

NUCLEAR REGULATORY COMMISSION

[Docket No. 70-3098]

**Duke Cogema Stone and Webster's Proposed Mixed Oxide Fuel Fabrication Facility;
Notice of Availability of Final Environmental Impact Statement**

AGENCY: Nuclear Regulatory Commission

ACTION: Notice of Availability of Final Environmental Impact Statement

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SUMMARY: Notice is hereby given that the U.S. Nuclear Regulatory Commission (NRC) is
issuing a Final Environmental Impact Statement (FEIS) on the proposed construction and
operation of a mixed oxide (MOX) fuel fabrication facility at the Savannah River Site in South
Carolina. The FEIS is being issued as part of the NRC's decision-making process on whether
to authorize Duke Cogema Stone & Webster (DCS), a contractor of the U.S. Department of
Energy (DOE), to construct and operate the proposed MOX fuel fabrication facility (MOX
facility).

The proposed MOX facility would convert depleted uranium dioxide and weapons-grade
plutonium dioxide into MOX fuel. The FEIS discusses the purpose and need for the proposed
MOX facility, and reasonable alternatives to the proposed action, including the no-action

alternative. The FEIS also discusses the environment potentially affected by the proposal, presents and compares the potential environmental impacts resulting from the proposed action and its alternatives, and identifies mitigation measures that could eliminate or lessen the potential environmental impacts.

The FEIS is being issued as part of the NRC's decision-making process on whether to authorize DCS to begin construction of the proposed MOX facility. The FEIS will also be relevant to any later decision on whether to authorize DCS to operate the MOX facility. Based on the evaluation in the FEIS, the NRC environmental review staff have concluded that the proposed action will generally have small effects on the public and existing environment. This FEIS reflects the final analysis of environmental impacts of DCS's proposal and its alternatives including the consideration of public comments received by the NRC. In addition, the FEIS provides summaries of the substantive public comments on the draft EIS, and responses, as appropriate.

Several pages in the FEIS have been removed from public access based on the additional security reviews that the NRC initiated on October 25, 2004. The material on these pages is being withheld pursuant to 10 CFR 2.390(a).¹

ADDRESSES: The NRC maintains an Agencywide Documents Access and Management System (ADAMS), which provides text and image files of NRC's public documents. The FEIS and its appendices may be accessed through the NRC's Public Electronic Reading Room on the Internet at <http://www.nrc.gov/reading-rm/adams.html>. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC Public Document Room (PDR) Reference staff at 1-800-397-4209, 301-415-4737 or by email to pdrr@nrc.gov. Please note that on October 25, 2004, the NRC suspended public access to

¹Please note that the MOX proceeding is governed by the old 10 CFR Part 2 provisions. Under the old regulation, the material being withheld is in accordance with 10 CFR 2.790(a).

ADAMS, and initiated an additional security review of publicly available documents to ensure that potentially sensitive information is removed from the ADAMS database accessible through the NRC's web site. Pending resumption of public access to ADAMS, interested members of the public may obtain copies of the referenced documents that have undergone security screening by contacting the Public Document Room at the above phone number.

The FEIS is also available for inspection at the Commission's Public Document Room, U.S. NRC's Headquarters Building, 11555 Rockville Pike (first floor), Rockville, Maryland. Upon written request and to the extent supplies are available, a single copy of the FEIS can be obtained for a fee by writing to the Office of the Chief Information Officer, Reproduction and Distribution Services Section, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; by electronic mail at DISTRIBUTION@nrc.gov; or by fax at (301) 415-2289.

A selected group of documents associated with the MOX facility may also be obtained from the Internet on NRC's MOX facility web page:

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

SUPPLEMENTARY INFORMATION: In January 2000, the DOE issued a Record of Decision pertaining to its surplus plutonium disposition program and the DOE's 1999 EIS related to this program [65 FR 1608]. The fundamental purpose of the DOE program is to ensure that plutonium produced for nuclear weapons and declared excess to national security needs is converted to forms that are inaccessible and unattractive for use in nuclear weapons.

The FEIS for the proposed MOX facility was prepared by the staff of the NRC and its contractor, Argonne National Laboratory, in compliance with the National Environmental Policy Act (NEPA), and the NRC's regulations for implementing NEPA (10 CFR Part 51). The proposed action involves a decision by NRC of whether to authorize DCS to construct and later

operate the proposed MOX facility at the Savannah River Site to convert surplus weapons plutonium into MOX fuel.

If approved by the NRC, the proposed MOX facility would be built in the F-Area of the DOE's Savannah River Site (SRS). Feedstock (surplus plutonium dioxide and depleted uranium dioxide) would have to be transported to SRS to make the MOX fuel. To support operation of the proposed MOX facility, two other new facilities would have to be built by the DOE at the SRS. Infrastructure upgrades, such as construction waste transfer pipelines, electric utility line realignment, and addition of access roads, would also be required. Any MOX fuel made at the proposed MOX facility would be transported to mission reactors, where it would be irradiated.

The NRC published a Notice of Intent to prepare an Environmental Impact Statement for the proposed MOX facility, and to conduct a scoping process, in the *Federal Register* on March 7, 2001 [66 FR 13794]. NRC staff subsequently held scoping meetings, and issued a Scoping Summary Report in August 2001. In April 2002, DOE issued an amended Record of Decision changing its planned approach for surplus weapons plutonium disposition [67 FR 19432]. On August 22, 2002, the NRC announced public meetings to discuss changes in DCS' Environmental Report (ER) that resulted from changes in DOE's plans [67 FR 54501]. The meetings were held on September 17, 2002, in Savannah, Georgia, September 18, 2002, in Augusta, Georgia, and September 19, 2002, in Charlotte, North Carolina. On June 20, 2003, DCS submitted Revision 3 of its ER, and on August 13, 2003, DCS submitted Revision 4 of its ER, and on June 10, 2004, DCS submitted Revision 5 of its ER. These revisions are summarized in Appendix J of the FEIS.

The FEIS describes the proposed action, and alternatives to the proposed action, including the no-action alternative. The FEIS discussion of the no-action alternative evaluates the environmental impacts of the continued storage of surplus plutonium in various DOE

locations nationwide, in the event NRC decides not to approve the proposed MOX facility. Alternatives considered but not analyzed in detail include alternate locations for the proposed MOX facility in the F-Area, alternative technology and design options, immobilization of surplus plutonium instead of producing MOX fuel, deliberately making off-specification MOX fuel, and the Parallex Project, the latter of which involves irradiating the MOX fuel in Canadian Deuterium-Natural Uranium Reactors. Additionally, the FEIS compares the impacts of using high-efficiency particulate air filters to the impacts of using sand filters for removal of particulate air emissions.

After weighing the impacts, costs, and benefits of the proposed action and comparing alternatives (see Chapter 4 of the FEIS), the NRC staff, in accordance with 10 CFR 51.91(d), sets forth its final NEPA recommendation regarding the proposed action. The NRC staff recommends that, unless safety issues mandate otherwise, the action called for is the issuance of the proposed license to DCS with conditions to protect environmental values.

The NRC staff in the Division of Fuel Cycle Safety and Safeguards are currently completing the safety review of DCS' construction authorization request. The final decision is currently scheduled for the Spring of 2005.

Dated at Rockville, Maryland, this 21 day of December 2004.

For the Nuclear Regulatory Commission.

/RA/

Scott C. Flanders, Deputy Director
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