## Document D0031

STATE OF TENNESSEE
**DEPARTMENT OF ENVIRONMENT AND CONSERVATION**
NASHVILLE, TENNESSEE 37243-0435

BETSY L. CHILD
COMMISSIONER

PHIL BREDESEN
GOVERNOR

January 30, 2004

Gary S. Hartman
U.S. Department of Energy
Oak Ridge Operations
PO Box 2001
Oak Ridge, TN 37831

RE: Depleted Uranium Hexafluoride EIS

Dear Mr. Hartman:

Please find enclosed the comments on the Draft Environmental Impact Statements concerning the facilities at Paducah and Portsmouth. I am writing to emphasize two points. The Department of Energy is under a final Order regarding the depleted uranium hexaflouride (DUF6) cylinders at the East Tennessee Technology Park in Oak Ridge. That Order requires that all of the cylinders be removed by December 31, 2009. All actions of the Department of Energy, in regard to the cylinders, should be consistent with that deadline, including the statements in the Environmental Impact Statement. The other issue is that at this time we support the option of over-packing any cylinders that do not meet DOT transportation requirements. We do not view any other option as having been adequately studied or evaluated in a NEPA process.

D0031-1

D0031-2

Sincerely,

Karen H. Stachowski

Karen Stachowski
Deputy Commissioner

Encls.

Cc: John Owsley

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## Document D0032

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DOE OVERSIGHT DIVISION
761 EMORY VALLEY ROAD
OAK RIDGE, TENNESSEE 37830-7072

January 23, 2004

Gary S. Hartman
U.S. Department of Energy
Oak Ridge Operations
PO Box 2001
Oak Ridge, TN 37831

Dear Mr. Hartman

**Draft Environmental Impact Statement (DEIS) for a proposal to Construct, Operate, Maintain, and Decontaminate and Decommission a Depleted Uranium Hexafluoride (DUF6) Conversion Facility at Portsmouth, Ohio and another at Paducah, Kentucky, DOE/EIS 0359 and DOE/EIS 0360, respectively**

The Tennessee Department of Environment and Conservation, DOE Oversight Division (TDEC/DOE-O), has reviewed the above subject documents in accordance with the requirements of the National Environmental Policy Act (NEPA) and associated regulations of 40 CFR 1500-1508 and 10CFR 1021 as implemented. The Tennessee Emergency Management Agency also concurs in these comments.

**General Comments:**

The state of Tennessee concurs with the proposed action for managing the ETTP cylinder inventory. We defer comments on siting and operational alternatives at DOE Paducah and DOE Portsmouth to the commonwealth of Kentucky and the state of Ohio respectively. D0032-1

We do not expect to compromise environmental quality in another state in order to benefit our own. We will continue to talk about $UF_6$ with Ohio and Kentucky like we have for the past several years. D0032-2

The DEIS documents were reviewed with the Tennessee Consent Order No.97-0378-H0023 Part IX of the Uranium Hexafluoride Management Plan in focus, which states *"By (July 31, 1999), DOE shall issue its record of decision (ROD) for the final Programmatic Environmental Impact Statement for Alternative Strategies for the long-term management and Use of Depleted Uranium Hexafluoride (PEIS). Unless DOE selects the no action alternative in the ROD, DOE* D0032-3

*shall either remove all known $DUF_6$ cylinders and their contents from ETTP or complete the conversion of the contents of the cylinders by (December 31,2009). In this event, DOE may undertake additional National Environmental Policy Act reviews (EAs/EISs) in order to implement the alternative selected in the ROD. Within 60 days of completing any such further NEPA reviews as may be necessary to implement the selected long-term management strategy, DOE shall submit a plan containing schedules for activities that will ensure removal of all known $DUF_6$ cylinders and their contents from ETTP or conversion of the contents of such cylinders will be completed by December 31, 2009. The schedule contained in the plan shall be considered an enforceable provision of this Agreement."* These documents should state that DOE shall submit this schedule within 60 days of completing this EIS. Any associated references (summaries, etc) should be changed accordingly. D0032-3 (cont.)

