

<b>SOLICITATION, OFFER AND AWARD</b>		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)	▶	RATING	PAGE OF PAGES 1   80
2. CONTRACT NUMBER DE-NE0008613		3. SOLICITATION NUMBER	4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)		5. DATE ISSUED
7. ISSUED BY Idaho Operations U.S. Department of Energy Idaho Operations 1955 Fremont Avenue Idaho Falls ID 83415		CODE 00701	8. ADDRESS OFFER TO (If other than Item 7)		
6. REQUISITION/PURCHASE NUMBER 17NE000055					

**NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".**

**SOLICITATION**

9. Sealed offers in original and \_\_\_\_\_ copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if hand carried, in the depository located in \_\_\_\_\_ until \_\_\_\_\_ local time \_\_\_\_\_ (Date)

CAUTION: LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.

<b>10. FOR INFORMATION CALL:</b>	A. NAME [REDACTED]	B. TELEPHONE (NO COLLECT CALLS)			C. E-MAIL ADDRESS [REDACTED]
		AREA CODE	NUMBER	EXT.	

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<input type="checkbox"/>	B	SUPPLIES OR SERVICES AND PRICES/COSTS		PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH.			
<input type="checkbox"/>	C	DESCRIPTION/SPECS./WORK STATEMENT		<input type="checkbox"/>	J	LIST OF ATTACHMENTS	
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<input type="checkbox"/>	H	SPECIAL CONTRACT REQUIREMENTS					

**OFFER (Must be fully completed by offeror)**

**NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.**

12. In compliance with the above, the undersigned agrees, if this offer is accepted within \_\_\_\_\_ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT <i>(See Section I, Clause No. 52.232.8)</i>	▶ 10 CALENDAR DAYS (%)	20 CALENDAR DAYS (%)	30 CALENDAR DAYS (%)	CALENDAR DAYS (%)
	NET 30			

14. ACKNOWLEDGEMENT OF AMENDMENTS <i>(The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):</i>	AMENDMENT NO.	DATE	AMENDMENT NO.	DATE

15A. NAME AND ADDRESS OF OFFEROR	CODE 126563258	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER <i>(Type or print)</i>
[REDACTED]			

15B. TELEPHONE NUMBER	15C. CHECK IF REMITTANCE ADDRESS	17. SIGNATURE	18. OFFER DATE
AREA CODE NUMBER EXT.	<input type="checkbox"/> IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE.		

**AWARD (To be completed by government)**

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION TerranearPMC
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22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304 (c) ( ) <input checked="" type="checkbox"/> 41 U.S.C. 253 (c) ( 0 )	23. SUBMIT INVOICES TO ADDRESS SHOWN IN <i>(4 copies unless otherwise specified)</i>
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24. ADMINISTERED BY (If other than Item 7) See Schedule G	CODE 00701	25. PAYMENT WILL BE MADE BY See Schedule G	CODE 00508
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26. NAME OF CONTRACTING OFFICER (Type or print) [REDACTED]	27. UNITED STATES OF AMERICA  Signature on File <i>(Signature of Contracting Officer)</i>	28. AWARD DATE 12/16/2016
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IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.  
AUTHORIZED FOR LOCAL REPRODUCTION  
Previous edition is unusable

**CONTINUATION SHEET**

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
DE-NE0008613

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NAME OF OFFEROR OR CONTRACTOR  
TERRANEAR PMC LLC

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Tax ID Number: 02-0560121 DUNS Number: 126563258 Delivery Location Code: 00701 Idaho Operations U.S. Department of Energy Idaho Operations 1955 Fremont Avenue Idaho Falls ID 83415 US  Payment: OR for Idaho U.S. Department of Energy Oak Ridge Financial Service Center P.O. Box 6017 Oak Ridge TN 37831 Fund: 05350 Appr Year: 2016 Allottee: 02 Report Entity: 500201 Object Class: 25233 Program: 2720924 Project: 0000000 WFO: 0000000 Local Use: 0000000 FOB: Destination Period of Performance: 01/03/2017 to 01/02/2019  NOT SPECIFIED /OTHER				
00001	Phase 1 - Commencement of Public Outreach; Team Kickoff Meeting; Securing Site. Obligated Amount: ██████████  Delivery: 01/02/2019				██████████
00002	NOT SPECIFIED /OTHER Phase 2 - Completion of All Regulatory Approvals. Obligated Amount: ██████████  Delivery: 01/02/2019				██████████
00003	NOT SPECIFIED /OTHER Phase 3 - Final Drilling and Test Plan Line item value is: ██████████  Delivery: 01/02/2019				██████████
00004	NOT SPECIFIED /OTHER Phase 4 - Drilling and Testing Line item value is: ██████████  Delivery: 01/02/2019				██████████
00005	NOT SPECIFIED /OTHER Phase 5 - Option Period One - Site Management & Maintenance Continued ...				██████████

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
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NAME OF OFFEROR OR CONTRACTOR  
TERRANEAR PMC LLC

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Amount: [REDACTED] (Option Line Item) Line item value is:: [REDACTED]  Delivery: 01/02/2020				
00006	NOT SPECIFIED /OTHER Phase 5 - Option Period Two - Site Management & Maintenance Amount: [REDACTED] (Option Line Item) Line item value is:: [REDACTED]  Delivery: 01/02/2021				[REDACTED]
00007	NOT SPECIFIED /OTHER Phase 5 - Option Period Three - Site Management & Maintenance Amount: [REDACTED] (Option Line Item) Line item value is:: [REDACTED]  Delivery: 01/02/2022				[REDACTED]

## **PART I – THE SCHEDULE**

### **SECTION B**

#### **SUPPLIES OR SERVICES AND PRICES/COSTS**

##### **B.1 TYPE OF CONTRACT**

This is a hybrid contract with cost plus fixed fee (CPFF) and time and materials (T&M) contract line items (CLINs). The contract for the Deep Borehole Field Test contains multiple phases; see CLINs below and Section C, Statement of Work (SOW) for details of phases.

The Contractor must receive written authorization from the Contracting Officer before it begins to perform Phases 2 through 5. DOE intends to use a down select process for Phases 3 and 4 to the Contractor(s) best performing/achieving the project objectives. Performance of any phase does not guarantee the Contractor will be authorized to perform successive phases and all phases are subject to the availability of funds. The overall period of performance will not exceed 60 months. It is possible some phases may overlap.

The Contractor must furnish all personnel, facilities, equipment, material, supplies, and services (except as may be expressly set forth in this contract as furnished by the Government) and otherwise do all things necessary to successfully accomplish the SOW (see Section C).

Note: The cost/funding items identified below will be completed at the time of contract award.

##### **B.2 CONTRACT FUNDING**

Subject to the availability of funds, the contract will be funded in accordance with this Section B and the schedule provided in Section C. These funds will be used to pay for all allowable and allocable costs incurred, plus fee, and T&M support, for the indicated deliverable or contract period. The Contractor exceeds price ceilings identified below at its own risk.

It is anticipated that annual contract funding will be provided quarterly.

##### **B.3 CONTRACT LINE ITEMS**

This contract consists of the following Contract Line Items (CLINs) with work to be accomplished in accordance with the Statement of Work (Section C):

CLIN	SERVICES
0001	<p><b>Phase 1 – Commencement of Public Outreach; Team Kickoff Meeting; Securing Site.</b></p> <p>This item includes: (a) commencement of public outreach; (b) planning and conducting a project kickoff meeting that will be used to further refine project approaches, schedules and budgeting; and (c) completing all activities necessary to secure the site from the land owner.</p>

The period of performance covered by this CLIN is anticipated to not exceed five (5) months.

Work will be for direct labor hours at the fixed hourly T&M rates specified in the Rate Table at Section J, Attachment L-J. Additional labor categories may be added only as authorized by the Contracting Officer.

Direct materials and travel will be reimbursed at “cost” in accordance with FAR 31 cost principles.

This item is a T&M line item.

Ceiling Price for T&M (0001) :



CLIN	SERVICES
0002	<p><b>Phase 2 – Completion of All Regulatory Approvals.</b></p> <p>This item involves: (a) preparing a Preliminary Drilling and Test Plan; (b) completing all activities necessary to secure federal, tribal, state and local regulatory approval for the project; (c) holding a readiness meeting with DOE to present an overview of all work completed; and (d) continuing public outreach.</p>

The period of performance covered by this CLIN is anticipated to not exceed five (5) months.

This item is a CPFF line item.

Estimated Cost:

Fixed Fee:

Total CPFF (0002):



CLIN	SERVICES
0003	<p><b>Phase 3 – Final Drilling and Test Plan</b></p> <p>Phase 3 involves: (a) preparing and completing a Final Drilling and Test Plan (including a Plan review meeting with DOE); and (b) continuing public outreach.</p>

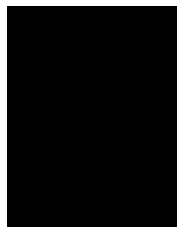
The period of performance covered by this CLIN is anticipated to not exceed four (4) months. This is an Option CLIN; the Contractor is only authorized to perform once a formal contract modification is issued to exercise the Option.

This item is a CPFF line item.

Estimated Cost:

Fixed Fee:

Total CPFF (0003):



CLIN	SERVICES
0004	<p><b>Phase 4 – Drilling and Testing</b></p> <p>Phase 4 involves: (a) performance of actual drilling and testing in accordance with the DOE-approved Final Drilling and Test Plan (drilling a Characterization Borehole and conducting borehole testing activities); (b) continued public outreach; and (c) post drilling contract closeout and remediation.</p>

The period of performance covered by this CLIN is anticipated to not exceed 20 months.

This is an Option CLIN; the Contractor is only authorized to perform once a formal contract modification is issued to exercise the Option.

This item is a CPFF line item.

Estimated Cost:

Fixed Fee:

Total CPFF (0004):



<b>CLIN</b>	<b>SERVICES</b>
<b>0005</b>	<b>Phase 5 – Site Management &amp; Maintenance</b>  Phase 5 involves Post drilling/testing on-going site maintenance, integration and support. Phase 5 involves post drilling/testing on-going site maintenance activities described in Section C during a full-scale DBFT performed by a separate Contractor.
<b>0005AA</b>	The first Phase 5 option year
<b>0005AB</b>	The second Phase 5 option year
<b>0005AC</b>	The third Phase 5 option year

The period of performance covered by this CLIN is anticipated to not exceed 36 months.

This is an Option CLIN; the Contractor is only authorized to perform once a formal contract modification is issued to exercise the Option.

This item is a T&M line item.

Ceiling Price for T&M (0005AA):

Ceiling Price for T&M (0005AB):

Ceiling Price for T&M (0005AC):



## PART I – THE SCHEDULE

### SECTION C

#### STATEMENT OF WORK

This Statement of Work (SOW) involves research and development (R&D) to assess the viability of deep borehole disposal (DBD) as one alternative for the disposal of smaller Department of Energy (DOE)-managed waste forms. DOE's *Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste* (DOE 2013) specifically recommended developing a research and development plan for DBD as a key strategy objective. Conclusions of DOE's *Assessment of Disposal Options for DOE-Managed High-Level Radioactive Waste and Spent Nuclear Fuel* (DOE 2014a) included that "...effective implementation of a strategy for management and disposal of all HLW and SNF..." would include focused research on deep boreholes, especially to retain flexible options for disposal of smaller DOE-managed waste forms.

Based on the above strategy, DOE intends to conduct a Deep Borehole Field Test (DBFT) to further evaluate the geoscience of the approach and technical feasibility capabilities for implementation. DOE has identified Sandia National Laboratories (SNL), operated by the Sandia Corporation, a Subsidiary of Lockheed Martin Corporation, as the *Technical Lead for the DBFT Project*, with the role of supporting DOE in: (i) developing the overall DBFT Project Plan; (ii) management and integration of all DBFT activities; and (iii) providing Project technical guidance to DOE, other DOE National Laboratories, and university partners.

The DBFT includes two drilling activities: 1) a Characterization Borehole; and 2) an optional Field Test Borehole. Each borehole will be drilled to a depth of about 5,000 m (16,400 feet) into crystalline basement rock in a geologically stable continental location. The initial smaller-diameter Characterization Borehole is the subject of this SOW and will be drilled and completed to facilitate downhole scientific testing and analysis. If site conditions are found to be suitable, DOE intends to drill a larger-diameter Field Test Borehole to facilitate proof-of-concept of emplacement activities using surrogate canisters. If the larger-diameter Field Test Borehole is performed, it will be accomplished under a separate contract.

The purpose of this SOW is to define phases and deliverables necessary to drill the Characterization Borehole and to begin the DBFT research to evaluate the DBD concept.

#### **C.1 Project Title:**

Deep Borehole Field Test.

#### **C.2 Background:**

Multiple factors have indicated that the DBD concept may provide an alternative for safe disposal of smaller DOE-managed radioactive waste forms in many possible U.S. locations with favorable geologic and hydrological characteristics. Using a simple reference design that is expected to be achievable in crystalline rocks with currently available commercial drilling technology, the implementation of the DBD concept may be technically feasible, cost effective,

and have sufficient capacity for some waste forms. The DBD concept consists of drilling a 0.43-m (17-inch) diameter disposal borehole or array of boreholes into crystalline basement rock to a total depth of 5,000 m (16,400 feet). In the DBD reference design, waste canisters are emplaced in the lower 2,000 m of the borehole, with the upper 3,000 m of the borehole appropriately sealed with a combination of bentonite, cement plugs, and cement/crushed rock backfill. Additional information can be found in “Reference Design and Operations for Deep Borehole Disposal of High-Level Radioactive Waste” SAND2011-6749, October 2011, <http://prod.sandia.gov/techlib/access-control.cgi/2011/116749.pdf> . A Deep Borehole Field Test is the next logical step to evaluate the feasibility for implementation of this waste disposal option. This SOW for a site and the drilling and implementation of the Characterization Borehole supports the overall DBFT and will be used to gather scientific data relevant to implementation of the DBD concept.

DOE has prepared a DBFT Project Plan (DOE 2014b <http://prod.sandia.gov/techlib/access-control.cgi/2014/1418559r.pdf>) that includes the possibility of drilling two deep boreholes (a smaller-diameter Characterization Borehole and a larger-diameter, Field Test Borehole) into crystalline basement rock in a geologically stable continental location. Local public acceptance/participation is a necessary prerequisite to the project and must be obtained before any drilling commences. Public involvement and engagement must continue through the duration of the project.

This SOW only involves the Characterization Borehole construction and testing activities with associated site management and research/science support activities; and possibly site management, integration and support during all or part of a follow-on larger diameter DBFT construction and testing activities. The preliminary design of the Characterization Borehole described in this SOW has a bottom-hole diameter of 0.22 m (8.5 inches) at 5000-m (16,400-ft) total depth. The purpose of the Characterization Borehole is to facilitate scientific testing and provide data on the downhole environment (e.g., examination of hydrogeological, geochemical, and geomechanical characteristics of the near-borehole host rock). No radioactive waste will be used in conjunction with the Characterization Borehole or any other activity performed under this contract.

If the Characterization Borehole test results and other site investigations indicate that the site is suitable, DOE intends to proceed to the next stage of the DBFT Project experiment by drilling a larger 0.43-m (17-inch) diameter Field Test Borehole for demonstration testing at the Contractor’s site. These specific activities will not take place under this contract, but will occur under a separate contract; although associated site management, integration and support activities might be continued under this contract or within the DBFT Overall Project. The Field Test Borehole will use surrogate containers to evaluate surface handling and emplacement operations and also will not involve any radioactive waste.

The Contractor is responsible for public outreach, as well as access, safety, and security of the site; these requirements are further described in this SOW.

The work under this contract will be performed in Phases (see Figure C.1 - Phased Approach). DOE anticipates that multiple Contractors may be involved in Phase 1, with most if not all of those Contractors also being authorized to proceed into Phase 2. A down-selection process will be used to reduce the number of Contractors performing Phases 3 and 4. Performance of Phase

2-5 must not begin until the Contractor receives written authorization from the DOE Contracting Officer (CO).

The nature of each contract phase is summarized in this paragraph and is further described later within this SOW. The process for DOE down-selection of Contractors/sites is also described in later sections of this SOW.

**Phase 1** focuses on public outreach (this outreach will continue across all contract phases), including discussions on addressing community impacts and completion of any activities necessary to secure the site. Phase 1 also includes a project kickoff meeting near the Contractor's proposed drill site to outline the Contractor's detailed approach for all Phase 1 activities, including schedule and budget and securing the DBFT site.

