dup (BHD0546-MSD1)

Source: 2404127-01

Prepared: 04/17/24 Analyzed: 04/27/24

Boron 5.22 2.00 mg/L 5.00 0.295 98.5 75-125 1.80 25

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD		

Batch BHD0836 - EPA 3050B

Blank (BHD0836-BLK1)

Prepared: 04/23/24 Analyzed: 04/26/24

Arsenic	ND	0.200	mg/kg wet						
Barium	ND	0.400	"						
Cadmium	ND	0.200	"						
Copper	ND	0.400	"						
Lead	ND	0.200	"						
Nickel	ND	0.400	"						
Silver	ND	0.0200	"						
Zinc	ND	0.400	"						
Selenium	ND	0.260	"						

LCS (BHD0836-BS1)

Prepared: 04/23/24 Analyzed: 04/26/24

Arsenic	39.4	0.200	mg/kg wet	40.0	98.4	80-120
Barium	41.1	0.400	"	40.0	103	80-120
Cadmium	1.94	0.200	"	2.00	96.8	80-120
Copper	41.5	0.400	"	40.0	104	80-120
Lead	19.6	0.200	"	20.0	98.0	80-120
Nickel	41.2	0.400	"	40.0	103	80-120
Silver	1.96	0.0200	"	2.00	97.8	80-120
Zinc	40.4	0.400	"	40.0	101	80-120
Selenium	4.16	0.260	"	4.00	104	80-120

Duplicate (BHD0836-DUP1)

Source: 2404207-01

Prepared: 04/23/24 Analyzed: 04/27/24

Arsenic	4.25	0.200	mg/kg dry	3.77	12.0	20
Barium	99.4	0.400	"	92.1	7.59	20
Cadmium	0.228	0.200	"	0.214	6.54	20
Copper	5.79	0.400	"	5.46	5.84	20
Lead	8.41	0.200	"	7.65	9.44	20
Nickel	4.94	0.400	"	4.54	8.47	20
Silver	0.0404	0.0200	"	0.0384	5.24	20
Zinc	17.9	0.400	"	17.2	3.97	20
Selenium	ND	0.260	"	ND		20

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch BHD0836 - EPA 3050B

Matrix Spike (BHD0836-MS1)

Source: 2404207-01

Prepared: 04/23/24 Analyzed: 04/27/24

Arsenic	42.0	0.180	mg/kg dry	39.2	3.77	97.7	75-125			
Barium	146	0.360	"	39.2	92.1	137	75-125			QM-07
Cadmium	2.28	0.180	"	1.96	0.214	105	75-125			
Copper	28.5	0.360	"	39.2	5.46	58.9	75-125			QM-07
Lead	27.9	0.180	"	19.6	7.65	103	75-125			
Nickel	27.7	0.360	"	39.2	4.54	59.0	75-125			QM-05
Silver	2.02	0.0180	"	1.96	0.0384	101	75-125			
Zinc	40.9	0.360	"	39.2	17.2	60.5	75-125			QM-05
Selenium	3.14	0.234	"	3.92	ND	80.1	75-125			

Matrix Spike Dup (BHD0836-MSD1)

Source: 2404207-01

Prepared: 04/23/24 Analyzed: 04/27/24

Arsenic	42.1	0.180	mg/kg dry	39.2	3.77	97.8	75-125	0.0922	25	
Barium	144	0.360	"	39.2	92.1	131	75-125	1.43	25	QM-07
Cadmium	2.26	0.180	"	1.96	0.214	104	75-125	0.881	25	
Copper	28.6	0.360	"	39.2	5.46	59.1	75-125	0.218	25	QM-07
Lead	27.6	0.180	"	19.6	7.65	102	75-125	0.908	25	
Nickel	27.7	0.360	"	39.2	4.54	59.0	75-125	0.00991	25	QM-05
Silver	1.99	0.0180	"	1.96	0.0384	99.7	75-125	1.58	25	
Zinc	41.0	0.360	"	39.2	17.2	60.7	75-125	0.228	25	QM-05
Selenium	3.11	0.234	"	3.92	ND	79.5	75-125	0.789	25	

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHD0567 - 3060A Mod

Blank (BHD0567-BLK1)

Prepared: 04/17/24 Analyzed: 04/18/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHD0567-BS1)

Prepared: 04/17/24 Analyzed: 04/18/24

Chromium, Hexavalent 25.4 0.30 mg/kg wet 25.0 102 80-120

Duplicate (BHD0567-DUP1)

Source: 2404116-01

Prepared: 04/17/24 Analyzed: 04/18/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHD0567-MS1)

Source: 2404116-01

Prepared: 04/17/24 Analyzed: 04/18/24

Chromium, Hexavalent 28.1 0.30 mg/kg dry 29.2 ND 96.2 75-125

Matrix Spike Dup (BHD0567-MSD1)

Source: 2404116-01

Prepared: 04/17/24 Analyzed: 04/18/24

Chromium, Hexavalent 28.1 0.30 mg/kg dry 29.2 ND 96.4 75-125 0.208 20

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHD0778 - General Preparation

