April 30, 2025

South Dakota Department of Agriculture and Natural Resources
Inspection, Compliance, and Remediation Program
523 East Capitol Avenue
Pierre, South Dakota 57501-3181

Attn: Ms. Trish Kindt
Email: trish.kindt@state.sd.us

Re: Work Plan and Cost Estimate for
Task 1: Remedial Excavation Observations
Task 2: RBCA Receptor Evaluation
Barker Dome Crude Oil Release
43.48769, -103.86845, Custer County, South Dakota
AET Project No. P-0043194
SDDANR Case No. 2025.044

Dear Ms. Kindt:

American Engineering Testing Inc. (AET) is pleased to provide the following proposal for Remedial Excavation Observation and Risk Based Corrective Action (RBCA) Receptor Evaluation services at the location indicated above. This proposal describes the general scope, schedule, fees, and other information regarding our services.

PROJECT INFORMATION

Information received from the South Dakota (SD) Department of Agriculture and Natural Resources (DANR) indicates that an unknown volume of crude oil was released onto the ground surface from an uncapped pipe connected to a crude oil above ground storage tank located approximately 20 miles west of Hot Springs, SD, and 13 miles north of Edgemont, SD, along Barker Dome Road in Custer County, SD (site). Subsequent to the release, the DANR is requiring cleanup of the free standing crude oil accumulation from the ground surface along with limited removal of the surface soil in the area of the release. The DANR also requested a receptor evaluation be conducted to determine if there are any potential receptors or exposure pathways at the site.

This proposal for remedial excavation observations and RBCA receptor evaluation was prepared in response to an email request from the DANR on April 28, 2025. The scope of services we propose to perform on this portion of the project is detailed in Attachment A of this proposal. Attachment B presents a short discussion of the methodologies that will be used to perform the services provided and Attachment C presents a cost estimate to complete the referenced scope of work.

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FEES

Based on the scope of work defined in this proposal, we anticipate incurring costs between $18,454.00 - $21,554.00 to complete the remedial excavation observation and RBCA receptor evaluation activities. The project cost estimate is attached to this proposal as Attachment C.

PERFORMANCE SCHEDULE

We propose to initiate work on this project within 5 working days, weather permitting, after we receive your authorization to proceed. We anticipate the fieldwork will last 2-3 days. The analytical results are generally received from the analytical laboratory within 10 working days of the sampling event(s). The remedial excavation observations report will be issued within 15 working days of receipt of the analytical results.

TERMS AND CONDITIONS

This work will be performed under the terms, conditions, and fee schedule established under AET's 2019 Regulated Substance Response Contract with DANR and First Amendment executed on July 12, 2022.

ACCEPTANCE

We will not begin work on this project without written authorization. Authorization can be initiated by signing the attached authorization page and returning it to our office.

Thank you for the opportunity of submitting this proposal. We look forward to working with you towards the completion of this project. If you have any questions or need further assistance, please call us at (605) 388-0029.

Sincerely,
American Engineering Testing, Inc.

Jeremy Huot, CPRR
Environmental Project Manager
Email: jhuot@teamaet.com

Bradley P. Bishop, CPRR
Senior Environmental Project Manager
Email: bbishop@teamaet.com

Attachments: Proposal Authorization Page
Attachment A. Scope of Work
Attachment B. Methodologies
Attachment C. Cost Estimate

WORK PLAN and COST ESTIMATE for REMEDIAL EXCAVATION OBSERVATIONS AND RBCA RECEPTOR EVALUATION BARKER DOME CRUDE OIL RELEASE CUSTER COUNTY, SOUTH DAKOTA

DANR CASE No. 2025.044
AET PROJECT No. P-0043194

April 30, 2025

AUTHORIZATION

FOR THE CLIENT:

Client: SD Department of Agriculture and Natural Resources

Authorized Signature: Hunter Roberts (Apr 30, 2025 15:45 CDT)

Typed Name: Hunter Roberts

Title: Department Secretary

Date: 04/30/2025

ACCEPTANCE

FOR AMERICAN ENGINEERING TESTING, INC:

Authorized Signature:

Typed Name: Bradley P. Bishop

Title: Senior Environmental Project Manager

Date: April 30, 2025

ATTACHMENT A

SCOPE OF WORK

Task 1: Remedial Excavation Observations

The scope of work we propose to perform for this portion of the project consists of:

1. securing an excavation contractor through a subcontract agreement for all necessary remedial cleanup, excavation, soil transport, and soil disposal;

2. mobilize a licensed petroleum release remediator to the project site to meet with the excavation contractor and landowner and observe the location and extents of the petroleum release areas, document site conditions, and collect a representative sample of the petroleum hydrocarbon impacted soils to be analyzed for the presence and concentration of total petroleum hydrocarbons as gasoline (TPH-G), total extractable hydrocarbons (TEH), benzene, toluene, ethylbenzene, xylenes (BTEX), naphthalene, and Toxicity Characteristic Leaching Procedure (TCLP) Resource Conservation and Recovery Act (RCRA) 8 metals, radium-226, and radium-228 as required for landfill disposal;

3. prepare a site safety plan outlining the safety requirements and risk management practices to be implemented during on-site remedial activities in an effort to identify and prevent potential hazards and ensure a safe working environment while on-site;

4. mobilize a licensed petroleum release assessor/remediator to the project site to meet with an excavation contractor to observe excavation of petroleum impacted soils, screen soil samples for organic vapors, and collect up to three clearance soil samples to be analyzed for TEH, TPH-G, BTEX, and naphthalene from the excavation zones;

5. coordinate with the excavation contractor proper disposal of the petroleum impacted soils at the Custer-Fall River Landfill; and

6. based on the project data collected, prepare a report including site maps, photos documenting the excavation, our field observations, field screening results, analytical soil sample test results, and our conclusions and recommendations based on the project data;the remedial excavation observation report will be combined with the RBCA receptor evaluation report.

Task 2: RBCA Receptor Evaluation

The scope of work we propose to perform for this portion of the project consists of:

1. coordinate with local utility companies and researching available information concerning the depths and construction of any water and sewer lines identified on and in the area of the subject Site;

2. reviewing available prior release and assessment records on and in the vicinity of the Site;

3. identifying on-Site and adjacent potential petroleum sources, potential exposure pathways (including hydrogeology), and any receptors present on and in the area of the subject Site (including subsurface structures, water wells, surface water bodies, and residential structures); and

4. preparing and submitting an assessment work plan to include Site description and history; Site figures showing the potential sources, pathways and receptors to be assessed; a preliminary Site Conceptual Model; and assessment methods proposed to evaluate the potential for completed pathways and risk including assessment locations, depths, and parameters to be analyzed; the RBCA receptor evaluation report will be combined with the remedial excavation observation report.

ATTACHMENT B

METHODOLOGIES

Soil Sample Screening

The soil samples are screened for the presence of organic vapors as an indication of hydrocarbon impacts using a Photoionization Detector (PID). This instrument provides readings in parts per million (ppm) equivalents of the calibration gas. The lower detectable limit is approximately 1 ppm.

The soil samples are collected in Whirl-pak® or Ziploc® baggies and taken to a well-ventilated area. The samples are allowed to equilibrate to room temperature. The samples are vigorously agitated for at least thirty seconds over a ten-minute headspace development period. In turn, each soil jar/bag is opened/punctured as appropriate; the PID probe is quickly inserted through the aluminum foil or plastic bag and the maximum meter response (should be within 2-5 seconds) is recorded. Erratic responses are discounted as a result of high organic vapor concentrations or conditions of elevated headspace moisture.

Chemical Analysis – Soil

The soil samples are analyzed for the presence and concentration of TEH, TPH-G, BTEX, naphthalene, TCLP RCRA 8 metals, radium-226, and radium-228 according to the appropriate DANR approved methods.

Chain of Custody

Upon collection of a sample to be analyzed in the laboratory, a chain of custody log is initiated. The chain of custody log includes the following information: project, work order number, shipped by, shipped to, project manager, sampling point, location, field identification number, date taken, sample type, number of containers, analysis required, and sampler's signature.

The chain of custody log is delivered with the samples to the laboratory. Upon arrival at the laboratory, the samples are checked in and custody of the samples signed over to the appropriate laboratory personnel. A copy of the chain of custody log is submitted to the project manager.

Reporting

Reports are prepared that 1) present and summarize the results of the work conducted, 2) include site location and study area maps, 3) give our opinion regarding the presence of chemicals of concern and the necessity for additional work, and 4) if the results of the study warrant additional work, recommend the scope of additional work.

Quality Assurance/Quality Control (QA/QC)

QA/QC manuals are available at AET offices for your review.

Staffing

We anticipate that Jeremy Huot and Brad Bishop will be the Project Managers for this project. The Project Managers are assisted by the balance of the Rapid City and Pierre office staff as needed.