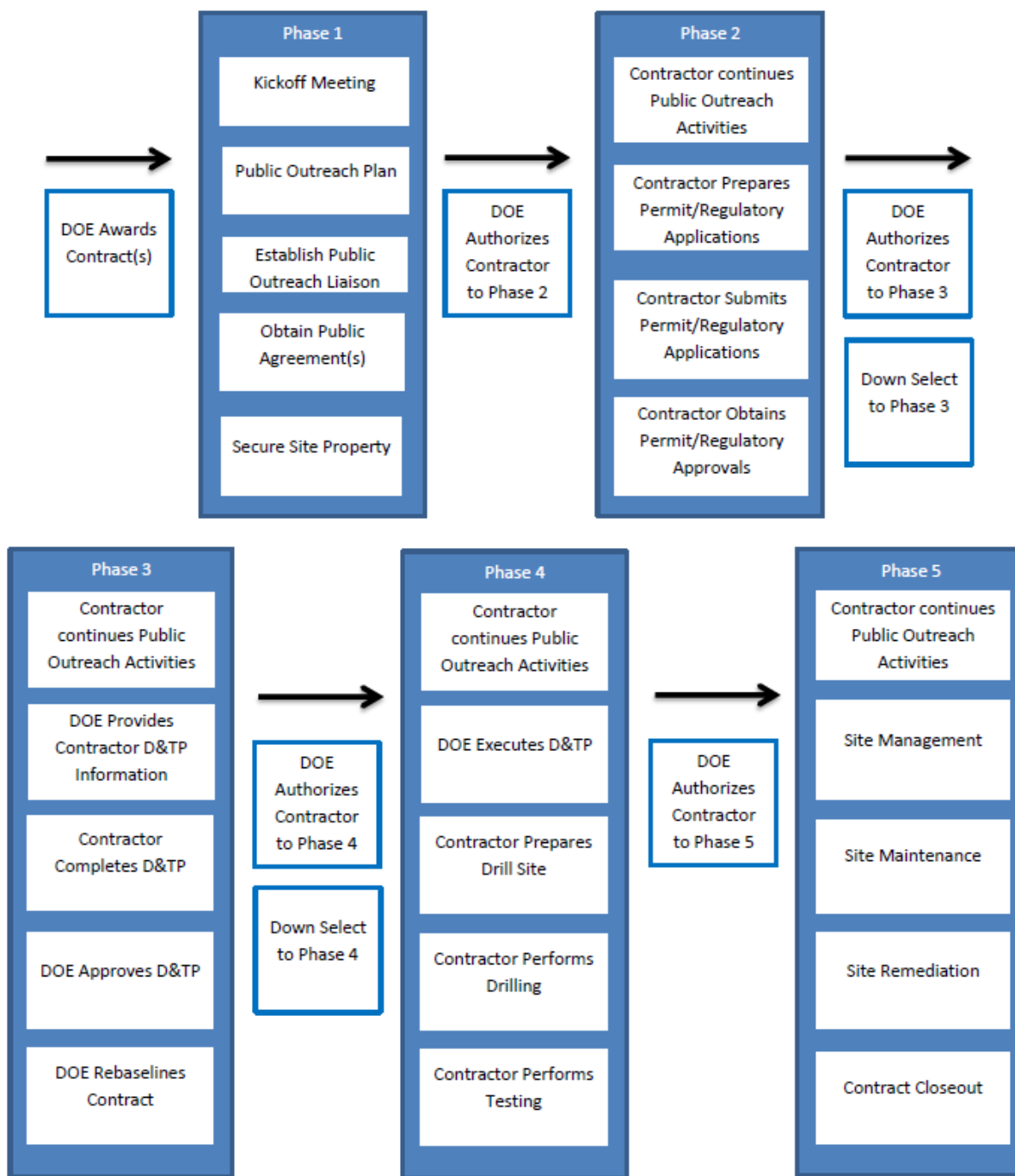
**Phase 2** involves continuation of public outreach; preparation of a Preliminary Drilling and Test Plan; completion of all activities necessary to secure federal, tribal (as applicable), state and local regulatory approval/permits; and holding a readiness meeting with DOE to present an overview of all work completed.

**Phase 3** involves continuation of public outreach and completion of the Final Drilling and Test Plan for review and approval by DOE.

**Phase 4** may involve a re-baseline of cost, schedule and performance of contract activities to be performed for Phase 4, as well as performance in accordance with the Final Drilling and Test Plan. Specifically, Phase 4 includes drilling the Characterization Borehole and conducting testing activities, borehole closeout and remediation. DOE may elect to complete closeout and remediation during Phase 5.

**Phase 5** is at DOE's discretion and involves on-going site management, integration and maintenance in support of larger diameter DBFT activities.

Identified time periods for completion of phases are DOE estimates only. The Contractor is permitted to complete performance of individual phases faster than the time identified; performance that exceeds the time identified is also permitted so long as any critical path deadline or the overall contract term is not affected.



**Figure C.1 - Phased Approach**

**C.3 Technical Objectives**

Radioactive waste will not be used at any time during contract performance. Geological, hydrogeological, geochemical, and geomechanical information will be collected from the Characterization Borehole, across both the crystalline basement and overlying rock intervals. The scientific testing and data collection process in the Characterization Borehole will be used to: (i) identify the critical downhole experiments and measurements that must be made at a future DBD site to determine the feasibility of long term isolation of high-activity waste forms; and (ii)

provide information on site-specific subsurface conditions to be used in planning and executing the drilling and emplacement demonstration activities for the larger diameter DBFT.

Unlike most resource exploration drilling operations, the value in the Characterization Borehole (and the DBFT research effort) will be the data collected. Therefore, it is imperative that testing, data quality, and configuration controls are implemented throughout the contract to ensure data quality is not compromised and no information is lost. Data acquisition will focus on those characteristics of the subsurface that are most relevant to the viability and safety of the DBD concept.

#### C.4 Performance Parameters

A. Background. Performance parameters are identified both in this SOW and in the approved Final Drilling and Test Plan for the Characterization Borehole. The Final Drilling and Test Plan must be consistent with borehole design and scientific testing guidance prepared by the Technical Lead of the DBFT Project. The Final Drilling and Test Plan must be delivered to DOE for approval before drilling can commence.

B. Specification of Parameters. The Contractor's work must comply with the following parameters:

1. The Contractor must provide a suitable drilling site to perform this scope of work. Use and access to this site must be available to DOE and the Contractor for the duration of this contract, as well as the anticipated duration of a separate contract to drill and test a larger diameter (17-in diameter) Field Test Borehole. The location of the site must be specifically identified and contained within a practical area.
2. The geologic and hydrological characteristics of the site must meet (to the maximum extent possible) each of the following parameters:
  - **Depth**--The depth to the crystalline basement is 2 km (1.2 miles) or less (note that all depths shallower than 2 km are considered equivalent, although the uncertainty of the data is considered).
  - **Site Size**--The site area is sufficient to accommodate two drilling operations with boreholes nominally separated by at least 200 m; surface facilities to support the drilling operations; surface facilities for sample management and on-site data collection; surface handling facilities for evaluation of handling operations for surrogate (mock-up) containers; and surface facilities for site operation needs. The site must have ample access for heavy equipment.
  - **Proximity to Wetlands/Flood Plains**--The site area is outside of wetland areas and 100-year flood zones.
  - **Ground Water Flow at Depth**-- Geologic information and data provide evidence of the **absence** of fresh ground water recharge at depth. This evidence might include, for example, lack of significant topographic relief that would drive deep recharge, evidence of ancient groundwater at depth, and/or data suggesting high-salinity

groundwater at depth.

- **Geothermal Heat Flux--** Geologic information and data provide evidence of the geothermal gradient and/or geothermal heat flux at the proposed site. A heat flux of less than  $75 \text{ mW/m}^2$  is preferred.
  - **Seismic/Tectonics/Volcanism--** The site has low seismic/tectonic and volcanic activity. Specifically, preferred conditions are:
    - Less than 2% probability within 50 years of peak ground acceleration greater than 0.16 g (generally indicative of area of tectonic stability).
    - Distances to Quaternary age volcanism and faulting greater than 10 km.
  - **Nature of Crystalline Basement Fabric and Stress State—**To the extent available, geologic information and data provide evidence of: (a) existence and orientation of any foliation in the crystalline basement rocks; and (b) the horizontal stress state at depth in the crystalline basement rocks. Lack of steeply dipping foliation or layering is preferred. Low differential horizontal stress is preferred. For example, strong evidence of a low differential horizontal stress at depth in the crystalline basement would include lack of breakouts in existing boreholes in the crystalline basement.
  - **Major Regional Structures, Basement Shear Zones and Other Tectonic Features--** Geologic information and data identify any major regional structures, basement shear zones, or other tectonic features within 50 km of the proposed site. The absence within this distance of known major regional structures, major crystalline basement shear zones, or major tectonic features is preferred.
  - **Surface/Subsurface Interferences for Testing--** There are no previous or current uses of the surface or subsurface that could interfere with the drilling test investigations or the reliability of data generated during testing. Such uses might include, for example, wastewater disposal by deep well injection, CO<sub>2</sub> injection, oil and gas production, mining, underground drinking water extraction, and strategic petroleum reserve sites. Absence of potential resources in the crystalline basement and sedimentary overburden is preferable. The information and bases provided for the site must also identify existing drinking water aquifers and any previous or current uses of the surface and/or subsurface (such as listed above) within 30 km of the proposed site.
  - **Surface/Subsurface Anthropogenic Radioactive/Chemical Contamination--** Geologic information or other technically reliable data identifies any previous or current anthropogenic radioactive or chemical contamination within 10 km of the proposed site.
3. The Contractor must drill one Characterization Borehole to a nominal depth of 5 km as determined by the DOE CO. DOE estimates drilling and testing activities involving the drilling rig will take seven months to complete.

- The Characterization Borehole must be cased across the overlying geologic units and portions of the crystalline basement rock that require casing for stability or water inflow reasons. The casing schedule must allow a minimum bottom-hole diameter of 8.5 inches in the crystalline basement rock. The crystalline basement portion of the borehole (assumed to extend from approximately 2 km to 5 km in depth) will not be cased, if conditions allow. A casing head must be installed that allows the characterization borehole to be sealed.
- Drilling must be conducted in such a way to minimize contamination of deep fluids with drilling mud. Drilling fluids and makeup water must be marked with a conservative tracer (e.g., iodide, deuterated water and/or fluorescein dye) to quantify potential contamination of groundwater samples from drilling fluids.
- Borehole deviation must be minimized by continuous or frequent monitoring, with a maximum allowable deviation from vertical of 100 m at the bottom of the borehole.
- Monitoring during drilling should include (as determined with the DBFT Project Technical Lead - see below):
  - Deviation and caliper surveys for monitoring straightness and borehole stability.
  - Drilling parameter logging (e.g., penetration rate, bit weight, hook load, rotary speed, rotary torque, mud circulation rate).
  - Drilling mud/cuttings logging (e.g., temperature, salinity, chemistry, dissolved gas concentrations, cuttings lithology, and rock flour mineralogy).

4. The Contractor must provide support for specialized testing (via work-over rig) to be defined by the DBFT Project Technical Lead (see additional details for DBFT Project activities in report on Characterization Objectives). Specialized testing is expected to follow completion of the Characterization Borehole drilling and will likely continue for 7 months following this completion.

### **C.5. Scope of Work**

The Contractor must function as the manager and integrator for all work performed by teaming members and subcontractors in coordination with the DBFT Project lead. The Contractor will provide all necessary management, public outreach, technical expertise, labor, facilities, drill site, materials, and equipment to drill one Characterization Borehole and provide logging data, scientific testing support, and core samples as described in this SOW. Performance of teaming members and subcontractors is the responsibility of the Contractor.

The capabilities, knowledge, experience, and expertise required must be sufficient to perform all aspects of this SOW, including:

- Conducting on-site day-to-day site operations and management, that includes:
  - Responsibility for ensuring site access control and site security, including access to

- the subsurface.
- Ensuring sufficient quantities of water and electricity for day-to-day operations and borehole drilling.
  - Preparing the site for project operations, including clearing the drill pad, road construction, site drainage, and installation of required utilities.
  - Ensuring all work is performed safely, consistent with all environment, safety and health (ES&H) requirements.
- Providing all expertise and experience necessary to support dispositioning of the site at completion of the contract, including any remediation that may be necessary.
  - Providing the capabilities necessary to obtain all required permits and regulatory approvals, with appropriate regulatory and legal expertise necessary for handling all land use and other issues required to complete the scope of work.
  - Providing project management expertise necessary to ensure timely and cost effective integration and completion of all tasks and deliverables including project planning compatible with Primavera P6.
  - Providing for day-to-day public outreach on all planning, design, and operations activities related to the project.
  - Developing and maintaining contingency management approaches to ensure availability of site operations.
  - Providing drilling integration services necessary to plan and complete deep scientific drilling and testing activities in the Characterization Borehole. Responsibilities include:
    - Drilling safety expertise necessary to plan and oversee all field work.
    - Drilling engineering, expertise, and experience necessary for drilling, casing and completing an 8.5-inch diameter Characterization Borehole to a depth of at least 5 km.
    - Collecting, securing and managing core samples, mud samples, drilling records, and logging data in accordance with an approved Drilling and Test Plan.
  - Providing technical expertise and support in areas of geological sciences and geological engineering.
  - Providing temporary on-site laboratory expertise and facilities for the management and preservation of materials for evaluation including cores, samples, cuttings, and drilling fluids during the drilling and scientific testing process.
  - Providing technical reports and information in accordance with the approved Final

### Drilling and Test Plan.

- Providing configuration management expertise to ensure records management, data qualities, and sample management, are developed/operated under a compatible/consistent Quality Assurance (QA) Program. For example, provide available DBFT Project and site data (existing, and collected during the project) to DOE through a Data Management System.
- The Contractor may also be required to assist the Government in meeting its responsibilities under the National Environmental Policy Act (NEPA). If this work is necessary, the contract will be modified by specific contract direction from the DOE CO.

In the event the Contractor is not directed to proceed into Phase 2, 3, or 4, the Contractor must:

- Remain ready (on stand-by) to proceed into those phases should it become necessary. This will preserve the Contractor's capability to perform the work in the event one or more of the Contractors continuing into those phases cannot complete their performance obligations. At a minimum, it is anticipated that readiness will require the Contractor to maintain contract commitments necessary to keep the Site available for project activities (a mandatory requirement), as well as maintain all performance capabilities (e.g., team member, subcontractor, and key personnel commitments to the project) necessary to perform those phases. DOE recognizes that, with the exception of keeping the Site available, certain capabilities of the Contractor will change during this period. If the Contractor is directed to proceed with Phase 3 or Phase 4, the contract will be modified to address funding and cost reimbursement requirements, as well as any changes to Contractor capabilities and project technical requirements.  
Note: This "stand by" requirement expires not later than six (6) months from the date the Contractor is notified it has not been selected to proceed into either Phase 3 or Phase 4, unless notified in writing by the CO that it has expired earlier than six months.

The Contractor must be responsible to perform the following tasks and provide the described deliverables.

#### **C.5.1 Phase 1 - Commencement of Public Outreach; Team Kickoff Meeting; Securing Site**

The Contractor is responsible for commencing public outreach in Phase 1, with the goal of obtaining sufficient public support to allow the Contractor to successfully complete all work under the contract. Public outreach efforts will continue through all contract phases. The term "public" includes federal, state and local governments; affected tribes; citizens; tribal members; citizen groups; tribal groups; and other interested stakeholders. Public outreach involves providing information and education about the project necessary to obtain public support for the project. The process must be open and transparent. Because public support is necessary for successful project completion, public outreach is a critical aspect of contract performance.

The Contractor's Public Outreach Liaison (see Section H, "Key Personnel") must reside near the proposed drill site for the purpose of providing information to the public on a day-to-day basis.

Informational material on the background and goals of the project must be developed and made available to the public as requested. This background material must be delivered to the COR for approval before release. The Public Outreach Liaison must also provide the COR real time feedback on any concerns or unanswered questions from the public. All meetings open to the general public must be coordinated with DOE.

The Contractor must prepare a Public Outreach Plan and submit the plan for DOE approval not later than 4 weeks after contract award. This plan must describe how the Contractor will conduct its public outreach for all phases of contract performance. Particular emphasis must be placed on:

- The steps the Contractor will take to inform the public and secure public support for the project. The plan must identify all potential outreach risks and risk avoidance/ mitigation strategies.
- Describing how the Contractor will use tribal, state and local media to educate and inform the public about project goals and plans and obtain public approval for the project.

The Contractor must work with the tribal (as applicable) and local community to define any impacts that may arise from this project and negotiate ways to mitigate these impacts. Impacts might include, for example, road damage from heavy equipment, increased need for law enforcement and/or emergency medical services, or upgrades needed for added utilities capacity or other services. The types and amounts of work in this category must be justified by the Contractor and found to be reasonable and allowable costs before finalizing any local agreements. The agreements must be completed before the Contractor is permitted to begin Phase 2 and must specify that expenditures will be made only if the Contractor receives approval to execute the Final Drilling and Test Plan (Phase 4).

