

Form 27 Data Package

Amoco 44-17
Remediation #: 38361



Prepared for:
Extraction Oil & Gas - 10459

March 4, 2025

N2S2SE Sec 17 1S 65W

Facility ID: 320283
API #: 001-08859

Field Notes



Photographic Log



Photographic Log

Site Name: Amoco 44-17 (Rem# 38361)

Photographer: C. Pursell / Stantec Consulting Services Inc.

Date: February 4, 2025



Photo #1 View of the wellhead floor sample location

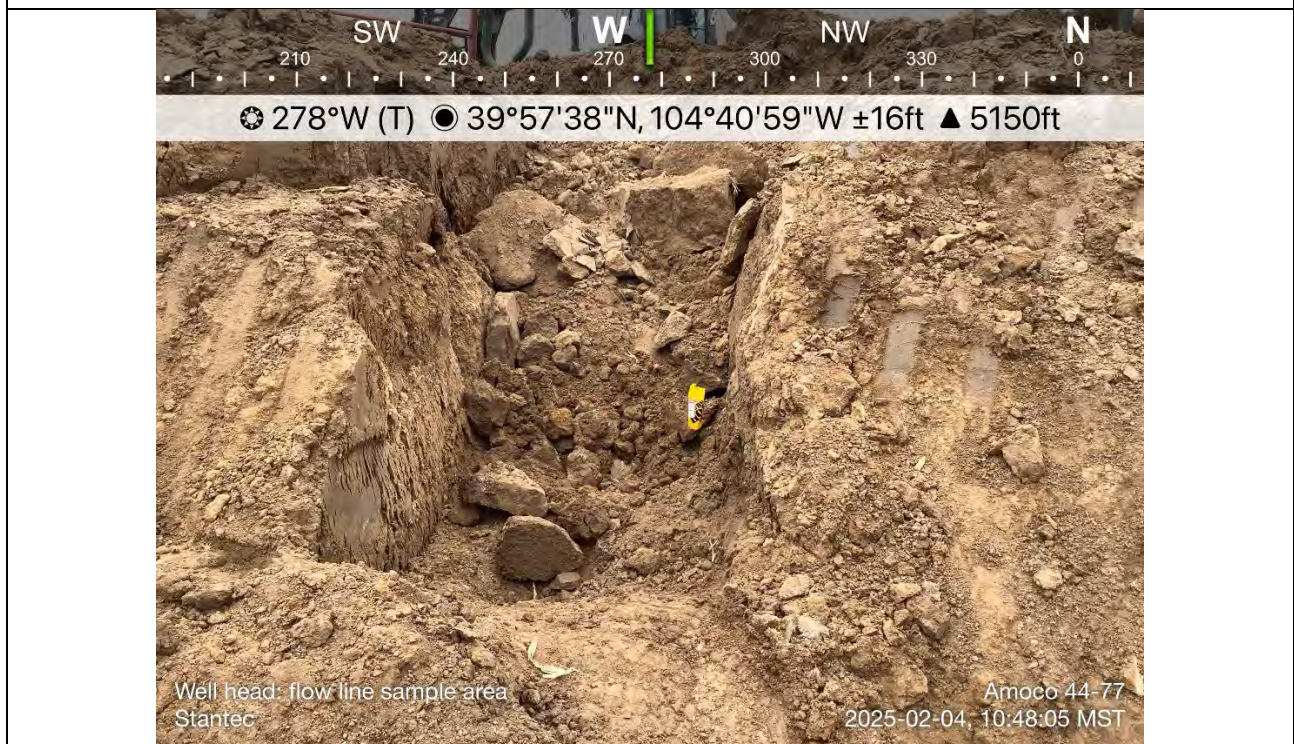


Photo #2 View of the flowline at wellhead sample location

Photographic Log

Site Name: Amoco 44-17 (Rem# 38361)

Photographer: C. Pursell / Stantec Consulting Services Inc.

Date: February 4, 2025



Photo #3 View of the flowline @ separator sample location



Photo #4 View of the AST sample area

Photographic Log

Site Name: Amoco 44-17 (Rem# 38361)

Photographer: C. Pursell / Stantec Consulting Services Inc.

