South Dakota Spill Report Form

PRCF #: **Case #:** 2025.44

Reported (MM/DD/YY): 4/28/25	Time:	Recorded By: TK

A. REPORTER

Reported By: Miles VanUden (landowner)

Organization Name: ☐ Discharger ☐ Public ☐ State ☐ Local ☐ Federal

Phone: Email:

Address:

City: State: Zip:

B. DISCHARGER (Responsible Party) ☐ As Above in A

Name: Thomas L. Sunde (operator with revoked permit)

Address:

City: State: Zip:

Phone: Email:

C. INCIDENT DATE & LOCATION ☐ As Above In B

Spill Date: (MM/DD/YY) Spill Time:

Street or Approx. Location:

Survey Description: 43.48769, -103.86845

City: Burdock County: Custer State: SD Zip: 57735

D. MATERIAL

Material type (Code/Name): ☐ Hazardous Substance ☐ Material Unknown ☑ Oil ☐ Other

Material type (Code/Name)	Quantity Spilled	Spilled in Water	Units (Check one)	
Crude oil	10?		☐ lb. ☑ bbl.	☐ gal. ☐ oth.
			☐ lb. ☐ bbl.	☐ gal. ☐ oth.
			☐ lb. ☐ bbl.	☐ gal. ☐ oth.

E. SOURCE

Source of Spill: ☑ AST ☐ UST ☐ Railway ☐ Transport ☐ Fixed Facility ☐ Pipeline ☐ Highway ☐ Other

Description: leak from pipe

Regulated Tank Facility: ☐ Tank Facility ID #:

F. MEDIUM

Medium Affected: ☐ Air ☑ Land ☐ Water ☐ Groundwater ☐ Within Facilities Only

Waterway Affected:

G. CAUSE

Reported Cause: ☐ Transportation Accident ☐ Natural Phenomenon ☐ Operational Error ☐ Unknown ☐ Dumping ☐ Other ☑ Equipment Failure

Description: leak from pipe

H. DAMAGES

# of Injuries: # of Fatalities:

I. ACTIONS

Response Action Taken:

K. NOTIFIED

Responding Agency: ☑ DANR ☐ Local ☐ Discharger ☐ Federal ☐ EPA ☐ Other

Agencies Notified: DANR

K. COMMENTS

Comments:

Off of Highway 89, south of Pringle and west of Hot Springs, you go west on Pilger Mountain Road for approximately 9.3 miles. Then there is an unmarked two-track road which you take for approximately 1.3 miles to reach the Barker Dome tank battery. This unmarked two-track road does show up on Google Maps as the “Barker Dome Rd”.

Department of Agriculture and Natural Resources
Inspection, Compliance, and Remediation Program
523 East Capitol Avenue
Pierre, South Dakota 57501

Business Hours M – F 8:00-5:00 pm
Normal Business Hours- (605)773-3296
After Business Hours- (605) 773-3231

DEPARTMENT of AGRICULTURE and NATURAL RESOURCES
JOE FOSS BUILDING
523 E CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

Memorandum

To: Terry Florentz, P.E., Administrator
Inspection, Compliance, and Remediation Program

From: Macy Jo Peterson, Environmental Scientist II
Inspection, Compliance, and Remediation Program

Subject: No Further Action for DANR Spill Case 2025.044, pertaining to a tank bottoms (crude oil and saltwater) release at the Barker Dome tank battery (formerly operated by Thomas L. Sunde).

Date: August 1, 2025

Site Description

The project location is situated approximately 20 miles west of Hot Springs, South Dakota (SD), and 13 miles north of Edgemont, SD, along Barker Dome Road in Custer County, SD. The latitude/longitude of the site is 43.487690°, -103.868450°. The geology of the site consists of silty to sandy lean clay, that is weathered and indicative of the Sundance Formation. The site was formerly operating as a crude oil well pad. The Department of Agriculture and Natural Resources (DANR) assumed responsibility for the Barker Dome oil field, formerly operated by Thomas L. Sunde, after the SD Board of Mineral and Environment revoked Sunde's well permits and ordered forfeiture of Sunde's plugging and performance bond. DANR was in the process of using the forfeited funds to hire a contractor to plug the Barker Dome wells and perform surface reclamation when the spill was discovered.

Investigation Efforts

Based on the information provided, on April 28, 2025, the landowner contacted DANR staff to report that an unknown amount of tank bottoms waste (crude oil and salt water) was released onto the ground at the tank battery site. In response, DANR retained the services of American Engineering Testing (AET) to remediate the site. Pooled oil was solidified and the material along with impacted surface soil was excavated and hauled to the Custer-Fall River landfill for disposal. The area was backfilled with clean soil and regraded to match surrounding surface topography. Upon review of the excavation field observations, organic vapor screening results, and clearance sample analytical results, it is AET's opinion that excavation activities at the site were successful in removing the majority of significantly impacted soil and freestanding crude oil from this release event.

Recommendations

While contamination remains on-site, it is below grade and does not currently pose a threat to nearby vulnerable receptors. There is likely no further harm to the environment and no harm to human health as a result of this release. Therefore, I recommend DANR case 2025.044 be assigned No Further Action status.

Macy Jo Peterson
SD DANR
Inspection, Compliance, and Remediation Program

MIDCONTINENT
TESTING LABORATORIES, INC.

2381 South Plaza Drive P.O. Box 3388 Rapid City, SD 57709
(605) 348-0111 -- www.thechemistrylab.com

Sample Site:	Composite (4 Loc)
Project Name:	Barker Dome Release
Project Number:	P-0043194
Sampled:	04/29/25 at 10:00 AM by Jeremy Huot
Sample Matrix:	Soil

AET
1745 SAMCO ROAD
RAPID CITY, SD 57702

Lab ID#:	20250429541
Received:	04/29/25 at 03:47 PM by Josh Bucknall
Account:	W1202 - AET - Rapid City

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst	Date
Metals - TCLP								
Arsenic (As)	< 0.005	mg/L	10	0.00036	0.005	EPA SW846 6020	TNA	05/02/25
Barium (Ba)	0.534	mg/L	10	0.00073	0.005	EPA SW846 6020	TNA	05/02/25
Cadmium (Cd)	0.002	mg/L	10	0.000303	0.001	EPA SW846 6020	TNA	05/02/25
Chromium (Cr)	< 0.001	mg/L	10	0.000109	0.001	EPA SW846 6020 DRC	TNA	05/02/25
Lead (Pb)	< 0.001	mg/L	10	0.00015	0.001	EPA SW846 6020	TNA	05/02/25
Mercury (Hg)	< 0.0002	mg/L	1	0.000045	0.0002	EPA SW846 7471B	GRT	05/02/25
Selenium (Se)	< 0.005	mg/L	10	0.001	0.005	EPA SW846 6020	TNA	05/02/25
Silver (Ag)	< 0.001	mg/L	10	0.00014	0.001	EPA SW846 6020	TNA	05/02/25
Volatile								
Benzene	< 0.050	mg/kg	1	0.018	0.050	SW846 8021B-S	SAC	05/07/25
Ethylbenzene	0.124	mg/kg	1	0.016	0.100	SW846 8021B-S	SAC	05/07/25
Methyl tertiary-Butyl Ether	< 0.100	mg/kg	1	0.023	0.100	SW846 8021B-S	SAC	05/07/25
Naphthalene	0.994	mg/kg	1	0.025	0.200	SW846 8021B-S	SAC	05/07/25
Toluene	< 0.100	mg/kg	1	0.015	0.100	SW846 8021B-S	SAC	05/07/25
Xylenes(o,m,p)	< 0.200	mg/kg	1	0.060	0.200	SW846 8021B-S	SAC	05/07/25
Total Volatile Hydrocarbons								
TPH as Gasoline	33.0	mg/kg	1	0.689	10.0	SW846 8015B-S	SAC	05/07/25
Semi-Volatile								
TPH(Total Extractable Hydrocarbons)	17400	mg/kg	200	258	2000	SW846 8015B-S	SAC	05/01/25
Extraction								
Extraction TPH/SOC	1.00	none	1			SW846 3550	SAC	04/29/25
Radiological								
Radium-226	0.7050	pCi/g	1			EPA 901.1m	SYS	05/29/25
Radium-228	0.8720	pCi/g	1			EPA 901.1m	SYS	05/29/25
Precision Data								
Radium-226 precision	± 0.131	pCi/g	1			SC-Radium 226 precision	SYS	05/29/25
Radium-228 precision	± 0.275	pCi/g	1			SC-Radium 228 precision	SYS	05/29/25