ATTACHMENT C

COST ESTIMATE, TERMS OF PAYMENT AND CLOSING REMARKS

The scope of work listed in this proposal will be performed and compensated for on a time and materials basis in accordance with the First Amendment to the 2019 Consultant Contract Fee Schedule between AET and DANR. A copy of the project cost estimate is attached.

PROJECT TIME AND MATERIALS ESTIMATED COSTS
BARKER DOME CRUDE OIL RELEASE
REMEDIAL EXCAVATION OBSERVATIONS AND RBCA RECEPTOR EVALUATION
CUSTER COUNTY, SOUTH DAKOTA
AET PROPOSAL NO. P-0043194

Equipment Services and Expenses [1]												
Photoionization Detector	1	-	2	day	@	$	120.00	=	$	120.00	-	$ 240.00
GPS Mapping Unit	1	-	2	day	@	$	105.00	=	$	105.00	-	$ 210.00
Sampling Supplies Fee [2]	4	-	5	sample	@	$	35.00	=	$	140.00	-	$ 175.00
Pickup Mileage	340	-	510	mile	@	$	1.00	=	$	340.00	-	$ 510.00
Pickup Truck Rental	2	-	3	day	@	$	80.00	=	$	160.00	-	$ 240.00
Site Visits and Regulatory Communication [1]												
Sr. Project Manager												
Project Management	5	-	6	hour	@	$	135.00	=	$	675.00	-	$ 810.00
Environmental Scientist												
Utility Locate/Locator Correspondence	1	-	2	hour	@	$	115.00	=	$	115.00	-	$ 230.00
Project Preparation, Loading/Unloading, Sample Prep	2	-	3	hour	@	$	115.00	=	$	230.00	-	$ 345.00
HASP Preparation	1	-	2	hour	@	$	115.00	=	$	115.00	-	$ 230.00
Project Travel Time	7	-	11	hour	@	$	115.00	=	$	805.00	-	$ 1,265.00
On-site Time	6	-	12	hour	@	$	115.00	=	$	690.00	-	$ 1,380.00
Administrative Assistant	1	-	2	hour	@	$	60.00	=	$	60.00	-	$ 120.00
Report Preparation [3]												
Sr. Project Manager	2	-	3	hour	@	$	135.00	=	$	270.00	-	$ 405.00
Staff Professional	10	-	12	hour	@	$	115.00	=	$	1,150.00	-	$ 1,380.00
Draftsperson	3	-	4	hour	@	$	85.00	=	$	255.00	-	$ 340.00
Clerical	1	-	1	hour	@	$	60.00	=	$	60.00	-	$ 60.00
Subcontractor Excavation Services												
Equipment Mobilization	1	-	1	lump	@	$	1,980.00	=	$	1,980.00	-	$ 1,980.00
Remedial Excavation and Backfill	1	-	1	lump	@	$	4,444.00	=	$	4,444.00	-	$ 4,444.00
Soil Disposal	80	-	80	yard	@	$	53.90	=	$	4,312.00	-	$ 4,312.00
Fiberglass Debris Disposal	1	-	1	lump	@	$	550.00	=	$	550.00	-	$ 550.00
Topsoil Replacement	15	-	15	yard	@	$	30.80	=	$	462.00	-	$ 462.00
Subcontractor Laboratory Services												
TEH, Naphthalene (Soil)	4	-	5	sample	@	$	115.00	=	$	460.00	-	$ 575.00
TPH-G, BTEX, MTBE (Soil)	4	-	5	sample	@	$	115.00	=	$	460.00	-	$ 575.00
TCLP RCRA 8 Metals (Soil)	1	-	1	sample	@	$	276.00	=	$	276.00	-	$ 276.00
Radium - 226 (Soil)	1	-	2	sample	@	$	110.00	=	$	110.00	-	$ 220.00
Radium - 228 (Soil)	1	-	2	sample	@	$	110.00	=	$	110.00	-	$ 220.00
TOTAL PROJECT ESTIMATED COSTS										**$ 18,454.00**	-	**$ 21,554.00**

[1] Reflects 2-3 round trips to the site; one trip for an initial site reconnaissance with property owner and excavation contractor, and one to two trips to document excavation activities, collect closure soil samples, and collect site specific information necessary for the preparation of a RBCA receptor evaluation.

[2] Sampling Supplies Fee may include the following equipment: bottles, chain of custody, sampling forms, gloves, cooler, ice pack, methanol, decon water, decon wipes, and other misc. sampling supplies.

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