



Mixed Oxide Xchange

U. S. Nuclear Regulatory Commission

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NRC Issues Draft Environmental Impact Statement

On February 20, 2003, the NRC staff began distributing for comment a Draft Environmental Impact Statement (DEIS) pursuant to the requirements of NRC's 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions." As required by the National Environmental Policy Act (NEPA), the DEIS evaluates the environmental impacts of the proposed MOX facility. Additionally, the DEIS evaluates the impacts of the no-action alternative, which is the continued storage of surplus weapons-grade plutonium at existing Department of Energy (DOE) sites. Continued storage would be expected to have no impact on air quality, water quality, waste management, cultural resources, or soils. The economic cost would be lower than that for the proposed action. However, continued storage would meet none of the DOE's goals for the plutonium disposition program, which are to (1) reduce the threat of nuclear weapons proliferation by ensuring that surplus stocks of weapons-grade plutonium are converted to a proliferation resistant form, (2) reduce the number of locations at which such plutonium is stored, and (3) reduce the risk of such plutonium falling into the hands of rogue states and terrorist groups.

The primary benefit of operation of the proposed MOX facility would be the reduction of surplus weapons-grade plutonium inventories.

Operation of the proposed MOX facility would be expected to produce insignificant air quality impacts, and no surface water impacts.

The existing waste management systems at DOE's Savannah River Site, where the proposed MOX facility would be built, would not be adversely affected.

After weighing the costs and benefits of the proposed action and comparing alternatives, the NRC staff made a preliminary recommendation that the proposed license to DCS be issued, with conditions to protect environmental values.

Comments on the DEIS will be accepted until May 14, 2003. Comments may be mailed to the address listed in the DEIS or submitted through the MOX web page:

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

CORRECTION TO THE MOX DEIS

Subsequent to issuance of the DEIS, the NRC identified an error in the calculation of accident doses. The error is an overestimate of the 1-year accident doses to members of the public. The NRC will discuss the cause and impacts of this error at the public meetings scheduled for March 25-27, 2003. When the doses have been recalculated, the NRC will post an errata sheet on the MOX Website and mail copies to recipients of the DEIS.



Status of MOX DSER Open Items

The NRC Draft Safety Evaluation Report for the MOX facility was issued last year on April 30, 2002. This draft report identified a total of 56 open, or unresolved, items from the staff's safety review. The staff identified an additional 10 open items during the ongoing review of additional information, which includes the revised Construction Authorization Request that was submitted on October 31, 2002. During the period from April 2002 to February 2003, 40 of the open items have been closed leaving 26 open items. The status of open item resolution is shown by category in the table (right). The resolution of these issues will be discussed in Revision 1 to the Draft Safety Evaluation Report, scheduled to be issued on April 30, 2003.

Technically complex open items in the chemical safety area include potential explosions, toxic chemical releases, and the fire hazard resulting from the presence of oxide powders and titanium. Most of the explosion issues are being moved toward resolution by discussions between NRC staff and DCS of various controls that can be used to prevent explosions. The primary considerations for toxic chemical releases are assuring that standards for potentially exposed workers are adequate to protect their health and safety.

Status of Open Items		
Category	Closed Items	Open items Remaining
Institutional	1	0
Site Description	0	1
Financial	0	2
Safety Assessment	3	1
Criticality Safety	4	6
Fire Safety	5	3
Chemical Safety	6	5
Radiation Safety	1	0
Environmental	2	0
Aqueous Polishing	9	6
MOX Processing	3	1
Ventilation Systems	0	1
Instrumentation & Control	1	0
Fluid Transport	1	0
Fluid Systems	4	0
Totals	40	26

Other technically complex open items are in the areas of nuclear criticality safety (NCS) and fire safety issues. The NCS open items primarily involve assuring an adequate margin of safety against accidental nuclear criticality. The fire safety issues include soot and high temperature damage to HEPA filters and fire barrier integrity. DCS will perform additional studies of system performance and fire behavior to address these concerns.

