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May 7, 2007

MEMORANDUM TO: Joseph G. Giitter, Deputy Director  
Special Projects and Technical  
Support Directorate  
Division of Fuel Cycle Safety  
and Safeguards

THRU: Stewart Magruder, Chief */RA/*  
MOX Branch  
Special Projects and Technical  
Support Directorate, FCSS

FROM: David Tiktinsky, Sr. Project Manager  
MOX Branch  
Special Projects and Technical  
Support Directorate, FCSS

SUBJECT: SUMMARY OF THE KICKOFF MEETING WITH SHAW AREVA MOX  
SERVICES ON THE CRITICALITY SAFETY REVIEW OF THE  
INTEGRATED SAFETY ANALYSIS SUMMARY AND LICENSE  
APPLICATION FOR THE MIXED OXIDE FUEL FABRICATION  
FACILITY TO BE BUILT NEAR AIKEN, SC

On February 22, 2007, Nuclear Regulatory Commission (NRC) staff met with representatives from Shaw AREVA MOX Services (MOX Services) to kickoff the criticality safety review of the Integrated Safety Analysis Summary and License Application for the Mixed Oxide Fuel Fabrication Facility (MFFF). Significant portions of the meeting were closed to the public, due to the sensitive nature of the information that was discussed. Please see the enclosed public meeting summary for more details (Enclosure 1). The meeting attendance list is also enclosed (Enclosure 2). A non-public meeting summary is found in Enclosure 3 and the handouts provided by MOX Services during the meeting are found in Enclosure 4. Enclosures

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3 and 4 contain official use only-proprietary and security related information and are being withheld from public release.

Enclosures:

1. Public Meeting Summary
2. List of Attendees
3. Non-Public Meeting Summary (Official Use Only Proprietary and Security Related Information)
4. Meeting Handout (Official Use Only Proprietary and Security Related Information)

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FROM: David Tiktinsky, Sr. Project Manager  
MOX Branch  
Special Projects and Technical  
Support Directorate, FCSS

SUBJECT: SUMMARY OF THE KICKOFF MEETING WITH SHAW AREVA MOX SERVICES ON  
THE CRITICALITY SAFETY REVIEW OF THE INTEGRATED SAFETY ANALYSIS  
SUMMARY AND LICENSE APPLICATION FOR THE MIXED OXIDE FUEL  
FABRICATION FACILITY TO BE BUILT NEAR AIKEN, SC

On February 22, 2007, Nuclear Regulatory Commission (NRC) staff met with representatives from Shaw AREVA MOX Services (MOX Services) to kickoff the criticality safety review of the Integrated Safety Analysis Summary and License Application for the Mixed Oxide Fuel Fabrication Facility (MFFF). Significant portions of the meeting were closed to the public, due to the sensitive nature of the information that was discussed. Please see the enclosed public meeting summary for more details (Enclosure 1). The meeting attendance list is also enclosed (Enclosure 2). A non-public meeting summary is found in Enclosure 3 and the handouts provided by MOX Services during the meeting are found in Enclosure 4. Enclosures 3 and 4 contain official use only-proprietary and security related information and are being withheld from public release.

Enclosures:

1. Meeting Summary
2. List of Attendees
3. Non-Public Meeting Summary (withhold under 10 CFR 2.390)
4. Meeting Handout (withhold under 10 CFR 2.390)

cc: G. Smith, NNSA A.J. Eggenberger, DNFSB  
J. Olencz, NNSA L. Zeller, BREDL  
H. Porter, SC Dept. Of HEC G. Carroll, Nuclear Watch South  
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|--------|------------|-------------|--------|-----------|
| OFFICE | MB         | SPB         | MB     | MB        |
| NAME   | DTiktinsky | LWilliamson | CTripp | SMagruder |
| DATE   | 3/7/07     | 3/20/07     | 5/2/07 | 5/3/07    |

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SUMMARY OF MEETING WITH MOX SERVICES TO KICKOFF THE CRITICALITY SAFETY  
TECHNICAL REVIEW OF THE INTEGRATED SAFETY ANALYSIS SUMMARY AND LICENSE  
APPLICATION FOR THE MIXED OXIDE FUEL FABRICATION FACILITY

Date: February 22, 2007

Place: U.S. Nuclear Regulatory Commission (NRC) Headquarters Offices; Rockville,  
Maryland

Attendees: See Enclosure 2

Purpose:

The purpose of this meeting was to kickoff the criticality safety technical review of the Integrated Safety Analysis (ISA) Summary and the License Application (LA).

Discussion:

Significant portions of this meeting were to be closed to the public due to the sensitive information discussed. However, no members of the public were in attendance.

After introductions by both the NRC and Shaw AREVA (MOX Services), the applicant began by discussing crosswalks between the Construction Authorization Request (CAR), the LA and ISA summary, NUREG-1718 (Standard Review Plan), and the Final Safety Evaluation Report for the CAR.

The next topic of discussion was the methodology used by MOX Services in the development of the LA and ISA's with respect to criticality. MOX Services stated that its ISA Methodology is intended to ensure that the ISA and the safety assessments are integrated and that detailed event sequences are identified. Additionally, the ISA summary is intended to demonstrate that items relied upon for safety (IROFS) are effective and that the requirements of 10 CFR 70.62(c) and 10 CFR 70.61 are satisfied.

The main discussion of the meeting related to the presentation of a specific event sequence example and how the conclusions in the ISA were supported. This included a description of the event, the IROFS designated for each preventive control, a summary of the double contingency principle determination, and a summary of the highly unlikely determination. The applicant presented an example nuclear criticality safety evaluation (NCSE) and described the content of the document and how it related to the ISA. The flow of documentation for the example that was presented included the identification of the hazard, supporting criticality calculations, the NCSE and the ISA.

No regulatory decisions were made at the meeting. Additional discussions related to the future performance of onsite reviews of NCSE's and criticality calculation packages that will be necessary for the staff to examine as the technical review proceeds.

The meeting was then adjourned.

## February 22, 2007 Criticality Safety Review Kickoff Meeting Attendees

- David Tiktinsky NRC
- Chris Tripp (telephone) NRC
- Rui Li NRC
- Stewart Magruder NRC
- William Troskoski NRC
- Craig Hrabal NRC
- Wesley Don Dotson MOX Services
- Walt Elliott MOX Services
- Bill Hennessy MOX Services
- Bob Foster MOX Services
- Dealis Gwyn MOX Services
- Garrett Smith DOE
- Don Williams ORNL