

**Document D0011**

PUBLIC MEETING

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PRESENTATION BY MR. GARY HARTMAN

SPEAKERS :

MS. BARBARA WALTON

MR. NORMAN MULVENON

MS. SUSAN GAWARECKI

MR. CHARLES FORSBERG

FACILITATOR:

MR. DARRYL ARMSTRONG

JANUARY 15, 2004

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JOAN S. ROBERTS

COURT REPORTER

P.O. BOX 5924

OAK RIDGE, TENNESSEE 37831

(865-457-4027)

1 forward. Seeing none, Barbara Walton will be  
2 the first speaker; who will be followed by  
3 Norman Mulvenon.

4 MS. WALTON: I'm Barbara Walton and I  
5 live here in Oak Ridge and I'm speaking as an  
6 individual. I appreciate this opportunity to  
7 comment. I think they did a good job of  
8 preparing these documents and I agree with the  
9 preferred alternatives. However, we have  
10 somewhat been overtaken by events and the  
11 decision has been made to build the centrifuge  
12 base enrichment plant at Portsmouth. And  
13 partly as a result of that, and partly for  
14 other reasons, the cumulative impacts section  
15 of the Portsmouth document, I feel, has some  
16 inadequacies, which I would like to see  
17 remedied in the final EIS. They refer to a  
18 1977 document, a 1977 Analysis of Environmental  
19 Consequences for such an action that was done  
20 by U.S. Energy Research and Development  
21 Administration. This is on page 5-117 of the  
22 Portsmouth document. I would like to see that  
23 updated. I'm assuming that there will be an  
24 EIS done for the enrichment facility that will  
25 be built at Portsmouth. This document does

D0011-1

D0011-2

<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	<p>state that it will be located in area B that</p> <p>was considered here, so there is no conflict</p> <p>there. Also, there were, in the worker dose on</p> <p>page 5-115 there were two footnotes. Note I</p> <p>said that there was no worker dose given for</p> <p>the lead cascade and the information just was</p> <p>not available. And I hope that that can be</p> <p>remedied to where a better estimate than a 1977</p> <p>document could be given for the final. In</p> <p>addition, there is a section on historical</p> <p>safety for Anhydrous Ammonia and Hydrogen</p> <p>Fluoride, which goes up through 2002, but the</p> <p>table of impacts on page 5-104 analyzes</p> <p>forty-nine percent and seventy percent Aqueous</p> <p>Hydrogen Fluoride. I suspect that was done</p> <p>because it is a bounding, but I would like a</p> <p>clear statement about that. I note that there</p> <p>was a recent derailment of fuming Sulfuric Acid</p> <p>in Knoxville and a lot of people were evacuated</p> <p>away from their homes for three or four days</p> <p>and that is a similar order of magnitude. And</p> <p>thirdly; in the Paducah Environmental Impact</p> <p>Statement on page 320 is figure 3.1-4 on the</p> <p>wetlands. This figure is titled Paducah, but</p> <p>it is the identical figure that is in the</p>	<p>D0011-2 (cont.)</p> <p>D0011-3</p> <p>D0011-4</p> <p>D0011-5</p> <p>D0011-6</p>
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**Documents D0011 & D0012**

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1 Portsmouth document on page 3-19. In other  
2 words, they have shown the Portsmouth wetlands  
3 in the Paducah document. And I assume that  
4 could be corrected for the final. Also, they  
5 say in the document that use of an overpack is  
6 most likely to ship the noncompliant cylinders,  
7 but they also analyze the building of a  
8 facility in Oak Ridge. I would like a more  
9 definitive statement on that. They don't  
10 analyze it as an alternative or give a  
11 preference, it's just a general statement and I  
12 would like a definite statement that that is  
13 what they plan to do. It's fine that they  
14 analyze more than one thing, which is what you  
15 are supposed to do in an EIS. And I think that  
16 covers the major points that I had. Thank you.

17 FACILITATOR: Norman.

18 MR. MULVENON: I'm Norman Mulvenon.  
19 M-u-l-v-e-n-o-n. I'm a resident of the City of  
20 Oak Ridge. My main theme is to thank the  
21 Department of Energy finally for issuing these  
22 environmental impact statements. And the  
23 second thing is that I concur with everything  
24 that Ms. Walton said. Barbara is very  
25 meticulous in reading these documents and is

D0011-6  
(cont.)

D0011-7

D0012-1

1           one of our resources in making sure that the  
2           Department of Energy follows all the rules.  
3           Our main theme here in Oak Ridge is that we  
4           ship those cylinders out of here. We don't  
5           particularly care whether they go to Portsmouth  
6           or Paducah, but they are scheduled to go to  
7           Portsmouth. There are some empties that have  
8           been recently sent to the Nevada test site and  
9           there are some partially filled cylinders that  
10          are ready to go to Ohio right now. And then  
11          the bulk of them are the cylinders which are  
12          going to be shipped out. Our main theme is  
13          that they should leave the City of Oak Ridge.  
14          They present an issue with us about being able  
15          to use the K-25 or ETRP site as a  
16          reindustrialization site. If you were a person  
17          who wanted to lease or build a building out  
18          there and all you see is thousands of these  
19          cylinders stacked around it, I don't think it  
20          is very conducive to people wanting to actually  
21          use the site. Our main theme; ship them out of  
22          here. Thank you very much.