Date: February 4, 2025

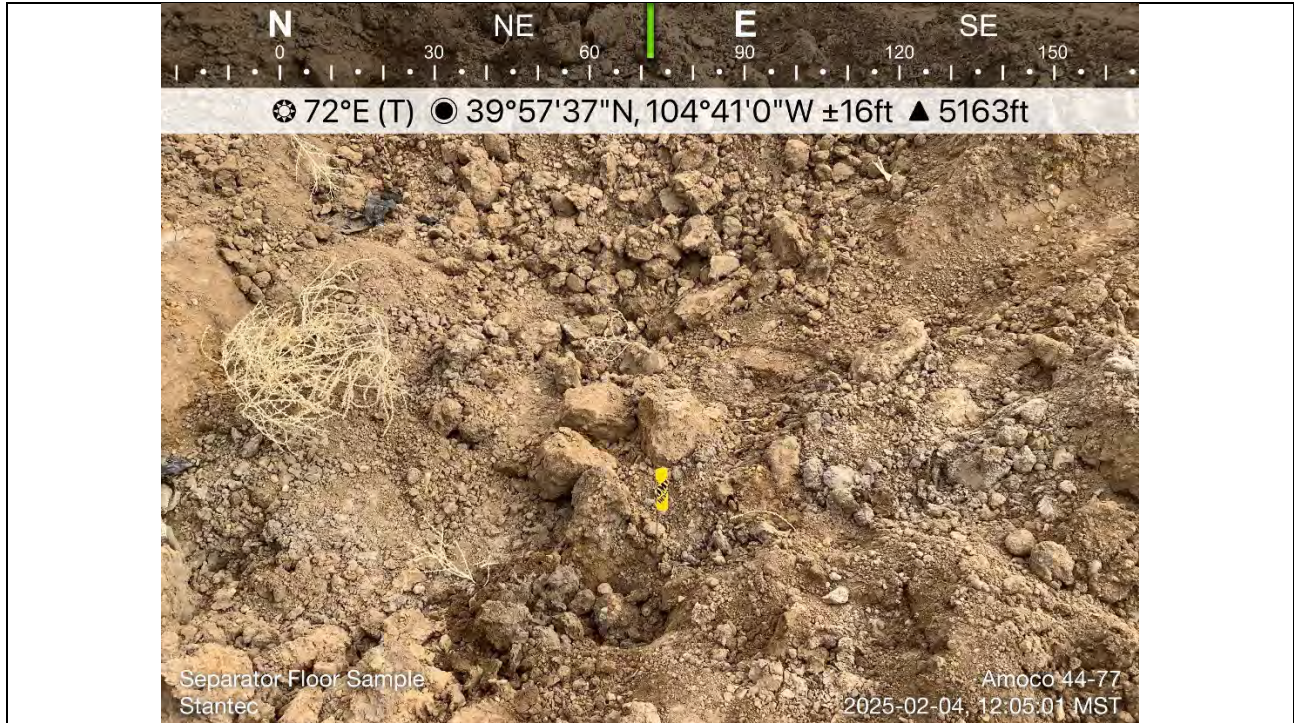


Photo #5 View of the separator sample



Photo #6 View of the produced water vessel sample locations

Photographic Log

Site Name: Amoco 44-17 (Rem# 38361)

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Photo #7 View of the produced water vessel sample locations



Photo #8 View of the background (BG) 01 sampling location

Photographic Log

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Photo #9 View of the BG02 sampling location



Photo #10 View of the BG03 sampling location

Photographic Log

Site Name: Amoco 44-17 (Rem# 38361)

Photographer: C. Pursell / Stantec Consulting Services Inc.