In addition to mitigating impacts, the Contractor must also work with the local community/tribal government (as applicable) to identify constructive benefits that are compatible with the goals and mission of DOE and the DBFT project. For example, one potential area of interest to DOE is in education for science, technology, engineering, and mathematics (STEM). As approved by the CO, the Contractor may negotiate with the local community ways to increase STEM education using Contractor or other resources. As a research project, the Deep Borehole Field Test will be a good example to students on the various science and engineering disciplines needed. While STEM is one example, the Contractor may explore other avenues for potential positive impacts to the local community. The types and amounts of the benefits must be justified by the Contractor and found to be reasonable and allowable costs before finalizing any local agreements. The agreements must be completed before the Contractor is permitted to begin Phase 2 and must specify that expenditures will be made only if the Contractor receives approval to execute the Final Drilling and Test Plan (Phase 4).

The Contractor is encouraged to explore complementary research opportunities at the site (particularly research that might further DBFT goals) with tribal and state agencies, institutions of higher learning, and other research entities. This research must not interfere with DBFT activities, is not a contract deliverable nor paid for by DOE, and must receive advance approval from the CO.

The Contractor must complete all remaining steps necessary for securing the site, including completing negotiation and signing a land use agreement with land owners and other necessary parties as described. The land use agreement must allow for longer term use of the site, including performance of anticipated down-stream project activities (e.g., a large diameter DBFT).

The land use agreement must provide for a fixed monthly payment and must meet the contract term requirements of Section H; however, it must also permit the Contractor to terminate the agreement at any time. This will allow the Contractor to terminate the agreement should it not be selected to continue into Phases 3, 4, or 5 (once any stand-by period described in C.5 above has expired).

The Contractor must also hold a project kickoff meeting near the Contractor's proposed drill site to outline the Contractor's detailed approach, schedule, and budget and for either party to answer any contractual, technical, or regulatory questions. Representatives of all major subcontractors or partners must attend, including any appropriate local community representatives. Any potential risks and mitigation strategies must also be presented by the Contractor. This meeting must be scheduled on or about two weeks after the contract is awarded, or as otherwise agreed to by the DOE Contracting Officer's Representative (COR). The meeting location and logistics must be provided by the Contractor and communicated to the COR. Contract deliverables resulting from this meeting include briefing material which depicts the Contractor's approach to implementing this contract and detailed meeting minutes.

The Contractor must not proceed to Phase 2 until written CO approval is received.

#### **C.5.2 Phase 2 - Completion of All Regulatory Approvals; Readiness Status Meeting**

The Contractor must continue its public outreach efforts and complete all work necessary to, (1) obtain support for the project from all federal, tribal, state or local governmental entities (as applicable); and (2) secure drilling permit(s) and other regulatory approvals needed to begin drilling. The land use permits and regulatory approvals must allow for longer term use of the site, including performance of anticipated down-stream project activities (e.g., a large diameter DBFT).

The Contractor must prepare a preliminary Drilling and Test Plan with sufficient technical detail to secure all necessary support, permits and approvals, including a rough order of magnitude cost for completion of the project. Copies of all regulatory approvals and the preliminary Drilling and Test Plan must be delivered to the COR.

After delivery of the regulatory approvals and the preliminary Drilling and Test Plan, the Contractor must meet to present an overview of all work completed to DOE. The meeting location must be near the drill site and logistics must be provided by the Contractor and communicated to the COR at least 3 weeks in advance. The purpose of the meeting is for DOE to determine if there has been suitable progress to merit continuation of the project. At this meeting the Contractor must provide its rationale for continuation to Phase 3, including a proposed Phase 3 schedule broken down by task. Contract deliverables resulting from this meeting include a package that provides all material presented by the Contractor at the meeting and detailed meeting minutes.

Down Select Criteria. DOE will decide if the Contractor will continue to Phase 3 based on the following criteria:

1. The degree of public acceptance of the project.
2. How well the Site meets the geological/hydrological characteristics and other conditions described in the SOW.
3. All permitting and other regulatory requirements have been met.
4. The adequacy of the preliminary Drilling and Test Plan and the Contractor's rationale for continuing to Phase 3.
5. Proposed costs appear to be reasonable and allocable and sufficient funds are available.

The Contractor should also recognize that some good contracts might not receive the go-ahead to proceed to the next phase because of program priorities and available funding.

The Contractor must not proceed to Phase 3 until written CO approval is received.

### **C.5.3 Phase 3 - Contract Option to Draft, Finalize the Final Drilling and Test Plan**

The Contractor must continue its public outreach efforts and provide a detailed draft of a final Drilling and Test Plan to DOE for approval as a contract deliverable. Drilling and borehole design information, scientific testing guidance, and input for the Technical Advisory Committee (TAC) charter (see the third bullet below) will be furnished by DOE for use by the Contractor in developing the Final Drilling and Test Plan. The Final Drilling and Test Plan must be approved by the CO before drilling can begin. Comments or additions to the draft Final Drilling and Test Plan must be negotiated with the DOE CO.

The Final Drilling and Test Plan must contain all information necessary to describe how the remaining work will be completed. At a minimum the Plan must contain the information listed below:

- A detailed drilling design that describes the engineering work and technical activities necessary to complete the Characterization Borehole, taking into account input provided by DOE.
- A site characterization summary describing known geological and hydrological characteristics located below the drilling site.
- A charter that includes the process and procedures for the establishment and operation of a Technical Advisory Committee (TAC). The purpose of this committee is to monitor activities, especially during drilling and testing, and ensure the necessary data and information are collected. Also, the TAC must ensure activities at the site do not preclude future tests through contamination of the borehole or other irreversible processes. The TAC must have the ability to report, on very short term issues, directly to

the CO and the COR. The membership of the TAC must include members of the Contractor team, DOE, the DBFT Project Technical Lead, technical experts from DOE National Laboratories, and/or other experts as necessary. The TAC must be chaired by DBFT Project Lead. In no event do TAC activities shift performance responsibility away from the Contractor.

- Sections that describe:
  - How and what logging data will be collected, how its quality will be ensured, how it will be stored/managed, and how it will be delivered to DOE.
  - How cores and other samples are collected during drilling.
  - How the scientific testing that will be performed.

Note that detailed conceptual and technical input for testing needs will be provided by DOE (as developed by the DBFT Project Technical Lead-see additional details for DBFT Project activities in report on Characterization Objectives). This input will include DBFT testing needs for (but may not be limited to):

- All logging data and support for sampling and customized downhole testing. Geophysical logging will be conducted sequentially for each portion of the borehole prior to casing, if borehole conditions permit. Sampling, logging, and testing may include:
  - Drill-stem shut-in testing and drill-stem pumping/sampling from intervals which would be cased or cemented as part of the borehole completion (e.g., an interval near the bottom of the sedimentary overburden, or problematic intervals in the bedrock portion of the borehole which cannot be left open hole).
  - Hydrofracture/extended leak-off tests in bedrock portion of borehole.
  - Intermittent advance cores will be collected (50 m for every 1 km of bedrock borehole) with possibility for additional cores at areas of interest.
  - Borehole televiewer/formation micro-imager log.
  - Resistivity log.
  - Self-potential log.
  - Spectral natural gamma log.
  - Neutron porosity log.
  - Nuclear magnetic resonance log.
  - Mud resistivity log.

- High-resolution temperature log.
- Anisotropic shear wave velocity log.
- Provisions stating how core samples, cuttings, and fluid samples must be packaged when removed from the borehole to reduce risk of contamination and must be given a unique tracking identification to ensure configuration control.
- Provisions stating how samples, geophysical logs, mud logging data, and drilling parameters must be made available to the DOE and DBFT Project Lead as soon as practical.
- Provisions stating how, after completion of drilling the characterization borehole, the Contractor will complete and support specialized testing. This specialized testing (via work-over rig) will be defined by the DBFT Technical Project Lead and is expected to include:
  - A flowing (pumping) temperature-pulse or salinity-dilution log across the entire crystalline basement portion of the borehole to identify all permeable zones.
  - Packer-based shut-in tests to determine the static formation pressure profile across the crystalline basement.
  - Packer-based pulse/pumping tests and geochemical sample collection conducted in higher-permeability regions of the crystalline basement portion of the borehole.
  - Packer-based tracer tests in the crystalline basement portion of the borehole.
- A regulatory plan that describes the permits and other regulatory approvals necessary to complete this SOW. This plan must describe the work necessary to comply with all tribal (if applicable), federal, state and local requirements.
- A description of potential environmental impacts from drilling and testing and how these impacts, if any, will be remediated by the Contractor before contract close-out (if necessary, a contract adjustment will be negotiated with the DOE Contracting Officer to address remediation).
- A safety and security plan that describes safety and security requirements for all activities at the drill site. This safety plan must describe how the Contractor and any team members, subcontractors and visitors will comply with Contractor and other applicable safety and security requirements.
- A Quality Assurance Surveillance Plan (QASP) that describes how the Contractor will monitor performance to ensure services performed are in compliance with contract requirements. The QASP must describe how samples and data will be collected, tracked, managed, distributed, and protected from loss. This includes processes and data management systems for sample handling and curation for any physical samples including, but not limited to, core and cuttings (e.g., perform sample management, chain

of custody, storage, distribution). The QASP must also define any consensus or industry standards used in the performance of this SOW.

- A discussion of the status of public outreach activities, including: (a) efforts to mitigate community/tribal impacts and provide constructive benefits; (b) the status of public support for the project; and (c) details on how public acceptance will be maintained during drilling and testing.
- A detailed schedule (compatible to Primavera P6) that shows all major activities and an associated costs for each activity. At a minimum the schedule must include site and land use issues, permitting and licensing, design activities, any long lead procurement activities, mobilization activities, detail of drilling and testing activities needed, delivery times of data and samples, and activities necessary to close out the contract. The Contractor's schedule must also reflect the overall DBFT schedule maintained by the DBFT Project Technical Lead.

If DOE or the DBFT Project Technical Lead believes it is necessary, the Contactor may be directed to conduct a status meeting as the Final Drilling and Test Plan nears completion. Specifics regarding the meeting date and location, as well as advance and post-meeting deliverables will be identified in the contract direction.

#### **C.5.3.1 Final Drilling and Test Plan Review Meeting**

Once all comments have been resolved and action items completed the Contractor must deliver a Final Drilling and Test Plan and schedule a Final Drilling and Test Plan meeting to take place at or near the drilling site. The Contractor must provide a detailed cost estimate and schedule for all remaining work through the end of the contract. The Final Drilling and Test Plan, cost estimate, and schedule must be delivered to the COR at least two weeks prior to the meeting. The purpose of the meeting is for DOE to determine if there has been suitable progress to merit continuation of the project. The Contractor must provide its rationale for continuation to Phase 4. Contract deliverables resulting from this meeting include the Contractor's meeting presentation material and detailed meeting minutes.

Down select Criteria. DOE will decide if the Contractor will continue to Phase 4 based on the following criteria:

1. The technical adequacy of the Final Drilling and Test Plan, including schedule, and the Contractor's rationale for continuing into Phase 4.
2. The Contractor remains in compliance with all permits and other regulatory requirements and has necessary public support.
3. Proposed costs appear to be reasonable and allocable and sufficient funds are available.
4. The Contractor has a realistic, credible plan for maintaining public support for the project during drilling and testing activities.

The Contractor should recognize that some good contracts might not receive the go-ahead to proceed to the next phase because of program priorities and available funding.

The Contractor must proceed to Phase 4 only after the Final Drilling and Test Plan has been approved by the CO and it has received specific direction to begin drilling and testing activities.

It is anticipated that the incorporation of the Final Drilling and Test Plan into the contract may require a re-baseline of the contract and result in changes to the contract in terms of cost, schedule, and performance. Any decision to re-baseline is within the complete discretion of the CO. Changes, if any, will be documented by a formal contract modification agreed to by the parties.

#### **C.5.4 Phase 4 - Contract Option to Perform the Final Drilling and Test Plan**

The Contractor must perform Phase 4 consistent with the approved Final Drilling and Test Plan. DOE reserves the right to witness activities at the drill site at any time on a non-interference basis.

##### **C.5.4.1 Interim Status Meeting**

The Contractor must provide for an interim status meeting for DOE just before drilling commences. This must occur at a location provided by the Contractor at or near the drill site and must include a site tour. All progress and status of work must be presented along with any potential risks and issues. The meeting location and logistics must be communicated to the COR at least three (3) weeks in advance of the meeting. The contract deliverables resulting from this meeting include the Contractor's meeting presentation material, a list of any action items, and detailed meeting minutes.

##### **C.5.4.2 Notifications**

During execution of the Final Drilling and Test Plan, the Contractor must notify the COR as soon as practicable, but in no event greater than 2 calendar days after any of the following occur:

- Logging data and/or core samples indicate that the subsurface formations and geology are significantly different than the characterization summary described in the Final Drilling and Test Plan.
- Logging data and/or core samples indicate that there are significant faults, shear zones, or major fracturing in the crystalline basement that would prevent any future data collection relevant to the goals of the test.
- Any severe loss of drilling mud circulation that may indicate this site may not be suitable for further testing.
- Any regulatory violation that may result in fines or penalties.
- Any work stoppage that could have an impact on schedule.

- Any potential loss or compromise of data quality, data integrity, or samples.
- Any borehole deviation from vertical beyond design specifications.
- Indications of significant borehole breakouts or instability that could compromise completion of the borehole research as planned.
- Any public support or political events or issues that could impact the project.

#### **C.5.4.3 Reports During Drilling**

The Contractor must produce a signed daily drilling report that details activities and progress, rig functions, depths, pipe tallies, casing and other materials used, core samples taken, preliminary logging data, as well as any safety activities such as safety meetings or rig inspections. The daily drilling reports must be available for review on the drilling site. The Contractor must e-mail copies of the completed drilling reports once a week to the COR. The Contractor must also hold a teleconference every two weeks with the TAC, COR, and other program staff at DOE to discuss progress and potential issues.

#### **C.5.4.4 Drilling Status Meeting**

The Contractor must provide for a drilling status meeting with DOE when drilling reaches approximately 3500m in depth (i.e., approximately half way through the crystalline basement below 2000m depth). The Contractor must compile any data not already transmitted to DOE and deliver it to the COR. The purpose of this meeting is to help DOE make a preliminary decision on the suitability of the site for the larger field test borehole. The Contractor must make a recommendation based on the data collected to date. The meeting location must be near the drill site and logistics must be provided by the Contractor. At least 3 weeks advance notice must be provided to the COR. The contract deliverables from this meeting include the recommendation (together with the geologic properties of the characterization borehole and data collected to date), Contractor meeting presentation materials, and detailed meeting minutes.

#### **C.5.4.5 Drilling Site Management; Characterization Borehole Closeout**

The Contractor must provide and be responsible for all aspects of site management for the duration of Phase 4. This includes the safety, security, and environmental compliance of the site. The Contractor must work with outside entities doing work at the site, which may include DOE, DOE National Laboratories, or other Contractors.

#### **C.5.4.6 Site Remediation**

The Contractor must complete site remediation, as necessary, consistent with permit/regulatory requirements and the final Drilling and Test Plan. If DOE elects to enter into Phase 5 the CO will provide written direction to the Contractor; in which case site remediation and closeout will be completed in Phase 5.

### C.5.5 Phase 5 - Contract Option for Site Management, Integration and Maintenance

If geologic and hydrological conditions are favorable for the larger-diameter Field Test Borehole and DOE decides to implement these DBFT activities, the Contractor will be responsible to make the Site available to, and integrate the site investigation activities of, a separate drilling Contractor. To the extent the proposed schedule for Field Test Borehole activities is within the overall contract term of this contract, the Contractor may also perform site management, integration and maintenance responsibilities during this large diameter Field Test Borehole phase. Those activities would be largely the same as those for the Characterization Borehole, but might also include additional integration of surface handling and testing activities, as well as emplacement testing activities for surrogate canisters. This work will be performed by the exercise of contract options lasting one year at a time; the last option is tied to the contract completion date and will last less than one year. The contract term shall be in accordance with section F.1.

