

From: <gary.hoover@srs.gov>
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Date: 9/26/2007 12:39:47 PM
Subject: FYI: MOX Presolicitation Notice
cc: <Mosi.Dayani@nnsa.doe.gov>,<js.bozzone@nnsa.srs.gov>,<David.Hoel@srs.gov>,<de
nnis.ryan@srs.gov>,<drew.grainger@srs.gov>,<jim.bolen@srs.gov>,<sherry.southern@srs.gov>

Ben,

FYI - a MOX item:

FBO.gov

To all interested Nuclear Utilities in the U.S.A.

General Information

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Naics Code:
221113 -- Nuclear Electric Power Generation

Contracting Office Address

Department of Energy, Shaw AREVA MOX Services, LLC (MOX Services), Shaw
AREVA MOX Services, LLC (MOX Services), Savannah River Site P.O. Box
7097,
Aiken, SC, 29804-7097, UNITED STATES

Description

Expression of Interest for Nuclear Reactors to Irradiate MOX Fuel

Shaw AREVA MOX Services, LLC (MOX Services) operating under a Department of Energy Contract is the prime contractor for the Mixed Oxide (MOX) Fuel Fabrication Facility (MFFF) Project under construction at the Savannah River Site outside Aiken, South Carolina. Under the terms and conditions of our prime contract, MOX Services is responsible for the procurement of the services of commercial light water reactors to irradiate MOX fuel in support of the MOX Project.

MOX Services is seeking an expression of interest from US utilities to identify additional domestic commercial reactors to irradiate the MOX fuel produced by the MFFF from weapons grade plutonium. The MFFF started construction August 1, 2007 and is expected to produce batch quantities of MOX fuel beginning in the fall of 2018. Duke Energy's McGuire Nuclear Station and Catawba Nuclear Station are under contract to irradiate the MOX fuel. It is expected that an additional forty fuel assemblies per year will be available above what those four reactors can utilize. MOX Services is seeking additional reactor(s) to use that fuel. The fuel supply contract would be for approximately fifteen years.

Four MOX Lead Test Assemblies are currently in Catawba Unit 1 in their second cycle of irradiation. An extensive post irradiation program is planned at the end of each fuel cycle and removal of fuel rods and hot cell destructive examinations are planned after both the second and third cycles of irradiation. These fuel assemblies are essentially identical to the AREVA Advanced Mark-BW 17x17 fuel operating in several pressurized water reactors except for the MOX fuel pellets and a slight increase in fuel rod length. MOX Services is most interested in nuclear reactors that can use this fuel design; however, other commercial domestic reactors may be proposed and considered. Additional information and background is provided in the enclosed Statement of Work.

We emphasize that the Statement of Work is provided for information only, to help your company determine its level of interest. We are requesting your company provide a response of your level of interest with regard to this program. If you are interested in the program please request a copy of the Draft Request for Proposal from Mr. Rick Salem at rasalem@moxproject.com.

We desire to have your expression of interest by October 12, 2007.

This expression of interest does not establish any commitment or obligation on the part of MOX Services to acquire services from your

company nor does it obligate your company either to provide services or to submit a proposal.

We extend our appreciation for any interest you may have with this very important project. If you have any questions regarding letter, please contact me on 803-819-5057.

STATEMENT OF WORK

I. Introduction

This Statement of Work (SOW) sets forth the Mixed Oxide (MOX) fuel qualification, reactor irradiation, and related services required under the Subcontract. The Subcontractor shall provide all necessary labor, supervision, materials and equipment, less Government furnished property or services, if any, to ensure delivery of safe, efficient and effective services.

II. Base Subcontract SOW

A. Fuel Qualification

The base prime contract requires the development and implementation of a comprehensive fuel qualification plan for the initial qualification of MOX fuel for use in the mission Commercial Light Water Reactors (CLWRs). The ultimate result of this activity will be approval of fuel designs to support the plutonium disposition mission.

Subcontractor will propose to MOX Services if additional Fuel Qualification is needed. If Subcontractor determines that a new fuel qualification program is necessary, Subcontractor will propose the Subcontractor's scope and cost.

The Subcontractor shall perform the various activities, as described in the following SOW.

1. Requirements

The following requirements apply to the qualification of MOX Fuel:

a. Determine if additional fuel qualification is necessary and support the fuel qualification activities in accordance with 10 CFR Part 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants.

b. Complete activities to support the first batch loading of MOX

fuel in or before 2018 .

