



Mixed Oxide Xchange

U. S. Nuclear Regulatory Commission

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Other MOX License Applications

In October 2003, the DOE filed an application for license to export up to 140 kilograms of plutonium dioxide to the Cadarache and MELOX MOX fuel fabrication facilities in France. The plutonium would be used to fabricate four MOX fuel lead test assemblies, which would be returned to the U.S. for proposed MOX fuel qualification tests in the Catawba Nuclear Power Station (see discussion below).

According to DOE, the lead assemblies will be used to confirm fuel performance and to demonstrate U.S. capability to receive, inspect, store, and load the fuel assemblies at commercial reactors. DOE requested the license by mid-June 2004 to transport the material to France in July-August 2004.

The NRC's Office of International Programs is responsible for reviewing export license applications and seeking Executive Branch and internal NRC staff views to determine whether U.S. export licensing criteria are satisfied. In December 2003, NRC received a petition for hearing and leave to intervene from Greenpeace International, Charleston Peace, and the Blue Ridge Environmental Defense League. The Commission acts as the presiding officer in any proceedings conducted for export licensing. At this time, the Commission is considering both the petitioners' contentions and opposing filings submitted by the DOE.

The proposed use of the MOX lead test assemblies in a U.S. reactor is the subject of another licensing action before the NRC. The Office of Nuclear Reactor Regulation is reviewing a February 2003 license amendment application from Duke Energy to use the lead assemblies in the Catawba Nuclear Power Station near Charlotte, NC. In August 2003, Blue Ridge Environmental Defense League (BREDL) filed a hearing request and petition to intervene in this licensing action. In October 2003, BREDL filed nine contentions and in December 2003 filed additional late-filed contentions.

On March 5, the Atomic Safety and Licensing Board Panel issued a Memorandum and Order (MO), ruling on standing and contentions. The March 5 Order rules on 13 safety and environmental contentions proposed

by BREDL and on contentions proposed by the Nuclear Information and Resource Services (NIRS). One BREDL contention had been withdrawn. The Board consolidated and reframed the BREDL contentions into 3 contentions. The Board admitted none of the NIRS contentions and NIRS is not admitted as a party to this proceeding.

Status of MOX Safety Review

In November 2003, the Department of Energy (DOE) directed Duke COGEMA Stone & Webster (DCS) to move the location of the proposed Mixed Oxide Fuel Fabrication Facility (MFFF) controlled area boundary (CAB) to coincide with the MFFF restricted area boundary. As a result, NRC staff delayed issuance of the Final Environmental Impact Statement (FEIS) and Final Safety Evaluation Report (FSER), pending new information from DCS on the impacts of the CAB change to the MFFF design. On March 24, 2004, DCS announced that DOE has decided to make the MFFF CAB coincident with the boundary of the MFFF site, the 41-acre parcel on which the MFFF would be located, and which encompasses the 14-acre MFFF restricted area. DCS expects to submit a revised Construction Authorization Request (CAR) and Environmental Report (ER) in June 2004. Following receipt of the revised CAR and ER, staff will issue a new schedule for issuance of the FEIS and FSER.

Staff is continuing to work to resolve the remaining nuclear criticality safety and chemical safety open items in the Draft Safety Evaluation Report. The staff has prepared written evaluations, including dissenting staff views, for most of the remaining chemical safety open items and provided them to NRC upper management for decisions.

On February 12, 2004 and March 12, 2004, DCS submitted to NRC additional information for staff to review pertaining to the remaining nuclear criticality safety open item and the titanium fire issue, respectively. Staff continues to review this information.

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NRC Differing Professional Views

At the NRC, employees have an opportunity to make known their best professional judgements, even those judgements that may differ from a prevailing staff view, management decision or policy position, or with proposed or accepted agency practices. When an employee wishes to express his or her judgement, and cannot resolve the concern through discussions with staff or immediate supervisors, then the employee may write a Differing Professional View, or DPV.

During the review of the MOX facility Construction Authorization Request, one employee has written two DPVs. The first DPV addressed the applicant's use of a specific computer code (ARCON96) to model the effects of chemical spills. This DPV also asked management to provide clear guidance on the resolution of generic issues related to the selection and use of computer codes. In an October 2003 decision, the Director of the Office of Nuclear Material Safety & Safeguards (NMSS) supported the prevailing staff view that use of the code was acceptable. The NMSS Director also made specific recommendations to the Director of the Division of Fuel Cycle Safety and Safeguards (FCSS) regarding the other generic issues raised in the DPV. In a letter to the NMSS Director in January 2004, the FCSS Director affirmed that these recommendations had been implemented.

In a second DPV, the employee raised concerns about whether, in the event that hazardous chemicals that are not licensed by NRC are accidentally spilled, safety features outside of the MOX facility emergency control room would be needed to ensure continued safe handling and storage of licensed nuclear material. The Director asked FCSS management and staff to review the matter. The FCSS review was performed by an individual not involved in the MOX project. The results of that review were documented in a September 3, 2003 memorandum to the Director, NMSS. By memorandum dated December 23, 2003, FCSS informed the Director, NMSS, that FCSS had completed the required actions and that closure of the issue was done appropriately.

On November 20, 2003, before FCSS staff completed its required actions, the employee filed a Differing Professional Opinion (DPO). A DPO is a formal process available to employees who are not satisfied with the outcome of the DPV process.

NRC values these procedures because it allows managers to hear all sides of a debate. The DPV and DPO processes also protect employees from retaliation for expressing a different view.

Working with the Russian Federation

In February 2004, staff traveled to Moscow, Russia to meet with members of the Russian Federation Gosatomnadzor (GAN), the U.S. Department of Energy (DOE), and the European community to discuss the development of Russian regulations and safety guides for nuclear waste. The regulations and safety guides are related to the Russian mixed oxide fuel project and are part of the Russian infrastructure support project funded by DOE. The interactions between the various parties provides GAN with a western regulatory perspective and will result in improved second draft versions of these regulations and safety guides.



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Mixed Oxide Xchange is published quarterly to highlight recent news and events associated with the NRC's licensing of a mixed oxide fuel fabrication facility. We welcome your suggestions for improvement of this newsletter. If you have comments or suggestions, you may contact us at moxfeedback@nrc.gov. To subscribe or unsubscribe, please send an e-mail

Find meeting summaries, updates related to the proposed MFFF, frequently asked questions and past issues of the Mixed Oxide Xchange.

Go to <http://www.nrc.gov/materials/fuel-cycle-fac/mox/licensing.html>.