**Specific Comments:**

**Section 1, Introduction, 2.1 No Action Alternative, 2.4.1 General:** Both EIS's evaluate a no action alternative that assumes continued storage of cylinders at Portsmouth, Paducah, and ETTP. These documents should state that the Tennessee Consent Order requires conversion or removal of $UF_6$ cylinders from ETTP by the end of 2009 because DOE did not select the no action alternative in the PEIS ROD of April 1999. D0032-4

**Section 1.2.1, Table 1.1-1 Inventory of DOE $UF_6$ Cylinders Considered in This [sic] EIS:** The tables list the proposed action for shipment of all ETTP cylinders to Portsmouth. According to the table this includes 584 empty cylinders. Most of these empty cylinders have already been shipped to NTS. Some empty 48-inch cylinders remaining at ETTP will probably be shipped to Portsmouth. The table is footnoted to show that the numbers are as of April 30, 2003. Updated data should be used in the final Portsmouth and Paducah documents. D0032-5

**Section 2.2.4 Preparation and Transportation of ETTP Cylinders, Pg. 2-18; Section 5.2.4 Cylinder Preparation Impacts at ETTP.** The statement is made in 2.2.4 that "It is unknown exactly how many $DUF_6$ cylinders do not meet DOT transportation requirements." In 5.2.4, the evaluation referenced in the $DUF_6$ PEIS (DOE 1999a) indicates that 50% to 100% of the ETTP inventory would not meet DOT requirements. The current documents should be updated to show the number of $DUF_6$ cylinders that will be shipped initially without extra preparation such as overpacks or transfer of contents. D0032-6

**Section 2.2.5, Preparation and Transportation of ETTP Cylinders to Portsmouth, Page S-21, Second Paragraph, Line 8:** There are "no current plans" for a new cylinder transfer facility at ETTP. If such a facility was to be further considered, the state of Tennessee would expect to be notified through the NEPA process of such plans as soon as they reach the stage of serious consideration. Due to the nature of the operation (purging of deteriorating cylinders, and subsequent refilling of more substantial cylinders) the environmental risk posed by this type of facility to the environment of the state of Tennessee and the East Tennessee Technology Park has the potential to be substantial. The state of Tennessee requires that the cylinders be shipped in a DOT-compliant manner using over-pack containers, if necessary. This applies even if the cylinders are shipped by a different mode of transportation to Paducah. D0032-7

**Section 2.3.5, Other Transportation Modes, Page 2-25:** Due to the difficulties cited by the document with air and barge transportation, it appears that these modes of transportation are not being seriously considered. If this situation changes, the state would expect adequate NEPA review in order to assess risks associated with those methods. D0032-8

**Section 2.4.2.3, Human Health and Safety – Transportation:** – This section shows the two highest potential accidents to involve either $NH_3$ or HF shipments. It should be expanded to show that there is also transportation risk connected with shipping $UF_6$ cylinders from ETTP to the selected conversion sites. D0032-9

**Section 3.2.7.1 Radiation Environment, Page 3-56, Line 3:** states that *"radiation exposure of the general public MEI (Maximally Exposed Individual) is estimated to be 6.7 mrem/yr. This dose is about 7% of the maximum dose limit of 100 mrem/yr set for the general public (DOE 1990) and much smaller than the average dose from natural background radiation in the state of Tennessee. The actual radiation exposure of the general public would be much lower that the estimated maximum value."* The state would like to point out that these dose estimates to the general public provided by the document are very scenario-dependent. The state's UF6 Cylinder Yard Monitoring Project recorded a 2002 direct gamma dose of 9,539 mrem/yr at the fence line of the K-1066-L yard. While the state's dose measurement in this instance is the result of continuous monitoring (twenty four hours per day, 365 days) and reflects direct gamma dose only, the relative openness of the ETTP site to co-located workers from private companies, and the plans to further open the ETTP site to the public leave many previous assumptions about dose estimates in question. D0032-10

**Section 5.2.3.1.1 Radiological Impacts, Page 5-61, Fourth Paragraph, Line 2** states that *"for the first 2 years, because of receiving, inspecting and putting the ETTP cylinders into storage position, the potential radiation exposures are expected to be greater than in following years."* This should be changed to reflect the fact that only ANSI-N14.1 compliant cylinders will be shipped during the first 2 years and the total shipping campaign will take approximately twice that long resulting in higher potential radiation exposures for a longer time period. D0032-11

If you have any questions concerning these comments, please contact me at (865) 481-0995.