### C.6 Work Location(s), Travel, and Deliverable Schedule

Work location(s) are at the discretion of the Contractor, but work will principally occur at the selected DBFT site. Required meetings are defined in this SOW. Two additional trips may be required each year for interim status discussions at DOE Program meetings to be defined by the COR. Deliverables are defined in this SOW and the Final Drilling and Test Plan on the schedule described below:

<b>Project Phase</b>	<b>Milestone</b>	<b>Deliverables</b>	<b>Delivery Date (weeks after award)*</b>
<b>Begin Phase 1</b>	Team Kickoff Meeting	Briefing material and detailed meeting minutes.	2
	Provide Public Outreach Plan	Informational material to be made available to the public and Public Outreach Plan	4
	Cost impacts that will be used in the local community/tribe	Draft of the formal agreement(s) with the local community including costs and justifications.	8
	Complete formal agreements with the local community/tribe and secure land from the land owner	Copies of the signed agreements.	10
	Receive formal approval to continue to Phase2	N/A	20
<b>Begin Phase 2</b>	Completion of all regulatory approvals and permits	Preliminary Drilling and Test Plan, including ROM cost estimate. Copies of all regulatory approvals.	36

<b>Project Phase</b>	<b>Milestone</b>	<b>Deliverables</b>	<b>Delivery Date (weeks after award)*</b>
	Readiness status meeting	Rationale for continuation to Phase 3, presentation material, and detailed meeting minutes.	38
	Receive formal approval to continue to Phase 3	N/A	40
<b>Begin Phase 3</b>	Complete the draft Drilling and Test Plan and detailed cost estimate	Draft Drilling and Test Plan.	48
	Draft Drilling and Test Plan design review	Presentation material, detailed meeting minutes, complete list of review comments, action items needed to complete the Drilling and Test Plan.	50
	Deliver final Drilling and Test Plan and final detailed cost estimate	Completed Final Drilling and Test Plan and detailed cost estimate.	52
	Final Drilling and Test Plan review meeting	Rationale for continuation to phase 4 and detailed meeting minutes.	54
	Receive formal approval to continue to Phase 4	N/A	56
<b>Begin Phase 4</b>	Incorporate final Drilling and Test Plan into contract and negotiate contract modification for final cost, schedule, and scope	N/A	58
	Interim status meeting	A site tour, detailed meeting minutes, and presentation material.	62
	Notifications (if required)	Official notification to the COR for events listed in Section C.5.5.2.	2 calendar days after the event.
	Daily Drilling Reports	Reports are collected and e-mailed to the COR weekly.	One week after drilling begins and each week thereafter.

<b>Project Phase</b>	<b>Milestone</b>	<b>Deliverables</b>	<b>Delivery Date (weeks after award)*</b>
	Drilling status meeting	Data not already provided to DOE, meeting minutes, presentation material, and recommendation to DOE on site suitability for larger borehole.	When drilling reaches approximately 3500m in depth through the crystalline basement.
	Management of Drilling Site	N/A	Duration of the contract.
	Coordination of site visits/experiments by outside entities	As needed.	As needed.
	Provide project status at DOE Program Meetings	Briefing material - as required by the COR.	Twice a year.
Phase 5	On-Going Site Management and Maintenance; Borehole Closeout; Site Remediation		

**\*Or as otherwise agreed to by the COR.**

### **C.7 Quality and Acceptance of Deliverables**

Any document reviews must be transmitted by the COR in writing or by electronic mail. Any deficiencies in reports or deliverables will be specifically noted by the COR.

All deliverables must meet all the requirements and guidance furnished in this SOW. All deliverables must be free of spelling and grammatical errors. Reports and presentations must be provided in electronic format utilizing Microsoft Office files and submitted to the COR or his/her designated Technical Monitor. Data and samples delivered must comply with test plans and configuration management plans outlined in the DOE approved Final Drilling and Test Plan.

### **C.8 Anticipated Start Date/Period of Performance**

Anticipated Start Date: January 16, 2017

Estimated Period of Performance: 5 years

**PART I –THE SCHEDULE****SECTION D****PACKAGING AND MARKING****D.1 PACKAGING**

- (a) Packaging and packing for shipment or mailing of all work deliverables must be in accordance with good commercial practices and adequate to ensure both acceptance by common carrier and safe transportation at the most economical rates.
- (b) Deliverables under this contract must be mailed by electronic mail or first-class mail, unless the urgency of the deliverable sufficiently justifies the use of overnight delivery. The Contractor must not use certified or registered mail or private parcel delivery service for the distribution of reports under this contract without the advance approval of the Contracting Officer.

**D.2 MARKING**

- (a) Each package, report or other deliverable must be accompanied by a letter or other document which:
  - (1) Identifies the contract number under which the item is being delivered.
  - (2) Identifies the deliverable item number or report requirement which requires the delivered item(s).
  - (3) Indicates whether the Contractor considers the delivered item to be a partial or full satisfaction of the requirement.
- (b) For any package, report or other deliverable being delivered to a party other than the Contracting Officer, a copy of the document required in (a) above must be simultaneously provided to the Contracting Officer.

## PART I - THE SCHEDULE

### SECTION E

#### INSPECTION AND ACCEPTANCE

#### E.1 FAR CLAUSES INCORPORATED BY REFERENCE

52.246-6 INSPECTION-TIME AND MATERIAL AND LABOR-HOUR (MAY 2001)

#### E.2 FAR 52.246-5 INSPECTION OF SERVICES - COST-REIMBURSEMENT (APR 1984)

- (a) *Definition.* "Services," as used in this clause, includes services performed, workmanship, and material furnished or used in performing services.
- (b) The contractor shall provide and maintain an inspection system acceptable to the Government covering the services under this contract. Complete records of all inspection work performed by the contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.
- (c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all places and times during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly delay the work.
- (d) If any of the services performed do not conform with contract requirements, the Government may require the contractor to perform the services again in conformity with contract requirements, for no additional cost. When the defects in services cannot be corrected by re- performance, the Government may –
  - (1) Require the contractor to take necessary action to ensure that future performance conforms to contract requirements; and
  - (2) Reduce any cost payable under the contract to reflect the reduced value of the services performed.
- (e) If the contractor fails to promptly perform the services again or take the action necessary to ensure future performance in conformity with contract requirements, the Government may –
  - (1) By contract or otherwise, perform the services and reduce any cost payable by an amount that is equitable under the circumstances; or
  - (2) Terminate the contract for default.

**E.3 INSPECTION**

Inspection of all items under this contract will be done by the DOE-ID Contracting Officer's Representative (COR) identified by the Contracting Officer (CO) as responsible for the product, report, or service being delivered, or any duly authorized DOE-ID representative as designated from time to time by the CO in writing in accordance with Section G of this contract.

Inspection will be conducted in accordance with the applicable FAR clause identified in E.1 above.

**E.4 ACCEPTANCE**

Only the CO or the Contracting Officer's Representative (COR) designated by the CO has the authority to accept work performed under this contract. (See also Clause H.2 for limits on the authority of the COR.)

## **PART I - THE SCHEDULE**

### **SECTION F**

#### **DELIVERIES OR PERFORMANCE**

##### **F.1 TERM OF CONTRACT**

The term of the contract, if all Phases are performed by the Contractor, ends five (5) years from the date the contract was issued (see item 5 of Standard Form 33).

##### **F.2 DELIVERIES**

All products, reports, and deliverables under this contract must be delivered to the addressees as required in Part III, Section J, Attachment J-A, Reporting Requirements Checklist.

##### **F.3 PLACE OF PERFORMANCE**

The work under this Contract is to be carried out in a variety of locations, but the principal place of performance will be at the Contractor's facilities located at: Y Bar Ranch (Duggar Ranch Property), Otero County, NM.

##### **F.4 FAR 52.242-15 STOP-WORK ORDER – ALTERNATE I (ARP 1989)**

- (a) The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either --
  - (1) Cancel the stop-work order; or
  - (2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government clause of this contract.
- (b) If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if—

- (1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and
  - (2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stop-page; provided that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.
- (c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.
  - (d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

**F.5 FAR 52.242-17 GOVERNMENT DELAY OF WORK (APR 1984)**

- (a) If the performance of all or any part of the work of this contract is delayed or interrupted
  - (1) by an act of the Contracting Officer in the administration of this contract that is not expressly or impliedly authorized by this contract, or
  - (2) by a failure of the Contracting Officer to act within the time specified in this contract, or within a reasonable time if not specified, an adjustment (excluding profit) shall be made for any increase in the cost of performance of this contract caused by the delay or interruption and the contract shall be modified in writing accordingly. Adjustment shall also be made in the delivery or performance dates and any other contractual term or condition affected by the delay or interruption. However, no adjustment shall be made under this clause for any delay or interruption to the extent that performance would have been delayed or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an adjustment is provided or excluded under any other term or condition of this contract.
- (b) A claim under this clause shall not be allowed --
  - (1) For any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved; and
  - (2) Unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the delay or interruption, but not later than the day of final payment under the contract

## PART I - THE SCHEDULE

### SECTION G

#### CONTRACT ADMINISTRATION DATA

#### G.1 FAR CLAUSES INCORPORATED BY REFERENCE

52.232-1	PAYMENTS	APR 1984
52.232-7	PAYMENTS UNDER TIME-AND MATERIALS AND LABOR-HOUR CONTRACTS	AUG 2012
52.232-16	PROGRESS PAYMENTS	APR 2012

#### G.2 PATENTS, DATA AND COPYRIGHTS

Patent, data and copyright requirements are set out in Part 27 of the Federal Acquisition Regulation (FAR), 48 CFR Part 27 and Part 927 of the Department of Energy Acquisition Regulation (DEAR), 48 CFR Subpart 927. Specific requirements are set out in clauses included in this contract, and may be supplemented by additional written direction from the Contracting Officer.

#### G.3 CORRESPONDENCE PROCEDURES

To promote timely and effective administration, all correspondence, reports and other documents submitted under this contract are subject to the following procedures:

- (a) **Technical Correspondence.** Technical correspondence concerning performance of this contract must be addressed to the DOE-ID Contracting Officer's Representative (COR) with an information copy to the Contracting Officer (CO). The COR will be designated by separate letter and will be the primary point of contact on technical matters, subject to the restrictions of DEAR Clause 952.242-70, "Technical Direction" contained in Section I. The COR is not authorized to change any of the terms and conditions of this contract (contract scope, term, schedule or cost). Only the CO can make changes to the scope, term, schedule, and cost of the work.
- (b) **Patents/Technical Data Correspondence.** The Chicago Operations Office, acting through the Intellectual Property Law Division of the Office of Assistant Manager for Legal Support/Chief Counsel, DOE, 9800 South Cass Avenue, Argonne, Illinois, 60439, represents the CO in administering the Patent Clauses in this contract. Correspondence concerning patent and technical data issues must be addressed to the Chicago Operations Office with a copy to the Idaho Operations Office Chief Counsel's Office, the CO and the COR.
- (c) **Non-technical Administrative Correspondence.** All correspondence, other than technical correspondence, must be addressed to the Contract Specialist identified in G.4(b), with information copies of the correspondence to the COR.

- (d) Subject Line(s). All correspondence must contain a subject line commencing with the contract number as illustrated below:

“SUBJECT: Contract No. DE-NE0008613” Deep Bore Hole Field Test

(Insert subject topic after contract number, e.g., “Request for Subcontract Consent”).

#### **G.4 SUBMISSION OF VOUCHERS/INVOICES**

The Financial Services Team of the Idaho Operations Office (DOE-ID) is the cognizant finance office for this contract. However, the DOE Oak Ridge Operations Office will make contract payments. Payments will be made through the Automated Clearing House (ACH) electronic payment system. In lieu of receiving payment by check, payments will be sent via ACH and automatically credited to the designated account at the financial institution.

##### Voucher Form

In requesting reimbursements, the Contractor must use Standard Form 1034, Public Voucher for Purchases and Services Other than Personal, accompanied by supporting statement of cost documentation. A computerized version of the 1034 may be used

See: <http://www.gsa.gov/portal/forms/download/115462>

An alternative to the voucher form is the Vendor Inquiry Payment Electronic Reporting System (VIPERS). This voluntary system enables the Contractor to submit invoices electronically, after being registered at <https://vipers.doe.gov/> and having received your personnel identification number (PIN). The Contractor must have its Data Universal Numbering System (DUNS) number available to complete the registration process. Further instructions are available at the URL address.

##### Timing

*If the above referenced VIPERS system is not utilized,* the Contractor is encouraged to use regular mail in lieu of express mail methods in order to promote cost effectiveness. Distribution of the original voucher/billing and copies must be made as described below. Failure to comply with these voucher mailing instructions will result in delayed payments and may affect performance ratings for administrative areas.

##### Submittal of Vouchers

- (a) The original of each voucher/billing must be submitted to:

U.S. Department of Energy  
Oak Ridge Financial Service Center  
P. O. Box 4368  
Oak Ridge, TN 37831

- (b) One copy of the voucher/billing, with supporting detail must be e-mailed or mailed to the cognizant contract specialist:

[REDACTED]  
 U.S. Department of Energy  
 Idaho Operations Office (DOE-ID)  
 1955 Fremont Avenue, MS-1221  
 Idaho Falls, ID 83415-1221  
 [REDACTED]

- (c) One copy of the voucher/billing, with supporting detail, must be e-mailed or mailed to the cognizant Contracting Officer's Representative:

[REDACTED]  
 U. S. Department of Energy  
 Idaho Operations Office (DOE-ID)  
 Supervisor, Fuel Cycle Programs  
 1955 Freemont Ave.,  
 Idaho Falls, ID 83405  
 [REDACTED]

#### Voucher Information

The following information must be included in each voucher: Period being billed; specific line items of cost elements to include, yet not be limited to, all materials, number of labor hours for each individual, labor rates and overheads applied; logical rack-up of sub-totals to the bottom line total being billed; and cumulative amount billed with a historical listing of invoices paid including invoice number, period billed and amount; billing period.

#### Voucher Frequency

The Government will make progress payments to the Contractor when requested as work progresses, but not more frequently than monthly.

Actual costs for travel and meeting expenses will be reimbursed in accordance with the Federal Travel Regulations and receipts must be presented for costs associated with this procurement.

### **G.5 CONTRACT ADMINISTRATION**

The contract will be administered by:

U.S. Department of Energy  
 Idaho Operations Office (DOE-ID)  
 Contract Management Division  
 1955 Fremont Avenue, MS-1221  
 Idaho Falls, ID 83415-1221

Any change to the contract administration information will be accomplished by written notification from the CO to the Contractor, without a formal contract modification.

**G.6 ACCESS TO PROPRIETARY DATA OR COMPANY CONFIDENTIAL,  
FINANCIAL, OR COMMERCIAL INFORMATION**

The Government may fulfill any of its obligations, or take any action under this contract (including inspection of audit of books, records, accounts, documents, and other data) either directly or through contractors or consultants. Any proprietary data or company confidential financial or commercial information so accessed by Government contractors or consultants may not be used, reproduced, nor disclosed outside of the Government except as expressly provided in this contract.

**PART I - THE SCHEDULE**

**SECTION H**

**SPECIAL CONTRACT REQUIREMENTS**

**H.1 FAR CLAUSES INCORPORATED BY REFERENCE**

52.234-4 EARNED VALUE MANAGEMENT SYSTEM MAY 2014

**H.2 MODIFICATION AUTHORITY**

Notwithstanding any of the other clauses of this contract, the Contracting Officer (CO) is the only individual authorized to:

- (a) Accept nonconforming work,
- (b) Waive any requirement of this contract, including schedule, or
- (c) Modify any term or condition of this contract.

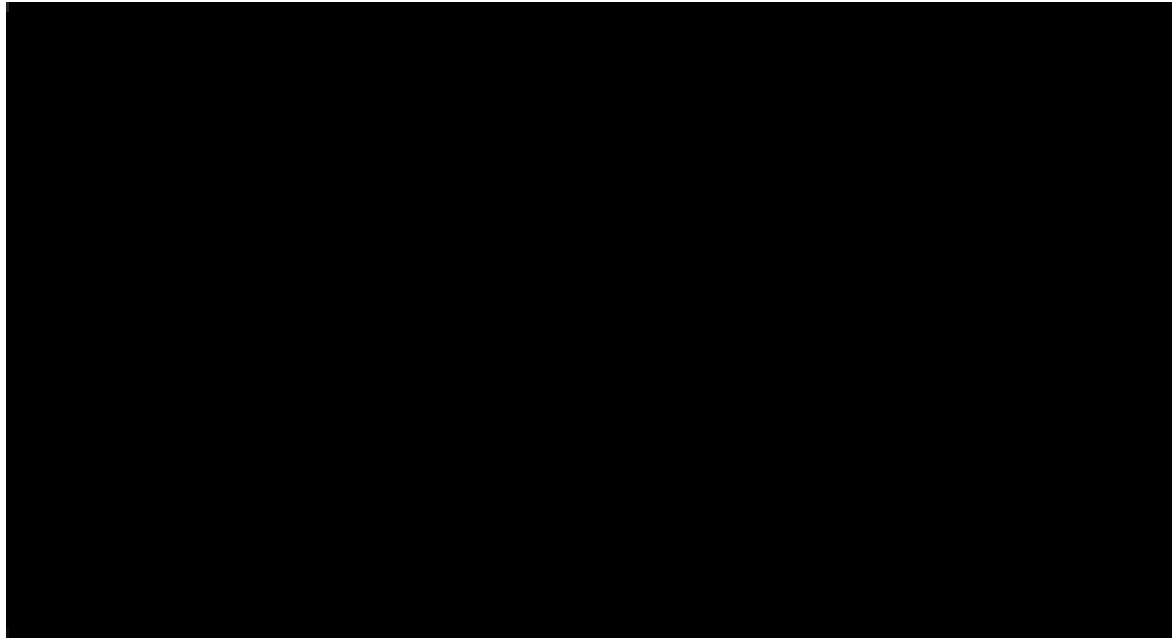
**H.3 GOVERNMENT PROPERTY AND DATA**

The Government is not obligated to provide any real or personal property or data under this contract in addition to that as may be expressly identified elsewhere in this contract.

**H.4 KEY PERSONNEL**

The Contractor's key personnel are as follows:

POSITION	TITLE

**POSITION****TITLE**

The clause DEAR 952.215-70 entitled "Key Positions" contains a requirement for notification to the CO reasonably in advance of diverting of, or substitution for, any of these required positions. That period of time must not be less than thirty (30) days.

**H.5 SUBCONTRACTS**

- (a) Prior to the placement of subcontracts, the Contractor must ensure that they contain:
  - (1) All of the clauses of this contract (altered when necessary for proper identification of the contracting parties) which contain a requirement for inclusion in applicable subcontracts; and
  - (2) Any applicable subcontractor Representations and Certifications (see Part V-- Section K).
- (b) Except as expressly set forth in the consent, any consent given by the CO to the Contractor permitting placement of a subcontract does not: (i) constitute approval of the subcontractor or of any subcontract terms or conditions; (ii) constitute an advance determination that subcontract costs paid by the Contractor are allowable under this contract; (iii) revise any term or condition of this contract or the respective rights of the parties under this contract; and (iv) does not create privity of contract between the subcontractor and the Government.

**H.6 CONFIDENTIALITY OF INFORMATION**

- (a) To the extent that work under this contract requires the Contractor be given access to confidential or proprietary business, technical, or financial information belonging to the Government or other companies, the Contractor must, after receipt of this information, treat the information as confidential. The Contractor further agrees it will not use this

information for any purpose unrelated to this contract, or disclose it to third parties unless specifically authorized by the CO in writing. The foregoing obligations, however, do not apply to:

- (1) Information, which, at the time of receipt by the Contractor, is in public domain;
  - (2) Information, which is published after receipt by the Contractor or otherwise becomes part of the public domain through no fault of the Contractor;
  - (3) Information which the Contractor can demonstrate was already in its possession at the time of receipt under this contract and was not acquired directly or indirectly from the Government or other government contractors; or
  - (4) Information which the Contractor can demonstrate was received by it from a third party who did not require the Contractor to hold it in confidence.
- (b) The Contractor must obtain the written agreement, in a form satisfactory to the CO, of each employee permitted access to confidential information, whereby the employee agrees that s/he will not discuss, divulge or disclose any the information or data to any person or entity except those persons or entities within the Contractor's organization directly concerned with the performance of the contract.
- (c) The Contractor agrees, if requested by the Government, to sign an agreement identical, in all material respects, to the provisions of this clause, with each company supplying information to the Contractor under this contract, and to supply a copy of such agreement to the CO. From time to time upon request of the CO, the Contractor must supply the Government with reports itemizing information received as confidential or proprietary and setting forth the company or companies from which the Contractor received such information.
- (d) The Contractor agrees that upon request by DOE-ID it will execute a DOE-approved agreement with any party whose facilities or proprietary data it is given access to or is furnished, restricting use and disclosure of the data or the information obtained from the facilities. Upon request by DOE-ID, this agreement must also be signed by Contractor personnel.
- (e) This clause shall flow down to all subcontracts.

## **H.7 SERVICES OF CONSULTANTS**

- (a) The Contractor must obtain the CO's written consent prior to awarding any subcontract for consulting services, including advisory and assistance services, which will exceed ten (10) days in any calendar year or exceed a total value of \$2,500. The Contractor must obtain and furnish to the CO information concerning the need for and selection of any subcontracts for consultant services and the reasonableness of the fees to be paid, including, but not limited to, whether fees to be paid to any consultant exceed the lowest fee charged by the consultant to others for performing consulting services of a similar nature.

- (b) The Contractor must obtain and furnish to the CO either an Organizational Conflicts of Interest (OCI) Disclosure Statement or Representation form in accordance with DEAR 909.507-2 "Organizational Conflicts of Interest", and must insert the clause at 48 CFR 952.209-72 (Refer Section I), in any consulting agreement or subcontract for all consultants to be utilized under this contract prior to their performing any effort under this contract. The CO must determine the consultant does not have an impermissible OCI before it can begin work for the Contractor.
- (c) The following consultants have been cleared by the CO for OCI: None.

## **H.8 CONTINUING DUTY TO DISCLOSE MATTERS THAT CREATE POTENTIAL OCI**

The Contractor has a continuing obligation to disclose any current or planned financial, contractual, organizational, or other interests that may create a potential OCI relating to its performance of this contract. This duty to disclose applies to the Contractor, its team members, key personnel and its subcontractors. The CO may require the Contractor to take steps to avoid, neutralize, and/or mitigate any potential OCI identified as a result of this disclosure.

## **H.9 RESERVED**

## **H.10 DISPOSITION OF INTELLECTUAL PROPERTY – FAILURE TO COMPLETE**

- (a) In the event of a termination, default, or failure to complete by the Contractor, the Government may take possession of and use all technical data used or developed under the Contract, including limited rights data, restricted computer software, and data and software obtained from subcontractors, licensors, and licensees, that is needed to complete the work in conformance with this Contract, including the right to use the data in any Government solicitations for the work contemplated under this Contract. Data delivered to the Government is subject to FAR 52.227-14 Rights in Data - General clause of this contract. Technical information includes, but is not limited to, designs, operation manuals, flowcharts, software, work progress reports, and any other information necessary for the work under this Contract.
- (b) Upon request, the Contractor agrees to grant to the Government an irrevocable, nonexclusive, paid-up license in and to any inventions or discoveries regardless of when conceived or actually reduced to practice by the Contractor, and any other intellectual property, including technical data, which are owned or controlled by the Contractor, at any time through completion or termination of this Contract and which are necessary for the continuation and completion of the project: (1) to practice or to have practiced by or for the Government; and (2) to transfer such license to future contractors of the project. The acceptance or exercise by the Government of these rights and license does not prevent the Government at any time from contesting the enforceability, validity, or scope of, or title to, any rights or patents or other intellectual property licensed.

- (c) As requested, the Contractor must take all necessary steps to assign permits, authorizations, leases, and licenses in any third party intellectual property to the Government, or such other party as the Government may designate, that are necessary for the work contemplated under this Contract.
- (d) The obligations under this clause are not dependent upon any payments by the Government. The obligations arise immediately upon the request of the Contracting Officer.

## **H.11 PROPERTY USE-DEEP BOREHOLE**

Any interest in real property acquired or improvements made thereto (the site) under this contract (*Deep Borehole Field Test*) must be held by the Contractor. This interest must allow for use during the period of performance covered by the contract and any time beyond the contract term (see Section C) for all of the purposes described in Section C. The Contractor is prohibited from disposing or encumbering its title or interest.

Unless advance written approval is received from the CO, Government property (other than foundations and similar improvements necessary for installing special tooling, special test equipment, or equipment) must not be installed or constructed on the site in such fashion as to become a fixture or otherwise become nonseverable from the land.

The terms of the use agreement for the drill site (e.g., lease, easement, license, or permit, etc.) must include a provision that allows the US Government, at its sole discretion, to continue to use the site for authorized purposes under the contract for the duration of the contract's maximum period of performance (five years), plus an option to be exercised at the sole discretion of the Government, to use the site for up to an additional period of five years after completion of the contract's period of performance. This option must: (1) give the Government and its contractors the right to further test, drill and/or improve the characterization deep borehole and to drill one or more additional deep borehole(s) of differing sizes and configurations on the site for additional research purposes; (2) include the monthly and the full cost/price to the Government for using the site for the additional five-year period; and (3) must be transferrable to a bona fide third party (i.e., another DOE contractor) that would use the site for the activities specified in (1) above. The inclusion of this option does not obligate the Government to exercise the option. Unless (1) the Contractor is in default; (2) the parties mutually agree otherwise; or (3) the Government no longer needs the site, the Contractor will not be directed to assign the use agreement to a third party at any time during the contract term.

In no case will the Government place or otherwise have nuclear material, waste, or other waste disposal material on the property. The use agreement for the site must also include a provision that the Government may, at its sole discretion, agree to release the property from this ten-year period any time prior to the end of the ten-year period as evidenced by written authorization from the Contracting Officer, with a corresponding reduction in the cost/price. The use of the real property encumbered under this contract is solely for the purposes specifically set forth in Section C. No further obligations, monetary or otherwise, are incurred by the Government unless the Government, at its sole discretion, elects to enter into another legally binding contractual agreement for other/continued use and/or improvement of the property following the end of the period of performance under this contract.

The use agreement must include a provision describing the amount of any payment made in the event the use agreement is terminated early. This payment will not be made if the early termination is caused by the default of the owner(s) or any lien holder(s). Any payment made is subject to the availability of funds.

If the Government no longer needs the site at any time during contract performance, the Contractor and the site owner(s) may negotiate the termination of the use agreement. The termination agreement must be approved by the Contracting Officer. The Government may also, in appropriate circumstances, permit the Contractor or its assignee to continue to use the improvements made to the site for other research and development activities, without further obligation to, or obligation by, the Government. This permission must be obtained from the Government through a written disposition agreement signed by both parties. The disposition agreement must include a statement of release substantially as follows:

*Contractor's Statement of Release*

*In consideration of Government's authorization to the Contractor to continue to use the improvements made to the site for continued research and development activities, the Government and the Contractor agree that the Government's authorization is a complete equitable adjustment for the site's improvements and the use of them. The Contractor assumes all future liability for the site and its improvements and hereby releases the Government from any and all liability for further equitable adjustments or monetary damages of any kind or amount attributable to such facts or circumstances giving rise to the site and any of its improvements. This includes releasing the Government of any and all liability, including any liability for site usage, clean up, restoration, etc., of the site and its improvements.*

No other Government obligations or liabilities are to be implied or inferred as a result of the *Deep Borehole Field Test* contract, including this clause, except as otherwise expressly stated in this contract.

Refer to the Statement of Work in Section C regarding other site closeout requirements

## **H.12 CONTRACT PHASES**

This contract breaks the work scope into 5 separate phases. The decision to assign work described in Phase 3, Phase 4 and Phase 5 will be made unilaterally by DOE, in its sole discretion. The Contractor understands that: (a) it is likely multiple contractors will perform Phases 1, 2 and 3; and (b) which of the multiple contractors will perform Phase 3 and Phase 4 will be made by DOE using down select criteria contained in Section C of the contract. The Contractor further agrees that DOE's decision to not assign it Phase 3, Phase 4 or Phase 5 is not a termination for convenience of the Government supporting the possible award of termination settlement costs.

## PART II – CONTRACT CLAUSES

### SECTION I

#### CONTRACT CLAUSES

#### I.1 FAR 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://energy.gov/management/downloads/searchable-electronic-department-energy-acquisition-regulation>

<http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/far1toc.htm>

**NOTE:** After selecting the appropriate regulation above, at the "Table of Contents" page, conduct a search for the desired regulation reference using your browser's **FIND** function. When located, click on the **regulation reference** (hyperlink).

NUMBER	TITLE FAR Clauses	DATE
52.202-1	DEFINITIONS	NOV 2013
52.203-3	GRATUITIES	APR 1984
52.203-5	COVENANT AGAINST CONTINGENT FEES	MAY 2014
52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT	SEP 2006
52.203-7	ANTI-KICKBACK PROCEDURES	MAY 2014
52.203-8	CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY	MAY 2014
52.203-10	PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY	MAY 2014
52.203-12	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS	OCT 2010
52.203-13	CONTRACTOR CODE OF BUSINESS ETHICS AND CONDUCT	OCT 2015
52.203-17	CONTRACTOR EMPLOYEE WHISTLEBLOWER RIGHTS AND REQUIRMENT TO INFORM EMPLOYEES OF WHISTLEBLOWER RIGHTS	APR 2014
52.204-4	PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER	MAY 2011
52.204-7	SYSTEM FOR AWARD MANAGEMENT	JUL 2013

<b>NUMBER</b>	<b>TITLE</b>	<b>DATE</b>
52.204-10	REPORTING EXECUTIVE COMPENSATION AND FIRST-TIER SUBCONTRACT AWARDS	JUL 2013
52.204-18	COMMERCIAL AND GOVERNMENT ENTITY CODE MAINTENANCE	JUL 2016
52.204-19	INCORPORATION BY REFERENCE OF REPRESENTATION AND CERTIFICATIONS	DEC 2014
52.209-6	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT	OCT 2015
52.209-9	UPDATES OF PUBLICLY AVAILABLE INFORMATION REGARDING RESPONSIBILITY MATTERS	JUL 2013
52.215-2	AUDIT AND RECORDS--NEGOTIATION	OCT 2010
52.215-8	ORDER OF PRECEDENCE--UNIFORM CONTRACT FORMAT	OCT 1997
52.215-10	PRICE REDUCTION FOR DEFECTIVE CERTIFIED COST OR PRICING DATA	AUG 2011
52.215-21	REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA- MODIFICATIONS	OCT 2010
52.215-23	LIMITATIONS ON PASS-THROUGH CHARGES	OCT 2009
52.216-7	ALLOWABLE COST AND PAYMENT AS MODIFIED BY DEAR 952.216-7	JUN 2013
52.216-8	FIXED FEE	JUN 2011
52.217-2	CANCELLATION UNDER MULTIYEAR CONTRACTS	OCT 1997
52.217-8	OPTION TO EXTEND SERVICES	NOV 1999
52.217-9	OPTION TO EXTEND THE TERM OF THE CONTRACT	MAR 2000
52.219-4	NOTICE OF PRICE EVALUATION FOR HUBZONE SMALL BUSINESS CONCERNS	OCT 2014
52.219-8	UTILIZATION OF SMALL BUSINESS CONCERNS	OCT 2014
52.219-9	SMALL BUSINESS SUBCONTRACTING PLAN ALTERNATE II	OCT 2014 OCT 2001
52.219-16	LIQUIDATED DAMAGES – SUBCONTRACTING PLAN	JAN 1999
52.222-1	NOTICE TO THE GOVERNMENT OF LABOR DISPUTES	FEB 1997
52.222-2	PAYMENT FOR OVERTIME PREMIUMS	JUL 1990

<b>NUMBER</b>	<b>TITLE</b>	<b>DATE</b>
52.222-3	CONVICT LABOR	JUN 2003
52.222-4	CONTRACT WORK HOURS AND SAFETY STANDARDS - OVERTIME COMPENSATION	MAY 2014
52.222-17	NONDISPLACEMENT OF QUALIFIED WORKERS	MAY 2014
52.222-21	PROHIBITION OF SEGREGATED FACILITIES	APR 2015
52.222-26	EQUAL OPPORTUNITY	APR 2015
52.222-35	EQUAL OPPORTUNITY FOR VETERANS	OCT 2015
52.222-36	EQUAL OPPORTUNITY FOR WORKERS WITH DISABILITIES	JUL 2014
52.222-37	EMPLOYMENT REPORTS ON VETERANS	FEB 2016
52.222-40	NOTIFICATION OF EMPLOYEE RIGHTS UNDER THE NATIONAL LABOR RELATIONS ACT	DEC 2010
52.222-50	COMBATING TRAFFICKING IN PERSONS	MAR 2015
52.223-6	DRUG-FREE WORKPLACE	MAY 2001
52.223-15	ENERGY EFFICIENCY IN ENERGY-CONSUMING PRODUCTS	DEC 2007
52.223-17	AFFIRMATIVE PROCUREMENT OF EPA-DESIGNATED ITEMS IN SERVICE AND CONSTRUCTION CONTRACTS	MAY 2008
52.223-18	ENCOURAGING CONTRACTOR POLICIES TO BAN TEXT MESSAGING WHILE DRIVING	AUG 2011
52.225-1	BUY AMERICAN-SUPPLIES	MAY 2014
52.225-13	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES	JUN 2008
52-227-1	AUTHORIZATION AND CONSENT	DEC 2007
52.227-2	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT	DEC 2007
52.227-14	RIGHTS IN DATA – GENERAL	MAY 2014
52.227-16	ADDITIONAL DATA REQUIREMENTS	JUN 1987
52.227-23	RIGHTS TO PROPOSAL DATA (TECHNICAL)	JUN 1987
52.228-7	INSURANCE – LIABILITY TO THIRD PERSONS	MAR 1996
52.230-2	COST ACCOUNTING STANDARDS	OCT 2015
52.230-3	DISCLOSURE AND CONSISTENCY OF COST ACCOUNTING PRACTICES	OCT 2015
52.230-6	ADMINISTRATION OF COST ACCOUNTING STANDARDS	JUN 2010
52.232-1	PAYMENTS	APR 1984

<b>NUMBER</b>	<b>TITLE</b>	<b>DATE</b>
52.232-9	LIMITATION ON WITHHOLDING OF PAYMENTS	APR 1984
52.232-16	PROGRESS PAYMENTS INTEREST	APR 2012
52.232-17	INTREST	MAY 2014
52.232-18	AVAILABILITY OF FUNDS	APR 1984
52.232-20	LIMITATION OF COST	APR 1984
52.232-23	ASSIGNMENT OF CLAIMS	MAY 2014
52.232-33	PAYMENT BY ELECTRONIC FUNDS TRANSFER – SYSTEM FOR AWARD MANAGEMENT	JUL 2013
52.232-39	UNENFORCEABILITY OF UNAUTHORIZED OBLIGATIONS	JUNE 2013
52.232-40	PROVIDING ACCELERATED PAYMENTS TO SMALL BUSINESS	DEC 2013
52.233-1	DISPUTES	MAY 2014
52.233-1	DISPUTES—ALTERNATE I	DEC 1991
52.233-3	PROTEST AFTER AWARD	AUG 1996
52.233-3	ALTERNATE I	JUN 1985
52.233-4	APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM	OCT 2004
52.242-1	NOTICE OF INTENT TO DISALLOW COSTS	APR 1984
52.242-3	PENALTIES FOR UNALLOWABLE COSTS	MAY 2014
52.242-13	BANKRUPTCY	JUL 1995
52.243-2	CHANGES-COST REIMBURSEMENT	AUG 1987
52.243-2	ALTERNATE I	APR 1984
52.243-3	CHANGES—TIME-AND-MATERIALS OR LABOR- HOURS	SEP 2000
52.243-2	ALTERNATE IV	APR 1984
52.244-6	SUBCONTRACTS FOR COMMERCIAL ITEMS	JUN 2016
52.245-1	GOVERNMENT PROPERTY	APR 2012
52.245-9	USE AND CHARGES	APR 2012
52.246-25	LIMITATION OF LIABILITY—SERVICES	FEB 1997
52.248-1	VALUE ENGINEERING	OCT 2010
52.249-6	TERMINATION (COST-REIMBURSEMENT)	MAY 2004
52.249-6	TERMINATION (COST-REIMBURSEMENT) -- ALTERNATE IV	MAY 2004
52.249-14	EXCUSABLE DELAYS	APR 1984
52.253-1	COMPUTER GENERATED FORMS	JAN 1991

**DEAR Clauses**

<b>NUMBER</b>	<b>TITLE</b>	<b>DATE</b>
952.202-1	DEFINITIONS	FEB 2011
952.203-70	WHISTLEBLOWER PROTECTION FOR CONTRACTOR EMPLOEES	DEC 2000
952.204-75	PUBLIC AFFAIRS	DEC 2000
952.208-70	PRINTING	APR 1984
952.209-8	ORGANIZATIONAL CONFLICTS OF INTEREST DISCLOSURE – ADVISORY AND ASSISTANCE SERVICES	JUN 1997
952.209-72	ORGANIZATIONAL CONFLICTS OF INTEREST	AUG 2009
952.216-7	ALLOWABLE COST AND PAYMENT	JUNE 2013
952.217-70	ACQUISITION OF REAL PROPERTY	MAR 2011
952.219-70	DOE MENTOR-PROTÉGÉ PROGRAM	MAY 2000
952.223-75	PRESERVATION OF INDIVIDUAL OCCUPATIONAL RADIATION EXPOSURE RECORDS	ARP 1984
952.226-72	ENERGY POLICY ACT SUBCONTRACTING GOALS AND REPORTING REQUIREMENTS	JUN 1996
952.226-74	DISPLACED EMPLOYEE HIRING PREFERENCE	JUN 1997
952.227-9	REFUND OF ROYALTIES	FEB 1995
952.227-11	PATENT RIGHTS-RETENTION BY THE CONTRACTOR (SHORT FORM)	FEB 1995
952.227-13	PATENT RIGHTS-ACQUISITION BY THE GOVERNMENT	SEP 1997
952.233-5	AGENCY PROTEST REVIEW	SEP 1996
952.235-71	RESEARCH MISCONDUCT	JUL 2005
952.242-70	TECHNICAL DIRECTION	DEC 2000
952.247-70	FOREIGN TRAVEL	JUN 2010
952.251-70	CONTRACTOR EMPLOYEE TRAVEL DISCOUNTS	AUG 2009
970.5227-4	AUTHORIZATION AND CONSENT	AUG 2002
970.5223-1	INTEGRATION OF ENVIROPNMENT, SAFETY, AND HEALTH INTO WORK PLANNING AND EXECUTION	DEC 2000

**I.2 FAR 52.203-14 DISPLAY OF HOTLINE POSTER(S) (Oct 2015)**

(a) *Definition.*

“United States,” as used in this clause, means the 50 States, the District of Columbia, and outlying areas.

(b) *Display of fraud hotline poster(s). Except as provided in paragraph (c)—*

(1) During contract performance in the United States, the Contractor shall prominently display in common work areas within business segments performing work under this contract and at contract work sites—

(i) Any agency fraud hotline poster or Department of Homeland Security (DHS) fraud hotline poster identified in paragraph (b)(3) of this clause; and

(ii) Any DHS fraud hotline poster subsequently identified by the Contracting Officer.

(2) Additionally, if the Contractor maintains a company website as a method of providing information to employees, the Contractor shall display an electronic version of the poster(s) at the website.

(3) Any required posters may be obtained as follows:

Poster(s)	Obtain from
Fraud Hotline	Fraud Hotline Posters U.S. Department of Energy Office of Inspector General ATTN: IG Hotline 1000 Independence Avenue, SW Mail Stop 5D-031 Washington, DC 20585 <a href="http://energy.gov/ig/downloads/office-inspector-general-hotline-poster">http://energy.gov/ig/downloads/office-inspector-general-hotline-poster</a>

(c) If the Contractor has implemented a business ethics and conduct awareness program, including a reporting mechanism, such as a hotline poster, then the Contractor need not display any agency fraud hotline posters as required in paragraph (b) of this clause, other than any required DHS posters.

(d) *Subcontracts.* The Contractor shall include the substance of this clause, including this paragraph (d), in all subcontracts that exceed \$5.5 million, except when the subcontract—

(1) Is for the acquisition of a commercial item; or

(2) Is performed entirely outside the United States.

### **I.3 FAR 52.204-1 APPROVAL OF CONTRACT (DEC 1989)**

This contract is subject to the written approval of the Contracting Officer and shall not be binding until so approved.

**I.4 FAR 52.219-28 POST-AWARD SMALL BUSINESS PROGRAM REPRESENTATION (JUL 2013)**

(a) *Definitions.* As used in this clause--

*Long-term contract* means a contract of more than five years in duration, including options. However, the term does not include contracts that exceed five years in duration because the period of performance has been extended for a cumulative period not to exceed six months under the clause at 52.217-8, Option to Extend Services, or other appropriate authority.

*Small business concern* means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and the size standard in paragraph (c) of this clause. Such a concern is “not dominant in its field of operation” when it does not exercise a controlling or major influence on a national basis in a kind of business activity in which a number of business concerns are primarily engaged. In determining whether dominance exists, consideration shall be given to all appropriate factors, including volume of business, number of employees, financial resources, competitive status or position, ownership or control of materials, processes, patents, license agreements, facilities, sales territory, and nature of business activity.

- (b) If the Contractor represented that it was a small business concern prior to award of this contract, the Contractor shall represent its size status according to paragraph (e) of this clause or, if applicable, paragraph (g) of this clause, upon the occurrence of any of the following:
- (1) Within 30 days after execution of a novation agreement or within 30 days after modification of the contract to include this clause, if the novation agreement was executed prior to inclusion of this clause in the contract.
  - (2) Within 30 days after a merger or acquisition that does not require a novation or within 30 days after modification of the contract to include this clause, if the merger or acquisition occurred prior to inclusion of this clause in the contract.
  - (3) For long-term contracts—
    - (i) Within 60 to 120 days prior to the end of the fifth year of the contract; and
    - (ii) Within 60 to 120 days prior to the date specified in the contract for exercising any option thereafter.
- (c) The Contractor shall represent its size status in accordance with the size standard in effect at the time of this representation that corresponds to the North American Industry Classification System (NAICS) code assigned to this contract. The small business size standard corresponding to this NAICS code can be found at <http://www.sba.gov/content/table-small-business-size-standards>.

- (d) The small business size standard for a contractor providing a product which it does not manufacture itself, for a contract other than a construction or service contract, is 500 employees.
- (e) Except as provided in paragraph (g) of this clause, the Contractor shall make the representation required by paragraph (b) of this clause by validating or updating all its representations in the Representations and Certifications section of the System for Award Management (SAM) and its other data in SAM, as necessary, to ensure that they reflect the Contractor's current status. The Contractor shall notify the contracting office in writing within the timeframes specified in paragraph (b) of this clause that the data have been validated or updated, and provide the date of the validation or update.
- (f) If the Contractor represented that it was other than a small business concern prior to award of this contract, the Contractor may, but is not required to, take the actions required by paragraphs (e) or (g) of this clause.
- (g) If the Contractor does not have representations and certifications in SAM, or does not have a representation in SAM for the NAICS code applicable to this contract, the Contractor is required to complete the following representation and submit it to the contracting office, along with the contract number and the date on which the representation was completed:

The Contractor represents that it  is,  is not a small business concern under NAICS Code 541712 assigned to contract number DE-NE0008613.

#### **I.5 FAR 52.222-2 – PAYMENT FOR OVERTIME PREMIUMS (JUL 1990)**

- (a) The use of overtime is authorized under this contract if the overtime premium does not exceed \$0 (to be completed at the time of award) or the overtime premium is paid for work --
  - (1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdowns of production equipment, or occasional production bottlenecks of a sporadic nature;
  - (2) By indirect-labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;
  - (3) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or
  - (4) That will result in lower overall costs to the Government.
- (b) Any request for estimated overtime premiums that exceeds the amount specified above shall include all estimated overtime for contract completion and shall --

- (1) Identify the work unit; e.g., department or section in which the requested overtime will be used, together with present workload, staffing, and other data of the affected unit sufficient to permit the Contracting Officer to evaluate the necessity for the overtime;
- (2) Demonstrate the effect that denial of the request will have on the contract delivery or performance schedule;
- (3) Identify the extent to which approval of overtime would affect the performance or payments in connection with other Government contracts, together with identification of each affected contract; and
- (4) Provide reasons why the required work cannot be performed by using multishift operations or by employing additional personnel.

**I.6 FAR 52.222-50 – COMBATING TRAFFICKING IN PERSONS (FEB 2009)**

(a) *Definitions.* As used in this clause—

“Agent” means any individual, including a director, an officer, an employee, or an independent contractor, authorized to act on behalf of the organization.

“Coercion” means—

- (1) Threats of serious harm to or physical restraint against any person;
- (2) Any scheme, plan, or pattern intended to cause a person to believe that failure to perform an act would result in serious harm to or physical restraint against any person; or
- (3) The abuse or threatened abuse of the legal process.

“Commercial sex act” means any sex act on account of which anything of value is given to or received by any person.

“Commercially available off-the-shelf (COTS) item” means—

- (1) Any item of supply (including construction material) that is—
  - (i) A commercial item (as defined in paragraph (1) of the definition at FAR 2.101);
  - (ii) Sold in substantial quantities in the commercial marketplace; and
  - (iii) Offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace; and

- (2) Does not include bulk cargo, as defined in 46 U.S.C. 40102(4), such as agricultural products and petroleum products.

“Debt bondage” means the status or condition of a debtor arising from a pledge by the debtor of his or her personal services or of those of a person under his or her control as a security for debt, if the value of those services as reasonably assessed is not applied toward the liquidation of the debt or the length and nature of those services are not respectively limited and defined.

“Employee” means an employee of the Contractor directly engaged in the performance of work under the contract who has other than a minimal impact or involvement in contract performance.

“Forced labor” means knowingly providing or obtaining the labor or services of a person—

- (1) By threats of serious harm to, or physical restraint against, that person or another person;
- (2) By means of any scheme, plan, or pattern intended to cause the person to believe that, if the person did not perform such labor or services, that person or another person would suffer serious harm or physical restraint; or
- (3) By means of the abuse or threatened abuse of law or the legal process.

“Involuntary servitude” includes a condition of servitude induced by means of—

- (1) Any scheme, plan, or pattern intended to cause a person to believe that, if the person did not enter into or continue in such conditions, that person or another person would suffer serious harm or physical restraint; or
- (2) The abuse or threatened abuse of the legal process.

“Severe forms of trafficking in persons” means—

- (1) Sex trafficking in which a commercial sex act is induced by force, fraud, or coercion, or in which the person induced to perform such act has not attained 18 years of age; or
- (2) The recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery.

“Sex trafficking” means the recruitment, harboring, transportation, provision, or obtaining of a person for the purpose of a commercial sex act.

“Subcontract” means any contract entered into by a subcontractor to furnish supplies or services for performance of a prime contract or a subcontract.

“Subcontractor” means any supplier, distributor, vendor, or firm that furnishes supplies or services to or for a prime contractor or another subcontractor.

“United States” means the 50 States, the District of Columbia, and outlying areas.

(b) *Policy.* The United States Government has adopted a policy prohibiting trafficking in persons including the trafficking-related activities of this clause. Contractors, contractor employees, and their agents shall not—

- (1) Engage in severe forms of trafficking in persons during the period of performance of the contract;
- (2) Procure commercial sex acts during the period of performance of the contract;
- (3) Use forced labor in the performance of the contract;
- (4) Destroy, conceal, confiscate, or otherwise deny access by an employee to the employee's identity or immigration documents, such as passports or drivers' licenses, regardless of issuing authority;
- (5)
  - (i) Use misleading or fraudulent practices during the recruitment of employees or offering of employment, such as failing to disclose, in a format and language accessible to the worker, basic information or making material misrepresentations during the recruitment of employees regarding the key terms and conditions of employment, including wages and fringe benefits, the location of work, the living conditions, housing and associated costs (if employer or agent provided or arranged), any significant cost to be charged to the employee, and, if applicable, the hazardous nature of the work;
  - (ii) Use recruiters that do not comply with local labor laws of the country in which the recruiting takes place;
- (6) Charge employees recruitment fees;
- (7)
  - (i) Fail to provide return transportation or pay for the cost of return transportation upon the end of employment—
    - (A) For an employee who is not a national of the country in which the work is taking place and who was brought into that country for the purpose of working on a U.S. Government contract or subcontract (for portions of contracts performed outside the United States); or
    - (B) For an employee who is not a United States national and who was brought into the United States for the purpose of working on a U.S. Government contract or subcontract, if the payment of such costs is required under existing temporary worker programs or pursuant to a written agreement with the employee (for portions of contracts performed inside the United States); except that—

(ii) The requirements of paragraphs (b)(7)(i) of this clause shall not apply to an employee who is—

(A) Legally permitted to remain in the country of employment and who chooses to do so; or

(B) Exempted by an authorized official of the contracting agency from the requirement to provide return transportation or pay for the cost of return transportation;

(iii) The requirements of paragraph (b)(7)(i) of this clause are modified for a victim of trafficking in persons who is seeking victim services or legal redress in the country of employment, or for a witness in an enforcement action related to trafficking in persons. The contractor shall provide the return transportation or pay the cost of return transportation in a way that does not obstruct the victim services, legal redress, or witness activity. For example, the contractor shall not only offer return transportation to a witness at a time when the witness is still needed to testify. This paragraph does not apply when the exemptions at paragraph (b)(7)(ii) of this clause apply.

- (8) Provide or arrange housing that fails to meet the host country housing and safety standards; or
- (9) If required by law or contract, fail to provide an employment contract, recruitment agreement, or other required work document in writing. Such written work document shall be in a language the employee understands. If the employee must relocate to perform the work, the work document shall be provided to the employee at least five days prior to the employee relocating. The employee's work document shall include, but is not limited to, details about work description, wages, prohibition on charging recruitment fees, work location(s), living accommodations and associated costs, time off, roundtrip transportation arrangements, grievance process, and the content of applicable laws and regulations that prohibit trafficking in persons.

(c) *Contractor requirements.* The Contractor shall—

- (1) Notify its employees and agents of—
- (i) The United States Government's policy prohibiting trafficking in persons described in paragraph (b) of this clause; and
- (ii) The actions that will be taken against employees or agents for violations of this policy. Such actions for employees may include, but are not limited to, removal from the contract, reduction in benefits, or termination of employment; and

- (2) Take appropriate action, up to and including termination, against employees, agents, or subcontractors that violate the policy in paragraph (b) of this clause.
- (d) *Notification.*
- (1) The Contractor shall inform the Contracting Officer and the agency Inspector General immediately of—
- (i) Any credible information it receives from any source (including host country law enforcement) that alleges a Contractor employee, subcontractor, subcontractor employee, or their agent has engaged in conduct that violates the policy in paragraph (b) of this clause (see also 18 U.S.C. 1351, Fraud in Foreign Labor Contracting, and 52.203-13(b)(3)(i)(A), if that clause is included in the solicitation or contract, which requires disclosure to the agency Office of the Inspector General when the Contractor has credible evidence of fraud); and
- (ii) Any actions taken against a Contractor employee, subcontractor, subcontractor employee, or their agent pursuant to this clause.
- (2) If the allegation may be associated with more than one contract, the Contractor shall inform the contracting officer for the contract with the highest dollar value.
- (e) *Remedies.* In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraphs (c), (d), (g), (h), or (i) of this clause may result in—
- (1) Requiring the Contractor to remove a Contractor employee or employees from the performance of the contract;
- (2) Requiring the Contractor to terminate a subcontract;
- (3) Suspension of contract payments until the Contractor has taken appropriate remedial action;
- (4) Loss of award fee, consistent with the award fee plan, for the performance period in which the Government determined Contractor non-compliance;
- (5) Declining to exercise available options under the contract;
- (6) Termination of the contract for default or cause, in accordance with the termination clause of this contract; or
- (7) Suspension or debarment.
- (f) *Mitigating and aggravating factors.* When determining remedies, the Contracting Officer may consider the following:

- (1) *Mitigating factors.* The Contractor had a Trafficking in Persons compliance plan or an awareness program at the time of the violation, was in compliance with the plan, and has taken appropriate remedial actions for the violation, that may include reparation to victims for such violations.
  - (2) *Aggravating factors.* The Contractor failed to abate an alleged violation or enforce the requirements of a compliance plan, when directed by the Contracting Officer to *do so.*
- (g) *Full cooperation.*
- (1) The Contractor shall, at a minimum—
    - (i) Disclose to the agency Inspector General information sufficient to identify the nature and extent of an offense and the individuals responsible for the conduct;
    - (ii) Provide timely and complete responses to Government auditors' and investigators' requests for documents;
    - (iii) Cooperate fully in providing reasonable access to its facilities and staff (both inside and outside the U.S.) to allow contracting agencies and other responsible Federal agencies to conduct audits, investigations, or other actions to ascertain compliance with the Trafficking Victims Protection Act of 2000 (22 U.S.C. chapter 78), E.O. 13627, or any other applicable law or regulation establishing restrictions on trafficking in persons, the procurement of commercial sex acts, or the use of forced labor; and
    - (iv) Protect all employees suspected of being victims of or witnesses to prohibited activities, prior to returning to the country from which the employee was recruited, and shall not prevent or hinder the ability of these employees from cooperating fully with Government authorities.
  - (2) The requirement for full cooperation does not foreclose any Contractor rights arising in law, the FAR, or the terms of the contract. It does not—
    - (i) Require the Contractor to waive its attorney-client privilege or the protections afforded by the attorney work product doctrine;
    - (ii) Require any officer, director, owner, employee, or agent of the Contractor, including a sole proprietor, to waive his or her attorney client privilege or Fifth Amendment rights; or
    - (iii) Restrict the Contractor from—
      - (A) Conducting an internal investigation; or
      - (B) Defending a proceeding or dispute arising under the contract or related to a potential or disclosed violation.

(h) *Compliance plan.*

- (1) This paragraph (h) applies to any portion of the contract that—
  - (i) Is for supplies, other than commercially available off-the-shelf items, acquired outside the United States, or services to be performed outside the United States; and
  - (ii) Has an estimated value that exceeds \$500,000.
- (2) The Contractor shall maintain a compliance plan during the performance of the contract that is appropriate—
  - (i) To the size and complexity of the contract; and
  - (ii) To the nature and scope of the activities to be performed for the Government, including the number of non-United States citizens expected to be employed and the risk that the contract or subcontract will involve services or supplies susceptible to trafficking in persons.
- (3) *Minimum requirements.* The compliance plan must include, at a minimum, the following:
  - (i) An awareness program to inform contractor employees about the Government's policy prohibiting trafficking-related activities described in paragraph (b) of this clause, the activities prohibited, and the actions that will be taken against the employee for violations. Additional information about Trafficking in Persons and examples of awareness programs can be found at the Web site for the Department of State's Office to Monitor and Combat Trafficking in Persons at <http://www.state.gov/j/tip/>.
  - (ii) A process for employees to report, without fear of retaliation, activity inconsistent with the policy prohibiting trafficking in persons, including a means to make available to all employees the hotline phone number of the Global Human Trafficking Hotline at 1-844-888-FREE and its email address at [help@befree.org](mailto:help@befree.org).
  - (iii) A recruitment and wage plan that only permits the use of recruitment companies with trained employees, prohibits charging recruitment fees to the employee, and ensures that wages meet applicable host-country legal requirements or explains any variance.
  - (iv) A housing plan, if the Contractor or subcontractor intends to provide or arrange housing that ensures that the housing meets host-country housing and safety standards.
  - (v) Procedures to prevent agents and subcontractors at any tier and at any dollar value from engaging in trafficking in persons (including activities in paragraph (b))

of this clause) and to monitor, detect, and terminate any agents, subcontracts, or subcontractor employees that have engaged in such activities.

(4) *Posting.*

(i) The Contractor shall post the relevant contents of the compliance plan, no later than the initiation of contract performance, at the workplace (unless the work is to be performed in the field or not in a fixed location) and on the Contractor's Web site (if one is maintained). If posting at the workplace or on the Web site is impracticable, the Contractor shall provide the relevant contents of the compliance plan to each worker in writing.

(ii) The Contractor shall provide the compliance plan to the Contracting Officer upon request.

(5) *Certification.* Annually after receiving an award, the Contractor shall submit a certification to the Contracting Officer that—

(i) It has implemented a compliance plan to prevent any prohibited activities identified at paragraph (b) of this clause and to monitor, detect, and terminate any agent, subcontract or subcontractor employee engaging in prohibited activities; and

(ii) After having conducted due diligence, either—

(A) To the best of the Contractor's knowledge and belief, neither it nor any of its agents, subcontractors, or their agents is engaged in any such activities; or

(B) If abuses relating to any of the prohibited activities identified in paragraph (b) of this clause have been found, the Contractor or subcontractor has taken the appropriate remedial and referral actions.

(i) *Subcontracts.*

(1) The Contractor shall include the substance of this clause, including this paragraph (i), in all subcontracts and in all contracts with agents. The requirements in paragraph (h) of this clause apply only to any portion of the subcontract that—

(A) Is for supplies, other than commercially available off-the-shelf items, acquired outside the United States, or services to be performed outside the United States; and

(B) Has an estimated value that exceeds \$500,000.

(2) If any subcontractor is required by this clause to submit a certification, the Contractor shall require submission prior to the award of the subcontract and annually thereafter. The certification shall cover the items in paragraph (h)(5) of this clause.

**I.7 FAR 52.232-25 – PROMPT PAYMENT (JUL 2013) ALTERNATE I (FEB 2002)**

Notwithstanding any other payment clause in this contract, the Government will make invoice payments under the terms and conditions specified in this clause. The Government considers payment as being made on the day a check is dated or the date of an electronic funds transfer (EFT). Definitions of pertinent terms are set forth in sections 2.101, 32.001, and 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see subparagraph (a)(4) of this clause concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) *Invoice payments --*(1) *Due date.*

(i) Except as indicated in paragraphs (a)(2) and (c) of this clause, the due date for making invoice payments by the designated payment office shall be the later of the following two events:

(A) The 30th day after the designated billing office receives a proper invoice from the Contractor (except as provided in paragraph (a)(1)(ii) of this clause).

(B) The 30th day after Government acceptance of supplies delivered or services performed. For a final invoice, when the payment amount is subject to contract settlement actions, acceptance is deemed to occur on the effective date of the contract settlement.

(ii) If the designated billing office fails to annotate the invoice with the actual date of receipt at the time of receipt, the invoice payment due date is the 30th day after the date of the Contractor's invoice; provided the designated billing office receives a proper invoice and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(2) *Certain food products and other payments.*

(i) Due dates on Contractor invoices for meat, meat food products, or fish; perishable agricultural commodities; and dairy products, edible fats or oils, and food products prepared from edible fats or oils are --

(A) For meat or meat food products, as defined in section 2(a)(3) of the Packers and Stockyard Act of 1921 (7 U.S.C. 182(3)), and as further defined in Pub. L. 98- 181, including any edible fresh or frozen poultry meat, any perishable poultry meat food product, fresh eggs, and any perishable egg product, as close as possible to, but not later than, the 7th day after product delivery.

(B) For fresh or frozen fish, as defined in section 204(3) of the Fish and Seafood Promotion Act of 1986 (16 U.S.C. 4003(3)), as close as possible to, but not later than, the 7th day after product delivery.

(C) For perishable agricultural commodities, as defined in section 1(4) of the Perishable Agricultural Commodities Act of 1930 (7 U.S.C. 499a(4)), as close as possible to, but not later than, the 10th day after product delivery, unless another date is specified in the contract.

(D) For dairy products, as defined in section 111(e) of the Dairy Production Stabilization Act of 1983 (7 U.S.C. 4502(e)), edible fats or oils, and food products prepared from edible fats or oils, as close as possible to, but not later than, the 10th day after the date on which a proper invoice has been received. Liquid milk, cheese, certain processed cheese products, butter, yogurt, ice cream, mayonnaise, salad dressings, and other similar products, fall within this classification. Nothing in the Act limits this classification to refrigerated products. When questions arise regarding the proper classification of a specific product, prevailing industry practices will be followed in specifying a contract payment due date. The burden of proof that a classification of a specific product is, in fact, prevailing industry practice is upon the Contractor making the representation.

(ii) If the contract does not require submission of an invoice for payment (e.g., periodic lease payments), the due date will be as specified in the contract.

- (3) *Contractor's invoice.* The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in paragraphs (a)(3)(i) through (a)(3)(x) of this clause. If the invoice does not comply with these requirements, the designated billing office will return it within 7 days after receipt (3 days for meat, meat food products, or fish; 5 days for perishable agricultural commodities, dairy products, edible fats or oils, and food products prepared from edible fats or oils), with the reasons why it is not a proper invoice. The Government will take into account untimely notification when computing any interest penalty owed the Contractor.

(i) Name and address of the Contractor.

(ii) Invoice date and invoice number. (The Contractor should date invoices as close as possible to the date of the mailing or transmission.)

(iii) Contract number or other authorization for supplies delivered or services performed (including order number and contract line item number).

(iv) Description, quantity, unit of measure, unit price, and extended price of supplies delivered or services performed.

(v) Shipping and payment terms (e.g., shipment number and date of shipment, discount for prompt payment terms). Bill of lading number and weight of shipment will be shown for shipments on Government bills of lading.

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number, and mailing address of person to notify in the event of a defective invoice.

(viii) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.

(ix) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision (e.g., 52.232-38, Submission of Electronic Funds Transfer Information with Offer), contract clause (e.g., 52.232-33, Payment by Electronic funds Transfer— System for Award Management, or 52.232-34, Payment by Electronic Funds Transfer-- Other Than System for Award Management), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(x) Any other information or documentation required by the contract (e.g., evidence of shipment.)

(4) *Interest penalty.* The designated payment office will pay an interest penalty automatically, without request from the Contractor, if payment is not made by the due date and the conditions listed in paragraphs (a)(4)(i) through (a)(4)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday, the designated payment office may make payment on the following working day without incurring a late payment interest penalty.

(i) The designated billing office received a proper invoice.

(ii) The Government processed a receiving report or other Government documentation authorizing payment, and there was no disagreement over quantity, quality, or Contractor compliance with any contract term or condition.

(iii) In the case of a final invoice for any balance of funds due the Contractor for supplies delivered or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

- (5) *Computing penalty amount.* The Government will compute the interest penalty in accordance with Office of Management and Budget prompt payment regulations at 5 CFR part 1315.
- (i) For the sole purpose of computing an interest penalty that might be due the Contractor, Government acceptance is deemed to occur constructively on the 7th day (unless otherwise specified in this contract) after the Contractor delivers the supplies or performs the services in accordance with the terms and conditions of the contract, unless there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. If actual acceptance occurs within the constructive acceptance period, the Government will base the determination of an interest penalty on the actual date of acceptance. The constructive acceptance requirement does not, however, compel Government officials to accept supplies or services, perform contract administration functions, or make payment prior to fulfilling their responsibilities.
- (ii) The prompt payment regulations at 5 CFR 1315.10(c) do not require the Government to pay interest penalties if payment delays are due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance, or on amounts temporarily withheld or retained in accordance with the terms of the contract. The Government and the Contractor shall resolve claims involving disputes and any interest that may be payable in accordance with the clause at FAR 52.233-1, Disputes.
- (6) *Discounts for prompt payment.* The designated payment office will pay an interest penalty automatically, without request from the Contractor, if the Government takes a discount for prompt payment improperly. The Government will calculate the interest penalty in accordance with the prompt payment regulations at 5 CFR part 1315.
- (7) *Additional interest penalty.*
- (i) The designated payment office will pay a penalty amount, calculated in accordance with the prompt payment regulations at 5 CFR part 1315 in addition to the interest penalty amount only if--
- (A) The Government owes an interest penalty of \$1 or more;
- (B) The designated payment office does not pay the interest penalty within 10 days after the date the invoice amount is paid; and
- (C) The Contractor makes a written demand to the designated payment office for additional penalty payment, in accordance with paragraph (a)(7)(ii) of this clause, postmarked not later than 40 days after the invoice amount is paid.
- (ii) (A) The Contractor shall support written demands for additional penalty payments with the following data. The Government will not request any additional data. The Contractor shall --

- (1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;
- (2) Attach a copy of the invoice on which the unpaid late payment interest was due; and
- (3) State that payment of the principal has been received, including the date of receipt.

(B) If there is no postmark or the postmark is illegible--

- (1) The designated payment office that receives the demand will annotate it with the date of receipt, provided the demand is received on or before the 40th day after payment was made; or
- (2) If the designated payment office fails to make the required annotation, the Government will determine the demand's validity based on the date the Contractor has placed on the demand; provided such date is no later than the 40th day after payment was made.

(iii) The additional penalty does not apply to payments regulated by other Government regulations (e.g., payments under utility contracts subject to tariffs and regulation).

- (b) *Contract financing payments.* If this contract provides for contract financing, the Government will make contract financing payments in accordance with the applicable contract financing clause.
- (c) *Fast payment procedure due dates.* If this contract contains the clause at 52.213-1, Fast Payment Procedure, payments will be made within 15 days after the date of receipt of the invoice.
- (d) *Overpayments.* If the Contractor becomes aware of a duplicate contract financing or invoice payment or that the Government has otherwise overpaid on a contract financing or invoice payment, the Contractor shall—
  - (1) Remit the overpayment amount to the payment office cited in the contract along with a description of the overpayment including the—
    - (i) Circumstances of the overpayment (e.g., duplicate payment, erroneous payment, liquidation errors, date(s) of overpayment);
    - (ii) Affected contract number and delivery order number if applicable;
    - (iii) Affected contract line item or subline item, if applicable; and

- (iv) Contractor point of contact.
- (2) Provide a copy of the remittance and supporting documentation to the Contracting Officer.
- (e) *Invoices for interim payments.* For interim payments under this cost-reimbursement contract for services--
  - (1) Paragraphs (a)(2.), (a)(3), (a)(4(ii), (a)(4(iii), and (a)(5)(i) do not apply;
  - (2) For purposes of computing late payment interest penalties that may apply, the due date for payment is the 30th day after the designated billing office receives a proper invoice; and
  - (3) The Contractor shall submit invoices for interim payments in accordance with paragraph of FAR 52.216-7, Allowable Cost and Payment. If the invoice does not comply with contract requirements, it will be returned within 7 days after the date the designated billing office received the invoice.

#### **I.8 FAR 52.242-4 – CERTIFICATION OF FINAL INDIRECT COSTS (JAN 1997)**

- (a) The Contractor shall --
  - (1) Certify any proposal to establish or modify final indirect cost rates;
  - (2) Use the format in paragraph (c) of this clause to certify; and
  - (3) Have the certificate signed by an individual of the Contractor's organization at a level no lower than a vice president or chief financial officer of the business segment of the Contractor that submits the proposal.
- (b) Failure by the Contractor to submit a signed certificate, as described in this clause, may result in final indirect costs at rates unilaterally established by the Contracting Officer.
- (c) The certificate of final indirect costs shall read as follows:

#### **Certificate of Final Indirect Costs**

This is to certify that I have reviewed this proposal to establish final indirect cost rates and to the best of my knowledge and belief:

1. All costs included in this proposal (identify proposal and date) to establish final indirect cost rates for (identify period covered by rate) are allowable in accordance with the cost principles of the Federal Acquisition Regulation (FAR) and its supplements applicable to the contracts to which the final indirect cost rates will apply; and
2. This proposal does not include any costs which are expressly unallowable under applicable cost principles of the FAR or its supplements.

Firm: \_\_\_\_\_

Signature: \_\_\_\_\_

Name of Certifying Official: \_\_\_\_\_

Title: \_\_\_\_\_

Date of Execution: \_\_\_\_\_

**I.9 FAR 52.243-7 – NOTIFICATION OF CHANGES (APR 1984)**

- (a) *Definitions.* “Contracting Officer,” as used in this clause, does not include any representative of the Contracting Officer.

“Specifically Authorized Representative (SAR),” as used in this clause, means any person the Contracting Officer has so designated by written notice (a copy of which shall be provided to the Contractor) which shall refer to this subparagraph and shall be issued to the designated representative before the SAR exercises such authority.

- (b) *Notice.* The *primary* purpose of this clause is to obtain prompt reporting of Government conduct that the Contractor considers to constitute a change to this contract. Except for changes identified as such in writing and signed by the Contracting Officer, the Contractor shall notify the Administrative Contracting Officer in writing promptly, within 20 calendar days from the date that the Contractor identifies any Government conduct (including actions, inactions, and written or oral communications) that the Contractor regards as a change to the contract terms and conditions. On the basis of the most accurate information available to the Contractor, the notice shall state --

- (1) The date, nature, and circumstances of the conduct regarded as a change;
- (2) The name, function, and activity of each Government individual and Contractor official or employee involved in or knowledgeable about such conduct;
- (3) The identification of any documents and the substance of any oral communication involved in such conduct;
- (4) In the instance of alleged acceleration of scheduled performance or delivery, the basis upon which it arose;
- (5) The particular elements of contract performance for which the Contractor may seek an equitable adjustment under this clause, including --
  - (i) What contract line items have been or may be affected by the alleged change;
  - (ii) What labor or materials or both have been or may be added, deleted, or wasted by the alleged change;

- (iii) To the extent practicable, what delay and disruption in the manner and sequence of performance and effect on continued performance have been or may be caused by the alleged change;
  - (iv) What adjustments to contract price, delivery schedule, and other provisions affected by the alleged change are estimated; and
- (6) The Contractor's estimate of the time by which the Government must respond to the Contractor's notice to minimize cost, delay or disruption of performance.
- (c) *Continued performance.* Following submission of the notice required by paragraph (b) of this clause, the Contractor shall diligently continue performance of this contract to the maximum extent possible in accordance with its terms and conditions as construed by the Contractor, unless the notice reports a direction of the Contracting Officer or a communication from a SAR of the Contracting Officer, in either of which events the Contractor shall continue performance; provided, however, that if the Contractor regards the direction or communication as a change as described in paragraph (b) of this clause, notice shall be given in the manner provided. All directions, communications, interpretations, orders and similar actions of the SAR shall be reduced to writing promptly and copies furnished to the Contractor and to the Contracting Officer. The Contracting Officer shall promptly countermand any action which exceeds the authority of the SAR.
- (d) *Government response.* The Contracting Officer shall promptly, within 30 calendar days after receipt of notice, respond to the notice in writing. In responding, the Contracting Officer shall either --
- (1) Confirm that the conduct of which the Contractor gave notice constitutes a change and when necessary direct the mode of further performance;
  - (2) Countermand any communication regarded as a change;
  - (3) Deny that the conduct of which the Contractor gave notice constitutes a change and when necessary direct the mode of further performance; or
  - (4) In the event the Contractor's notice information is inadequate to make a decision under subparagraphs (d)(1), (2), or (3) of this clause, advise the Contractor what additional information is required, and establish the date by which it should be furnished and the date thereafter by which the Government will respond.
- (e) *Equitable adjustments.*
- (1) If the Contracting Officer confirms that Government conduct effected a change as alleged by the Contractor, and the conduct causes an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work under this contract, whether changed or not changed by such conduct, an equitable adjustment shall be made --

- (i) In the contract price or delivery schedule or both; and
  - (ii) In such other provisions of the contract as may be affected.
- (2) The contract shall be modified in writing accordingly. In the case of drawings, designs or specifications which are defective and for which the Government is responsible, the equitable adjustment shall include the cost and time extension for delay reasonably incurred by the Contractor in attempting to comply with the defective drawings, designs or specifications before the Contractor identified, or reasonably should have identified, such defect. When the cost of property made obsolete or excess as a result of a change confirmed by the Contracting Officer under this clause is included in the equitable adjustment, the Contracting Officer shall have the right to prescribe the manner of disposition of the property. The equitable adjustment shall not include increased costs or time extensions for delay resulting from the Contractor's failure to provide notice or to continue performance as provided, respectively, in paragraphs (b) and (c) of this clause.

NOTE: The phrases "contract price" and "cost" wherever they appear in the clause, may be appropriately modified to apply to cost-reimbursement or incentive contracts, or to combinations thereof.

**I.10 FAR 52.244-2 -- SUBCONTRACTS (OCT 2010)**

(a) *Definitions.* As used in this clause—

"Approved purchasing system" means a Contractor's purchasing system that has been reviewed and approved in accordance with Part 44 of the Federal Acquisition Regulation (FAR)

"Consent to subcontract" means the Contracting Officer's written consent for the Contractor to enter into a particular subcontract.

"Subcontract" means any contract, as defined in FAR Subpart 2.1, entered into by a subcontractor to furnish supplies or services for performance of the prime contract or a subcontract. It includes, but is not limited to, purchase orders, and changes and modifications to purchase orders.

- (b) When this clause is included in a fixed-price type contract, consent to subcontract is required only on unpriced contract actions (including unpriced modifications or unpriced delivery orders), and only if required in accordance with paragraph (c) or (d) of this clause.
- (c) If the Contractor does not have an approved purchasing system, consent to subcontract is required for any subcontract that-
  - (1) Is of the cost-reimbursement, time-and-materials, or labor-hour type; or

## (2) Is fixed-price and exceeds—

(i) For a contract awarded by the Department of Defense, the Coast Guard, or the National Aeronautics and Space Administration, the greater of the simplified acquisition threshold or 5 percent of the total estimated cost of the contract; or

(ii) For a contract awarded by a civilian agency other than the Coast Guard and the National Aeronautics and Space Administration, either the simplified acquisition threshold or 5 percent of the total estimated cost of the contract.

- (d) If the Contractor has an approved purchasing system, the Contractor nevertheless shall obtain the Contracting Officer's written consent before placing the following subcontracts:

Any subcontracts having a total value >\$150,000 which were not already part of and identified in the contractor's original proposal submitted in response to solicitation number DE-SOL-0010181.

- (e) (1) The Contractor shall notify the Contracting Officer reasonably in advance of placing any subcontract or modification thereof for which consent is required under paragraph (b), (c), or (c) of this clause including the following information:

(i) A description of the supplies or services to be subcontracted.

(ii) Identification of the type of subcontract to be used.

(iii) Identification of the proposed subcontractor.

(iv) The proposed subcontract price.

(v) The subcontractor's current, complete, and accurate certified cost or pricing data and Certificate of Current Cost or Pricing Data, if required by other contract provisions.

(vi) The subcontractor's Disclosure Statement or Certificate relating to Cost Accounting Standards when such data are required by other provisions of this contract.

(vii) A negotiation memorandum reflecting -

(A) The principal elements of the subcontract price negotiations;

(B) The most significant considerations controlling establishment of initial or revised prices;

(C) The reason certified cost or pricing data were or were not required;

(D) The extent, if any, to which the Contractor did not rely on the subcontractor's certified cost or pricing data in determining the price objective and in negotiating the final price;

(E) The extent to which it was recognized in the negotiation that the subcontractor's certified cost or pricing data were not accurate, complete, or current; the action taken by the Contractor and the subcontractor; and the effect of any such defective data on the total price negotiated;

(F) The reasons for any significant difference between the Contractor's price objective and the price negotiated; and

(G) A complete explanation of the incentive fee or profit plan when incentives are used. The explanation shall identify each critical performance element, management decisions used to quantify each incentive element, reasons for the incentives, and a summary of all trade-off possibilities considered.

- (2) The Contractor is not required to notify the Contracting Officer in advance of entering into any subcontract for which consent is not required under paragraph (b), (c), or (d) of this clause.
- (f) Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subcontract nor approval of the Contractor's purchasing system shall constitute a determination -
- (1) Of the acceptability of any subcontract terms or conditions;
  - (2) Of the allowability of any cost under this contract; or
  - (3) To relieve the Contractor of any responsibility for performing this contract.
- (g) No subcontract or modification thereof placed under this contract shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement type subcontracts shall not exceed the fee limitations in FAR 15.404-4(c)(4)(i).
- (h) The Contractor shall give the Contracting Officer immediate written notice of any action or suit filed and prompt notice of any claim made against the Contractor by any subcontractor or vendor that, in the opinion of the Contractor, may result in litigation related in any way to this contract, with respect to which the Contractor may be entitled to reimbursement from the Government.
- (i) The Government reserves the right to review the Contractor's purchasing system as set forth in FAR Subpart 44.3.
- (j) Paragraphs (c) and (e) of this clause do not apply to the following subcontracts, which were evaluated during negotiations:

**I.11 DEAR 952.215-70 KEY PERSONNEL (DEC 2000)**

- (a) The personnel listed below or elsewhere in this contract (see H.4) are considered essential to the work being performed under this contract. Before removing, replacing, or diverting any of the listed or specified personnel, the Contractor must:

(to be filled in at contract award)

- (1) Notify the Contracting Officer reasonably in advance;
  - (2) Submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on this contract; and
  - (3) Obtain the Contracting Officer's written approval. Notwithstanding the foregoing, if the Contractor deems immediate removal or suspension of any member of its management team is necessary to fulfill its obligation to maintain satisfactory standards of employee competency, conduct, and integrity under the clause at 48 CFR 970.5203-3, Contractor's Organization, the Contractor may remove or suspend such person at once, although the Contractor must notify Contracting Officer prior to or concurrently with such action.
- (b) The list of personnel may, with the consent of the contracting parties, be amended from time to time during the course of the contract to add or delete personnel.

**I.12 DEAR 952.227-82 RIGHTS TO PROPOASL DATA (APR 1984)**

Except for technical data contained on all pages of the contractor's proposal dated 10/19/16 which are asserted by the contractor as being proprietary data, it is agreed that, as a condition of the award of this contract, and notwithstanding the provisions of any notice appearing on the proposal, the Government shall have the right to use, duplicate, disclose and have others do so for any purpose whatsoever, the technical data contained in the proposal upon which this contract is based.

**PART III - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS****SECTION J****LIST OF ATTACHMENTS****ATTACHMENT J-A****REPORTING REQUIREMENTS CHECKLIST**

<b>REPORT</b>	<b>FREQUENCY</b>	<b># OF COPIES</b>	<b>ADDRESSEES</b>
Subcontracting Plan	As required by Section H	1, 1 Electronic Mail	A, B
Environmental Checklist Evaluations	As requested	1, 1 Electronic Mail	A, C
NEPA reporting as required by the COR	As requested	1, 1 Electronic Mail	A, C
Organizational Conflict of Interest Risk Analysis and Mitigation Plan	Once After Award, Update As Needed	1, 1 Electronic Mail	A, B
Public Outreach Plan	As required by Section C	1, 1 Electronic Mail	A, B
Formal Agreements with public and landowner	As required by Section C	1, 1 Electronic Mail	A, B
Final Drilling and Test Plan with Final Detailed Cost Estimate	As required by Section C	1, 1 Electronic Mail	A, B
Notifications	As required by Section C	1 Electronic Mail	B
Drilling Reports	As required by Section C	1 Electronic Mail	B
Technical Progress Reporting as described by the COR	Semi-Annually	1, 1 Electronic Mail	A, B
Single Dollar Figure Representing Estimated Spending to Date	1 <sup>st</sup> Friday of Each Month	1 Electronic Mail	B

**Note:** When two or more copies are required, include one original. All reports required under this contract must be sent to the following:

A.

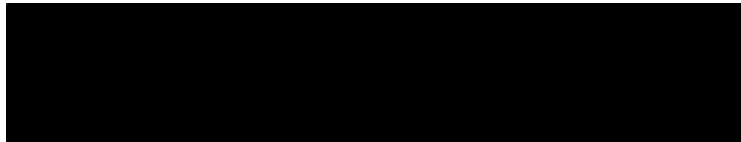


U.S. Department of Energy Idaho Operations Office  
1955 Fremont Avenue Idaho Falls, ID 83401-1221



B.

U. S. Department of Energy Idaho Operations Office  
Supervisor, Fuel Cycle Programs  
1955 Fremont Avenue, Idaho Falls, ID 83415



C.

U.S. Department of Energy Idaho Operations Office  
1955 Fremont Avenue Idaho Falls, ID 83415-1216

\* NEPA Environmental Checklist Evaluations only

**The Contractor is responsible for following established DOE Idaho procedures for clearances on all oral, written and audio/visual informational material prepared for public use.**

### **REPORTS CHECKLIST DEFINITIONS**

#### **TECHNICAL REPORTS--GENERAL**

Each report of a scientific, technical, and engineering information nature must begin with a statement of the original objective of the effort and a concise summary of the progress achieved during the reporting period. The body of the report must contain a full account of progress, problems encountered, plans for the next reporting period, and an assessment of the prospects for future progress. The author(s) of the report must clearly identify technical factors with affect, either positively or negatively, plans for achieving the objectives on schedule and within the funds available.

The report must include sufficient detail to allow the work to be replicated by others. Each report must include a thorough account of activities directed toward application of the results, such as investigation of user needs, work or collaboration with potential users, and activities to disseminate the results. It must also include a discussion of how these activities have affected the course of the project.

#### **TECHNICAL PROGRESS REPORT**

"Technical Progress Reports" summarize the work performed during a specific reporting period and include the technical results (both positive and negative) of that period. If a draft Technical Progress Report is required, DOE-ID will review the draft report and provide comments within

approximately 20 days after receipt from the Contractor. The Contractor must submit the report in final form within 20 days after receipt of DOE-ID's comments.

### **CLARITY OF REPORTS**

Technical reports will be assessed for their quality with respect to the Contractor's quality assurance surveillance plan, as well as technical merit. Other factors which will be considered in evaluating presentation aspects of the documents submitted include: format, spelling and grammar, void of any corporate tags (e.g. headers, footers, stationary, etc.).

**PART III - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS****ATTACHMENT J-B  
ACRONYMS**

**ACH** Automated Clearing House  
**CCR** Central Contractor Registration  
**CD** compact disk  
**CFR** Code of Federal Regulations  
**CO** Contracting Officer  
**COI** Conflict of Interest  
**COR** Contracting Officer's Representative  
**DEAR** Department of Energy Acquisition Regulation  
**DOE** Department of Energy  
**DOE-HQ** Department of Energy -Headquarters  
**DOE-ID** Idaho Operations Office  
**DPAS** Defense Priorities and Allocation System  
**DUNS** Data Universal Numbering System  
**EPAct** Energy Policy Act  
**FAR** Federal Acquisition Regulation  
**FOIA** Freedom of Information Act  
**GAO** Government Accountability Office  
**GFP** Government-Furnished Property  
**GSA** General Services Administration  
**ID-OPMO** ID Organizational Property Management Officer  
**NAICS** North American Industrial Classification System  
**NE DOE** Office of Nuclear Energy, Science and Technology  
**NEPA** National Environmental Policy Act  
**OCI** Organizational Conflict of Interest  
**OIG** DOE Office of Inspector General  
**RFP** Request for Proposal  
**SEB** Source Evaluation Board  
**SOW** Statement of Work  
**USC** United States Code  
**VIPERS** Vendor Inquiry Payment Electronic Reporting System