Report of Analysis for: **AET - Rapid City** Sample Site: **Composite (4 Loc)**

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
MDA Data							
Radium-226 MDA	0.113	pCi/g	1			SC - Radium 226 MDA	SYS 05/29/25
Radium-228 MDA	0.460	pCi/g	1			SC - Radium 228 MDA	SYS 05/29/25

Quality Control Data

Parameter	Result	Limits	DF	Method	Analyst/Date
Surrogate Recovery-SV					
Ortho-Terphenyl	D-Surrogate not calculated due to dilution				
Surrogate Recovery-Volatile					
4-Bromofluorobenzene	120.9 %	(85.08) - (122.8)	1	SW846 8021B QC	SAC 05/07/25

Notes:
Radium 226 and 228 analyzed by Pace Labs. Report attached.

Report Approved By:



Report Approved On: 6/9/2025 11:50:30 AM

MIDCONTINENT
TESTING LABORATORIES, INC.

2381 South Plaza Drive P.O. Box 3388 Rapid City, SD 57709
(605) 348-0111 -- www.thechemistrylab.com

Lab Numbers: 20250429541 - 20250429541

QC Sample Report

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
Spike									
Arsenic - T	0501836	0.283	0.006	0.025	10	110.7 %	(85.70) - (115.7)	EPA 200.8	
Barium - T	0501836	0.534	0.278	0.025	10	102.5 %	(80.59) - (119.2)	EPA 200.8	
Cadmium - T	0501836	0.256	< 0.001	0.025	10	102.4 %	(86.45) - (110.6)	EPA 200.8	
Chromium - T	0501836	0.251	< 0.001	0.025	10	100.4 %	(83.44) - (114.8)	EPA 200.8 DRC	
Lead - T	0501836	0.2616	0.0019	0.025	10	103.9 %	(93.57) - (112.2)	EPA 200.8	
Mercury - T	0430103	0.0021	< 0.0002	0.002	1	106.0 %	(88.02) - (114.0)	EPA 245.1	
Selenium - T	0501836	1.25	< 0.005	0.125	10	99.65%	(82.85) - (113.5)	EPA 200.8	
Arsenic - TR	0502106	0.248	< 0.005	0.025	10	99.0 %	(88.17) - (107.5)	EPA 200.8	
Arsenic - TR	0502209	0.254	< 0.005	0.025	10	101.6 %	(88.17) - (107.5)	EPA 200.8	
Barium - TR	0502106	0.301	0.054	0.025	10	98.8 %	(87.21) - (104.1)	EPA 200.8	
Barium - TR	0502209	0.266	0.021	0.025	10	98.4 %	(87.21) - (104.1)	EPA 200.8	
Cadmium - TR	0502106	0.247	< 0.001	0.025	10	98.9 %	(90.20) - (106.7)	EPA 200.8	
Cadmium - TR	0502209	0.254	< 0.001	0.025	10	101.5 %	(90.20) - (106.7)	EPA 200.8	
Chromium - TR	0502106	0.2446	< 0.0010	0.025	10	97.8 %	(83.63) - (110.7)	EPA 200.8 DRC	
Chromium - TR	0502209	0.2506	< 0.0010	0.025	10	100.2 %	(83.63) - (110.7)	EPA 200.8 DRC	
Lead - TR	0502209	0.2477	< 0.0010	0.025	10	99.1 %	(91.39) - (105.8)	EPA 200.8	
Lead - TR	0502106	0.2446	< 0.0010	0.025	10	97.8 %	(91.39) - (105.8)	EPA 200.8	
Selenium - TR	0502209	1.22	< 0.005	0.125	10	97.5 %	(84.58) - (105.9)	EPA 200.8	
Selenium - TR	0502106	1.22	0.017	0.125	10	96.3 %	(84.58) - (105.9)	EPA 200.8	
Silver - TR	0502209	0.2512	< 0.0010	0.025	10	100.5 %	(84.11) - (108.5)	EPA 200.8	
Silver - TR	0502106	0.2448	< 0.0010	0.025	10	97.9 %	(84.11) - (108.5)	EPA 200.8	
Benzene	0508541	1.20	< 0.050	1.00	1	119.6 %	(67.26) - (115.3)	SW846 8021B-S	X
- Result is within QC guidelines of 80 - 120%									
Ethylbenzene	0508541	1.20	< 0.100	1.00	1	120.0 %	(80.98) - (111.1)	SW846 8021B-S	X
- Result is within QC guidelines of 80 - 120%									
MTBE	0508541	1.18	< 0.100	1.00	1	117.9 %	(64.47) - (111.9)	SW846 8021B-S	X
- Result is within QC guidelines of 80 - 120%									
Naphthalene	0508541	0.909	< 0.200	1.00	1	90.9 %	(61.30) - (143.1)	SW846 8021B-S	
Toluene	0508541	1.25	< 0.100	1.00	1	125.3 %	(73.57) - (113.9)	SW846 8021B-S	X
- Result is within QC guidelines of 70 - 130%									
Xylenes(o,m,p)	0508541	3.79	< 0.200	3.00	1	126.3 %	(74.86) - (117.9)	SW846 8021B-S	X
- Result is within QC guidelines of 70 - 130%									
TPH Gas	0508541	103	< 10.0	100	1	103.3 %	(54.52) - (130.0)	SW846 8015B-S	
TPH-Diesel	0409542	164	< 10.0	200	1	82.0 %	(55.43) - (103.4)	SW846 8015B-S	
Matrix Spike Duplicate									
Arsenic - T	0501836	0.269	0.283		10	-4.82%	(-13.67) - (12.50)	EPA 200.8	
Barium - T	0501836	0.515	0.534		10	-3.63%	(-11.79) - (10.85)	EPA 200.8	