Sincerely

John A. Owsley
Director

Jao742.99

## Document D0033

**Ruby English**
**6715 Metropolis Lake Road**
**West Paducah, KY 42086**
**Phone: (270) 488-3225**
**E-Mail: renglish@brtc.net**

February 3, 2004

Gary S. Hartman
U. S. Department of Energy
Oak Ridge Operations
PO Box 2001
Oak Ridge, TN 37831

***Public Comment in the Matter of:*** ***Draft Environmental Impact Statement***
**Construction and Operation of a Depleted Uranium**
***Hexafluoride Conversion Facility***

***Comment Period was Extended to: February 4, 2004 by Department of Energy*** D0033-1

Please include the following comments as part of the permanent record.

Thank you for allowing me the opportunity to comment on such an important topic. The construction of a DUF6 Conversion Facility to be located at Paducah, KY. As you know, I am a neighbor of the Paducah Gaseous Diffusion Plant and have always tried to comment on topics you have let me know about and I always try to do it in a civilized manner. D0033-2

I understand about the conversion plant being built here and employing some of the workers that will be laid off when USEC closes. Since this is a rural community and the high paying jobs are not around here this plant would be good for the few people that will be successful in securing those positions. But, I also understand that when all or most of the current and former workers begin developing health problems then that will be another story. D0033-3

The continued storage of the current DUF6 cylinders indefinitely will eventually cause you more of a problem if these are not moved and disposed of due to continued exposure. There are more accidents at the Paducah Gaseous Diffusion Plant each year than is reported. One day this plant will cause and accident that will affect this whole area if these cylinders are not cleaned up. Then, I look at the health aspect for the neighborhood and wonder how much more The Department of Energy is going to put on us. D0033-4

So money wise this plant will be a good thing. Health-wise this plant addition will only cause more health problems for the neighborhood and the community. D0033-5

Transportation will be another problem, because, you will not only clean-up the cylinders at the Paducah site, but, you will be shipping in cylinders from other locations. These cylinders will be traveling on our roads and rails and possibly down our rivers. There could be accidents and then this would endanger the public. Hexaflouride is dangerous to our health. I also want to know about the disposal of the cylinders as to where they will go. My concern is in the landfill behind my house. Is that the plan? D0033-6

I also want to know about the waste from the DUF6 plant being built in New Mexico by Louisiana Energy Systems. Is the Department of Energy going to be responsible for waste that is produced from this plant. If so will they be shipped to Paducah? From everything that I am reading it seems the plan is for the EPA to lower the standards for the landfills and then DOE will dispose of material in these landfills that should never be put there. This has already happened at the Paducah Site and I am sure it could and will happen again. I don't really know what else to say, because, I think decisions and agreements have already been made and any thing else I could say would not make much difference. I hope that you will seriously consider and think about the decisions you make that at least take the thought of what is good for the neighborhood and the worker's. I know you have to make money, but please don't do it at the expense of human life. There has already been more than enough lives taken due to health problems caused by the misguided management that has been at this plant in the past. Please do something good for the community and build and operate a clean plant. The imaginary fences are not there and the contaminants don't stop at the fence either. The landfills are already leaking, so any additional dumping will only endanger us that much more. D0033-7 D0033-8 D0033-9

This Paducah Site will become a dumping ground for all waste good or bad that other locations will want to ship to Paducah if you let them. So, let me know what your decision will be and May God Bless. D0033-10

Sincerely,

Ruby English

Ruby English
PGDP Neighbor and
ACT Chairperson

## Document D0034

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
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ATLANTA, GEORGIA 30303-8960

February 2, 2004

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Mr. Gary S. Hartman
DOE-ORO Cultural Resources Management Coordinator
U.S. Department of Energy-Oak Ridge Operations
P.O. Box 2001
Oak Ridge, TN 37831