- c. Demonstrate adequacy of fuel design for projected burnups, which shall not be less than 20,000 MWd/MTHM on an assembly basis.
 - d. RESERVED
 - e. Store, pending disposal or destructive post-irradiation examination, the irradiated test/demonstration fuel in accordance with Nuclear Regulatory Commission (NRC) requirements.
 - f. RESERVED
 - g. Utilize Department of Energy (DOE) provided plutonium only.
2. Fuel Qualification Plan

The Subcontractor will have responsibilities for supporting the Fuel Qualification, if it is determined to be necessary. Subcontractor will be responsible for; the neutronic design of the lead assembly and burnable absorber design, cycle specific thermal hydraulic analyses, application of cycle specific loss-of-coolant-analysis (LOCA) limits, fuel cycle design for the Lead Assembly cycles, licensing these cycles, receiving the lead assemblies, security and safeguards, loading the lead assemblies, irradiating the assemblies for three cycles, core monitoring and core follow, assisting Contractor in post irradiation examinations of the fuel, and storing the lead assemblies until final disposal options are available.

B. Irradiation Services

The Subcontractor will perform the following work related to ensuring the development of an irradiation services program to utilize mission reactors to irradiate MOX fuel.

- 1. Mission Reactor and Site Facility Modification Design
 - a. Mission Reactor and Site Facility Modification Functional Requirements.

Subcontractor shall ensure that designs for Mission Reactor and site facility modifications necessary to support irradiation of MOX Fuel incorporate the following functional requirements as applicable:

- (1) Must be able to facilitate International Atomic Energy Agency (IAEA) inspections and monitoring and minimize access to proprietary or other sensitive information;
- (2) Must be able to secure, store and handle MOX fuel in accordance with the requirements of 10 CFR Part 73, Physical Protection of Plants and Materials;
- (3) Must have sufficient capacity for storage of one reload batch of MOX fuel elements for at least 90 days;
- (4) Must have the capability to receive MOX fuel based on twenty-four hour notice of the planned DOE Safeguards Transporter (SGT) arrival time;
- (5) Must have the capability to receive, protect, and unload up to three SGTs during a 24-hour period;
- (6) Must have an SGT parking area within the site security perimeter for parking idle, loaded SGTs awaiting unloading and having security equivalent to that of a protected nuclear site area;
- (7) Must have the capability for unloading fresh fuel transportation packages and performing receipt inspection of fuel assemblies;
- (8) Must have the capability to handle fresh fuel transportation packages to prevent contamination during unloading or fuel storage operations.
- (9) Must integrate like-type reactor design modifications to minimize costs.

b. Mission Reactor and Site Facility Modifications

(1) Mission Reactor System and Site Facility Review

The Subcontractor has responsibility for missions reactors to perform and document engineering reviews of affected reactor systems and reactor site facilities to determine where modifications are necessary to utilize MOX fuel. These reviews shall include, but are not limited to: the primary, auxiliary, and secondary systems; instrumentation and control systems, site security systems, fresh fuel receipt, spent fuel storage; and SGT ingress and egress.

(2) Mission Reactor System and Site Facility Modification Plan(s)

The Subcontractor has responsibility for mission reactors to provide MOX Services for submittal to DOE a Mission Reactors System Modification Plan (or plans, if desired) which identifies proposed modifications to mission reactor systems and infrastructures to accommodate the irradiation of MOX fuel. The plan(s) shall include, but is not limited to: a summary technical description of the proposed modifications; justification of the need for the proposed modifications; and corresponding schedules and cost estimates for design and construction of the modifications. The plan shall be updated as needed.

(3) Mission Reactor System and Site Facility Design Modifications

The Subcontractor has responsibility to perform the design of required modifications for mission reactor systems and infrastructures after DOE approval of the Mission Reactor System Modification Plan(s).

The Subcontractor has the responsibility to deliver to MOX Services the Mission Reactor System Modification Plan for mission reactors as specified in Section F.2, Delivery Requirements, and assist MOX Services in resolution of DOE comments on this plan.

(4) Mission Reactor System and Site Facility Design Modifications

The Subcontractor has responsibility to periodically update the Mission Reactors System Modification Plan and provide to MOX Services for review and submittal to DOE as specified in Section F.2, Delivery Requirements. The updates shall identify any significant changes resulting from the completion of design of required modifications and/or significant cost changes.

(5) Mission Reactor System and Site Facility Design Modifications

The Subcontractor has responsibility to host progress review meetings to discuss the status and scope of the reactor modifications. The first review shall be conducted within one year of contract award, with subsequent meetings conducted no less than once per year thereafter until the design modifications are completed.

2. Mission Reactors License Amendment Applications

The Subcontractor has responsibility to prepare the licensing plan(s) for mission reactors for obtaining NRC licensing amendments. The plan(s) shall include a description of the tasks necessary to amend licenses of the mission reactors and include supporting cost estimates, schedules, and milestones. The Subcontractor shall obtain permits in accordance with the

approved Mission Reactor Permitting Plan(s).

The Subcontractor shall prepare, submit, and defend NRC license amendment requests for the mission reactors.

The Subcontractor has the responsibility to deliver to MOX Services the Mission Reactors Licensing Plan(s) for mission reactors for submittal to DOE as specified in Section F.2, Delivery Requirements. This is submitted for DOE information only. Revisions to the plan shall be submitted to MOX Services for submittal to DOE for information only.

The Subcontractor has the responsibility to submit the necessary License Amendment Application(s) and Revisions to MOX Services for submittal to DOE concurrently with Subcontractor's License Amendment submittal to the NRC. This is submitted to DOE for information only.

3. Mission Reactors Permitting Plan(s)

The Subcontractor has the responsibility to prepare and implement a Mission Reactors Permitting Plan(s) for mission reactors which outlines the overall permitting strategy and describes activities associated with obtaining Federal, state, and local permits, including Public Utility Commission (PUC) approvals. This will be accomplished in a two step process. The first is a review of applicable permits and the second will be development of the Plan(s), if any permit revisions are necessary. The Plan(s) shall include a description of the tasks necessary to obtain all applicable permits for mission reactors and the supporting cost estimates, schedules and milestones. The Subcontractor shall obtain permits in accordance with the approved Mission Reactor Permitting Plan(s).

The Mission Reactor Permitting Plan(s) shall be submitted to MOX Services for submittal to DOE as specified in Section F.2, Delivery Requirements. This submittal is for DOE information only.

4. Mission Reactor Core Management

a. Core Design Requirements

Subcontractor shall ensure that core designs to support irradiation services incorporate the following requirements:

- (1) Capability to utilize MOX fuel pellet composition with no integral neutron absorbers.
- (2) Ability to achieve a minimum burnup level of 20,000 MWd/MTHM on

an individual assembly basis.

- (3) Ability to utilize existing proven technology bases for core management to the maximum extent practicable.
- (4) Ability to utilize verified, validated and qualified core design codes.
- (5) Utilization of proven MOX core designs for initial core loadings.
- (6) Capability for transition from a MOX fuel core to Low-Enriched Uranium (LEU) fuel core after completion of a current operating cycle and one additional cycle of operation.
- (7) Capability to accommodate an increase or decrease in the plutonium core loading rate for future refuelings. To the extent practicable, the core design approach shall enable substitution of LEU assemblies with MOX assemblies and vice versa, such that the addition or subtraction of MOX fuel assemblies can be balanced with traditional LEU fuel.
- (8) To the extent practicable, capability to irradiate the last MOX fuel assemblies for at least one cycle before or in 2035.
- (9) Ability to extract pins from MOX fuel assemblies.

b. Mission Reactor Core Design and Management Activities

The Subcontractor has responsibility to perform the following activities associated with the reactor core design and management activities:

- (1) Core design activities necessary to utilize MOX fuel in mission reactors and for core reloads encompassing:
 - (i) Development of fuel specifications, and
 - (ii) Reserved.
 - (iii) Preparation of core physics calculations;
 - (iv) Design of lead and subsequent fuel assemblies and overall core design for the period of transition from full LEU fuel to a MOX fuel configuration and for routine operation with MOX fuel;
- (2) Modification of applicable core physics, neutronics, and fuel

design and fuel performance computer codes, with subsequent verification, validation and qualification.

- (3) Revision of the Final Safety Analysis Report (FSAR) to support the reactor license amendment.
- (4) Preparation, if necessary, of a QA plan, procedures and supporting documentation as required by 10 CFR Part 50, Appendix B, ?Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants.?
- (5) Development of contingency plans for the continued operation of the reactor using uranium fuel if the MOX fuel supply is interrupted.
- (6) Coordination, as necessary, with the DOE Technical Manager (TM) on DOE nuclear waste repository matters relating to MOX fuel design and irradiation.
- (7) Preparation of a Mission Reactors Irradiation Plan which describes an integrated approach to the operation of all mission reactors. The plan shall include, but is not limited to:
 - (i) Proposed MOX fuel throughput for the selected mission reactors by year and cumulatively;
 - (ii) Fuel and core designs sufficient to achieve planned throughput;
 - (iii) Accommodation of potential interruptions in the MOX fuel supply; and
 - (iv) Coordination of interfaces with fuel qualification activities.
 - (v) Coordination of mission reactors loading patterns to accomplish the SOW.
 - (vi) Capability to handle the potential disruption of MOX irradiation caused by a shut-down of a mission reactor over an extended period of time.

5. Mission Reactor Operations

The Subcontractor has responsibility for mission reactor to:

- a. Review and modify mission reactor procedures and programs that may be affected by the use of MOX fuel including, but not limited to:

normal, emergency and post-accident operating procedures; fresh and spent fuel handling procedures; damaged fuel handling procedures; safeguards procedures; and security procedures.

b. Develop a MOX fuel utilization training program to train and qualify mission reactor site engineering, operations, maintenance, security and other affected personnel on the required changes to site procedures, systems, equipment, and facilities associated with the use of MOX fuel.

6. Test/Demonstration Fuel Irradiation

If the Subcontractor and MOX Services determine the need for irradiation of lead test assemblies, the Subcontractor shall ensure that all required permits and licenses are obtained, the MOX test/demonstration fuel is irradiated in a TBD reactor, and inspections and post-irradiation fuel examinations are performed as required by the Fuel Qualification Plan.

MOX fuel assemblies shall be clearly identified and remain intact at the reactor site, i.e., assemblies should not be planned for deconstitution. The only exceptions allowed are for planned testing that requires removal of pins or for damaged fuel that requires removal of pins. Damaged fuel that needs to be withdrawn from the fuel assemblies shall be withdrawn and stored pending examination or disposal.

C. Project Management and Subcontract Administration

The Subcontractor shall have responsibilities for Project Management. This includes managing the activities at Subcontractor that support the preparation for use of MOX fuel, administration and accounting including cost reporting, invoicing, progress reports, tracking schedule progress, variance reporting, etc., for the Subcontractor activities.

The Subcontractor shall have responsibility for External Affairs. This includes developing outreach programs and materials associated with mission reactor use of MOX fuel. The Subcontractor will conduct media relations in support of the MOX fuel project. The Subcontractor will keep community leaders and the general population in the vicinity of mission reactors informed of the MOX fuel program.

As a part of External Affairs, the Subcontractor will support MOX Services and DOE with international plutonium disposition efforts. Such support will include, but not be limited to, (i) participation in national and international conferences and meetings related to plutonium disposition

and (ii) interactions with participants in the Russian plutonium disposition program.

Subcontractor will provide MOX Services weekly status updates including hours and costs by cost account for employees and contractors.

III. Option 1 SOW

A. Implementation of Mission Reactors and Site Modifications

1. This segment of Option 1 includes all effort necessary to modify the mission reactors and facilities in order for MOX Fuel to be irradiated. The Subcontractor shall ensure that the mission reactors and site facilities are modified to meet the following requirements:

a. Commercial light water reactors capable of meeting reactivity control requirements associated with partial MOX fuel cores.

b. Reactor plants and ancillary facilities that comply with NRC and DOE security and transportation interface requirements associated with transporting MOX fuel.

c. Appropriate reactor protection and controls that may be necessary as a result of irradiating partial MOX fuel cores.

d. Appropriate lifting capacity at the reactor sites capable of lifting the MOX Fresh Fuel Packages which will weigh approximately 15,000 pounds when loaded.

e. Reactor(s) with appropriate control rods to ensure proper shutdown margins associated with irradiating MOX fuel.

2. The Subcontractor shall complete the effort delineated above in accordance with the following milestones:

[Subcontractor to propose milestones for the modifications?TBD]

B. Subcontractor will support NRC and ASLB review of the License Amendment Request.

C. Subcontractor will provide any needed training on MOX fuel use to the office and site staff.

D. Subcontractor will procure any enriched soluble boron or other material needed in preparation for batch MOX fuel irradiation.

E. Subcontractor will provide annually to MOX Services the refueling needs and expected fuel delivery schedule for the next 5 years.

F. Subcontractor will provide MOX Services weekly status updates including hours and costs by cost account for Subcontractor's employees and contractors.

IV. Option 2 SOW

The SOW for the Option 2 period is to be decided if MOX Services exercises its rights under this Order.

Option 2 SOW would be activities related to MOX fuel supply procurement, invoicing, and irradiation. It would include annual updates to the 5 year fuel delivery schedule.

It should include some periodic poolside Post Irradiation Examination activities and IAEA (or equivalent) Monitoring and Inspection support.

Point of Contact

Christy Johnson, Administrative Assistant III, Phone 803-819-2807, Fax 803-819-8931, Email cjohnson@moxproject.com - Christy Johnson, Administrative Assistant III, Phone 803-819-2807, Fax 803-819-8931, Email cjohnson@moxproject.com

Place of Performance

Address:

Shaw AREVA MOX Services, LLC (MOX Services), Savannah River Site P.O. Box
7097, Aiken, SC, 29804-7097, UNITED STATES

Postal Code:

29804-7097

Country:

UNITED STATES

Hearing Identifier: Vogtle_Public
Email Number: 650

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Subject: FYI: MOX Presolicitation Notice
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Files	Size	Date & Time
MESSAGE	23229	9/26/2007 12:39:47 PM
TEXT.htm	28936	9/27/2007 1:39:14 PM
Mime.822	53540	9/27/2007 1:39:14 PM

Options

Priority: Standard
Reply Requested: No
Return Notification: None
None

Concealed Subject: No
Security: Standard

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an assembly basis.

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e. Store, pending disposal or destructive post-irradiation examination, the irradiated test/demonstration fuel in accordance with Nuclear Regulatory Commission (NRC) requirements.

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g. Utilize Department of Energy (DOE) provided plutonium only.

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1. Mission Reactor and Site Facility Modification Design

a. Mission Reactor and Site Facility Modification Functional Requirements.

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The Subcontractor has the responsibility to deliver to MOX Services the Mission Reactor System Modification Plan for mission reactors as specified in Section F.2, Delivery Requirements, and assist MOX Services in resolution of DOE comments on this plan.

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4. Mission Reactor Core Management

a. Core Design Requirements

Subcontractor shall ensure that core designs to support irradiation services incorporate the following requirements:

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- (2) Ability to achieve a minimum burnup level of 20,000 MWd/MTHM on an individual assembly basis.
- (3) Ability to utilize existing proven technology bases for core management to the maximum extent practicable.
- (4) Ability to utilize verified, validated and qualified core design codes.
- (5) Utilization of proven MOX core designs for initial core loadings.
- (6) Capability for transition from a MOX fuel core to Low-Enriched Uranium (LEU) fuel core after completion of a current operating cycle and one additional cycle of operation.
- (7) Capability to accommodate an increase or decrease in the plutonium core loading rate for future refuelings. To the extent practicable, the core design approach shall enable substitution of LEU assemblies with MOX assemblies and vice versa, such that the addition or subtraction of MOX fuel assemblies can be balanced with traditional LEU fuel.

- (8) To the extent practicable, capability to irradiate the last MOX fuel assemblies for at least one cycle before or in 2035.
- (9) Ability to extract pins from MOX fuel assemblies.

b. Mission Reactor Core Design and Management Activities

The Subcontractor has responsibility to perform the following activities associated with the reactor core design and management activities:

- (1) Core design activities necessary to utilize MOX fuel in mission reactors and for core reloads encompassing:
 - (i) Development of fuel specifications, and
 - (ii) Reserved.
 - (iii) Preparation of core physics calculations;
 - (iv) Design of lead and subsequent fuel assemblies and overall core design for the period of transition from full LEU fuel to a MOX fuel configuration and for routine operation with MOX fuel;
- (2) Modification of applicable core physics, neutronics, and fuel design and fuel performance computer codes, with subsequent verification, validation and qualification.
- (3) Revision of the Final Safety Analysis Report (FSAR) to support the reactor license amendment.
- (4) Preparation, if necessary, of a QA plan, procedures and supporting documentation as required by 10 CFR Part 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants."
- (5) Development of contingency plans for the continued operation of the reactor using uranium fuel if the MOX fuel supply is interrupted.
- (6) Coordination, as necessary, with the DOE Technical Manager (TM) on DOE nuclear waste repository matters relating to MOX fuel design and irradiation.
- (7) Preparation of a Mission Reactors Irradiation Plan which describes an integrated approach to the operation of all mission reactors. The plan shall include, but is not limited to:
 - (i) Proposed MOX fuel throughput for the selected mission reactors by year and cumulatively;
 - (ii) Fuel and core designs sufficient to achieve planned throughput;
 - (iii) Accommodation of potential interruptions in the MOX fuel supply; and
 - (iv) Coordination of interfaces with fuel qualification activities.
 - (v) Coordination of mission reactors loading patterns to accomplish the SOW.
 - (vi) Capability to handle the potential disruption of MOX irradiation caused by a shut-down of a mission reactor over an extended period of time.

5. Mission Reactor Operations

The Subcontractor has responsibility for mission reactor to:

- a. Review and modify mission reactor procedures and programs that may be affected by the use of MOX fuel including, but not limited to: normal, emergency and post-accident operating procedures; fresh and spent fuel handling procedures; damaged fuel handling procedures; safeguards procedures; and security procedures.
- b. Develop a MOX fuel utilization training program to train and qualify mission reactor site engineering, operations, maintenance, security and other affected personnel on the required changes to site procedures, systems, equipment, and facilities associated with the use of MOX fuel.

6. Test/Demonstration Fuel Irradiation

If the Subcontractor and MOX Services determine the need for irradiation of lead test assemblies, the Subcontractor shall ensure that all required permits and licenses are obtained, the MOX test/demonstration fuel is irradiated in a TBD reactor, and inspections and post-irradiation fuel examinations are performed as required by the Fuel Qualification Plan.

MOX fuel assemblies shall be clearly identified and remain intact at the reactor site, i.e., assemblies should not be planned for deconstitution. The only exceptions allowed are for planned testing that requires removal of pins or for damaged fuel that requires removal of pins. Damaged fuel that needs to be withdrawn from the fuel assemblies shall be withdrawn and stored pending examination or disposal.

C. Project Management and Subcontract Administration

The Subcontractor shall have responsibilities for Project Management. This includes managing the activities at Subcontractor that support the preparation for use of MOX fuel, administration and accounting including cost reporting, invoicing, progress reports, tracking schedule progress, variance reporting, etc., for the Subcontractor activities.

The Subcontractor shall have responsibility for External Affairs. This includes developing outreach programs and materials associated with mission reactor use of MOX fuel. The Subcontractor will conduct media relations in support of the MOX fuel project. The Subcontractor will keep community leaders and the general population in the vicinity of mission reactors informed of the MOX fuel program.

As a part of External Affairs, the Subcontractor will support MOX Services and DOE with international plutonium disposition efforts. Such support will include, but not be limited to, (i) participation in national and international conferences and meetings related to plutonium disposition and (ii) interactions with participants in the Russian plutonium disposition program.

Subcontractor will provide MOX Services weekly status updates including hours and costs by cost account for employees and contractors.

III. Option 1 SOW

A. Implementation of Mission Reactors and Site Modifications

1. This segment of Option 1 includes all effort necessary to modify the mission reactors and facilities in order for

MOX Fuel to be irradiated. The Subcontractor shall ensure that the mission reactors and site facilities are modified to meet the following requirements:

- a. Commercial light water reactors capable of meeting reactivity control requirements associated with partial MOX fuel cores.
- b. Reactor plants and ancillary facilities that comply with NRC and DOE security and transportation interface requirements associated with transporting MOX fuel.
- c. Appropriate reactor protection and controls that may be necessary as a result of irradiating partial MOX fuel cores.
- d. Appropriate lifting capacity at the reactor sites capable of lifting the MOX Fresh Fuel Packages which will weigh approximately 15,000 pounds when loaded.
- e. Reactor(s) with appropriate control rods to ensure proper shutdown margins associated with irradiating MOX fuel.

2. The Subcontractor shall complete the effort delineated above in accordance with the following milestones:

[Subcontractor to propose milestones for the modifications?TBD]

- B. Subcontractor will support NRC and ASLB review of the License Amendment Request.
- C. Subcontractor will provide any needed training on MOX fuel use to the office and site staff.
- D. Subcontractor will procure any enriched soluble boron or other material needed in preparation for batch MOX fuel irradiation.
- E. Subcontractor will provide annually to MOX Services the refueling needs and expected fuel delivery schedule for the next 5 years.
- F. Subcontractor will provide MOX Services weekly status updates including hours and costs by cost account for Subcontractor's employees and contractors.

IV. Option 2 SOW

The SOW for the Option 2 period is to be decided if MOX Services exercises its rights under this Order.

Option 2 SOW would be activities related to MOX fuel supply procurement, invoicing, and irradiation. It would include annual updates to the 5 year fuel delivery schedule.

It should include some periodic poolside Post Irradiation Examination activities and IAEA (or equivalent) Monitoring and Inspection support.

Point of Contact

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