DISCOVERY PHASE OF MOX HEARING

The NRC staff is evaluating a construction authorization request (CAR) submitted by Duke Cogema Stone & Webster (DCS). The staff must approve the CAR before DCS would be authorized to begin building the proposed MOX fuel fabrication facility. The staff plans to issue a final safety evaluation report on the CAR in the fall of 2003.

An Atomic Safety and Licensing Board was established in 2001 to consider legal and technical arguments being made by groups opposing the CAR, and the Board is now governing the discovery phase of the hearing. Discovery is a process common to many legal proceedings, and gives hearing participants the opportunity to learn the details of an opponent's positions -- and the identities of any expert witnesses -- before evidence is presented to the Board for a decision.

So far in the discovery process, one of the groups opposing the CAR -- Georgians Against Nuclear Energy (GANE) -- has submitted written questions (interrogatories) to DCS, which DCS has now answered. These questions relate to GANE's legal and technical arguments (contentions) previously admitted by the Board into the CAR proceeding. DCS has likewise sent questions to and received answers from GANE. Together, DCS and GANE have now identified several expert witnesses. As a further part of the discovery process over the next several months, DCS and GANE have the option of taking sworn testimony (depositions) from the opposing expert witnesses. The NRC staff will not be subject to any discovery processes until after it issues its final SER.

USE OF MOX IN OPERATING REACTORS

On February 27, 2003, Duke Power submitted an application for amendment of the Operating Licenses for the Catawba and McGuire Nuclear Stations. The amendments, if granted, would allow the use of four MOX lead test fuel assemblies in one of the McGuire or Catawba units. The application relies on several Topical Reports that have previously been submitted for staff review. Duke has requested that the staff complete its review of the application by August 2004 in anticipation of loading the fuel assemblies into one of the units in a Spring 2005 refueling outage.

UPCOMING MEETINGS

- March 25 DEIS Public Comment Meeting, Savannah, GA**
- March 26 DEIS Public Comment Meeting, N. Augusta, SC**
- March 27 DEIS Public Comment Meeting, Charlotte, NC**

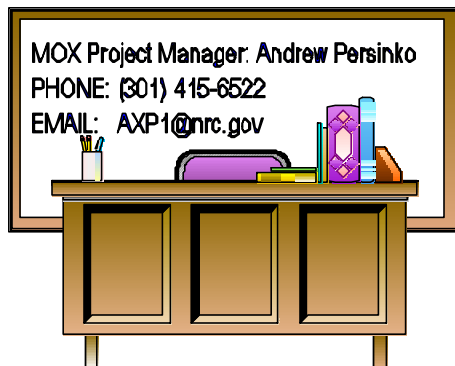
ALPHABET SOUP

(commonly used acronyms in this newsletter)

ASLB	Atomic Safety and Licensing Board	MFFF	Mixed Oxide Fuel Fabrication Facility
CAR	Construction Authorization Request	MOX	Mixed Oxide
DCS	Duke Cogema Stone & Webster	MPQAP	MOX Project Quality Assurance Plan
DEIS	Draft Environ. Impact Statement	NCS	Nuclear Criticality Safety
DOE	Department of Energy	NEPA	National Environmental Policy Act
DSER	Draft Safety Evaluation Report	NRC	Nuclear Regulatory Commission
GANE	Georgians Against Nuclear Energy	PM	Project Manager
IROFS	Items Relied on for Safety	QL	Quality Level
HEPA	High Efficiency Particulate Air	SPD	Surplus Plutonium Disposition

NRC's Mixed Oxide Fuel Infoweb

To 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>.



U.S. Nuclear Regulatory Commission

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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 to subscribe@nrc.gov. All issues will be e-mailed unless you provide your mailing address and indicate your preference to receive copies by U.S. Postal Service.