Lab Numbers: **20250429541 - 20250429541**

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
Matrix Spike Duplicate									
Cadmium - T	0501836	0.247	0.256		10	-3.44%	(-11.95) - (10.24)	EPA 200.8	
Chromium - T	0501836	0.246	0.251		10	-1.80%	(-10.83) - (11.68)	EPA 200.8 DRC	
Lead - T	0501836	0.2507	0.2616		10	-4.28%	(-11.28) - (10.63)	EPA 200.8	
Mercury - T	0430103	0.0021	0.0021		1	-1.90%	(-9.530) - (7.396)	EPA 245.1	
Selenium - T	0501836	1.20	1.25		10	-3.78%	(-13.26) - (11.80)	EPA 200.8	
Arsenic - TR	0502209	0.249	0.254	0.025	10	-1.90%	(-5.795) - (6.589)	EPA 200.8	
Arsenic - TR	0502106	0.248	0.248		10	0.149%	(-5.795) - (6.589)	EPA 200.8	
Barium - TR	0502209	0.266	0.266	0.025	10	-0.154%	(-4.277) - (5.142)	EPA 200.8	
Barium - TR	0502106	0.298	0.301		10	-0.879%	(-4.277) - (5.142)	EPA 200.8	
Cadmium - TR	0502106	0.249	0.247		10	0.774%	(-4.597) - (4.856)	EPA 200.8	
Cadmium - TR	0502209	0.246	0.254	0.025	10	-3.19%	(-4.597) - (4.856)	EPA 200.8	
Chromium - TR	0502209	0.2671	0.2506	0.025	10	6.39%	(-6.643) - (7.257)	EPA 200.8 DRC	
Chromium - TR	0502106	0.2440	0.2446		10	-0.237%	(-6.643) - (7.257)	EPA 200.8 DRC	
Lead - TR	0502106	0.2442	0.2446		10	-0.155%	(-3.881) - (4.017)	EPA 200.8	
Lead - TR	0502209	0.2463	0.2477	0.025	10	-0.587%	(-3.881) - (4.017)	EPA 200.8	
Selenium - TR	0502209	1.22	1.22	0.125	10	-0.214%	(-6.510) - (6.495)	EPA 200.8	
Selenium - TR	0502106	1.22	1.22		10	0.303%	(-6.510) - (6.495)	EPA 200.8	
Silver - TR	0502106	0.2445	0.2448		10	-0.110%	(-5.094) - (6.436)	EPA 200.8	
Silver - TR	0502209	0.2449	0.2512	0.025	10	-2.54%	(-5.094) - (6.436)	EPA 200.8	
Benzene	0508541	1.17	1.20		1	-2.03%	(-16.06) - (12.84)	SW846 8021B-S	
Ethylbenzene	0508541	1.24	1.20		1	3.28%	(-17.45) - (14.80)	SW846 8021B-S	
MTBE	0508541	1.14	1.18		1	-3.28%	(-14.54) - (12.12)	SW846 8021B-S	
Naphthalene	0508541	1.11	0.909		1	20.3 %	(-30.37) - (27.56)	SW846 8021B-S	
Toluene	0508541	1.28	1.25		1	1.90%	(-15.74) - (13.44)	SW846 8021B-S	
Xylenes(o,m,p)	0508541	3.72	3.79		1	-1.87%	(-17.18) - (14.95)	SW846 8021B-S	
TPH Gas	0508541	101	103		1	-2.39%	(-18.87) - (14.22)	SW846 8015B-S	
TPH-Diesel	0409542	175	164		1	6.55%	(-26.05) - (25.32)	SW846 8015B-S	
Initial Calibration Verification									
Arsenic - D		0.052	0.050		1	3.04%	(-4.696) - (4.118)	EPA 200.8	
Barium - D		0.052	0.050		1	3.64%	(-6.160) - (7.692)	EPA 200.8	
Cadmium - D		0.051	0.050		1	2.40%	(-4.820) - (4.226)	EPA 200.8	
Chromium - D		0.052	0.050		1	3.18%	(-13.89) - (12.01)	EPA 200.8 DRC	
Lead - D		0.0509	0.0500		1	1.72%	(-4.819) - (6.739)	EPA 200.8	
Selenium - D		0.250	0.250		1	0.112%	(-5.214) - (3.198)	EPA 200.8	
Silver - D		0.051	0.050		1	2.10%	(-4.064) - (5.522)	EPA 200.8	
Mercury - T		0.0031	0.0030		1	3.33%	(-5.016) - (11.78)	EPA 245.1	
TPH-Diesel		998	1000		1	-0.200%	(-24.60) - (30.28)	SW846 8015B-S	
Continuing Calibration Verification									
Arsenic - D		0.051	0.050		1	1.10%	(-10.29) - (0.7200)	EPA 200.8	X
- Recovery was within 10% of expected value									
Arsenic - D		0.049	0.050		1	-1.60%	(-10.29) - (0.7200)	EPA 200.8	
Arsenic - D		0.051	0.050		1	2.22%	(-10.29) - (0.7200)	EPA 200.8	X
- Recovery was within 10% of expected value									
Arsenic - D		0.050	0.050		1	0.820%	(-10.29) - (0.7200)	EPA 200.8	X
- Recovery was within 10% of expected value									

Lab Numbers: **20250429541 - 20250429541**

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
Continuing Calibration Verification									
Arsenic - D		0.051	0.050		1	2.02%	(-10.29) - (0.7200)	EPA 200.8	X
- Recovery was within 10% of expected value									
Barium - D		0.049	0.050		1	-1.22%	(-7.713) - (1.673)	EPA 200.8	
Barium - D		0.050	0.050		1	-1.06%	(-7.713) - (1.673)	EPA 200.8	
Barium - D		0.052	0.050		1	3.98%	(-7.713) - (1.673)	EPA 200.8	X
- Recovery was within 10% of expected value									
Barium - D		0.050	0.050		1	0.720%	(-7.713) - (1.673)	EPA 200.8	
Barium - D		0.050	0.050		1	-1.08%	(-7.713) - (1.673)	EPA 200.8	
Cadmium - D		0.051	0.050		1	1.32%	(-8.275) - (3.327)	EPA 200.8	
Cadmium - D		0.050	0.050		1	0.260%	(-8.275) - (3.327)	EPA 200.8	
Cadmium - D		0.049	0.050		1	-1.18%	(-8.275) - (3.327)	EPA 200.8	
Cadmium - D		0.050	0.050		1	0.320%	(-8.275) - (3.327)	EPA 200.8	
Cadmium - D		0.050	0.050		1	-0.940%	(-8.275) - (3.327)	EPA 200.8	
Chromium - D		0.051	0.050		1	2.72%	(-7.492) - (10.18)	EPA 200.8 DRC	
Chromium - D		0.052	0.050		1	4.26%	(-7.492) - (10.18)	EPA 200.8 DRC	
Chromium - D		0.051	0.050		1	2.10%	(-7.492) - (10.18)	EPA 200.8 DRC	
Chromium - D		0.052	0.050		1	3.52%	(-7.492) - (10.18)	EPA 200.8 DRC	
Chromium - D		0.050	0.050		1	-0.940%	(-7.492) - (10.18)	EPA 200.8 DRC	
Lead - D		0.0508	0.0500		1	1.50%	(-6.131) - (3.757)	EPA 200.8	
Lead - D		0.0500	0.0500		1	0.080%	(-6.131) - (3.757)	EPA 200.8	
Lead - D		0.0502	0.0500		1	0.400%	(-6.131) - (3.757)	EPA 200.8	
Lead - D		0.0499	0.0500		1	-0.220%	(-6.131) - (3.757)	EPA 200.8	
Lead - D		0.0508	0.0500		1	1.58%	(-6.131) - (3.757)	EPA 200.8	
Selenium - D		0.246	0.250		1	-1.47%	(-11.31) - (0.8166)	EPA 200.8	
Selenium - D		0.245	0.250		1	-2.04%	(-11.31) - (0.8166)	EPA 200.8	
Selenium - D		0.252	0.250		1	0.720%	(-11.31) - (0.8166)	EPA 200.8	
Selenium - D		0.254	0.250		1	1.62%	(-11.31) - (0.8166)	EPA 200.8	X
- Recovery was within 10% of expected value									
Selenium - D		0.247	0.250		1	-1.05%	(-11.31) - (0.8166)	EPA 200.8	
Silver - D		0.050	0.050		1	0.620%	(-6.467) - (4.749)	EPA 200.8	
Silver - D		0.050	0.050		1	0.880%	(-6.467) - (4.749)	EPA 200.8	
Silver - D		0.054	0.050		1	7.48%	(-6.467) - (4.749)	EPA 200.8	X
- Recovery was within 10% of expected value									
Silver - D		0.050	0.050		1	-0.380%	(-6.467) - (4.749)	EPA 200.8	
Silver - D		0.045	0.050		1	-9.72%	(-6.467) - (4.749)	EPA 200.8	X
- Recovery was within 10% of expected value									
Mercury - T		0.0020	0.0020		1	-1.50%	(-11.12) - (7.856)	EPA 245.1	
Mercury - T		0.0010	0.0010		1	-2.00%	(-11.12) - (7.856)	EPA 245.1	
Mercury - T		0.0020	0.0020		1	-0.500%	(-11.12) - (7.856)	EPA 245.1	
Mercury - T		0.0020	0.0020		1	1.00%	(-11.12) - (7.856)	EPA 245.1	
Mercury - T		0.0021	0.0020		1	3.00%	(-11.12) - (7.856)	EPA 245.1	
Mercury - T		0.0050	0.0050		1	0.600%	(-11.12) - (7.856)	EPA 245.1	
Mercury - T		0.0020	0.0020		1	1.00%	(-11.12) - (7.856)	EPA 245.1	
Benzene		27.1	25.0		1	8.45%	(-3.994) - (12.15)	SW846 8021B	
Benzene		27.1	25.0		1	8.43%	(-3.994) - (12.15)	SW846 8021B	
Ethylbenzene		26.7	25.0		1	6.62%	(-7.381) - (12.87)	SW846 8021B	

Lab Numbers: **20250429541 - 20250429541**

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method
Continuing Calibration Verification								
Ethylbenzene		26.6	25.0		1	6.30%	(-7.381) - (12.87)	SW846 8021B
MTBE		28.3	25.0		1	13.4 %	(-13.19) - (20.39)	SW846 8021B
MTBE		27.6	25.0		1	10.5 %	(-13.19) - (20.39)	SW846 8021B
Naphthalene		28.7	25.0		1	14.8 %	(-41.35) - (27.12)	SW846 8021B
Naphthalene		25.2	25.0		1	0.952%	(-41.35) - (27.12)	SW846 8021B
Toluene		28.1	25.0		1	12.2 %	(-2.637) - (18.29)	SW846 8021B
Toluene		28.1	25.0		1	12.3 %	(-2.637) - (18.29)	SW846 8021B
Xylenes(o,m,p)		82.9	75.0		1	10.6 %	(-5.886) - (17.46)	SW846 8021B
Xylenes(o,m,p)		83.0	75.0		1	10.7 %	(-5.886) - (17.46)	SW846 8021B
TPH Gas		1750	2000		1	-12.4 %	(-21.46) - (4.653)	SW846 8015B
TPH Gas		1850	2000		1	-7.38%	(-21.46) - (4.653)	SW846 8015B
TPH-Diesel		1140	1000		1	13.8 %	(-13.69) - (27.60)	SW846 8015B-S
TPH-Diesel		1170	1000		1	16.9 %	(-13.89) - (28.09)	SW846 8015B-S
Lab Control Spike								
Benzene		1.12	0.00	1.00	1	111.6 %	(76.03) - (127.3)	SW846 8021B-S
Ethylbenzene		1.12	0.00	1.00	1	112.2 %	(84.58) - (125.6)	SW846 8021B-S
MTBE		1.14	0.00	1.00	1	113.5 %	(73.87) - (130.1)	SW846 8021B-S
Naphthalene		0.698	0.00	1.00	1	69.8 %	(34.04) - (163.6)	SW846 8021B-S
Toluene		1.18	0.00	1.00	1	117.8 %	(79.43) - (131.7)	SW846 8021B-S
Xylenes(o,m,p)		3.48	0.00	3.00	1	116.1 %	(81.30) - (132.0)	SW846 8021B-S
TPH Gas		89.7	0.00	100	1	89.7 %	(67.09) - (112.1)	SW846 8015B-S
TPH-Diesel		163	0.00	200	1	81.7 %	(57.40) - (109.8)	SW846 8015B-S
Initial Calibration Blank								
Mercury - T		0.0000	0.000		1	-0.00001	(-0.0001) - (0.0001)	EPA 245.1
Continuing Calibration Blank								
Arsenic - D		0.000	0.00		1	-0.00002	(-0.0003) - (0.0002)	EPA 200.8
Barium - D		0.00	0.00		1	0	(0.0000) - (0.0000)	EPA 200.8
Cadmium - D		0.000	0.00		1	0.00001	(0.0000) - (0.0001)	EPA 200.8
Chromium - D		0.000	0.00		1	0.00001	(0.0000) - (0.0001)	EPA 200.8 DRC
Lead - D		0.000	0.000		1	0	(0.0000) - (0.0000)	EPA 200.8
Selenium - D		0.000	0.00		1	0.00006	(-0.0002) - (0.0005)	EPA 200.8
Silver - D		0.00	0.00		1	0	(0.0000) - (0.0001)	EPA 200.8
Mercury - T		-0.0001	0.000		1	-0.00005	(-0.0001) - (0.0001)	EPA 245.1
Mercury - T		0.0000	0.000		1	-0.00002	(-0.0001) - (0.0001)	EPA 245.1
Mercury - T		0.0000	0.000		1	-0.00002	(-0.0001) - (0.0001)	EPA 245.1
Mercury - T		0.0000	0.000		1	-0.00001	(-0.0001) - (0.0001)	EPA 245.1
Lab Reagent Blank								
Benzene		0.00	0.00		1	0	(0.000) - (0.000)	SW846 8021B-S
Ethylbenzene		0.00	0.00		1	0	(0.000) - (0.000)	SW846 8021B-S
MTBE		0.068	0.00		1	0.0683	(-0.0351) - (0.0909)	SW846 8021B-S
Naphthalene		0.00	0.00		1	0	(-0.0527) - (0.0712)	SW846 8021B-S
Toluene		0.00	0.00		1	0	(-0.0310) - (0.0419)	SW846 8021B-S

Lab Numbers: **20250429541 - 20250429541**

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method
Lab Reagent Blank								
Xylenes(o,m,p)		0.066	0.00		1	0.0655	(-0.0760) - (0.1478)	SW846 8021B-S
TPH Gas		0.362	0.00		1	0.36244	(-0.7855) - (1.266)	SW846 8015B-S
TPH-Diesel		1.33	0.00		1	1.33	(-6.985) - (9.426)	SW846 8015B-S

Approved By: 

Approved On: 05/23/2025 04:05 PM

AMERICAN ENGINEERING TESTING, INC.