Blank (BHD0778-BLK1)

Prepared: 04/22/24 Analyzed: 04/30/24

Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

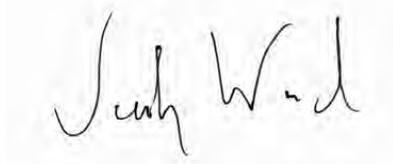
LCS (BHD0778-BS1)

Prepared: 04/22/24 Analyzed: 04/30/24

Calcium	5.97	0.0500	mg/L wet	5.00		119	70-130			
Magnesium	5.01	0.0500	"	5.00		100	70-130			
Sodium	5.12	0.0500	"	5.00		102	70-130			

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC			RPD	Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHD0439 - General Preparation

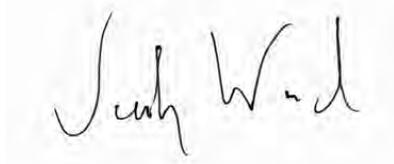
Duplicate (BHD0439-DUP1)

Source: 2404129-01

Prepared & Analyzed: 04/15/24

% Solids	76.0		%		76.1			0.175	20	
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Summit Scientific



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHD0779 - General Preparation

Blank (BHD0779-BLK1)

Prepared: 04/22/24 Analyzed: 04/26/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHD0779-BS1)

Prepared: 04/22/24 Analyzed: 04/26/24

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BHD0779-DUP1)

Source: 2404208-01

Prepared: 04/22/24 Analyzed: 04/26/24

Specific Conductance (EC) 0.371 0.0100 mmhos/cm 0.374 0.725 20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHD0780 - General Preparation

LCS (BHD0780-BS1)

Prepared: 04/22/24 Analyzed: 04/26/24

pH	9.23	pH Units	9.18	101	95-105
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Duplicate (BHD0780-DUP1)

Source: 2404208-01

Prepared: 04/22/24 Analyzed: 04/26/24

pH	9.03	pH Units	9.08	0.552	20
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Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/01/24 14:57

Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 02, 2024

Sam Vogt

Tasman Geosciences

6855 W. 119th Ave.

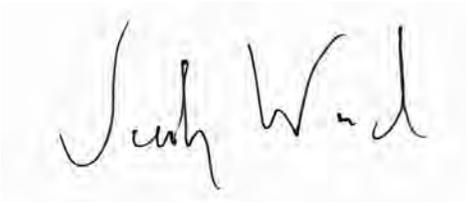
Broomfield, CO 80020

RE: Civitas - Hunt 8-60 17A

Work Order #2404177

Enclosed are the results of analyses for samples received by Summit Scientific on 04/10/24 17:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and "W".

Jacob Wood For Paul Shrewsbury

President



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

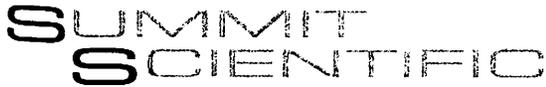
Reported:
05/02/24 15:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DEL-S01@13-14'	2404177-01	Soil	04/10/24 13:00	04/10/24 17:40
DEL-S01@14-15'	2404177-02	Soil	04/10/24 13:15	04/10/24 17:40
DEL-E01@12-13'	2404177-03	Soil	04/10/24 12:00	04/10/24 17:40
DEL-E01@19-20'	2404177-04	Soil	04/10/24 12:30	04/10/24 17:40
DEL-W01@12-13'	2404177-05	Soil	04/10/24 14:30	04/10/24 17:40
DEL-W01@14-15'	2404177-06	Soil	04/10/24 15:00	04/10/24 17:40

Summit Scientific

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4653 Table Mountain Drive
 Golden, CO 80403
 303-277-9310

Lab ID 2404177 Page 1 of 1

Send Data To:		Send Invoice To:	
Client: Civitas/Tasman	Project Manager: Jacob Evans/Sam Vogt	Company:	
Address: 6855 W. 119th Ave.	E-Mail: svogt@tasman-geo.com, jevans@civiresources.com	Project Name/Location:	
City/State/Zip: Broomfield, CO 80020	Project Name: <u>Hunt 8-60 17A</u>	AFE#: <u>C/C: P3647</u>	
Phone: PM Phone # - (610) 405-9078	Project Number:	PO/Billing Codes: <u>8520.162</u>	
Sampler Name: <u>Kennon Bavel</u>		Contact:	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN	1,2,4 + 1,3,5 TMBs	TPH (GRO,DRO,ORO)	PAH	pH, EC, SAR	Boron		Metals	Full Table 915
1	DEL-SD1@ 13-14'	4/10/24	1300	2			X			X										X	pH, EC, SAR by Saturated paste preparation method Boron by Hot Water Soluble preparation Method Table 915 Metals - As, Ba, Cd, Cu, Pb, Ni, Se, Ag, Zn, Cr VI
2	DEL-SD1@ 14-15'		1315																		
3	DEL-ED1@ 12-13'		1200																		
4	DEL-ED1@ 19-20'		1230																		
5	DEL-WD1@ 12-13'		1430																		
6	DEL-WD1@ 14-15'		1500																		
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: <u>[Signature]</u>	Date/Time: <u>4/10/24 / 1740</u>	Received by: Tasman Lockbox	Date/Time: <u>4/10/24 / 1740</u>	TAT Business Days	Field DO	Notes:
				Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by: <u>Tasman Lockbox</u>	Date/Time: <u>4/10/24 / 1740</u>	Received by: <u>[Signature]</u>	Date/Time: <u>4/10/24 / 1740</u>	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: <u>9.8</u>	Corrected Temperature: <u>8</u>	IR gun #: <u>1</u>	HNO3 lot #: _____			