23                   FACILITATOR: Thank you, sir. Anyone  
24                   else registered, Fred?

25                   FRED: No, sir.

D0012-1  
(cont.)

**Document D0013**

22

1 FACILITATOR: Is there anyone who has  
2 not registered who would like to speak at this  
3 time? Please step forward and state your name  
4 for the record.

5 MS. GAWARECKI: Good evening, I'm  
6 pleased to be able to speak on the EISs. I am  
7 Susan Gawarecki, G-a-w-a-r-e-c-k-i, Executive  
8 Director of the local oversight committee and  
9 several of our stakeholder members are here  
10 tonight. We follow EISs like this quite  
11 closely and will issue some official comments  
12 on them. I wanted to say that I concur with  
13 Barbara Walton and Norman Mulvenon and  
14 especially emphasize that safe and rapid  
15 shipment of the cylinders out is a high  
16 priority in this community. We would hope that  
17 UDS would look at this for their part of the  
18 shipping very early on, involve the  
19 stakeholders. Do consider the option of rail  
20 transportation instead of by truck. And  
21 understand that you are going to have to be  
22 working with a number of states and emergency  
23 management organizations as well. And there  
24 are good organizations already built up and a  
25 lot of planning done already. And certainly,

D0013-1

**Documents D0013 & D0014**

23

1 we are eager to work with the company and make  
2 sure that they understand what the needs of the  
3 communities are. But again, we are very  
4 interested in seeing those cylinders shipped  
5 out in a timely and safe manner. Thank you.

D0013-1  
(cont.)

6 FACILITATOR: Thank you. Is there  
7 anybody else who is not registered that would  
8 like to speak at this time? Please step  
9 forward and state your name for the record.

10 MR. FORSBERG: Charles Forsberg,  
11 F-o-r-s-b-e-r-g. Short comment; the facilities  
12 should include expandable long-term storage  
13 facilities for the stable Depleted Uranium  
14 Dioxide waste product. The historical record  
15 of the United States and other Western  
16 countries is that disposal always takes longer  
17 than planned. Plan ahead.

D0014-1

18 FACILITATOR: Thank you, sir. Is there  
19 anyone else who would like to speak who is not  
20 registered at this time? This is like church,  
21 you are going to get two more calls. Anyone  
22 else? Is there anyone who would like to extend  
23 their comments who has already spoken? If  
24 there is anyone who would like to give their  
25 comments one-on-one with the court reporter

1           privately at the close of this session, she  
2           will be available until the close of business  
3           on this hearing which is at nine o'clock. The  
4           DOE and the Argonne National Laboratory  
5           representatives are available following this  
6           meeting, if you would like to meet with them  
7           privately one-on-one or discuss any issues with  
8           them. The public record will remain open and  
9           accept comments from the public through  
10          February 2, 2004. Comments that are received  
11          by this date will be included in the public  
12          record. Comments received after this time will  
13          be considered to the extent practical. If you  
14          wish to have your comments on the official  
15          record after tonight, you may submit written  
16          comments by mail, by fax or by e-mail directly  
17          to Mr. Gary Hartman with U.S. Department of  
18          Energy. That information is on page five of  
19          his presentation. Fred, what time is it back  
20          there?

21                        FRED: Quarter to seven.

22                        FACILITATOR: Ladies and gentlemen, it  
23                        is 6:45. I want to thank each of you for  
24                        coming this evening. I am always comforted to  
25                        know that people are willing to take time away

1           from their families to come to meetings like  
2           this and let their opinions be known on such  
3           projects. Participation has made this meeting  
4           successful and we thank you for your  
5           attendance. Please be safe driving home. This  
6           meeting is now officially adjourned.

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CERTIFICATE

I, JOAN S. ROBERTS, NOTARY PUBLIC AT LARGE  
FOR THE STATE OF TENNESSEE AND COURT REPORTER  
DO HEREBY ACKNOWLEDGE THAT THE FOREGOING TWENTY-SIX  
PAGES ARE A TRUE AND CORRECT TRANSCRIPT OF THE  
PUBLIC MEETING TAKEN BY ME IN THIS CAUSE ON THE 15TH  
DAY OF JANUARY, 2004.

THIS THE 23RD DAY OF JANUARY, 2004.

\_\_\_\_\_

JOAN S. ROBERTS, COURT REPORTER

Document D0015



# PACE

## Local 5-689

PAPER, ALLIED-INDUSTRIAL, CHEMICAL AND ENERGY INTERNATIONAL UNION, AFL-CIO

**Community And Workforce Questions For The Public Draft Environmental Impact Statement (ESI) Hearing January 7<sup>th</sup>, 2004 - Waverly, Ohio.**

Dan Minter, President  
Bill Dimit, V. Pres.