**RE: EPA Review and Comments on**
**Draft Environmental Impact Statement (DEIS)**
**Construction and Operation of a Depleted Uranium Hexafluoride**
**Conversion Facility at the Paducah, KY site**
**CEQ No. 030541**

Dear Mr. Hartman:

The U.S. Environmental Protection Agency (U.S. EPA) Region 4 reviewed the subject Draft Environmental Impact Statement (DEIS) pursuant to Section 309 of the Clean Air Act and Section 102 (2)(C) of the National Environmental Policy Act (NEPA). The purpose of this letter is to provide the Nuclear Regulatory Commission (NRC) with EPA's comments regarding potential impacts of the proposed construction and operation of a depleted uranium hexafluoride conversion facility at the Paducah, Kentucky site.

DOE's proposed action is to design, construct, and operate a conversion facility for converting depleted uranium hexafluoride ($DUF_6$) to a more stable chemical form (depleted triuranium octaoxide, $U_3O_8$) at the Paducah, KY site. The resulting conversion products would be suitable for beneficial use or for disposal.

The DEIS assesses the potential environmental impacts of the following activities: 1) construction, operation, maintenance, and decontamination and decommissioning (D&D) of the proposed conversion facility; 2) conversion to depleted $U_3O_8$ based on the proposed Uranium Disposition Services, LLC (UDS) technology; 3) transportation of uranium conversion products and waste to a disposal facility; 4) transportation and sale of the hydrogen fluoride (HF) conversion co-product and 5) neutralization of HF to $CaF_2$ and its sale or disposal in the event that the HF product is not sold.

Potential environmental impacts were assessed by examining all of the activities required to implement each alternative. For each alternative, potential impacts to workers, the public, and the environment were estimated for both normal operations and potential accidents. The No Action alternative is the storage of $DUF_6$ cylinders indefinitely, with continued cylinder surveillance and maintenance. The action alternatives included three potential locations for siting the proposed conversion facility. Location A was identified as the preferred location.

When regulatory compliance is discussed in this document, the radionuclide National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Radionuclide Emissions for United States Department of Energy (USDOE) Owned or Operated Facilities, in 40, CFR 61, Subpart H, is not always adequately referenced. Please include this information in the FEIS. D0034-1

The EIS should include information regarding the capability and capacity for the two disposal facilities mentioned in the DEIS, namely Envirocare and the Nevada Test Site (NTS), to accept the proposed waste products from the Paducah conversion facility. The disposal facilities must meet both the Waste Acceptance Criteria (WAC) limits, as well as have the physical capacity to accept the proposed quantity of conversion product waste. D0034-2

Based on the review of the DEIS, the project received a rating of "EC-1," meaning that some environmental concerns exist regarding aspects of the proposed project. Because of the chemical and radioactive nature of the materials processed and produced, safety measures and prevention of potential impacts to on-site workers and public health are areas of primary concern. Specifically, protecting the environment and human health involves the need for appropriate operation and safety measures, monitoring, short-term storage, packaging, and transportation and sale or disposal of conversion products.

Ongoing radiological monitoring will be required during operation of this facility. Also, appropriate short-term storage of radioactive wastes on-site is required in order to prevent impacts to workers, the public, and the environment. With regard to LLW disposal, the DEIS covers the impacts from the transporting of conversion products to both the Envirocare of Utah, Inc. facility, and Nevada Test Site (NTS) from the proposed conversion facility in Paducah. Construction of the facility could potentially result in minor impacts to wetlands. Overall, the impacts as defined in the DEIS appear to be within acceptable limits. D0034-3

Thank you for the opportunity to comment on this document. We look forward to reviewing the Final EIS. If we can be of further assistance, please contact Ramona McConney of my staff at (404) 562-9615.

Sincerely,

Heinz Mueller

Heinz J. Mueller, Chief
NEPA Program Office

Enclosure: Summary of Rating Definitions and Follow up Action

## SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION*

**Environmental Impact of the Action**

LO-Lack of Objections
The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS sate, this proposal will be recommended for referral to the CEQ.

**Adequacy of the Impact Statement**

Category 1-Adequate
The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alterative and those of the alternatives reasonably available to the project or action. No further analysis or data collecting is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information
The draft EIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment