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ML101820635

Draft Safety Evaluation Report for the License Application  
To Possess and Use Radioactive Material at the Mixed Oxide Fuel  
Fabrication Facility in Aiken, SC

Docket No. 70-3098  
Shaw AREVA MOX Services

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Division of Fuel Cycle Safety and Safeguards  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001



#### 16.2.1.2 *Financial Protection*

In Section 16.1.2 of the LA, the applicant addressed the issue of Price-Anderson liability coverage. DOE has agreed to indemnify MOX Services in accordance with Section 170(d) of the Atomic Energy Act of 1954, as amended, and DOE Acquisition Regulation (DEAR) 952.250-70, "Nuclear Hazards Indemnity Agreement" (48 CFR § 952.250-70). The applicant submitted a request (DCS, 2006b) for exemption from 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," including the requirement in 10 CFR § 140.13a, "Amount of Financial Protection Required for Plutonium Processing and Fuel Fabrication Plants." Chapter 2 of this SER describes the staff's review of the acceptability of this exemption.

#### 16.2.1.3 *Labeling*

The applicant submitted a request (DCS, 2006c) for an exemption from the labeling requirements of containers with licensed material set forth in 10 CFR § 20.1904(a). Section 9.5 of this SER presents the staff's review of the acceptability of this exemption.

### 16.2.2 **Authorizations**

#### 16.2.2.1 *Prior Commitments*

In Section 16.2.1 of the LA, the applicant provided the authorization that all commitments made to the NRC prior to the most recent NRC-approved revision of the LA shall no longer be binding upon MOX Services unless imposed by license condition. The applicant has included this authorization under the assumption that all commitments relating to the MFFF will be included in or referenced by the license for the facility. The staff believes that upon issuance of a license, all issues that require commitments will be resolved or will be conditions of the license. The staff therefore finds that this authorization is acceptable.

#### 16.2.2.2 *Frequencies*

When measurement, surveillance, and/or other frequencies are specified in the LA or other license commitments, the applicant proposes a list of definitions of the time period for specific frequency designations. The staff reviewed the frequencies associated with each time period and finds that the frequencies are well defined and reasonable. The staff therefore finds the use of the defined frequencies provided in the LA and their use to be acceptable.

#### 16.2.2.3 *Changes to the License Application*

In Section 16.2.3 of the LA, the applicant provided the conditions to make changes to the LA and the criteria for determining when prior approval from the NRC would be needed. MOX Services maintains the LA so that it is accurate and up to date by means of the MFFF configuration management processes, which include written procedures. MOX Services evaluates changes to the facility and its processes for impact on the LA and updates the LA as necessary to ensure its continued accuracy. Responsibility for maintaining and updating the LA belongs to the manager of the support services function, as described in Chapter 4 of the LA.

A change to the facility or its processes is evaluated before the change is implemented. The applicants' evaluation of the change determines, before the change is implemented, whether an application for an amendment to the LA must be submitted in accordance with 10 CFR 70.34, "Amendment of licenses." The LA describes the sites, structures, processes, systems,



equipment, components, computer programs, and activities of personnel. MOX Services may make changes to these items, as described in the LA, without prior NRC approval, if the change meets the following criteria:

- It does not decrease the level of effectiveness of the design basis as described in the LA.
- It does not result in a departure from a method of evaluation described in the LA and used in establishing the design bases.
- It does not result in a degradation in safety.
- It does not affect compliance with applicable regulatory requirements.
- It does not conflict with an existing license condition.

If a change to the LA is made, the applicant will promptly update the affected onsite documentation per written procedures. MOX Services will maintain records of changes to its facility. These records include a written evaluation that provides the bases for the determination that the changes to the LA do not require prior NRC approval. The applicant retains these records until termination of the license. Changes are communicated to the NRC as follows:

- For changes that require NRC preapproval, MOX Services submits an amendment request to the NRC in accordance with 10 CFR 70.34 and 10 CFR 70.65, "Additional Content of Applications."
- For changes that do not require NRC preapproval of the LA, MOX Services submits to the NRC annually, within 30 days after the end of the calendar year during which the changes occurred, a brief summary of the changes.

The staff has reviewed the commitments and requirements for making changes to the LA. Consistent with the change process of 10 CFR 70.72, "Facility changes and change process," for the facility safety program, the requirements provided by the applicant have three key elements:

- (1) the criteria used to evaluate changes to determine when preapproval by the staff is required
- (2) the timeliness of updates to onsite documentation and reporting of changes to the staff
- (3) the commitment to providing documentation for the evaluation for determining prior NRC approval and to maintaining records of changes

The staff finds that the criteria provided by the applicant for determining whether prior NRC approval is needed are consistent with the type of changes that would be made to the LA. The staff finds that the timeliness required for prompt updating of the onsite documentation and the timeframe for reporting changes not requiring NRC prior approval are reasonable and consistent with the process for making changes to the safety program as described in 10 CFR 70.72. The staff also finds that the commitment to performing and documenting the evaluation of NRC prior

approval and maintaining records is acceptable. The staff therefore finds that the authorization for making changes to the LA is acceptable.

## REFERENCES

10 CFR Part 70 *U.S. Code of Federal Regulations*, "Domestic Licensing of Special Nuclear Material," Part 70, Chapter I, Title 10, "Energy."

Atomic Energy Act, as amended 1954.

(DCS, 2006a) Duke Cogema Stone & Webster Mixed Oxide Fuel Fabrication Facility to USNRC, "Request for Exemption from Decommissioning Requirements," Aiken, SC, September 27, 2006.

(DCS, 2006b) Duke Cogema Stone & Webster Mixed Oxide Fuel Fabrication Facility to USNRC, "Request for Exemption from Indemnity Agreement and Financial Protection Requirements," Aiken, SC, September 27, 2006.

(DCS, 2006c) Duke Cogema Stone & Webster Mixed Oxide Fuel Fabrication Facility to USNRC, "Request for Exemption from Radiation Labeling Requirements," Aiken, SC, September 27, 2006.

(DCS, 2004) Duke Cogema Stone & Webster, Mixed Oxide Fuel Fabrication Facility Construction Authorization Request, Aiken, SC, 2004.

DOE Acquisition Regulations (DEAR) 952.250-70, "Nuclear Hazards Indemnity Agreement."

(MOX, 2010) Shaw AREVA MOX Services, "MFFF-License Application," Aiken, SC, March 2010..

(MOX, 2009b) Shaw AREVA MOX Services, "Request for Additional Information Regarding the Review of the Fundamental Nuclear Material Control Plan for the MFFF License Application Request, NRC-DCS-0000406, 26 February 2009," Aiken, SC, December 17, 2009.

(NRC, 2000) U.S. Nuclear Regulatory Commission, NUREG-1718, "Standard Review Plan for the Review of an Application for a Mixed Oxide (MOX) Fuel Fabrication Facility," Washington, DC, August 2000.

(NRC, 1999) U.S. Nuclear Regulatory Commission, SECY 99-177, "Current Status of Legislative Issues Related to NRC Licensing a Mixed Oxide Fuel Fabrication Facility," Washington, DC, July 1999.

Price-Anderson Nuclear Industries Indemnity Act, Washington, DC, 1957.

10 CFR Part 20, Standards for Protection Against Radiation

10 CFR Part 40, Domestic Licensing of Source Material

10 CFR Part 74, Material Control and Accounting of Special Nuclear Material

10 CFR Part 140, Financial Protection Requirements and Indemnity Agreements