Date: February 4, 2025



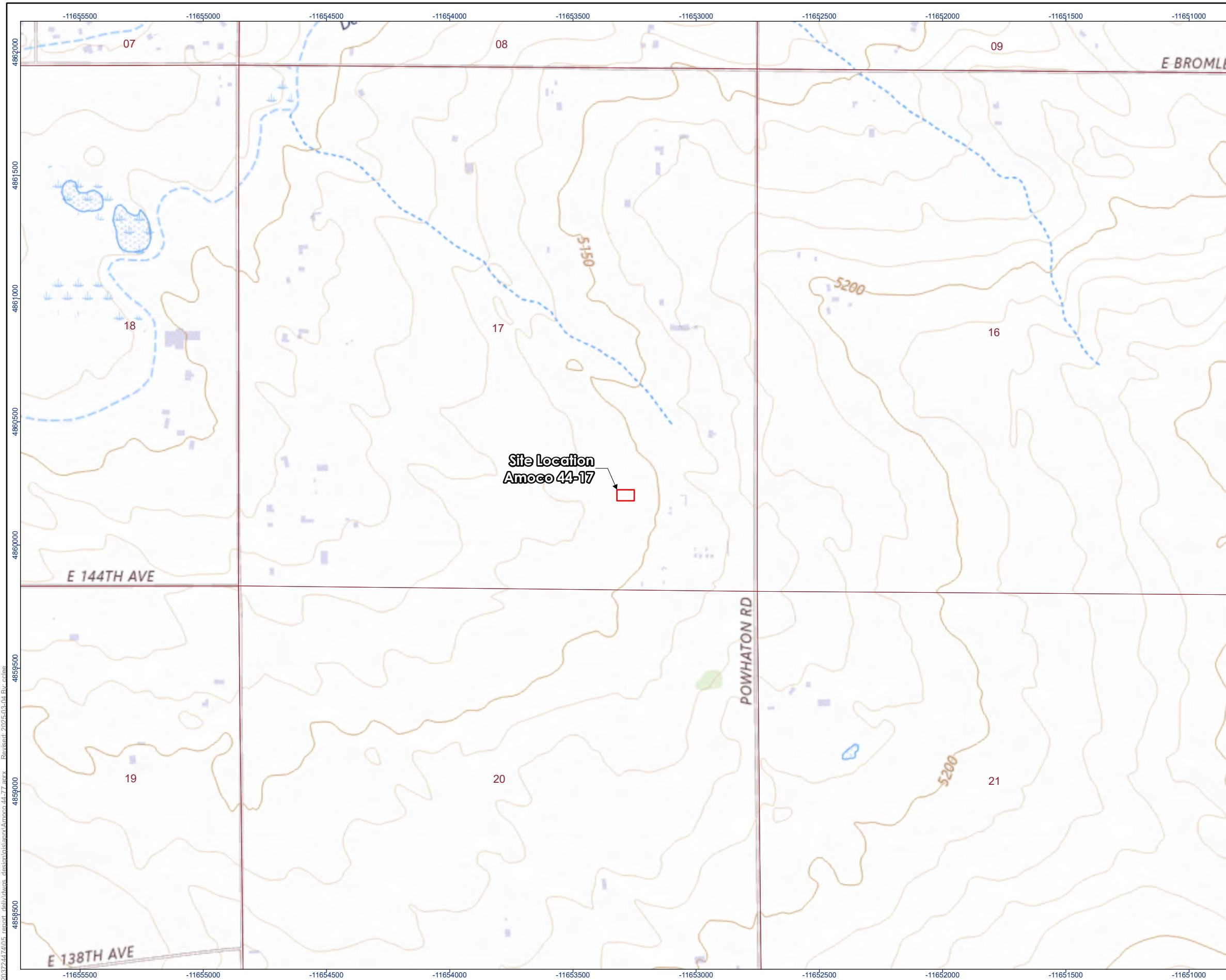
Photo #11 View of the BG04 sampling location



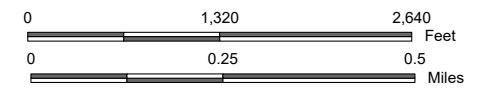
Photo #12 View of the BG05 sampling location

Figures





- Site Location
- PLSS Section



(At original document size of 11x17) 1:15,840

Notes
 1. Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
 2. Background: World Terrain Base. Sources: Esri, USGS, NOAA
 USGSTopo: USGS The National Map; National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State HIU; NOAA National Centers for Environmental Information. Data refreshed February, 2025.
 World Terrain Reference: Sources: Esri, Garmin, USGS, NPS



Project Location
 SEC 17-T1S-R65W
 ADAMS COUNTY, COLORADO

Drawn by CCL on 2025-03-04
 Reviewed by CR 2025-03-04
 203724474

Client/Project
 EXTRACTION OIL & GAS INC - 10459
 Amoco 44-17
 Remediation #38361

Figure No.

1

Title

SITE LOCATION MAP

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Tables



Table 2
Soil Sample Analytical Results
Extraction Oil & Gas, Inc.
SITE NAME: Amoco 44-17
Remediation Project # 38361

Constituent of Concern	ECMC Table 915-1 RSSL's	ECMC Table 915-1 GWSSL's	Results									
			WH-B01 @ 6'	WH-FL01 @ 3'	SEP-FL01 @ 3'	SEP-B01 @ 6'	PWV-B01 @ 6'	PWV-N @ 3'	PWV-S @ 3'	PWV-E @ 3'	PWV-W @ 3'	AST-B01 @ 0'
Sample Name			WH-B01 @ 6'	WH-FL01 @ 3'	SEP-FL01 @ 3'	SEP-B01 @ 6'	PWV-B01 @ 6'	PWV-N @ 3'	PWV-S @ 3'	PWV-E @ 3'	PWV-W @ 3'	AST-B01 @ 0'
Date			2/4/2025	2/4/2025	2/4/2025	2/4/2025	2/4/2025	2/4/2025	2/4/2025	2/4/2025	2/4/2025	2/4/2025
PID (ppm)			5.8	0.6	247.2	556.7	626.5	71.5	1.8	23.8	48.3	1.2
Depth (feet)			6	3	3	6	6	3	3	3	3	0
TPH (mg/kg)												
TPH - GRO	--		0.551	ND	19.5	18.8	1,200	3.67	ND	1.09	0.225	ND
TPH - DRO	--		45.1	ND	530	405	1,480	168	ND	105	ND	ND
TPH - ORO	--		ND	ND	346	301	867	201	ND	166	ND	ND
TPH - Total	500		45.651	0.000	895.5	724.8	3,547	372.67	ND	272.09	0.225	ND
Soil Suitability for Reclamation												
EC (mmhos/cm)	4		0.892	1.38	1.02	0.718	0.720	0.640	0.274	1.18	1.18	0.146
SAR (ratio)	6		0.728	2.64	14.3	5.93	22.4	4.17	0.143	8.77	7.06	3.78
pH (units)	6-8.3		8.57	8.20	7.96	8.44	8.27	8.38	8.24	8.37	8.36	7.05
boron (mg/L)	2		0.384	0.312	2.76	0.606	1.94	0.826	0.220	1.06	1.09	ND
Organic Compounds in Soils (mg/kg)												
benzene	1.2	0.0026	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
toluene	490	0.69	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene	5.8	0.78	ND	ND	ND	ND	2.66	0.00238	ND	ND	ND	ND
total xylenes	58	9.9	ND	ND	ND	ND	27.8	0.0730	ND	ND	ND	ND
1,2,4-trimethylbenzene	30	0.0081	ND	ND	0.00452	0.0131	28.0	0.0747	ND	0.0134	0.0108	ND
1,3,5-trimethylbenzene	27	0.0087	0.00220	ND	0.0950	0.120	8.27	0.0506	ND	0.0113	ND	ND
naphthalene	2	0.0038	ND	ND	0.109	ND	3.15	0.0432	ND	0.00950	0.00456	ND
acenaphthene	360	0.55	ND	ND	0.0121	ND	0.0867	0.00376	ND	ND	ND	ND
anthracene	1800	5.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benz(a)anthracene	1.1	0.011	ND	ND	ND	ND	ND	0.00489	ND	ND	ND	ND
benzo(a)pyrene	0.11	0.24	ND	ND	ND	0.00258	ND	0.00602	ND	ND	ND	ND
benzo(b)fluoranthene	1.1	0.3	ND	ND	0.00415	0.00664	0.0326	0.0102	ND	0.00246	ND	ND
benzo(k)fluoranthene	11	2.9	ND	ND	ND	0.6060	ND	0.00376	ND	ND	ND	ND
chrysene	110	9	ND	ND	ND	ND	ND	0.0169	ND	0.00598	ND	ND
dibenzo(a,h)anthracene	0.11	0.096	ND	ND	ND	0.00221	ND	0.00263	ND	ND	ND	ND
fluoranthene	240	8.9	ND	ND	0.00678	0.00553	0.0437	0.0199	ND	0.00352	0.00304	ND
fluorene	240	0.54	ND	ND	0.139	0.0232	0.683	0.0263	ND	0.00809	0.00228	ND
indeno(1,2,3-cd)pyrene	1.1	0.98	ND	ND	ND	ND	ND	0.00451	ND	ND	ND	ND
pyrene	180	1.3	ND	ND	0.0106	0.00996	0.0691	0.0169	ND	0.00352	0.00342	ND
1-methylnaphthalene	18	0.006	ND	ND	0.878	ND	5.46	0.142	ND	0.0433	0.0114	ND
2-methylnaphthalene	24	0.019	0.00227	ND	1.23	ND	10.1	0.198	ND	0.0510	0.0182	ND

Metals in Soils (mg/kg)												
arsenic	0.68	0.29	3.83	4.68	3.81	3.69	4.02	4.71	3.11	4.57	3.53	3.97
barium	15000	82	109	107	88.6	89.9	94.4	111	83.2	135	96.7	101
cadmium	71	0.38	0.341	0.171	0.147	0.130	0.146	0.169	0.114	0.219	0.145	0.147
chromium (VI)	0.3	0.00067	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
copper	3100	46	23.1	11.6	ND	ND	9.19	12.8	ND	11.0	ND	10.3
lead	400	14	56.3	12.1	8.53	7.14	9.11	11.8	9.75	9.71	10.5	13.6
nickel	1500	26	9.46	12.7	8.95	8.38	8.88	12.5	6.85	12.0	8.62	10.8
selenium	390	0.26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
silver	390	0.8	0.139	ND	ND	ND	ND	ND	ND	ND	ND	ND
zinc	23000	370	130	53.4	36.2	ND	36.9	48.0	ND	44.5	37.2	47.2

Notes

ECMC	Colorado Energy and Carbon Management Commission
RSSL	Residential Soil Screening Level
GWSSL	Protection of Groundwater Soil Screening Level
--	not applicable
ppm	parts per million
TPH	total petroleum hydrocarbons
mg/kg	milligrams per kilogram
GRO	gasoline range organics
DRO	diesel range organics
ORO	oil range organics
EC	electrical conductivity
mmhos/cm	millimhos per centimeter
SAR	sodium adsorption ratio
mg/L	milligrams per liter
ND	not detected
bold	result exceeds the applicable standard
bold	result exceeds the applicable standard

Table 3
Background Soil Sample Analytical Results
Extraction Oil & Gas, Inc.
SITE NAME: Amoco 44-17
Remediation Project # 38361

Constituent of Concern	ECMC Table 915-1 RSSL's	ECMC Table 915-1 GWSSL's	Results									
Sample Name			BG01 @ 3'	BG01 @ 6'	BG02 @ 3'	BG02 @ 6'	BG03 @ 3'	BG03 @ 6'	BG04 @ 3'	BG04 @ 6'	BG05 @ 3'	BG05 @ 6'
Date			2/4/2025	2/4/2025	2/4/2025	2/4/2025	2/4/2025	2/4/2025	2/4/2025	2/4/2025	2/4/2025	2/4/2025
PID (ppm)			29.5	3.1	11.8	1.5	6.8	1.5	2.2	1.2	2.3	1.2
Depth (feet)			3	6	3	6	3	6	3	6	3	6
Soil Suitability for Reclamation												
EC (mmhos/cm)	4		1.08	3.63	2.76	3.74	5.66	2.38	1.67	3.87	3.41	4.55
SAR (ratio)	6		2.88	5.97	5.23	4.24	6.42	7.66	8.46	10.2	8.13	8.43
pH (units)	6-8.3		8.23	8.20	8.27	8.06	8.09	8.36	8.47	8.34	8.24	8.20
boron (mg/L)	2		0.197	1.24	0.960	0.251	3.04	6.36	3.68	5.74	1.50	3.33
Metals in Soils (mg/kg)												
arsenic	0.68	0.29	4.03	7.38	6.49	4.11	4.42	8.47	5.86	5.05	4.34	4.57
barium	15000	82	164	164	163	102	116	697	262	197	100	119
cadmium	71	0.38	0.215	0.159	0.377	0.182	0.137	0.185	0.144	0.183	0.103	ND
chromium (VI)	0.3	0.00067	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
copper	3100	46	12.6	15.7	12.0	9.55	11.0	20.6	13.8	ND	10.6	10.6
lead	400	14	12.3	12.9	11.7	10.2	9.33	16.4	12.4	8.06	8.98	9.21
nickel	1500	26	11.3	17.3	13.2	8.43	11.0	23.2	14.3	10.1	10.3	13.7
selenium	390	0.26	ND	ND	0.773	ND	ND	ND	ND	ND	ND	ND
silver	390	0.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
zinc	23000	370	57.8	67.3	66.2	40.0	43.5	75.8	44.1	34.9	41.1	41.7

Notes

ECMC	Colorado Energy and Carbon Management Commission
RSSL	Residential Soil Screening Level
GWSSL	Protection of Groundwater Soil Screening Level
ppm	parts per million
mg/kg	milligrams per kilogram
EC	electrical conductivity
mmhos/cm	millimhos per centimeter
SAR	sodium adsorption ratio
mg/L	milligrams per liter
ND	not detected
bold	result exceeds the applicable standard
bold	result exceeds the applicable standard