P. O. Box 467  
Piketon, OH 45661

Delivery Add: 2288  
Wakefield Mound Rd

PH: (740) 289-2405  
FAX: (740) 289-2126

E-Mail:  
paceport@zoomnet.net

- |  |                |
|--|----------------|
| <p>1) PL 107-206 -- Assurance that construction of both plants will be started on schedule on July 31, 2004. Further, both sites' construction must proceed expeditiously thereafter. (Section 502(c) of the Act) Meeting schedule is an environmental compliance issue.</p>   | <p>D0015-1</p> |
| <p>2) Has DOE provided sufficient funds for construction of both plants for FY 05? This speaks to the question of whether statutory intent will be honored fully, or whether it will be constrained by allocation of funds in the President's budget request. Failure to meet schedule is an environmental issue.</p>  | <p>D0015-2</p> |
| <p>3) PL 107-206 provides access to the \$373 million by the Secretary without need for further appropriation, by virtue of removing the fence on the expenditures of funds. This money is in account number 95X4054 in the U.S. Treasury. The GAO's Letter Report January 19, 2000 to Chairman Billy Tauzin of the House Energy &amp; Commerce Committee regarding the use of funds for the Portsmouth Cold Standby Plan (B-286661), states that the USEC Fund is available to meet the authorized purposes of the McConnell Act (P.L. 105-204). Please explain whether and how DOE is using these funds? If not, please explain why?</p> | <p>D0015-3</p> |
| <p>4) Are there foreign ownership and control issues that are impairing the ability of the contractor and DOE to meet the statutory schedule? If so, what are the plans for resolving this potential delay?</p>  | <p>D0015-4</p> |
| <p>5) Socioeconomic Impact - Will DOE direct Bechtel Jacobs to admit UDS to the Multiple Employer Pension Plan? If not, please advise how DOE will assure that UDS will provide pension continuity?</p>  | <p>D0015-5</p> |
| <p>6) It appears from the supplied data that impacts no action would in fact pose greater risk to environment and public safety? This is based on decay of the containment vessels and surveillance painting potential impacts and other required up-keep activities. Is this what the EIS is stating based on a no action plan?</p>   | <p>D0015-6</p> |
| <p>7) How, given the risks of a no action option and the fact that time is not an element conducive to the current method of vessel storage, provisions of Public law 105-204 and 107 -206, clear Congressional intent and 1/3 billion in available funding; why is a no action option even a proposed option under consideration?</p>   | <p>D0015-7</p> |

Document D0016



1864 Shyville Road, Piketon, Ohio 45661

**Southern Ohio Diversification Initiative**

Phone: 740-289-3654 or 289-4861

Fax: 740-289-4591

January 7, 2004

Gary S Hartman  
US Department of Energy – Oak Ridge Operations  
PO Box 2001  
Oak Ridge, TN 37831

Dear Mr. Hartman:

Thank you for the opportunity to comment on the US Department of Energy's Draft Environmental Impact Statement for the proposal to construct, operate, maintain and decontaminate and decommission a depleted uranium hexafluoride conversion facility at the US DOE Piketon Site. We believe that the best alternative to dealing with the DUF<sub>6</sub> waste at the US DOE Piketon site is to build the DUF<sub>6</sub> Conversion Plant, as directed by Public Laws 105-204 and 107-206, at Piketon, Ohio, to convert the material into a more stable form for use and/or disposal. We also agree that location A (former lithium hydroxide monohydrate storage area) is the best location for the facility.

D0016-1

We oppose the no action alternative and long-term storage of the cylinders and conversion products at the US DOE Piketon site. As the designated community reuse organization, SODI expects to be involved in the sale of conversion products so that revenues will be used to benefit the community and local governments that are hosting and supporting the conversion plant operations. We also oppose the construction of one conversion plant for two sites.

D0016-2

D0016-1 (cont.)

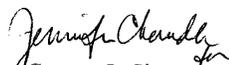
Because the DUF<sub>6</sub> material is chemically toxic to humans if released into the atmosphere, it is imperative that safety and health issues are given top priority to protect the workers, the community, and the environment. We do not support the transport of "repaired" or "as is" non-compliant cylinders from ETTP to Piketon. We strongly urge US DOT not to grant exemptions, but to require DUF<sub>6</sub> contents to be transferred from non-compliant cylinders to new or compliant cylinders prior to shipment to Piketon. Shipping and then storing non-compliant cylinders from ETTP at Piketon increases the risk of exposure to toxic chemicals to workers, the community, and the environment. We also believe that DUF<sub>6</sub> cylinders from ETTP should be shipped only as the Piketon inventory of DUF<sub>6</sub> material is safely converted and space becomes available.

D0016-3

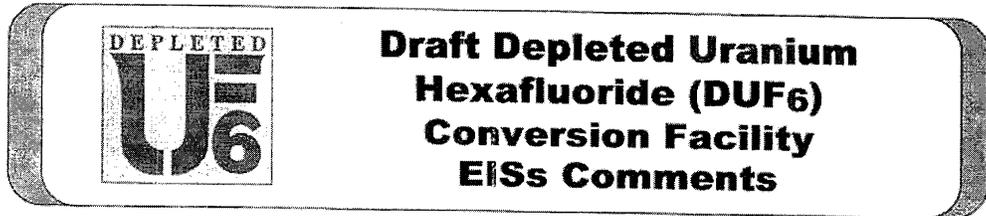
D0016-4

Please provide a written response to the SODI Board of Directors, 1864 Shyville Road, Piketon, Ohio, 45661. If you have any questions or need additional information, please contact me at (740) 289-3654.

Sincerely,

  
Gregory L. Simonton  
Executive Director

Document D0017



This form is provided for you to submit your comments on either or both of the Draft Environmental Impact Statements for construction and operation of DUF<sub>6</sub> Conversion Facilities at the Paducah and Portsmouth sites. Please give this completed form to one of the meeting hosts or take it with you and mail it in. Make your comments, fold the form, tape it shut, place a stamp on the outside and drop it in the mail.

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

Comments must be received no later than February 2, 2004

OLD  
HERE

**Please provide this information:**

FOLD  
HERE

Name Steve Meiners  
 Title/organization Regional Manager / SEC (Safety & Ecology Corp.)  
 Mailing address 2000 McCracken Blvd.  
Paducah  
 State Kentucky Zip+four 42001

Please indicate if the comment is for  Paducah DEIS  Portsmouth DEIS  Both DEISs

E-mail (I wish to receive DUF<sub>6</sub> Conversion Facility EISs information by e-mail at this address) smainers@sec-tn.com

OLD  
HERE

Please consider large transport in a second draft EIS for public comment. Range is more economical and safer than truck or rail transport. It is safer for the public because it involves no onboard fuel and does not place the cylinders in harms way in proximity to fuel trucks and other fuel-laden conveyances moving at high speed in opposing and cross-traversing traffic.

FOLD  
HERE

D0017-1

**WITHHOLDING OF PERSONAL INFORMATION**  
 It is DOE's practice to make comments, including names and addresses of commenters, available for public review. Individuals may request that their home address be withheld from the publicly available record, and DOE will honor such requests to the extent allowable by law. Circumstances may also arise in which DOE would withhold from the publicly available record a commenter's identity, as allowable by law.  
 If you wish DOE to withhold your name and/or address, you must state this prominently at the beginning of your comment. However, DOE will not consider anonymous comments. DOE will make all submittals from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety.

Document D0018



Ohio Department of Natural Resources

BOB TAIT, GOVERNOR

SAMUEL W. SPECK, DIRECTOR

Division of Real Estate and Land Management  
 Paul R. Baldrige, Chief  
 1952 Belcher Drive – Bldg. C-4  
 Columbus, OH 43224-1386  
 Phone: (614) 265-6384

January 12, 2004

Gary S. Hartman  
 U.S. Department of Energy-Oak Ridge Operations  
 P.O. Box 2001  
 Oak Ridge TN 37831

Dear Mr. Hartman:

The Ohio Department of Natural Resources (ODNR) has completed a review of the *Draft Environmental Impact Statement (DEIS) for Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Portsmouth, Ohio, Site (DOE/EIS – 0360)*. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), chapters 1531 and 1533 of the Ohio Revised Code, the National Environmental Policy Act, and other applicable laws and regulations. These comments are the result of project reviews within multiple ODNR Divisions and collectively reflect ODNR's experience as a state resource management agency. These comments do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

ODNR has no concerns with this proposed project. No rare or endangered species, unique natural features, state nature preserves or scenic rivers were identified within or adjacent to the project site. Additionally, ODNR does not think the proposed project will negatively impact any rare or endangered species, ODNR properties, or rare geological features outside of the project area.

ODNR appreciates the opportunity to provide these comments. If you have any questions, please call Randall E. Sanders, Environmental Administrator, at 614.265.6344.

D0018-1

Sincerely,

Paul R. Baldrige, Chief  
 Division of Real Estate and Land Management

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cc. Scott Zody, Deputy Director

**Document D0019**

Submitted in writing at the Oak Ridge hearing on January 15, 2004.

The EIS does not describe the role of the U.S. Nuclear Regulatory ~~Commission~~ Commission (USNRC), especially in licensing the product for disposal.

Clarifying the role of various licensing agencies would be beneficial to the reader.

D0019-1

M. Janeth Haire  
116 Greenbriar Ln.  
Oak Ridge, TN 37830

The product of the conversion facilities is said to be  $U_3O_8$ . In fact it is a complex mixture of uranium oxides, urania. Most of the beneficial uses of depleted uranium use uranium dioxide,  $UO_2$ . I urge the Project to include provisions to fabricate  $UO_2$ .

D0019-2

M. Jonathan Haire  
116 Greenbriar Ln.  
Oak Ridge, TN  
37830

Document D0020



Many Voices Working for the Community

# Oak Ridge Site Specific Advisory Board

January 15, 2004

Gary S. Hartman  
DOE-Oak Ridge Operations  
P.O. Box 2001  
Oak Ridge, TN 37831

Dear Mr. Hartman:

**Comments on the Draft Environmental Impact Statements for Depleted Uranium Hexafluoride (UF<sub>6</sub>) Conversion Facilities**

The Oak Ridge Site Specific Advisory Board (ORSSAB) has considered the Draft Environmental Impact Statements for Depleted UF<sub>6</sub> Conversion Facilities.<sup>1,2</sup> ORSSAB provided a recent recommendation to the U.S. Department of Energy—Oak Ridge Operations concerning the Depleted UF<sub>6</sub> Disposition Program at the Department of Energy's East Tennessee Technology Park.<sup>3</sup> At this time, ORSSAB would like to affirm that recommendation and submit it as comments on the proposed activities described in these documents. A copy of that recommendation is enclosed. ORSSAB would also like to take this opportunity to clarify that the overall intent of the recommendation is to accelerate the removal of all UF<sub>6</sub> cylinders in inventory at the East Tennessee Technology Park.

Sincerely,

David N. Mosby, Chair

Enclosure

cc/enc: Dave Adler, DOE-ORO  
Pat Halsey, DOE-ORO  
Connie Jones, EPA Region 4  
John Owsley, TDEC  
Sandra Waisley, DOE-HQ

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File Cl.

<sup>1</sup> U.S. Department of Energy, *Draft Environmental Impact Statement for Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Paducah, Kentucky, Site*, DOE/EIS-0359, December 2003.

<sup>2</sup> U.S. Department of Energy, *Draft Environmental Impact Statement for Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Portsmouth, Ohio, Site*, DOE/EIS-0360, December 2003.

<sup>3</sup> Oak Ridge Site Specific Advisory Board, "Recommendation Concerning the Depleted Uranium Hexafluoride Disposition Program at the DOE East Tennessee Technology Park," Letter to Mr. Steve McCracken, July 10, 2003.

D0020-1



*Many Voices Working for the Community*

## **Oak Ridge Site Specific Advisory Board**

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July 10, 2003

Mr. Steve McCracken  
Assistant Manager for Environmental Management  
DOE-Oak Ridge Operations  
P.O. Box 2001, EM-90  
Oak Ridge, TN 37831

Dear Mr. McCracken:

**Recommendation Concerning the Depleted Uranium Hexafluoride Disposition Program  
at the DOE East Tennessee Technology Park, Oak Ridge, Tennessee**

At our July 9, 2003, meeting, the Oak Ridge Site Specific Advisory Board approved the enclosed recommendation.

We appreciate your consideration of our recommendation and look forward to receiving your written response.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Mosby".

David N. Mosby, Chair

Enclosure

cc/enc: Dave Adler, DOE-ORO  
Pat Halsey, DOE-ORO  
Dave Hutchins, DOE-ORO  
Connie Jones, EPA Region 4  
John Owsley, TDEC  
Sandra Waisley, DOE-HQ



**Oak Ridge Site Specific Advisory Board  
Recommendation Concerning the Depleted Uranium  
Hexafluoride Disposition Program at the DOE  
East Tennessee Technology Park, Oak Ridge, Tennessee**

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## **BACKGROUND**

A uranium enrichment process called gaseous diffusion was used at the Oak Ridge Gaseous Diffusion Plant, now called the East Tennessee Technology Park (ETTP), from 1945 until 1985. The process physically separated naturally occurring uranium, fed as a uranium hexafluoride (UF<sub>6</sub>) gas that solidifies at ambient temperatures, into a product enriched in uranium-235 and a depleted stream that was withdrawn and stored in cylinders allowed to accumulate on site. Most cylinders contain either 10 or 14 tons of UF<sub>6</sub>, but there are a number of cylinders of smaller sizes and ones that are empty or contain heels.

Overall, there are approximately 57,000 storage cylinders containing over 500,000 metric tons of UF<sub>6</sub> at the ETTP, Paducah, Kentucky, and Portsmouth, Ohio, gaseous diffusion plants. Since there are more cylinders at Paducah (about 38,000), transporting the 6,364 ETTP cylinders to Portsmouth would bring the inventories into balance and facilitate the design and operation of two similarly sized conversion plants. The Tennessee Department of Conservation (TDEC) and DOE signed a Commissioner's Order in 1999 requiring DOE to submit a plan to remove the depleted UF<sub>6</sub> (DUF<sub>6</sub>) cylinders and their contents no later than December 31, 2009. The Oak Ridge Comprehensive Closure and Performance Management Plans accelerate this schedule to the end of fiscal year 2007 to accomplish closure of ETTP. In 2002, DOE awarded a conversion contract to Uranium Disposition Services for two plants and also decided that Bechtel Jacobs Corporation (BJC) and Uranium Disposition Services (UDS) will share responsibility for shipment of the ETTP cylinders to Portsmouth. Requirements for shipping UF<sub>6</sub> cylinders are contained in the U.S. Department of Transportation Hazardous Materials Regulations, 49 CFR Parts 100-185 and ANSI N14.1, *Uranium Hexafluoride - Packaging for Transport*. BJC will be responsible for shipping ANSI N14.1-compliant cylinders in 2003 through 2005, and UDS will be responsible for shipping ANSI N14.1-noncompliant cylinders in 2005 through 2007.

