NEPA Activities for the Depleted Uranium Hexafluoride Management Program

On October 31, 2000, the U.S. Department of Energy (DOE) issued a request for proposals (RFP) to procure a contractor to design, construct, and operate depleted uranium hexafluoride (DUF_6) conversion facilities. The objective of the DUF_6 conversion project is to chemically process the Department's inventory of DUF_6 (now located at the Paducah Gaseous Diffusion Plant, the Portsmouth Gaseous Diffusion Plant, and the ETTP) to some other stable chemical form acceptable for transportation, beneficial use/reuse, and/or disposal. Conversion facilities will be constructed at Paducah and Portsmouth. In addition, the selected contractor will also assume cylinder surveillance and maintenance of the DOE inventory of DUF_6, low-enrichment uranium (LEU), hexafluoride (UF_6) and empty and heel cylinders. These surveillance and maintenance activities will include the transfer of cylinders located at the ETTP to the Portsmouth site for conversion. Finally, the selected contractor will also be responsible for transportation and disposition of conversion by-products, all waste forms, and empty and heel cylinders. It is currently estimated that it will take up to 25 years of conversion plant operations to convert all of DOE's DUF_6 inventory.

As part of the selection process, DOE will prepare an environmental critique and synopsis for each proposal. The environmental critique will evaluate the environmental data and information submitted by each offeror and will be subject to the confidentiality requirements of the procurement process. A publicly available environmental synopsis, based on the environmental critique, will be prepared to document the consideration given to environmental factors in the contractor selection process and in the determination of reasonable alternatives. The environmental synopsis will be filed with the U.S. Environmental Protection Agency and will be incorporated into the site-specific Environmental Impact Statement (EIS) analysis.

Purpose of the EIS

This EIS will assess the potential environmental impacts of constructing, operating, maintaining, decontaminating, and decommissioning DUF_6 conversion facilities at the Portsmouth and Paducah gaseous diffusion plant sites, as well as other reasonable alternatives. The EIS will aid decision making on DUF_6 conversion by evaluating the environmental impacts of the range of reasonable alternatives, as well as providing a means for public input into the decision-making process. DOE is committed to involving the public in the preparation of the EIS.

Preparation of an Environmental Impact Statement

Federal laws and regulations require the federal government to evaluate the effects of its actions on the environment and to consider alternative courses of action. The National Environmental Policy Act of 1969 (NEPA) specifies when an environmental impact statement (EIS) must be prepared. NEPA regulations require, that among other things, federal agencies include discussion of a proposed action and the range of reasonable alternatives in an EIS. Sufficient information must be included in the EIS for reviewers to evaluate the relative merits of each alternative.

For general information on the DOE NEPA process, please contact Carol M. Borgstrom, Director, Office of NEPA Policy and Compliance (EH-42), U.S. Department of Energy, 1000 Independence Avenue, S.W., Washington, DC 20585-0119; telephone (202) 586-4600 or (800) 472-2756 (messages only).

A Tiered Approach to NEPA

This EIS represents the second level of a tiered environmental review process being used to evaluate and implement the DUF_6 management program. Tiering refers to the process of first addressing general matters in a Programmatic EIS (PEIS), then moving to a more narrowly focused (project level) environmental review that incorporates by reference the more general discussions. The DUF_6 PEIS, issued in April 1999, was the first level of the tiered approach for DUF_6 management.

The DUF_6 PEIS addressed the potential environmental impacts of broad strategy alternatives, including analyses of the impacts of (1) continued storage of DUF_6 at DOE's current storage sites; (2) technologies for converting the DUF_6 to depleted triuranium octaoxide (U_3O_8), uranium dioxide (UO_2), or uranium metal; (3) long-term storage of depleted U_3O_8 and UO_2 for subsequent use or disposal; (4) long-term storage of DUF_6 in cylinders at a consolidated site; (5) use of depleted UO_2 and uranium metal conversion products; (6) transportation of materials; and (7) disposal of depleted U_3O_8 and UO_2 at generic disposal sites. The results of the PEIS analysis, as well as supporting documentation prepared during and after the PEIS preparation, will be incorporated into this EIS to the extent appropriate.

The Record of Decision (ROD) for the DUF_6 PEIS identified DOE's decision to promptly convert the DUF_6 inventory to a more stable chemical form. The ROD also identified that the conversion facilities would be built consistent with plans submitted by DOE under Public Law 105-204. This second-tier EIS will assess environmental impacts associated with implementing the DUF_6 PEIS ROD.

EIS Schedule

The scoping period for the EIS is scheduled to close January 11, 2001. The draft EIS is scheduled to be published by June 2002. A 45-day comment period on the draft EIS is planned, and public hearings to receive comments will be held approximately one month after issuance. Availability of the draft EIS, the dates of the public comment period, and information about the public hearings will be announced in the *Federal Register* and in the local news media.

The final EIS is scheduled to be published in January 2003. A Record of Decision would be issued no sooner than 30 days after the U.S. Environmental Protection Agency notice of availability of the final EIS is published in the *Federal Register*.

Preliminary Alternatives

Consistent with NEPA implementation requirements, this EIS will assess the range of reasonable alternatives regarding constructing, operating, maintaining, decontaminating, and decommissioning DUF_6 conversion facilities. DOE welcomes comments on these or other reasonable alternatives. This list of alternatives is subject to modification in response to comments received during the public scoping process.