☐ St. Paul Office
550 Cleveland Ave. N.
St. Paul, MN 55114
651-659-9001
651-659-1379 (fax)

☒ OTHER Rapid City Office
ADDRESS: 1745 Samco Rd
Rapid City, SD
PHONE: 605-388-0029

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PAGE 1 OF 1

AET PROJECT NUMBER P-0043194 P.O. # 18-1136
PROJECT NAME/LOCATION Barker Dome Release
AET PROJECT MANAGER Jeremy Huot
SEND REPORT TO Jeremy Huot & Brad Bishop
SAMPLED BY (PRINT) Jeremy Huot
SAMPLER SIGNATURE

REQUESTED TURNAROUND TIME: ☒ NORMAL ☐ RUSH
DATE NEEDED BY:

ITEM#	SAMPLE DESCRIPTION	DATE	TIME	SAMPLE TYPE	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	MeOH	HCL	H_2SO_4	HNO_3	FIELD FILTERED Y/N	ANALYSIS: TEH, Naphthalene	TPH-G, BTEX, MTBE	TCLP RCRA & metals	Radium-226	Radium-228	REMARKS
1	Composite (4 Loc)	4/29/25	10:00	Soil	3	X					N	X	X	X	X	X	2 Jars & 1 Ziplock lab # 2025012954

NOTE:
on ice
13.0°C

ITEM NUMBER	RELINQUISHED BY/AFFILIATION	ACCEPTED BY/AFFILIATION	DATE	TIME
1	AET		4/29/25	3:47pm

MIDCONTINENT TESTING LABORATORIES

SAMPLE RECEIPT CHECKLIST

Company Name: AET

Date/Time Received: 4/29/25 (Date) / 1547 (Time)

Project: Barker Dome Release

Received by: Josh

Lab Number(s): 2025042954I

Carrier Name: Hand Delivered

UNPACKING

Yes	No		Initials
☑	☐	1. Shipping container in good condition?	
☐	☑	2. Custody seals present on shipping container? Condition: Intact ☐ Broken ☐	
☑	☐	3. (Ice) / Blue Ice (circle one) present in shipping container? Container(s) Temp. 1. 13.0°C 2. _____ 3. _____ 4. _____	
☐	☑	4. Bottles broken and/or leaking? (Photograph broken bottles.)	
☐	☑	5. Custody seals on sample bottles? Condition: Intact ☐ Broken ☐	

LABELING

Yes	No		Initials
☑	☐	6. Chain of custody Present?	
☑	☐	7. Chain of custody includes signatures, dates, and times when relinquished and received?	
☑	☐	8. Chain of custody agrees with bottle count?	
☑	☐	9. Chain of custody agrees with labels?	
☑	☐	10. Samples received within holding times?	
☑	☐	11. Samples in proper container?	
☑	☐	12. Sufficient sample volume for indicated tests?	

PRESERVATIVE

Yes	No		Initials	Yes	No		Initials
☐	☐	13. Metals bottle(s) pH < 2?		☐	☐	17. TOC bottle(s) pH < 2?	
☐	☐	14. Nutrient bottle(s) pH < 2?		☐	☐	18. Oil & Grease bottle(s) pH < 2?	
☐	☐	15. Cyanide bottle(s) pH > 12?		☐	☐	19. Volatiles pH < 2?	
☐	☐	16. Sulfide bottle(s) pH > 9?					

COMMENTS:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 20250429541
Pace Project No.: 30776560

Sample: 20250429541 **Lab ID: 30776560001** Collected: 04/29/25 10:00 Received: 05/06/25 11:05 Matrix: Solid
PWS: Site ID: Sample Type:

Results reported on a "dry-weight" basis
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 901.1	**0.705 ± 0.131 (0.113) C:NA T:NA**	pCi/g	05/29/25 07:45	13982-63-3	Ra
Radium-228	EPA 901.1	**0.872 ± 0.275 (0.460) C:NA T:NA**	pCi/g	05/29/25 07:45	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 20250429541
Pace Project No.: 30776560

QC Batch: 746226
QC Batch Method: EPA 901.1
Analysis Method: EPA 901.1
Analysis Description: 901.1 Gamma Spec Ingrowth
Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30776560001

METHOD BLANK: 3634086 Matrix: Solid

Associated Lab Samples: 30776560001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.005 ± 0.078 (0.093) C:NA T:NA	pCi/g	05/26/25 19:22	Ra
Radium-228	0.011 ± 0.088 (0.122) C:NA T:NA	pCi/g	05/26/25 19:22	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: 20250429541
Pace Project No.: 30776560

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

Ra	The reported Ra-226 results were determined by hermetically sealing the dried, processed sample in an appropriate-sized can. Each sample was stored for a minimum of 21 days to ensure that equilibrium between Ra-226 and daughters Bi-214 and Pb-214 was achieved. Reported Ra-226 results were inferred from gamma peaks attributable to Bi-214 and Pb-214.

REPORT OF LABORATORY ANALYSIS

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1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20250429541
Pace Project No.: 30776560

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30776560001	**20250429541**	EPA 901.1	746226		

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MIDCONTINENT
TESTING LABORATORIES, INC.

2381 South Plaza Drive P.O. Box 3388 Rapid City, SD 57709
(605) 348-0111 -- www.thechemistrylab.com

Sample Site:	Composite 2
Project Name:	Barker Dome Release
Project Number:	P-0043194
Sampled:	05/07/25 at 10:15 AM by Jeremy Huot
Sample Matrix:	Soil

AET
1745 SAMCO ROAD
RAPID CITY, SD 57702

Lab ID#:	20250508581
Received:	05/08/25 at 08:52 AM by Shela Carpenter
Account:	W1202 - AET - Rapid City

Parameter	Result	Units	DF	Method	Analyst	Date
Radiological						
Radium-226	0.6650	pCi/g	1	EPA 901.1m	SYS	06/11/25
Radium-228	0.7650	pCi/g	1	EPA 901.1m	SYS	06/11/25
Precision Data						
Radium-226 precision	± 0.080	pCi/L	1	SC-Radium 226 precision	SYS	06/11/25
Radium-228 precision	± 0.139	pCi/L	1	SC-Radium 228 precision	SYS	06/11/25
MDA Data						
Radium-226 MDA	0.078	pCi/L	1	SC - Radium 226 MDA	SYS	06/11/25
Radium-228 MDA	0.139	pCi/L	1	SC - Radium 228 MDA	SYS	06/11/25

Notes:
Radium 226 and 228 analyzed by Pace Labs. Report attached.

Report Approved By:



Report Approved On: 6/16/2025 12:09:30 PM

MIDCONTINENT
TESTING LABORATORIES, INC.

2381 South Plaza Drive P.O. Box 3388 Rapid City, SD 57709
(605) 348-0111 -- www.thechemistrylab.com

Lab Numbers: 20250508581 - 20250508581

QC Sample Report

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method

Approved By: 

Approved On: 06/16/2025 12:09 PM

AMERICAN ENGINEERING TESTING, INC.

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550 Cleveland Ave. N.
St. Paul, MN 55114
651-659-9001
651-659-1379 (fax)

☒ OTHER Rapid City Office

ADDRESS: 1745 Samco Rd
Rapid City, SD

PHONE: 605-388-0029

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PAGE 1 OF 1

AET PROJECT NUMBER P-0043194 P.O.# 18-1138

PROJECT NAME/LOCATION Barker Dome Release

AET PROJECT MANAGER Jeremy Huot

SEND REPORT TO J. Huot & B. Bishop

SAMPLED BY (PRINT) Jeremy Huot

SAMPLER SIGNATURE

REQUESTED TURNAROUND TIME: ☒ NORMAL ☐ RUSH

DATE NEEDED BY:

ITEM#	SAMPLE DESCRIPTION	DATE	TIME	SAMPLE TYPE	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	PRESERVATIVES: MeOH	PRESERVATIVES: HCL	PRESERVATIVES: H_2SO_4	PRESERVATIVES: HNO_3	FIELD FILTERED Y/N	ANALYSIS: Radium 226	ANALYSIS: Radium 228	REMARKS
1	Composite 2	5/7/25	10:15	Soil	1	X					N	X	X	202505085 81

NOTE:

11.4°C
BlueIce

ITEM NUMBER	RELINQUISHED BY/AFFILIATION	ACCEPTED BY/AFFILIATION	DATE	TIME
1	AET		5/8/25	0852

MIDCONTINENT

SAMPLE RECEIPT CHECKLIST

Company Name: AET
Date/Time Received: 5/8/25 (Date) / 0852 (Time)
Project: Barker Dam Release
Received by: Shela
Lab Number(s): 202505085 81
Carrier Name: Hand Delivered

UNPACKING

Yes	No		Initials
☑	☐	1. Shipping container in good condition?	
☐	☑	2. Custody seals present on shipping container? Condition: Intact ☐ Broken ☐	
☑	☐	3. Ice / Blue Ice (circle one) present in shipping container? Container(s) Temp. 1. 11.4°C 2. _____ 3. _____ 4. _____	
☐	☑	4. Bottles broken and/or leaking? (Photograph broken bottles.)	
☐	☑	5. Custody seals on sample bottles? Condition: Intact ☐ Broken ☐	

LABELING

Yes	No		Initials
☑	☐	6. Chain of custody Present?	
☑	☐	7. Chain of custody includes signatures, dates, and times when relinquished and received?	
☑	☐	8. Chain of custody agrees with bottle count?	
☑	☐	9. Chain of custody agrees with labels?	
☑	☐	10. Samples received within holding times?	
☑	☐	11. Samples in proper container?	
☑	☐	12. Sufficient sample volume for indicated tests?	

PRESERVATIVE

Yes	No		Initials	Yes	No		Initials
☐	☐	13. Metals bottle(s) pH < 2?		☐	☐	17. TOC bottle(s) pH < 2?	
☐	☐	14. Nutrient bottle(s) pH < 2?		☐	☐	18. Oil & Grease bottle(s) pH < 2?	
☐	☐	15. Cyanide bottle(s) pH > 12?		☐	☐	19. Volatiles pH < 2?	
☐	☐	16. Sulfide bottle(s) pH > 9?					

COMMENTS:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 20250508581
Pace Project No.: 30779796

Sample: 20250508581 **Lab ID: 30779796001** Collected: 05/07/25 10:15 Received: 05/15/25 10:10 Matrix: Solid
PWS: Site ID: Sample Type:

Results reported on a "dry-weight" basis
Comments: • The sampler's name and signature were not listed on the COC.
• Sample ID on Ziploc bag = 0508581; logged per client COC; notified via SAF.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 901.1	**0.665 ± 0.080 (0.078) C:NA T:NA**	pCi/g	06/11/25 12:37	13982-63-3	Ra
Radium-228	EPA 901.1	**0.765 ± 0.139 (0.139) C:NA T:NA**	pCi/g	06/11/25 12:37	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 20250508581
Pace Project No.: 30779796

QC Batch: 748389
QC Batch Method: EPA 901.1
Analysis Method: EPA 901.1
Analysis Description: 901.1 Gamma Spec Ingrowth
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30779796001

METHOD BLANK: 3645200 Matrix: Solid
Associated Lab Samples: 30779796001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.021 (0.256) C:NA T:NA	pCi/g	06/04/25 11:16	Ra
Radium-228	0.068 ± 0.130 (0.230) C:NA T:NA	pCi/g	06/04/25 11:16	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: 20250508581
Pace Project No.: 30779796

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

Ra	The reported Ra-226 results were determined by hermetically sealing the dried, processed sample in an appropriate-sized can. Each sample was stored for a minimum of 21 days to ensure that equilibrium between Ra-226 and daughters Bi-214 and Pb-214 was achieved. Reported Ra-226 results were inferred from gamma peaks attributable to Bi-214 and Pb-214.

REPORT OF LABORATORY ANALYSIS

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1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20250508581
Pace Project No.: 30779796

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30779796001	20250508581	EPA 901.1	748389		

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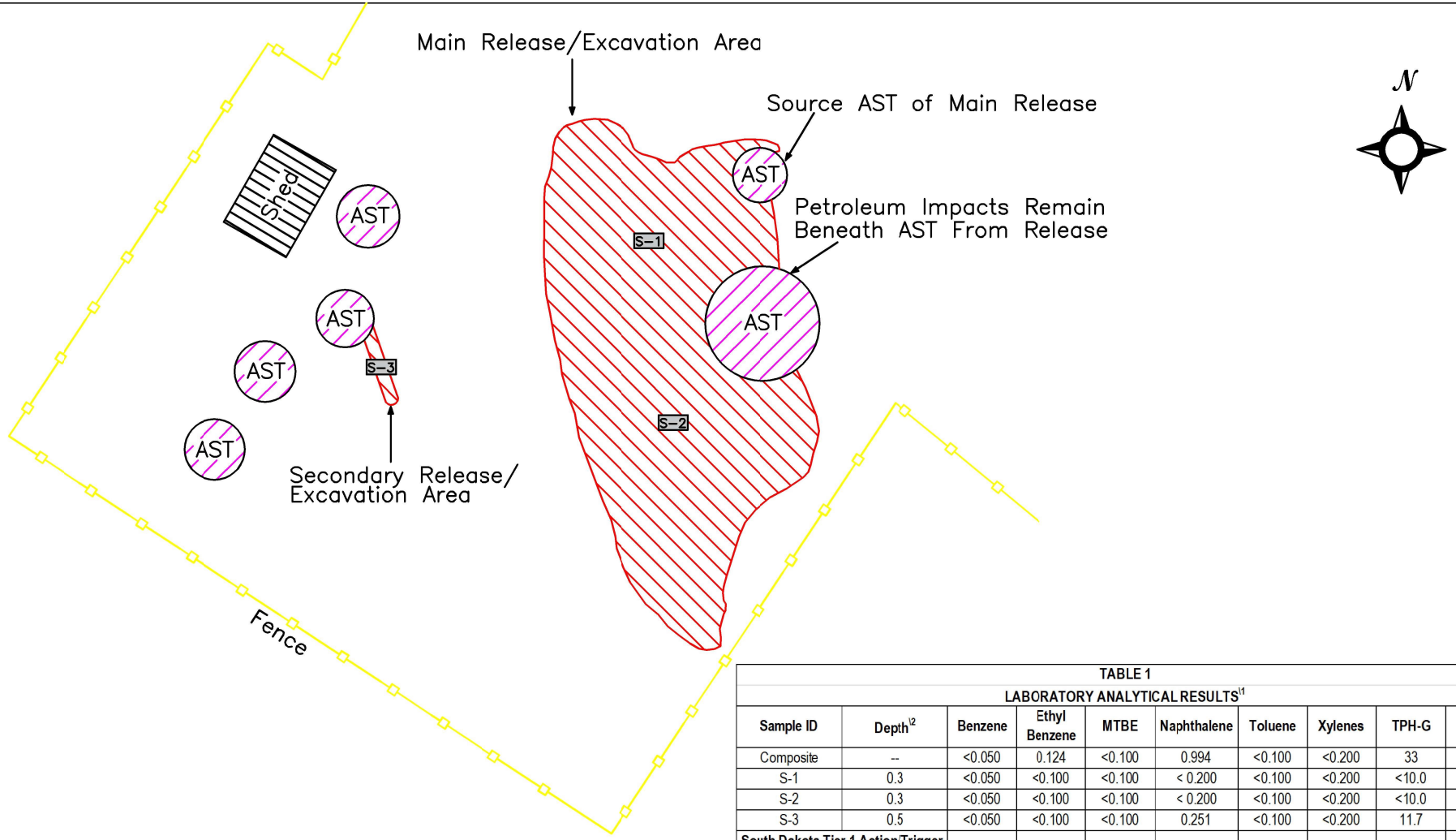