## **DISCUSSION**

On May 14, 2003, Mr. David Hutchins, Manager of the DUF<sub>6</sub> Cylinder Program at ETTP, gave a review to the Oak Ridge Site Specific Advisory Board (ORSSAB) on plans for shipping cylinders at ETTP to Portsmouth. The presentation focused on the ANSI N14.1-compliant cylinders. DOE notes that these shipments do not involve "Highway Route-Controlled Quantities," and are not subject to any laws that require specific routing, notifications, or escorts, but they are taking some additional steps. The questions asked by members of the Board and the public related to emergency response and preparedness training, communications with local communities, shipping logistics, and hazards inherent to the material. The Board was told that some consideration was given to disguising the cylinders for security purposes but that ability to identify the material in any incident was decided to be more important. Shipment by barge and air were discounted. DOE prefers highway shipments by truck, claiming they're more cost

effective than rail. Truck shipments were said to have higher probability of accident occurrence than rail, but rail accidents would have higher consequences due to more cylinders potentially being involved. Truck shipments allow greater potential selection of routes. DOE has worked primarily through state authorities rather than directly with every local community along the way to develop the transportation plan and to train emergency response personnel. The Department of Transportation has set an initial evacuation distance for UF<sub>6</sub> from a large spill at 100 meters (1/16 mile) and then 300 meters (3/16 mile) in event of a major fire. By comparison, evacuation distances, in event of a fire, are 800 meters (1/2 mile) for gasoline and chlorine and 1,600 meters (1 mile) for propane.

Historical research indicates that DOE and its predecessor agencies have been involved in efforts to make the handling of uranium hexafluoride safer for a long time. In 1966, fire tests of bare, UF<sub>6</sub>-filled cylinders were conducted at the Oak Ridge Gaseous Diffusion Plant Rifle Range to determine if cylinders would hydrostatically or explosively rupture and the time available for fire fighting before either incident occurred.<sup>1</sup> The tests confirmed that a UF<sub>6</sub> cylinder rupture of explosive force is possible and that it can occur within a time sufficiently short as to preclude fire fighting unless initiated very promptly. It was also concluded that a type of foam insulation provided a high degree of fire protection for shipments.

Safety issues related to the storage of DUF<sub>6</sub> have continued to be investigated up through preparation and maintenance of current safety basis documents for the cylinder storage yards.

On April 30, 2002, the Department of Transportation issued a notice of proposed rulemaking (NPRM) to bring about compatibility of its regulations with those of the International Atomic Energy Agency (IAEA). One area that has the greatest potential for substantially increased costs to shippers of radioactive materials concerns large stocks of DUF<sub>6</sub> stored in currently authorized packagings at three different locations. If this material should be moved off-site to one or more conversion facilities, then it is likely that the current packagings will not meet the standards proposed in this NPRM. In that case the existing packages likely will be required to be overpacked in order to meet the standard for a hypothetical fire test. The ramification of differences between U.S. and IAEA regulations is something that needs to be better understood.

**RECOMMENDATION**

ORSSAB fully supports the accelerated shipping schedule for DUF<sub>6</sub> cylinders from ETTP. Additionally, we recommend that DOE keep open and not preclude transportation options other than highway. Finally, we recommend that DOE manage the safety aspects of the program consistent with the entire knowledge base of the hazards associated with handling UF<sub>6</sub> and inform the public about any plans to seek exemptions from more stringent requirements that may be evolving.

D0020-1 (cont.)  
 D0020-2  
 D0020-3

<sup>1</sup> Mallett, A.J., *ORGDP Container Test and Development Program – Fire Tests of UF<sub>6</sub>-Filled Cylinders*, K-D-1894, Union Carbide Nuclear Division, ORGDP, January 12, 1966.

**Document D0021****Comments on the UF6 Environmental Impact Statement**

**Paul D. Kalb, Division Head  
Environmental Research & Technology Division  
Brookhaven National Laboratory  
Upton, NY 11973**

As a researcher at Brookhaven National Laboratory (BNL) I have been involved with the issue of depleted uranium for a number of years. As you are probably aware, BNL developed, tested and patented a process for the encapsulation of various forms of DU in polyethylene. The secondary end-use product (sometimes referred to as DUPoly) is a dense solid that can be used for shielding or ballast applications. It provides the same benefits as DUCrete but has advantages in that it can be easily formed to complex shapes, re-worked at a later date, and has good ability to shield both high energy gamma and neutron radiation. We recently completed fabrication of a full-scale prototype DUPoly transport/disposal cask and then successfully used it to transport a highly radioactive RaBe source and dispose the material and cask at Hanford without additional handling and radiation exposures to workers. We have discussed the use of this material for dry-cask storage of spent nuclear fuel with NAS Corp. and its use as a shielding/construction material at the Yucca Mountain repository with Argonne National Laboratory.

I was disappointed to find that the EIS did not take the potential for re-use of the DU into account, but rather focused on issues of disposal. Turning our waste into useful, commercially viable products is a tremendous economic and sociological benefit. While the UF6 website does include several references to secondary end-use of DU, including its use in DUPoly, the EIS itself does not consider this alternative. In my view, the additional benefits associated with this alternative make the treatment of DUF<sub>6</sub> a much more cost-effective and attractive solution.

D0021-1

Document D0022



State of Ohio Environmental Protection Agency  
Southwest District

401 East Fifth Street  
Dayton, Ohio 45402-2911

TELE: (937) 285-6357  
FAX: (937) 285-6249

January 29, 2004

Mr. Gary S. Hartman  
USDOE ORO  
P.O. Box 2001  
Oak Ridge, Tennessee 37831

Mr. Hartman:

Ohio EPA has reviewed the Draft Environmental Impact Statement for Construction and Operation of a Depleted Uranium Hexafluoride (DUF<sub>6</sub>) Conversion Facility and comments on this draft are listed below. As you are aware, Kentucky, Tennessee and Ohio have been working with DOE for many years to address the multiple challenges associated with management and conversion of DUF<sub>6</sub>. We expect that collaboration to continue throughout the construction, operation and cylinder management and transportation portions of this project.

Ohio EPA concurs with the preferred alternative of constructing a DUF<sub>6</sub> conversion facility at the Portsmouth site. We also concur with transporting DUF<sub>6</sub> cylinders from the ETTP at Oak Ridge to the Portsmouth site for conversion. We are currently negotiating administrative orders with DOE to allow this to happen. Please contact me if you have any questions about these comments.

Sincerely,

Graham E. Mitchell  
Chief, Office of Federal Facilities Oversight

D0022-1



**Ohio EPA Comments on the Draft Environmental Impact Statement for Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Portsmouth, Ohio Site.**

**General Comments**

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| 1) | A closed RCRA unit (The X-616 Chromium sludge Lagoon) which is in post-closure care is located in the area of Alternative Location A. A deed notice was submitted to the Pike County Planning Commission on July 7, 1992. There are also monitoring wells associated with this unit which are used to evaluate the status of the groundwater contamination in that area. Please provide a description of how the restricted land and these wells will be avoided during the construction and operation of the facility.   | D0022-2 |
| 2) | The EIS should be expanded to discuss the potential to accept the DUF <sub>6</sub> cylinders from USEC should the Centrifuge Facility be constructed and operated at Portsmouth. The EIS should discuss the impact of longer operation and the potential need to increase the size of the Portsmouth Facility to deal with the additional DUF <sub>6</sub> cylinders.   | D0022-3 |
| 3) | The EIS should recognize that the current clean-up at the facility is governed by three Administrative Consent Orders; the 1989 Ohio Consent Decree, the 1997 Three Party Administrative Order on Consent and the 1999 Administrative Order for Integration. The document should also recognize that the DUF <sub>6</sub> is considered a hazardous waste by the State of Ohio and that there is an Administrative Order governing how the DUF <sub>6</sub> cylinders are to be managed at the site.                      | D0022-4 |
| 4) | Please provide a discussion of how the cylinders will be prioritized for conversion. Will the older cylinders be processed first? Will the cylinders from ETTP be processed first? What is the current strategy for determining which cylinders will be addressed first during the conversion process?  | D0022-5 |
| 5) | Please provide a description of the type of inspections that will be conducted of the cylinders during the four month aging period to determine if the cylinder wall has been breached or damaged during the conversion process.  | D0022-6 |
| 6) | You may wish to consider decommissioning and decontaminating the X-616 SWMU and the old fire training area to make additional room for cylinders to be stored and managed before and after conversion.  | D0022-7 |
| 7) | The EIS fails to describe in Section 5.9 what is expected during decommissioning and decontamination (D& D) of the facility. The EIS should provide some detail regarding what will happen to the waste from the D&D facility and where the waste is likely to go. For instance, some of the material may be construction debris and is likely to be interred in a facility that accepts construction debris waste, other waste would be considered mixed waste and shall be shipped off site to an appropriate facility. | D0022-8 |

**Specific Comments**

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| 1) | Table S-2 page S-13: The table should also include a bulleted item under Proposed Action describing how the DUF <sub>6</sub> cylinders created by USEC during the centrifuge operation ( should the facility be constructed in Portsmouth) would be maintained at the facility and converted at the UDS Facility.  | D0022-9  |
| 2) | Page S-21, Section S.2.2.5: Will the noncompliant cylinders remain in the over packs? If not, how will these cylinders be moved around the facility once received at Portsmouth?   | D0022-10 |
| 1) | Page S-39, S.5.5 Water and Soil: The text should indicate that best available practices (BAT) will be implemented at the site during construction to eliminate or reduce the risk of potential soil, surface water, and groundwater contamination from construction of the facility. The text indicates that good construction practices will be implemented during construction but does not provide any detail. It is common for a construction project as described in the text to implement a BAT policy during construction to minimize impact on the soils, surface water and ground water at the construction site. | D0022-11 |
| 4) | Page S-39, S.5.6 Socioeconomics: The text indicates that construction of the facility would create 310 jobs and the operation of the conversion facility would create 320 jobs. The information provided to Ohio EPA indicates that approximately 100-150 construction jobs would be created and approximately 140-150 jobs would be needed to operate the facility. Please provide the correct reference to the number of jobs created for construction and operation of the facility.  | D0022-12 |
| 5) | Page S-41, section S.5.8: This section states that a stabilizer will be added to the heels in the emptied cylinders. What type of stabilizer will be used and will this stabilizer produce any gases which will need to be captured?   | D0022-13 |
| 6) | Page S-41, section S.5.8: Will the U <sub>3</sub> O <sub>8</sub> generated be considered a LLW or a LLMW? How will this be determined?   | D0022-14 |
| 1) | Page S-47, S.5.18 Unavoidable Adverse Impacts: Please provide an explanation as to why it may be necessary to disturb up to 65 acres of land during construction. Please provide an area map showing the extent of the area which may be disturbed.  | D0022-15 |
| 2) | Page S-47, S.5.18 Unavoidable Adverse Impacts: Please provide a detailed list of the possible loss of terrestrial and aquatic habitats from construction and disturbance of wildlife during operations. Include a description of the type of wildlife which may be impacted due to construction. Also, describe which areas may be irrevocably harmed due to the presence of the facility.   | D0022-16 |
| 3) | Page S-54, S.7 Preferred Alternative, Table S-6: – Under Environmental Consequence, the Bounding radiological accident for the proposed action is given as an earthquake damaging the U <sub>3</sub> O <sub>8</sub> storage building and releasing 145 lb. of depleted U <sub>3</sub> O <sub>8</sub> . For no action, a cylinder ruptures-fire is given as the bounding accident with 24,000 lb of UF <sub>6</sub> released. On Pg. S-12, the cylinder accident is stated  | D0022-17 |

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| <p>to be one involving several cylinders in a fire. On Pg. S-68, under the earthquake scenario, 10% of the stored containers are assumed to be breached. More definitive data needs to be presented to support the quantities released.</p>  | <p>D0022-17<br/>(cont.)</p> |
| <p>4) Page 2-23, Section 2.2.7: The EIS discusses the possibility of accepting cylinders from the Paducah facility. Currently, there is no mechanism in place that allows for the transfer of cylinders from the Paducah facility to Portsmouth. As you are aware the State of Ohio and US DOE are currently negotiating a Director's Administrative Order, including a management plan for the shipment and management for the cylinders from ETTP. Please provide a description of the regulatory requirements which would be required in order for the State of Ohio to accept the DUF<sub>6</sub> cylinders from Paducah. Furthermore, it is likely that Portsmouth may be required to accept cylinders from an enrichment facility in New Mexico or a new USEC centrifuge facility. It would make more sense to increase the size of the facilities being built so that a greater number of cylinders can be addressed in a shorter period of time. Both facilities should be sized to have the capability to address all the DUF<sub>6</sub> cylinders currently on site as well as others which may be shipped from other facilities in the future.</p> | <p>D0022-18</p>             |
| <p>5) Page 2-25, Section 2.3.5 Other Transportation Modes: 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.</p>   | <p>D0022-19</p>             |
| <p>6) Page 2-27, Section 2.4.2: Please refer to General Comment #7 above in regard to D&amp;D.</p>   | <p>D0022-20</p>             |
| <p>7) Page 2-29, Section 2.4.2.2.2: Please make reference to the approved DUF<sub>6</sub> management plan that is currently in place and agreed to by US DOE. The DUF<sub>6</sub> management plan outlines the steps US DOE must take should a breach in the DUF<sub>6</sub> cylinders occur.</p>  | <p>D0022-21</p>             |
| <p>8) Section 5.2.2.3.1 Based on the information provided in this section. It appears that fugitive dust emissions (PM<sub>10</sub>, and PM<sub>2.5</sub>) concentrations (ug/m<sup>3</sup>) from construction activities may exceed the National Ambient Air Quality Standards NAAQS for PM<sub>10</sub> and PM<sub>2.5</sub>. Additional emission control methods, operational restrictions, or monitoring need to be implemented to assure that the NAAQS are not exceeded.</p>   | <p>D0022-22</p>             |