S₂

Sample Receipt Checklist

S2 Work Order# 2469177

Client: Custast Casman Client Project ID: Hunt 8-60 17A

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) 9.8 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? (1) NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ice</u>
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>same day</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? (1) Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? (1) Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

(1) If NO, then contact the client before proceeding with analysis and note in case narrative.

AS

Custodian Printed Name

4/10/24
Date/Time



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-S01@13-14'
2404177-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/24 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHD0334	04/10/24	04/11/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **04/10/24 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0404	101 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	99.0 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0385	96.2 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/10/24 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHD0331	04/10/24	04/10/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/10/24 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.63	61.0 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-S01@13-14'
2404177-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/10/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHD0338	04/11/24	04/12/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/10/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0143	42.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0153	45.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/10/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHD0444	04/15/24	04/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/10/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-S01@13-14'
2404177-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	4.39	0.200	mg/kg dry	1	BHD0825	04/23/24	05/02/24	EPA 6020B
Barium	28.0	0.400	"	"	"	"	"	"
Cadmium	0.471	0.200	"	"	"	"	"	"
Copper	6.48	0.400	"	"	"	"	"	"
Lead	21.3	0.200	"	"	"	"	"	"
Nickel	3.42	0.400	"	"	"	"	"	"
Silver	0.0431	0.0200	"	"	"	"	"	"
Zinc	18.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/10/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0561	04/17/24	04/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **04/10/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	9.68	0.0500	mg/L dry	1	BHD0701	04/20/24	04/30/24	EPA 6020B	
Magnesium	1.96	0.0500	"	"	"	"	"	"	
Sodium	95.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/10/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	7.29	0.00100	units	1	BHE0026	05/01/24	05/01/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/10/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-S01@13-14'
2404177-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	75.5	%	1	BHD0427	04/15/24	04/17/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/10/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.526	0.0100	mmhos/cm	1	BHD0703	04/20/24	04/22/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **04/10/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.92		pH Units	1	BHD0702	04/20/24	04/22/24	EPA 9045D	

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-S01@14-15'
2404177-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHD0334	04/10/24	04/11/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/10/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0398	99.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0391	97.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/10/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHD0331	04/10/24	04/10/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/10/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.39	67.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-S01@14-15'
2404177-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/10/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHD0338	04/11/24	04/12/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/10/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0220	65.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0150	45.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/10/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHD0444	04/15/24	04/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/10/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-S01@14-15'
2404177-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	4.02	0.200	mg/kg dry	1	BHD0825	04/23/24	05/02/24	EPA 6020B
Barium	34.2	0.400	"	"	"	"	"	"
Cadmium	0.278	0.200	"	"	"	"	"	"
Copper	6.61	0.400	"	"	"	"	"	"
Lead	20.5	0.200	"	"	"	"	"	"
Nickel	3.20	0.400	"	"	"	"	"	"
Silver	0.0492	0.0200	"	"	"	"	"	"
Zinc	18.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/10/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0561	04/17/24	04/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **04/10/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	17.5	0.0500	mg/L dry	1	BHD0701	04/20/24	04/30/24	EPA 6020B	
Magnesium	5.92	0.0500	"	"	"	"	"	"	
Sodium	96.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/10/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.09	0.00100	units	1	BHE0026	05/01/24	05/01/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/10/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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6855 W. 119th Ave.
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Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-S01@14-15'
2404177-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	73.8	%	1	BHD0427	04/15/24	04/17/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/10/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.523	0.0100	mmhos/cm	1	BHD0703	04/20/24	04/22/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **04/10/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.55		pH Units	1	BHD0702	04/20/24	04/22/24	EPA 9045D	

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-E01@12-13'
2404177-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHD0334	04/10/24	04/11/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/10/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0400	100 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0395	98.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0374	93.5 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/10/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHD0331	04/10/24	04/10/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/10/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.62	60.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Project Number: P1647
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Reported:
05/02/24 15:04

DEL-E01@12-13'
2404177-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/10/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHD0338	04/11/24	04/12/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/10/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0231	69.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0163	48.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/10/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHD0444	04/15/24	04/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/10/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-E01@12-13'
2404177-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.90	0.200	mg/kg dry	1	BHD0825	04/23/24	05/02/24	EPA 6020B
Barium	53.0	0.400	"	"	"	"	"	"
Cadmium	0.549	0.200	"	"	"	"	"	"
Copper	5.13	0.400	"	"	"	"	"	"
Lead	10.4	0.200	"	"	"	"	"	"
Nickel	2.48	0.400	"	"	"	"	"	"
Silver	0.0406	0.0200	"	"	"	"	"	"
Zinc	14.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/10/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0561	04/17/24	04/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **04/10/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	23.7	0.0500	mg/L dry	1	BHD0701	04/20/24	04/30/24	EPA 6020B	
Magnesium	4.68	0.0500	"	"	"	"	"	"	
Sodium	193	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/10/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.48	0.00100	units	1	BHE0026	05/01/24	05/01/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/10/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-E01@12-13'
2404177-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	75.6	%	1	BHD0427	04/15/24	04/17/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/10/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.18	0.0100	mmhos/cm	1	BHD0703	04/20/24	04/22/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **04/10/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.46		pH Units	1	BHD0702	04/20/24	04/22/24	EPA 9045D	

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Tasman Geosciences
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Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-E01@19-20'
2404177-04 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BHD0334	04/10/24	04/11/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/10/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0409	102 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.8 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0390	97.4 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/10/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BHD0331	04/10/24	04/10/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/10/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	7.96	63.7 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
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Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-E01@19-20'
2404177-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/10/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHD0338	04/11/24	04/12/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/10/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0299	89.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0196	58.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/10/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHD0444	04/15/24	04/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/10/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-E01@19-20'
2404177-04 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.24	0.200	mg/kg dry	1	BHD0825	04/23/24	05/02/24	EPA 6020B
Barium	41.7	0.400	"	"	"	"	"	"
Cadmium	0.328	0.200	"	"	"	"	"	"
Copper	5.11	0.400	"	"	"	"	"	"
Lead	16.3	0.200	"	"	"	"	"	"
Nickel	1.71	0.400	"	"	"	"	"	"
Silver	0.0645	0.0200	"	"	"	"	"	"
Zinc	17.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/10/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0561	04/17/24	04/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **04/10/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	9.54	0.0500	mg/L dry	1	BHD0701	04/20/24	04/30/24	EPA 6020B	
Magnesium	1.61	0.0500	"	"	"	"	"	"	
Sodium	123	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/10/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.70	0.00100	units	1	BHE0026	05/01/24	05/01/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/10/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
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Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-E01@19-20'
2404177-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	67.8	%	1	BHD0427	04/15/24	04/17/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/10/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.632	0.0100	mmhos/cm	1	BHD0703	04/20/24	04/22/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **04/10/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.59		pH Units	1	BHD0702	04/20/24	04/22/24	EPA 9045D	

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-W01@12-13'
2404177-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHD0334	04/10/24	04/11/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/10/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0416	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0388	97.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/10/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHD0331	04/10/24	04/10/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/10/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.37	67.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
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Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-W01@12-13'
2404177-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/10/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHD0338	04/11/24	04/12/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/10/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0270	81.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0198	59.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/10/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHD0444	04/15/24	04/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/10/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-W01@12-13'
2404177-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.58	0.200	mg/kg dry	1	BHD0825	04/23/24	05/02/24	EPA 6020B
Barium	30.3	0.400	"	"	"	"	"	"
Cadmium	1.43	0.200	"	"	"	"	"	"
Copper	5.59	0.400	"	"	"	"	"	"
Lead	17.6	0.200	"	"	"	"	"	"
Nickel	2.36	0.400	"	"	"	"	"	"
Silver	0.0468	0.0200	"	"	"	"	"	"
Zinc	15.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/10/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0561	04/17/24	04/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **04/10/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	27.5	0.0500	mg/L dry	1	BHD0701	04/20/24	04/30/24	EPA 6020B	
Magnesium	5.42	0.0500	"	"	"	"	"	"	
Sodium	218	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/10/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.94	0.00100	units	1	BHE0026	05/01/24	05/01/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/10/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-W01@12-13'
2404177-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	74.1	%	1	BHD0427	04/15/24	04/17/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/10/24 14:30**

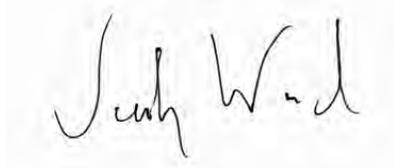
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.26	0.0100	mmhos/cm	1	BHD0703	04/20/24	04/22/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **04/10/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.43		pH Units	1	BHD0702	04/20/24	04/22/24	EPA 9045D	

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Tasman Geosciences
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Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-W01@14-15'
2404177-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHD0334	04/10/24	04/11/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0420	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0389	97.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0381	95.3 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHD0331	04/10/24	04/10/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.31	66.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-W01@14-15'
2404177-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHD0338	04/11/24	04/12/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0260	77.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0182	54.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHD0444	04/15/24	04/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-W01@14-15'
2404177-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.76	0.200	mg/kg dry	1	BHD0825	04/23/24	05/02/24	EPA 6020B
Barium	30.8	0.400	"	"	"	"	"	"
Cadmium	0.552	0.200	"	"	"	"	"	"
Copper	5.62	0.400	"	"	"	"	"	"
Lead	13.2	0.200	"	"	"	"	"	"
Nickel	2.56	0.400	"	"	"	"	"	"
Silver	0.0414	0.0200	"	"	"	"	"	"
Zinc	15.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0561	04/17/24	04/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **04/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	19.4	0.0500	mg/L dry	1	BHD0701	04/20/24	04/30/24	EPA 6020B	
Magnesium	3.65	0.0500	"	"	"	"	"	"	
Sodium	157	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	8.58	0.00100	units	1	BHE0026	05/01/24	05/01/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Hunt 8-60 17A
Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

DEL-W01@14-15'
2404177-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	75.3	%	1	BHD0427	04/15/24	04/17/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/10/24 15:00**

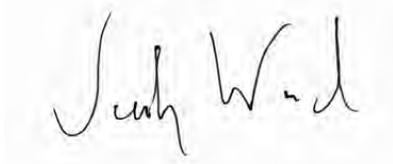
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.963	0.0100	mmhos/cm	1	BHD0703	04/20/24	04/22/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **04/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.60		pH Units	1	BHD0702	04/20/24	04/22/24	EPA 9045D	

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHD0334 - EPA 5030 Soil MS

Blank (BHD0334-BLK1)

Prepared: 04/10/24 Analyzed: 04/11/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0256		"	0.0400		63.9	50-150			
<i>Surrogate: Toluene-d8</i>	0.0478		"	0.0400		119	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0407		"	0.0400		102	50-150			

LCS (BHD0334-BS1)

Prepared: 04/10/24 Analyzed: 04/11/24

Benzene	0.0930	0.0020	mg/kg	0.100		93.0	70-130			
Toluene	0.111	0.0050	"	0.100		111	70-130			
Ethylbenzene	0.0946	0.0050	"	0.100		94.6	70-130			
m,p-Xylene	0.195	0.010	"	0.200		97.5	70-130			
o-Xylene	0.0965	0.0050	"	0.100		96.5	70-130			
1,2,4-Trimethylbenzene	0.0840	0.0050	"	0.100		84.0	70-130			
1,3,5-Trimethylbenzene	0.0897	0.0050	"	0.100		89.7	70-130			
Naphthalene	0.0866	0.0038	"	0.100		86.6	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0492		"	0.0400		123	50-150			
<i>Surrogate: Toluene-d8</i>	0.0493		"	0.0400		123	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0414		"	0.0400		104	50-150			

Matrix Spike (BHD0334-MS1)

Source: 2404165-01

Prepared: 04/10/24 Analyzed: 04/11/24

Benzene	0.0586	0.0020	mg/kg	0.100	ND	58.6	70-130			QM-07
Toluene	0.101	0.0050	"	0.100	ND	101	70-130			
Ethylbenzene	0.0848	0.0050	"	0.100	ND	84.8	70-130			
m,p-Xylene	0.170	0.010	"	0.200	ND	85.1	70-130			
o-Xylene	0.0890	0.0050	"	0.100	ND	89.0	70-130			
1,2,4-Trimethylbenzene	0.0669	0.0050	"	0.100	ND	66.9	70-130			QM-07
1,3,5-Trimethylbenzene	0.0818	0.0050	"	0.100	ND	81.8	70-130			
Naphthalene	0.0531	0.0038	"	0.100	ND	53.1	70-130			QM-07
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0206		"	0.0400		51.4	50-150			
<i>Surrogate: Toluene-d8</i>	0.0501		"	0.0400		125	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0417		"	0.0400		104	50-150			

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch BHD0334 - EPA 5030 Soil MS

Matrix Spike Dup (BHD0334-MSD1)	Source: 2404165-01			Prepared: 04/10/24 Analyzed: 04/11/24						
Benzene	0.0568	0.0020	mg/kg	0.100	ND	56.8	70-130	2.96	30	QM-07
Toluene	0.0966	0.0050	"	0.100	ND	96.6	70-130	4.52	30	
Ethylbenzene	0.0823	0.0050	"	0.100	ND	82.3	70-130	3.02	30	
m,p-Xylene	0.169	0.010	"	0.200	ND	84.5	70-130	0.690	30	
o-Xylene	0.0826	0.0050	"	0.100	ND	82.6	70-130	7.52	30	
1,2,4-Trimethylbenzene	0.0716	0.0050	"	0.100	ND	71.6	70-130	6.89	30	
1,3,5-Trimethylbenzene	0.0772	0.0050	"	0.100	ND	77.2	70-130	5.85	30	
Naphthalene	0.0484	0.0038	"	0.100	ND	48.4	70-130	9.22	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0181		"	0.0400		45.2	50-150			QM-07
Surrogate: Toluene-d8	0.0501		"	0.0400		125	50-150			
Surrogate: 4-Bromofluorobenzene	0.0425		"	0.0400		106	50-150			

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			Limits	RPD	Limit		

Batch BHD0331 - EPA 3550A

Blank (BHD0331-BLK1)

Prepared: 04/10/24 Analyzed: 04/11/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	16.0		"	12.5		128	30-150			

LCS (BHD0331-BS1)

Prepared: 04/10/24 Analyzed: 04/11/24

C10-C28 (DRO)	574	50	mg/kg	500		115	70-130			
Surrogate: <i>o</i> -Terphenyl	15.2		"	12.5		121	30-150			

Matrix Spike (BHD0331-MS1)

Source: 2404165-01

Prepared: 04/10/24 Analyzed: 04/11/24

C10-C28 (DRO)	576	50	mg/kg	500	18.8	111	70-130			
Surrogate: <i>o</i> -Terphenyl	15.0		"	12.5		120	30-150			

Matrix Spike Dup (BHD0331-MSD1)

Source: 2404165-01

Prepared: 04/10/24 Analyzed: 04/11/24

C10-C28 (DRO)	554	50	mg/kg	500	18.8	107	70-130	3.90	20	
Surrogate: <i>o</i> -Terphenyl	13.2		"	12.5		106	30-150			

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHD0338 - EPA 5030 Soil MS

Blank (BHD0338-BLK1)

Prepared: 04/11/24 Analyzed: 04/12/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0324</i>		"	<i>0.0333</i>		<i>97.1</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0260</i>		"	<i>0.0333</i>		<i>78.1</i>	<i>40-150</i>			

LCS (BHD0338-BS1)

Prepared: 04/11/24 Analyzed: 04/12/24

Acenaphthene	0.0325	0.00500	mg/kg	0.0333	97.6	31-137
Anthracene	0.0298	0.00500	"	0.0333	89.3	30-120
Benzo (a) anthracene	0.0373	0.00500	"	0.0333	112	30-120
Benzo (a) pyrene	0.0360	0.00500	"	0.0333	108	30-120
Benzo (b) fluoranthene	0.0366	0.00500	"	0.0333	110	30-120
Benzo (k) fluoranthene	0.0283	0.00500	"	0.0333	85.0	30-120
Chrysene	0.0328	0.00500	"	0.0333	98.3	30-120
Dibenz (a,h) anthracene	0.0396	0.00500	"	0.0333	119	30-120
Fluoranthene	0.0254	0.00500	"	0.0333	76.3	30-120
Fluorene	0.0342	0.00500	"	0.0333	103	30-120
Indeno (1,2,3-cd) pyrene	0.0366	0.00500	"	0.0333	110	30-120
Pyrene	0.0391	0.00500	"	0.0333	117	35-142
1-Methylnaphthalene	0.0291	0.00500	"	0.0333	87.3	35-142
2-Methylnaphthalene	0.0267	0.00500	"	0.0333	80.1	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0293</i>		"	<i>0.0333</i>	<i>87.9</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0251</i>		"	<i>0.0333</i>	<i>75.4</i>	<i>40-150</i>

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHD0338 - EPA 5030 Soil MS

Matrix Spike (BHD0338-MS1)

Source: 2404165-01

Prepared: 04/11/24 Analyzed: 04/12/24

Acenaphthene	0.0167	0.00500	mg/kg	0.0333	ND	50.0	31-137			
Anthracene	0.0173	0.00500	"	0.0333	ND	52.0	30-120			
Benzo (a) anthracene	0.0209	0.00500	"	0.0333	ND	62.8	30-120			
Benzo (a) pyrene	0.0220	0.00500	"	0.0333	ND	65.9	30-120			
Benzo (b) fluoranthene	0.0194	0.00500	"	0.0333	ND	58.2	30-120			
Benzo (k) fluoranthene	0.0147	0.00500	"	0.0333	ND	44.2	30-120			
Chrysene	0.0179	0.00500	"	0.0333	ND	53.6	30-120			
Dibenz (a,h) anthracene	0.0376	0.00500	"	0.0333	ND	113	30-120			
Fluoranthene	0.0143	0.00500	"	0.0333	ND	42.8	30-120			
Fluorene	0.0181	0.00500	"	0.0333	ND	54.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0362	0.00500	"	0.0333	ND	108	30-120			
Pyrene	0.0329	0.00500	"	0.0333	ND	98.7	35-142			
1-Methylnaphthalene	0.0152	0.00500	"	0.0333	ND	45.5	15-130			
2-Methylnaphthalene	0.0142	0.00500	"	0.0333	ND	42.7	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0158		"	0.0333		47.3	40-150			
Surrogate: Fluoranthene-d10	0.0143		"	0.0333		43.0	40-150			

Matrix Spike Dup (BHD0338-MSD1)

Source: 2404165-01

Prepared: 04/11/24 Analyzed: 04/12/24

Acenaphthene	0.0149	0.00500	mg/kg	0.0333	ND	44.8	31-137	10.9	30	
Anthracene	0.0164	0.00500	"	0.0333	ND	49.1	30-120	5.65	30	
Benzo (a) anthracene	0.0186	0.00500	"	0.0333	ND	55.8	30-120	11.9	30	
Benzo (a) pyrene	0.0197	0.00500	"	0.0333	ND	59.1	30-120	10.8	30	
Benzo (b) fluoranthene	0.0171	0.00500	"	0.0333	ND	51.3	30-120	12.4	30	
Benzo (k) fluoranthene	0.0134	0.00500	"	0.0333	ND	40.4	30-120	9.19	30	
Chrysene	0.0159	0.00500	"	0.0333	ND	47.8	30-120	11.3	30	
Dibenz (a,h) anthracene	0.0384	0.00500	"	0.0333	ND	115	30-120	2.31	30	
Fluoranthene	0.0137	0.00500	"	0.0333	ND	41.0	30-120	4.37	30	
Fluorene	0.0166	0.00500	"	0.0333	ND	49.7	30-120	8.85	30	
Indeno (1,2,3-cd) pyrene	0.0392	0.00500	"	0.0333	ND	118	30-120	8.09	30	
Pyrene	0.0265	0.00500	"	0.0333	ND	79.6	35-142	21.4	30	
1-Methylnaphthalene	0.0358	0.00500	"	0.0333	ND	107	15-130	81.0	50	QR-02
2-Methylnaphthalene	0.0337	0.00500	"	0.0333	ND	101	15-130	81.3	50	QR-02
Surrogate: 2-Methylnaphthalene-d10	0.0380		"	0.0333		114	40-150			
Surrogate: Fluoranthene-d10	0.0139		"	0.0333		41.8	40-150			

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD	Limit	Notes
		Limit	Units			%REC	Limits			

Batch BHD0444 - EPA 3050B

Blank (BHD0444-BLK1)

Prepared: 04/15/24 Analyzed: 04/29/24

Boron ND 2.00 mg/L

LCS (BHD0444-BS1)

Prepared: 04/15/24 Analyzed: 04/29/24

Boron 4.58 2.00 mg/L 5.00 91.7 80-120

Duplicate (BHD0444-DUP1)

Source: 2404089-01

Prepared: 04/15/24 Analyzed: 04/29/24

Boron 0.285 2.00 mg/L 0.231 21.0 20 QR-01

Matrix Spike (BHD0444-MS1)

Source: 2404089-01

Prepared: 04/15/24 Analyzed: 04/29/24

Boron 5.27 2.00 mg/L 4.98 0.231 101 75-125

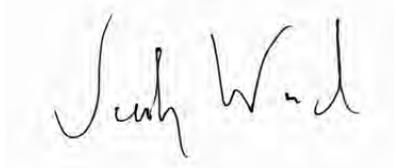
Matrix Spike Dup (BHD0444-MSD1)

Source: 2404089-01

Prepared: 04/15/24 Analyzed: 04/29/24

Boron 5.40 2.00 mg/L 4.98 0.231 104 75-125 2.42 25

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD		

Batch BHD0825 - EPA 3050B

Blank (BHD0825-BLK1)

Prepared: 04/23/24 Analyzed: 05/02/24

Arsenic	ND	0.200	mg/kg wet						
Barium	ND	0.400	"						
Cadmium	ND	0.200	"						
Copper	ND	0.400	"						
Lead	ND	0.200	"						
Nickel	ND	0.400	"						
Silver	ND	0.0200	"						
Zinc	ND	0.400	"						
Selenium	ND	0.260	"						

LCS (BHD0825-BS1)

Prepared: 04/23/24 Analyzed: 05/02/24

Arsenic	37.2	0.200	mg/kg wet	40.0	93.1	80-120
Barium	36.9	0.400	"	40.0	92.2	80-120
Cadmium	1.90	0.200	"	2.00	95.1	80-120
Copper	39.7	0.400	"	40.0	99.1	80-120
Lead	19.0	0.200	"	20.0	95.1	80-120
Nickel	38.5	0.400	"	40.0	96.2	80-120
Silver	1.91	0.0200	"	2.00	95.4	80-120
Zinc	38.6	0.400	"	40.0	96.4	80-120
Selenium	3.85	0.260	"	4.00	96.4	80-120

Duplicate (BHD0825-DUP1)

Source: 2404122-01

Prepared: 04/23/24 Analyzed: 05/02/24

Arsenic	2.56	0.200	mg/kg dry	2.30	10.7	20
Barium	69.7	0.400	"	70.0	0.459	20
Cadmium	0.293	0.200	"	0.336	13.5	20
Copper	5.74	0.400	"	5.79	0.863	20
Lead	9.04	0.200	"	9.30	2.84	20
Nickel	4.42	0.400	"	4.39	0.733	20
Silver	0.0627	0.0200	"	0.0631	0.610	20
Zinc	26.5	0.400	"	26.7	0.665	20
Selenium	0.195	0.260	"	0.196	0.563	20

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch BHD0825 - EPA 3050B

Matrix Spike (BHD0825-MS1)