TABLE 1

LABORATORY ANALYTICAL RESULTS[1]

Sample ID	Depth[2]	Benzene	Ethyl Benzene	MTBE	Naphthalene	Toluene	Xylenes	TPH-G	TEH
Composite	--	<0.050	0.124	<0.100	0.994	<0.100	<0.200	33	***17400***
S-1	0.3	<0.050	<0.100	<0.100	< 0.200	<0.100	<0.200	<10.0	44.6
S-2	0.3	<0.050	<0.100	<0.100	< 0.200	<0.100	<0.200	<10.0	***1200***
S-3	0.5	<0.050	<0.100	<0.100	0.251	<0.100	<0.200	11.7	***529***
South Dakota Tier 1 Action/Trigger Levels		**0.2**	**10**	**-**	**25**	**15**	**300**	**500[5]**	**500[5]**

[1] All values are in mg/kg, which is equivalent to parts per million, unless otherwise noted.

[2] Depths measured in feet below ground surface.

[3] "<" denotes analyte not detected at or above the laboratory reporting limit following the "less than" symbol.

[4] Values listed in ***bold italics*** indicate concentration exceeded Tier 1 Trigger or Action Levels.

[5] Total hydrocarbon concentration is considered a "trigger level" to require a more thorough evaluation of the site and is not intended to be a Tier 1 cleanup goal.

SCALE (FEET)

0 30

AMERICAN ENGINEERING TESTING

PROJECT: BARKER DOME CRUDE OIL RELEASE CUSTER COUNTY, SOUTH DAKOTA		PROJECT NO. P-0043194
SUBJECT: SITE SKETCH WITH ASTs, EXCAVATION EXTENTS, AND SAMPLE INFORMATION	DRAWN BY: JJH	DATE: MAY 27, 2025
SCALE: 1 INCH = 30 FEET	REVIEWED BY: BPB	FIGURE: 2

PHOTOGRAPHS



Photo 1:	**View of release source from AST.**
Photo 2:	**View of main release area prior to remedial excavation activities.**



PHOTOGRAPHS



Photo 3:	**View of main release area prior to remedial excavation activities.**
Photo 4:	**View of secondary release area prior to remedial excavation activities.**



PHOTOGRAPHS



Photo 5:	**View of fiberglass tank/debris removal in progress.**
Photo 6:	**View of excavation and soil/crude oil mixing in progress.**



PHOTOGRAPHS



Photo 7:	**View of excavation and soil/crude oil mixing in progress.**
Photo 8:	**View of excavation and soil/crude oil mixing in progress.**



PHOTOGRAPHS



Photo 9:	**View of main release area after excavation and backfilling had been completed.**
Photo 10:	**View of main release area after excavation and backfilling had been completed.**



PHOTOGRAPHS

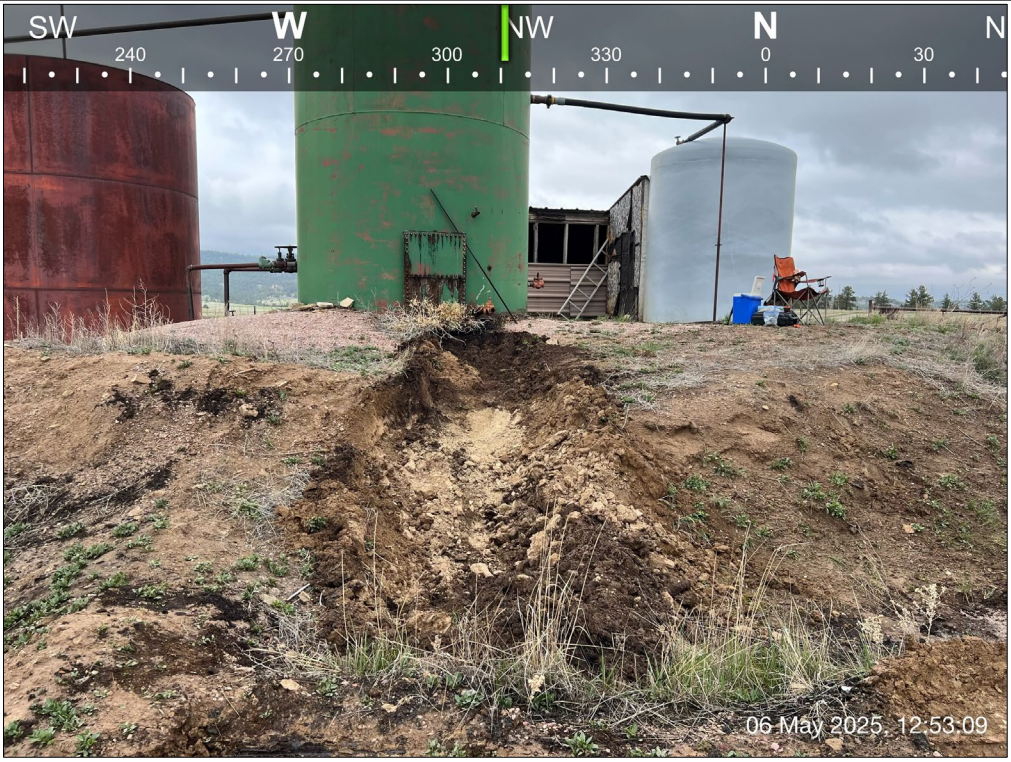


Photo 11:	**View of secondary release area excavation.**
Photo 12:	**View of secondary release area after excavation and backfilling had been completed.**



From:	Klenner, Jeff
To:	Kindt, Trish
Cc:	Lees, Michael
Subject:	Barker Dome Spill
Date:	Monday, April 28, 2025 11:49:40 AM
Attachments:	Locator Map 1.pdf Locator Map 2.pdf Locator Map 3.pdf

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Hi Trish,

The lat-long of the spill is 43.48769, -103.86845. Thomas L. Sunde was the operator but we have revoked his permits.

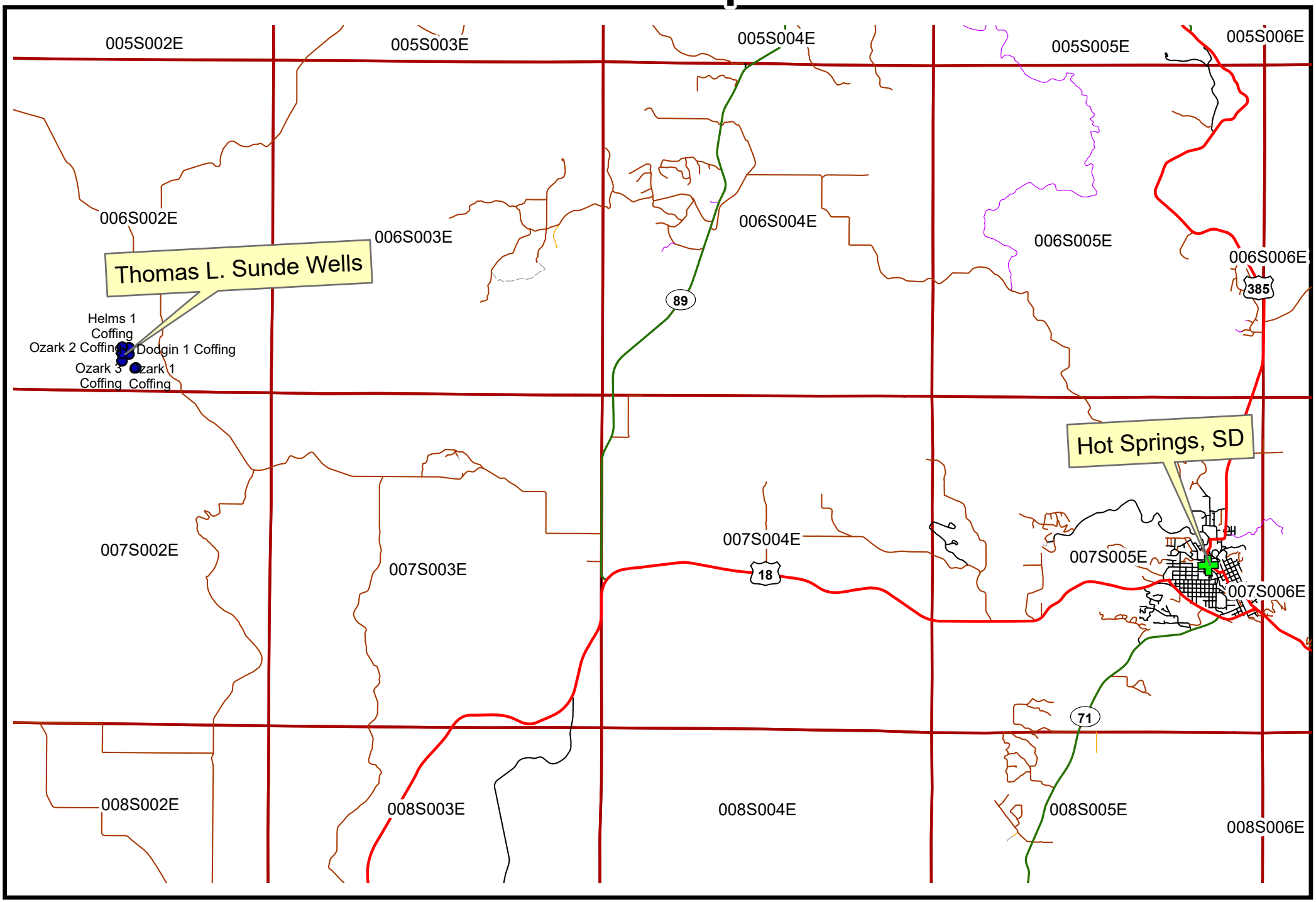
Off of Highway 89, south of Pringle and west of Hot Springs, you go west on Pilger Mountain Road for approximately 9.3 miles. Then there is an unmarked two-track road which you take for approximately 1.3 miles to reach the Barker Dome tank battery. This unmarked two-track road does show up on Google Maps as the “Barker Dome Rd”. I have attached a few maps for the location.

[redacted]

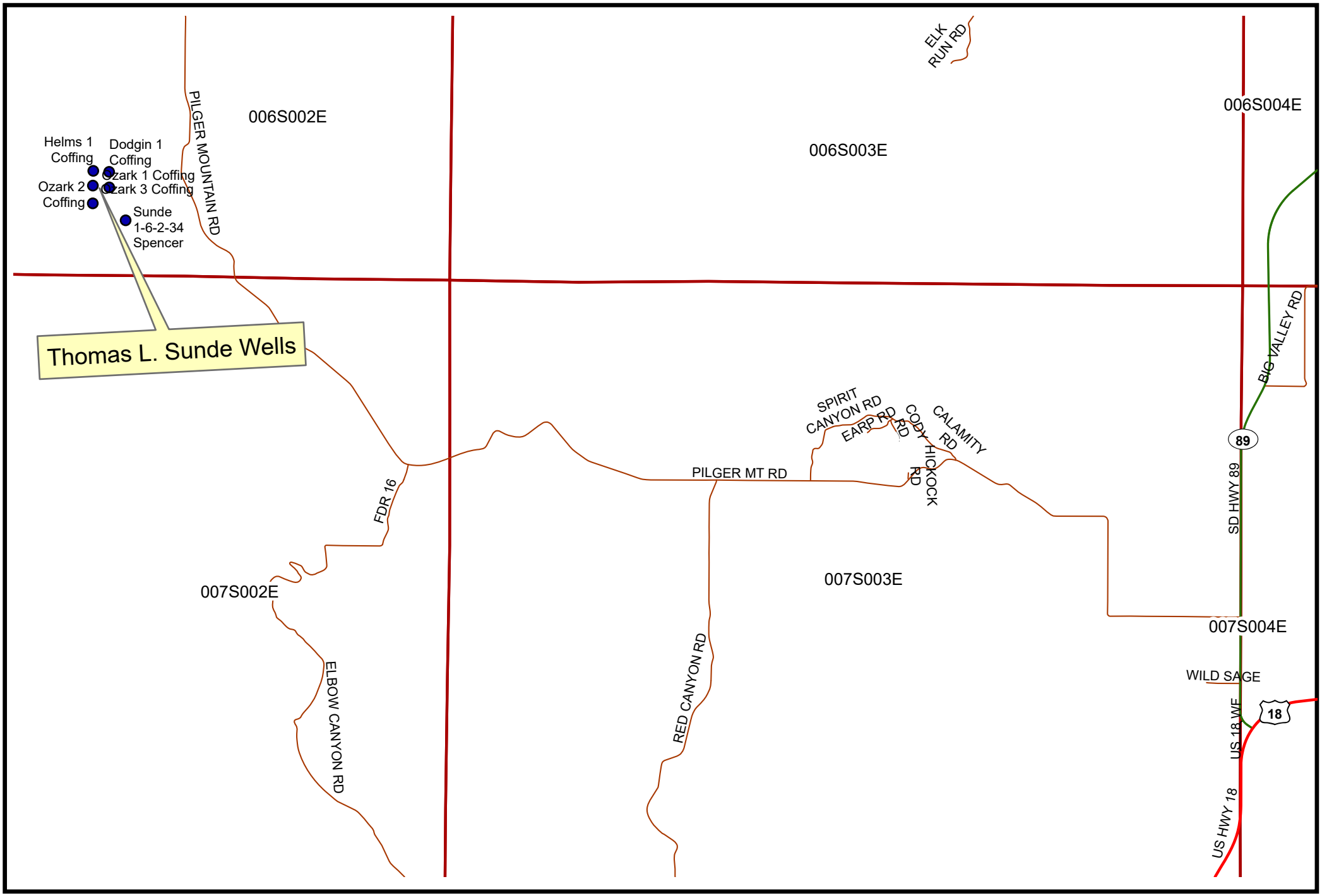
Let me know if you need anything else.

Jeff Klenner
Environmental Scientist IV
Minerals, Mining, and Superfund Program
Department of Agriculture and Natural Resources
221 Mall Drive, Suite 201
Rapid City, SD 57701
605.394.2229 | Fax: 605.394.5317
danr.sd.gov

Locator Map 1



Locator Map 2



Locator Map 3



From: Klenner, Jeff
To: Florentz, Terry; Kindt, Trish
Cc: Lees, Michael
Subject: Barker Dome Spill
Date: Monday, April 28, 2025 10:44:30 AM

From: Jeffrey Klenner <klenner0021@gmail.com>
Sent: Monday, April 28, 2025 9:42 AM
To: Klenner, Jeff <Jeff.Klenner@state.sd.us>
Subject:









