

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE	PAGE OF PAGES 1 2
2. AMENDMENT/MODIFICATION NO. 0436	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
6. ISSUED BY Idaho Operations Office Idaho Operations U.S. Department of Energy Idaho Operations Idaho Falls ID 89415	CODE 892432	7. ADMINISTERED BY (If other than Item 6) Idaho Operations U.S. Department of Energy Idaho Operations 1955 Fremont Avenue MS 1221 Idaho Falls ID 83415	CODE 00701
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) BATTELLE ENERGY ALLIANCE, LLC Attn: Adam Andersen P.O. BOX 1625 IDAHO FALLS ID 83415		(x) 9A. AMENDMENT OF SOLICITATION NO.	
CODE 152020629 FACILITY CODE		9B. DATED (SEE ITEM 11)	
		x 10A. MODIFICATION OF CONTRACT/ORDER NO. DE-AC07-05ID14517	
		10B. DATED (SEE ITEM 13) 11/09/2004	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended. is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) FAR 43.103 (a) (3)

E. IMPORTANT: Contractor is not. is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

DUNS Number: 152020629

The purpose of this modification is to incorporate changes made to the Fiscal Year (FY) 2019 Performance Evaluation and Measurement Plan (PEMP). A full version of the revised FY 2019 PEMP is included as an attachment to this modification. This modification also revises Section G and J to add Linda S. McCoy as the primary Contracting Officer's Representative (COR) and rescind the COR designations for Robert Boston and Amy Grose. A full description of these changes are outlined in the Information Pages included as an attachment to this modification.

All other terms and conditions remain unchanged.

Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) Adam D. Andersen, BEA Contracting Officer	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Jeffrey C. Fogg
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED
16B. UNITED STATES OF AMERICA (Signature of Contracting Officer)	16C. DATE SIGNED

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
DE-AC07-05ID14517/0436

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NAME OF OFFEROR OR CONTRACTOR
BATTELLE ENERGY ALLIANCE, LLC

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Payment: OR for Idaho U.S. Department of Energy Oak Ridge Financial Service Center P.O. Box 6017 Oak Ridge TN 37831 Period of Performance: 11/09/2004 to 09/30/2024				

INFORMATION PAGES MODIFICATIONS

The purpose of this modification is to incorporate the following changes:

1. Section G, “*Contract Administration Data*”

- Section G.1., to be retitled as, “Fee Determination Official, Head of Contracting Activity, Contracting Officer, and Contracting Officer’s Representative”
- Section G.1., paragraph (a), has been replaced in its entirety with the following:

Robert D. Boston, the Manager, U.S. Department of Energy, Idaho Operations Office, is designated as the Fee Determination Official (FDO) for this contract. Amy E. Grose is designated as the Head of Contracting Activity (HCA) for this contract.

- Section G.1., paragraph (d), the following COR designations are removed:
 - Robert D. Boston, COR
 - Amy E. Grose, COR

The following COR designation is incorporated:

- Linda S. McCoy, Primary COR

2. Section J – “*List of Documents, Exhibits, and Other Attachments*”

J-T Contracting Officer’s Representative (COR) Designation

Attachment T-1 Linda S. McCoy replaces Robert D. Boston as the Primary COR

Attachment T-6 Reserved

3. Section J, Attachment K – “*Fiscal Year (FY) 2019 Performance Evaluation and Measurement Plan (PEMP)*”

Objective 1.1

Old Language:

Lead and implement relevant, high impact RDD&D programs. Continue to build on the INL’s position as the preeminent, internationally-recognized Laboratory in nuclear energy technologies (including advanced fuel cycles). The primary focus areas include, but are not limited to the following:

- Engineering driven science-based approach to the development and performance of Nuclear Fuels and Materials applicable to current and future generations of reactors;
- Fuel cycle technologies including advancements in pyro and aqueous processing technologies, nuclear materials management and non-proliferation standards, and transient testing capability enabling the design and qualification of fuels and materials;
- Reactor Safety, Material Science, and Human Performance for Life Extension of Light Water Reactors;
- Advanced reactor design and optimization; and
- Innovative research that supports sustaining the current fleet and demonstration of advanced reactors.

New Language:

Lead and implement relevant, high impact RDD&D programs. Continue to build on the INL’s position as the preeminent, internationally-recognized Laboratory in nuclear energy technologies (including advanced fuel cycles). The primary focus areas include, but are not limited to the following:

- Engineering driven science-based approach to the development and performance of Nuclear Fuels and Materials applicable to current and future generations of reactors;
- Fuel cycle technologies including advancements in pyro and aqueous processing technologies, nuclear materials management and non-proliferation standards, and transient testing capability enabling the design and qualification of fuels and materials;
- Reactor Safety, Material Science, and Human Performance for Life Extension of Light Water Reactors;
- Advanced reactor design and optimization;
- Advanced Modeling and Simulation including industry and Nuclear Regulatory Commission adoption and use of NE mod-sim tools; and
- Innovative research that supports sustaining the current fleet and demonstration of advanced reactors.

Notable Outcome 1.1B – Micro-reactors

Old Language:

Notable Outcome 1.1.B – Micro-reactors

Demonstrate an integrated modeling and simulation capability for full-scale, multi-physics simulation and visualization of a micro-reactor concept.

New Language:

Notable Outcome 1.1.B – Micro-reactors

- (a) Demonstrate an integrated modeling and simulation capability for full-scale, multi-physics simulation and visualization of a micro-reactor concept.
- (b) In support of the Department’s micro-reactor program, prepare the final draft of the Report to Congress on a Pilot Program for Micro-Reactor Demonstration, as directed by the FY19 National Defense Authorization Act (to be completed by June 30, 2019).

Notable Outcome 1.1.C – Fuel Cycle

Deleted in its entirety.

The following Notable Outcomes are added to Objective 1.1:

Notable Outcome 1.1.G – Light Water Reactor Sustainability

In partnership with a nuclear plant owner, develop and deploy a predictive maintenance strategy to replace time-based maintenance activities at commercial nuclear power plants to eliminate unnecessary operation and maintenance costs.

Notable Outcome 1.1.H – Small Modular Reactors

Meet all FY 2019 milestones toward completion of the site-wide Senior Seismic Hazard Analysis Committee (SSHAC) Level 3 study of the INL, with a clearly documented plan for addressing no less than ten site conditions at five INL facility areas and successfully following the Nuclear Regulatory Commission’s guidance in NUREG-2213 “Updated Implementation Guidelines for SSHAC Hazard Studies,” leading to a PPRP Closure Letter. A PPRP closure letter signifies the successful completion of the SSHAC study and enhances the likelihood of regulatory acceptance in an eventual license application.

Notable Outcome 1.1.I – Gateway for Accelerated Innovation in Nuclear

GAIN will develop and manage the Nuclear Technology Legacy Document Retrieval Process. This will include working with the Advanced Reactor Industry (Molten Salt Reactor, High Temperature Reactor, and Fast Reactor) to prioritize documents they need that are currently marked “Applied Technology,” retrieving them from OSTI, and expediting the export/classification reviews. A pilot process will demonstrate success by retrieving, reviewing, and making available 50 documents in FY 2019.

Notable Outcome 1.4 Collaborations

Old Language:

The Department of Energy has a partnership with NASA for the National Laboratories to provide their unique capabilities and expertise to support research, development, testing and deployment of nuclear power and propulsion systems for space applications. Due to INL’s lead laboratory role in nuclear energy and specific space nuclear power and propulsion expertise and capabilities, the INL has moved into a leadership role supporting this partnership. To advance the technology, and efficiently utilize the infrastructure and expertise of the DOE Laboratories, the INL shall establish a plan/charter as the National Technical Director for Space Nuclear Power, which will include the roles and responsibilities of all participating laboratories. The charter should be submitted to DOE by November 15, 2018. The INL shall also accomplish the following important FY19 activities: 1) support the partnership with NASA to qualify fuels and test fission reactor systems for space applications by initiating testing of advanced fuel designs in TREAT; 2) support the partnership with the NASA Mars 2020 mission by completing the fueling of an MMRTG; and 3) support the goals of constant rate production by initiating irradiation of plutonium 238 production qualification targets in ATR.

New Language:

The Department of Energy has a partnership with NASA for the National Laboratories to provide their unique capabilities and expertise to support research, development, testing and deployment of nuclear power and propulsion systems for space applications. Due to INL’s lead laboratory role in nuclear energy and specific space nuclear power and propulsion expertise and capabilities, the INL has moved into a leadership role supporting this partnership. To advance the technology, and efficiently utilize the infrastructure and expertise of the DOE Laboratories, the INL shall establish a plan/charter as the National Technical Director for Space Nuclear Power, which will include the roles and responsibilities of all participating laboratories. The final charter, signed by all laboratory partners, should be submitted to DOE by September 30, 2019. The INL shall also accomplish the following important FY19 activities: 1) support the partnership with NASA to qualify fuels and test

fission reactor systems for space applications by initiating testing of advanced fuel designs in TREAT; 2) support the partnership with the NASA Mars 2020 mission by completing the fueling of an MMRTG; and 3) support the goals of constant rate production by initiating irradiation of plutonium 238 production qualification targets in ATR.

A revised FY 2019 PEMP is included as an attachment to this modification and replaces Section J, Attachment K.

4. Section J, Attachment T – “*Contracting Officer’s Representative (COR) Designations*”

Attachment T-1 Linda S. McCoy replaces Robert D. Boston as the Primary COR. Mr. Boston’s COR designation is hereby rescinded.

Attachment T-6 Attachment is removed. Amy E. Grose’s COR designation is hereby rescinded. This section is Reserved.

(end of modification)