Preferred Alternative. Under the preferred alternative, two conversion facilities would be built: one at the Paducah Gaseous Diffusion Plant site (Paducah, Kentucky) and another at the Portsmouth Gaseous Diffusion Plant site Porsmouth, Ohio). The cylinders currently stored at the ETTP site near Oak Ridge, Tennessee, would be transported to Portsmouth for conversion. The conversion products (i.e., depleted uranium, as well as fluorine components produced during the conversion process) would be put to beneficial uses or disposed of at an appropriate disposal facility. This alternative is consistent with the Conversion Plan, that DOE submitted to Congress

Public Law 105-204

The U.S. Congress stated its intentions with regard to DUF_6 in Public Law 105-204, signed by the President in July 1998. This law directed the Secretary of Energy to prepare and submit to Congress a plan for the construction and operation of plants to treat and recycle the DUF_6 consistent with the National Environmental Policy Act (NEPA).

in July 1999 in response to Public Law 105-204. Sub-alternatives to be considered for the preferred alternative include

- Conversion technology processes identified in response to the final RFP for DUF_6 conversion services, plus any other technologies that DOE believes must be considered.
- Local siting options for building and operating conversion facilities within the Paducah and Portsmouth plant boundaries.
- Timing options, such as staggering the start of the construction and operation of the two conversion facilities.
- Interim storage of conversion products at the conversion sites, prior to off-site shipment.
- Fabrication of representative depleted uranium and hydrogen fluoride (HF) products suitable for use.
- Packaging, handling, and transportation of conversion products (depleted uranium and HF neutralized to solid calcium fluoride) to a low-level-waste disposal facility.

One Conversion Plant Alternative. An alternative of building and operating only one conversion facility at either the Portsmouth or the Paducah site will be considered. This plant could differ in size or production capacity from the two proposed for Portsmouth and Paducah. Technology and local siting sub-alternatives will be considered as with the preferred alternative.

Use of Existing UF_6 Conversion Capacity Alternative. DOE will consider using existing UF_6 conversion capacity at commercial nuclear fuel fabrication facilities in lieu of constructing one or two new conversion plants. DOE is evaluating the feasibility of using existing conversion capacity, although no expression of interest has been received from such facilities.

No Action Alternative. Under the ''no action'' alternative, cylinder management activities (handling, inspection, monitoring, and maintenance) would continue under the ''status quo'' at the three current storage sites indefinitely, which includes actions needed to meet safety and environmental requirements.

Where applicable under the alternatives listed above, transportation options, such as truck, rail, and barge, will be considered for shipping DUF_6 cylinders to a conversion facility and conversion products to a disposal facility.

Public Involvement

Public input into the EIS process is encouraged, and there are many ways of providing comments. To ensure that comments are considered in the preparation of the EIS, they must be postmarked by January 11, 2001. Late comments will be considered to the extent practicable. The comments will be used to help determine the scope of the EIS and to identify issues of concern to the public. This process allows DOE to focus more time and resources on these issues of concern when the EIS is being prepared.

How To Comment on the NEPA Activities

There are six ways to provide written or oral comments: at scoping meetings, by mail, through the Web, by e-mail, by fax, or by voice message.

Mail Comments: Written comments should be mailed to
Kevin Shaw
U.S. Department of Energy, Office of Environmental Management
Office of Site Closure - Oak Ridge Office (EM–32)
19901 Germantown Road, Germantown, Maryland 20874

World Wide Web: Comments can be submitted directly from the program web site: http://web.ead.anl.gov/uranium .

E-Mail: Comments can be e-mailed to DUF6.Comments@em.doe.gov (please use 'NOI Comments' for the subject).

Toll-Free FAX: Comments can be faxed toll free to 1-866-530-0943.

Toll Free Voice Message (Phone): Comments can be left as a voice message at the following toll-free number (in the United States): 1-866-530-0944

For More Information

Please direct comments or questions concerning the DOE DUF_6 Management Program to: Kevin Shaw, U.S. Department of Energy, Office of Environmental Management, Office of Site Closure Oak Ridge Office (EM–32), 19901 Germantown Road, Germantown, MD 2087; (301) 903-4232; fax (301) 903-3479.

Environmental and project-related materials are available for public review in the following reading rooms:

DOE Headquarters, Freedom of Information Reading Room, 1000 Independence Avenue, S.W., Room 1 E-190, Washington, DC 20585. Telephone: (202) 586-3142.

Oak Ridge/DOE, Public Reading Room, 230 Warehouse Road, Suite 300, Oak Ridge, Tennessee 37831. Telephone: (865) 241-4780 or 1-800-382-6938, option 6.

Paducah/DOE, Environmental Information Center, 115 Memorial Drive, Paducah, Kentucky 42001. Telephone: (270) 554-6967.

Portsmouth/DOE, Environmental Information Center, 3930 U.S. Route 23, Perimeter Road, Piketon, Ohio 45661. Telephone: (740) 289-3317.

Additional information is also available through the project web site at: http://web.ead.anl.gov/uranium, or at http://www.tis.eh.doe.gov/nepa.