Source: 2404122-01

Prepared: 04/23/24 Analyzed: 05/02/24

Arsenic	40.9	0.181	mg/kg dry	41.7	2.30	92.5	75-125				
Barium	106	0.362	"	41.7	70.0	86.3	75-125				
Cadmium	2.26	0.181	"	2.09	0.336	92.1	75-125				
Copper	28.8	0.362	"	41.7	5.79	55.2	75-125				QM-05
Lead	27.7	0.181	"	20.9	9.30	88.0	75-125				
Nickel	26.7	0.362	"	41.7	4.39	53.6	75-125				QM-05
Silver	2.01	0.0181	"	2.09	0.0631	93.1	75-125				
Zinc	48.5	0.362	"	41.7	26.7	52.3	75-125				QM-05
Selenium	3.43	0.236	"	4.17	0.196	77.5	75-125				

Matrix Spike Dup (BHD0825-MSD1)

Source: 2404122-01

Prepared: 04/23/24 Analyzed: 05/02/24

Arsenic	41.1	0.181	mg/kg dry	41.7	2.30	93.1	75-125	0.619	25		
Barium	114	0.362	"	41.7	70.0	105	75-125	7.03	25		
Cadmium	2.43	0.181	"	2.09	0.336	100	75-125	7.42	25		
Copper	28.8	0.362	"	41.7	5.79	55.2	75-125	0.0406	25		QM-05
Lead	29.8	0.181	"	20.9	9.30	98.3	75-125	7.45	25		
Nickel	26.9	0.362	"	41.7	4.39	53.9	75-125	0.574	25		QM-05
Silver	2.17	0.0181	"	2.09	0.0631	101	75-125	7.64	25		
Zinc	48.4	0.362	"	41.7	26.7	52.2	75-125	0.0594	25		QM-05
Selenium	3.42	0.236	"	4.17	0.196	77.2	75-125	0.354	25		

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHD0561 - 3060A Mod

Blank (BHD0561-BLK1)

Prepared: 04/17/24 Analyzed: 04/18/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHD0561-BS1)

Prepared: 04/17/24 Analyzed: 04/18/24

Chromium, Hexavalent 25.0 0.30 mg/kg wet 25.0 100 80-120

Duplicate (BHD0561-DUP1)

Source: 2404090-01

Prepared: 04/17/24 Analyzed: 04/18/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHD0561-MS1)

Source: 2404090-01

Prepared: 04/17/24 Analyzed: 04/18/24

Chromium, Hexavalent 32.1 0.30 mg/kg dry 31.6 ND 102 75-125

Matrix Spike Dup (BHD0561-MSD1)

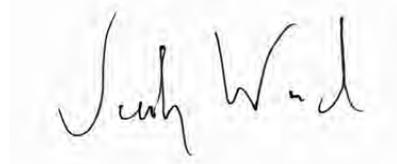
Source: 2404090-01

Prepared: 04/17/24 Analyzed: 04/18/24

Chromium, Hexavalent 32.3 0.30 mg/kg dry 31.6 ND 102 75-125 0.589 20

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHD0701 - General Preparation

Blank (BHD0701-BLK1)

Prepared: 04/20/24 Analyzed: 04/30/24

Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BHD0701-BS1)

Prepared: 04/20/24 Analyzed: 04/30/24

Calcium	5.82	0.0500	mg/L wet	5.00		116	70-130			
Magnesium	5.11	0.0500	"	5.00		102	70-130			
Sodium	5.11	0.0500	"	5.00		102	70-130			

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

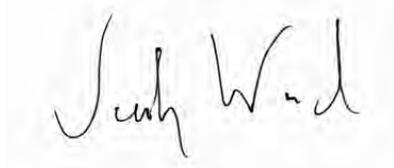
Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC			RPD	Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHD0427 - General Preparation

Duplicate (BHD0427-DUP1)	Source: 2404090-01	Prepared: 04/15/24	Analyzed: 04/17/24		
% Solids	81.7	%	79.0	3.34	20

Summit Scientific



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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHD0703 - General Preparation

Blank (BHD0703-BLK1)

Prepared: 04/20/24 Analyzed: 04/22/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHD0703-BS1)

Prepared: 04/20/24 Analyzed: 04/22/24

Specific Conductance (EC) 0.153 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BHD0703-DUP1)

Source: 2404038-01

Prepared: 04/20/24 Analyzed: 04/22/24

Specific Conductance (EC) 2.24 0.0100 mmhos/cm 2.29 2.03 20

Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHD0702 - General Preparation

LCS (BHD0702-BS1)

Prepared: 04/20/24 Analyzed: 04/22/24

pH	9.22	pH Units	9.18	100	95-105
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Duplicate (BHD0702-DUP1)

Source: 2402519-02

Prepared: 04/20/24 Analyzed: 04/22/24

pH	5.68	pH Units	5.75	1.22	20
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Summit Scientific

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

Project: Civitas - Hunt 8-60 17A

Project Number: P1647
Project Manager: Sam Vogt

Reported:
05/02/24 15:04

Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference