



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGIONS 5  
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CHICAGO, IL 60604-3590

OCT 31 2005

Chief, Rules Review and Directives Branch  
U.S. Nuclear Regulatory Commission  
Mail Stop T6-D59  
Washington, D.C. 20555-0001

REPLY TO THE ATTENTION OF:

B-19J

RECEIVED

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RULES AND DIRECTIVES  
BRANCH  
USNRC

9/18/05  
70FR53396  
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Re: Draft Environmental Impact Statement for the Proposed American Centrifuge Plant,  
Pike County, Ohio, NUREG-1834, EIS No. 20050365

Dear Sir or Madam:

In accordance with Section 309 of the Clean Air Act and the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (U.S. EPA) has reviewed the Draft Environmental Impact Statement (DEIS), issued by the U.S. Nuclear Regulatory Commission (NRC), for the project listed above.

The DEIS states that the proposed Federal action under consideration in the DEIS is for the NRC to issue a license that would authorize USEC Inc. to possess and use special nuclear material, source material and byproduct material at the American Centrifuge Plant (ACP), a gas centrifuge uranium enrichment facility, proposed to be located on the U.S. Department of Energy Portsmouth Reservation (Portsmouth Reservation), near Piketon, Ohio. The enriched uranium produced at the proposed ACP would be used to manufacture nuclear fuel for commercial nuclear power reactors.

The DEIS appears to evaluate this project as a generic case. However, the Portsmouth Reservation is a unique facility with extensive data documenting a variety of past uses and sources. Therefore, the DEIS should have provided a much more thorough background for this case. We urge the project proponents to document a more thorough site-specific evaluation in the final environmental impact statement (FEIS).

We are concerned about the project scope documented in the DEIS. The project proponents exclude security issues from the scope of the DEIS. The project scope, as documented in the DEIS, should include all of the activities planned at ACP. If the DEIS does not include certain planned activities, then they must be evaluated in a supplemental document. Given the historic production activities at the Portsmouth Reservation for military, as well as civilian uses, the FEIS should explicitly state whether the facility will be used for military purposes.

We are concerned about the alternatives screening process. Two alternate locations for a gas centrifuge uranium enrichment plant were evaluated in the DEIS (Paducah, Kentucky and Piketon, Ohio). Apparently, both sites are suitable for the project, but the Paducah site is eliminated from detailed evaluation, based on environmental, socioeconomic, and regulatory factors. While we do not dispute the project proponents' selection of Piketon as the preferred

SISP Review Complete

E-RIDS = ADM-03

Template = ADM-013

Adm = M. Blevins (MYB6)

site, the FEIS needs to either (1) document a detailed analysis for Paducah, or (2) present a more thorough explanation as to why Paducah was dropped as a viable alternative.

We are concerned about the management of depleted uranium fluoride (DUF6) at the Portsmouth Reservation. The United States has produced DUF6 since the early 1950's as part of the process of enriching uranium for both civilian and military applications. DOE's Portsmouth DUF6 conversion facility will process that site's estimated 250,000 metric tons of DUF6, stored in about 16,000 cylinders onsite; an additional 4,800 cylinders will be transferred for processing from the Oak Ridge ETTP facility. The DEIS states that 571,000 metric tons of DUF6 will be generated in 30 years at ACP, producing nearly as much DUF6 as DOE has over nearly 50 years. Management of this large amount of DUF6 material was not fully accounted for in the DEIS. Therefore, the FEIS should include detailed information about DUF6 management and disposal from ACP operations, within the context of all DUF6 management and disposal activities at the Portsmouth Reservation.

We are concerned about cumulative erosion and sedimentation impacts from the construction of the Cylinder Storage Yard X-745H. According to the DEIS, excavation and grading activities in the future cylinder storage yard would make the area more susceptible to erosion. Little Beaver Creek would receive stormwater runoff from the construction area. Currently, Little Beaver Creek is impaired from siltation and sedimentation. Additional erosion and sedimentation from construction activities would cumulatively impact this creek. However, the DEIS does not document a cumulative impact analysis for this case. Such an analysis should be included in the FEIS. In addition, we urge the project proponents to commit to evaluating significant characteristics for the Little Beaver Creek habitat (e.g., fish spawning periods, mussel locations), and conducting appropriate mitigation activities to preserve these characteristics.

Based on our review of this DEIS, we have given the project an EC-2 rating. The "EC" means that we have environmental concerns with the proposed action, and the "2" means that additional information needs to be provided in the FEIS. Our concerns relate to the documentation of the following issues:

1. Purpose and need of the proposed project,
2. Project scope,
3. Alternatives screening process,
4. Description of preferred alternative,
5. Product Management,
6. Modeling data,
7. Proposed monitoring scheme,
8. Proposed mitigation,
9. Environmental impacts,
10. Cumulative impacts,
11. Applicable regulations,
12. Affected environment, and
13. Agency Involvement.

We have enclosed our comments and the U.S. EPA rating system summary. If you have any questions or wish to discuss any aspect of the comments, please contact Michael Murphy (for radiation-related issues) at (312) 353-6686, Eugene Jablonowski (for Superfund-related issues) at (312) 886-4591, or Newton Ellens (for NEPA-related issues) at (312) 353-5562.

Sincerely,

*Newton A. Ellens, for KAW*

Kenneth A. Westlake, Chief  
NEPA Implementation Section  
Office of Science, Ecosystems, and Communities

Enclosures

cc: Maria Galanti  
Ohio Environmental Protection Agency  
Southeast District Office

Kenneth Dewey  
Ohio Environmental Protection Agency  
Southeast District Office

## **U.S. Environmental Protection Agency Comments on Environmental Impact Statement for the Proposed American Centrifuge Plant, Pike County, Ohio**

### **General Comments:**

The draft environmental impact statement (DEIS or EIS) appears to evaluate this project as a generic case. This is not actually appropriate as this is the sole facility of this type with the variety of past uses and sources that are linked with this facility. Over fifty years of data have been collected on this site which can provide a much more thorough background, as well as provide a basis for a site specific document format. We recommend the final environmental impact statement (FEIS) be focused on site-specific analyses, impacts, and mitigation.

Some of the general descriptions of how the materials, source materials, product materials, and the waste materials will be handled and controlled at the U.S. Department of Energy's (DOE's) Portsmouth, Ohio Reservation (Portsmouth Reservation) appear to be incomplete and fragmented, which made it difficult to properly evaluate whether or not requirements under other Federal regulations can be met with the necessary degree of completeness to authorize this project.

The FEIS should describe what the Nuclear Regulatory Commission (NRC) is doing to ensure that funding sufficient for the American Centrifuge Plant's (ACP's) decontamination and decommissioning, as well as waste management, is in place prior to issuing a license.

We are concerned about the cancer rate data provided in the DEIS. The DEIS provides estimated latent cancer fatality data, but does not include non-fatal cancer rate data. The FEIS should provide more comprehensive cancer rate data.

We are concerned about dated annual radiological emission data in the DEIS. In some cases, data is provided for radiation emitted several years ago. The FEIS should reference the most current annual radiological emissions data—for 2004, in this case.

### **Specific Comments:**

#### **Purpose and need of the proposed project**

- 1) (Page xix, Line 41 and Page 1-5, Line 34) The justification of the rationale used for the purpose and need of the proposed project is insufficient. The DEIS states that the proposed ACP is needed because only one uranium enrichment plant currently operates in the United States, the Paducah, Kentucky Gaseous Diffusion Plant (Paducah Plant). A supply disruption with the Paducah Plant would leave the nation's

commercial nuclear reactors fully dependent on foreign sources for enriched uranium—a situation which could impact national security. However, the DEIS also states that the Paducah Plant would be shut down, decontaminated, and decommissioned after ACP begins operating. Therefore, ACP would not satisfy the national security facet of the purpose and need of the proposed project, because the project would merely replace, instead of supplement, the nation's only operating uranium enrichment plant. Therefore, we urge NRC to reevaluate this aspect of the stated Purpose and Need.

- 2) (Page 1-2, Line 38 and footnote of Page 4-53) We are concerned about the lack of a justification in the DEIS for the need to enrich uranium up to 10% by weight of uranium-235. According to the DEIS, the license issued by NRC would authorize USEC Inc. (USEC) to produce enriched uranium up to 10% by weight of uranium-235. However, the DEIS also states that most power plants use enriched uranium with less than 5.5% of uranium-235 by weight, and that it would be unlikely for USEC to enrich uranium up to the higher weight. Finally, the DEIS states that, of the cylinders used to ship enriched uranium, none of them are certified to ship uranium enriched to higher than 5% by weight of uranium-235. Given that it would not be feasible for USEC to enrich uranium above 5% by weight of uranium-235 (for civilian use), NRC should explain why the proposed license would authorize a higher level of enrichment. If the project proponents foresee a scenario under which USEC would need to enrich uranium up to 10% of uranium-235, then that scenario should be documented in the Purpose and Need Section of the FEIS. Otherwise, we would urge NRC to reconsider the limit of uranium enrichment cited in its license for USEC.
- 3) (Executive Summary, Purpose and Need For the Proposed Action, Page xx, paragraph 1) The description appears to be incomplete and does not address the range or possibilities of materials that can be reasonably assumed to be produced at this facility. This is based on the type and range of enrichments that have been conducted in past operations at the gaseous diffusion facility at this site.
- 4) (Introduction, Section 1.3.2 The Need for Domestic Supplies of Enriched Uranium for National Energy Security, page 1-5, paragraph 1) It is unclear whether future inclusion of additional nuclear power plants and their needs for enriched fuel is taken into account in this evaluation. It would be reasonable to include at least one to two new plants and their potential needs to be included in this evaluation to assure that a more representative range of possible customers for this facility's output is evaluated.

#### **Project scope**

- 5) (Page 2-1, Line 44) The scope of the DEIS does not include decommissioning and related activities of the Paducah, Kentucky Gas Diffusion Plant. The DEIS states that

after uranium enrichment operations begin at ACP, the Paducah Plant would cease its uranium enrichment operations. According to the DEIS:

For the purposes of this analysis, cessation of uranium enrichment operations at Paducah would include stopping uranium enrichment plant operations, but would not include decommissioning of the Paducah Gaseous Diffusion Plant, changes to any other activities at that site, or any alternative uses of that site in the future. Those other actions at Paducah would be the subject of other decisions and other environmental reviews.

- The scope of DEIS should have included the cessation of all uranium enrichment operations at the Paducah Plant, because it is a connected action under the National Environmental Policy Act (NEPA). The start of ACP's uranium enrichment operations and the cessation of uranium enrichment operations at the Paducah Plant are closely related—the Paducah Plant's operations would not cease if ACP's operations did not start. Therefore, the FEIS should document a comprehensive evaluation of the cessation of all uranium enrichment operations at the Paducah Plant.
- 6) (Page 2-35, Line 19) The ACP FEIS should discuss the former Portsmouth, Ohio gaseous diffusion plant, and any ACP interactions with it, considering that the Portsmouth plant is either in cold standby or cold iron and that the ACP will be in close proximity to it.
  - 7) (Introduction, Section 1.2, The Proposed Action, Page 1-2, paragraph 5) The potential range of produced materials does not include the possibility of production for the Department of Defense. If this is potentially a reasonably assumed product, it needs to be included for evaluation.
  - 8) (Introduction, Section 1.4, Scope of the Environmental Analysis, Page 1-7, paragraph 3) The scope of the environmental analysis may not meet the actual needs to be addressed for the new facility to be created and put into operation. The scope may need to be expanded to assure that all of the environmental issues are adequately addressed.
  - 9) (Introduction, Section 1.4.4 Issues Outside the Scope of the EIS, Page 1-9) This section artificially narrows the scope of this evaluation to exclude security issues relevant to this facility. Safety and Security, Credibility and Terrorism must be addressed in any project of this type. The DEIS is incomplete and inadequate to properly address these issues.
  - 10) (Page 2-2, Line 26) The ACP FEIS should identify: 1) all of the uranium enrichment projects expected for the facility; 2) all of the projects that the facility is capable of

performing; 3) whether this facility will be reprocessing feed materials from spent nuclear fuel; and 4) whether this FEIS encompasses all of the activities that an enrichment facility may be called to perform.

- 11) (Page D-5) Considering the exceptionally large amount of depleted uranium that will be generated by ACP operations, and since it's a credible option, the ACP FEIS should also assess the transportation of depleted uranium and other radioactive wastes to Andrews, Texas, and the location of another disposal facility that should have an Agreement State license for disposal within the next year.

### **Alternatives screening process**

- 12) (Page 2-37, Line 4) We are concerned about the lack of a sufficient number of reasonable alternatives selected for detailed study. Only the preferred alternative is retained as a reasonable alternative in the DEIS for detailed study. The DEIS initially describes an evaluation of several alternatives, including the construction and operation of a gas centrifuge uranium enrichment plant at the existing Paducah Plant site. The DEIS states that construction and operation of such a plant at Paducah was considered a reasonable alternative to the proposed action. Additionally, the DEIS states that both Piketon and Paducah were suitable sites for the construction of a gas centrifuge uranium enrichment plant, when regarding environmental, socioeconomic, and regulatory factors. Under NEPA, the project proponents should have rigorously explored and objectively evaluated all reasonable alternatives. However, the project proponents eliminated the Paducah Plant site from further consideration because of construction, engineering, and plant safety concerns. The FEIS should either (1) document a detailed analysis for the Paducah site, or (2) offer a more thorough justification for why the Paducah site was not studied in detail in the DEIS.
- 13) The ACP DEIS states:

“The DOE-USEC Agreement stipulates that USEC deploy the ACP at either the DOE reservation in Piketon or Paducah. Also, no other sites offered the unique combination of (1) readily accessible environmental data; (2) past history and experience in uranium enrichment; and (3) the availability of skilled labor with uranium enrichment industry experience.”

Was the DOE-USEC Agreement the appropriate legal means for determining the location of the ACP in the absence of an EIS? Considering that the Piketon gaseous diffusion ceased enrichment operations in 2001, the ACP won't begin operations until 2009, and that the gas centrifuge facility proposed by Louisiana Energy Services near Eunice, New Mexico would be located at a “green field” site where there have been no prior enrichment operations, are the three reasons provided for siting the ACP at

Piketon truly valid for the purposes of an EIS?

### **Description of preferred alternative**

- 14) (Page 2-34, Line 19) The ACP DEIS states that the intent of decommissioning is to return the proposed ACP site to a state that meets NRC requirements for release for unrestricted use after decontamination and decommissioning is completed. The ACP FEIS should define and discuss what NRC considers “unrestricted use” to mean. Are the NRC requirements consistent with Comprehensive Environmental Response Compensation and Liability Act (CERCLA) standards for free release of property without institutional controls? Who owns the ACP buildings? Are they owned by DOE and leased to USEC, or does USEC have ownership of buildings on the Portsmouth Reservation? If USEC or a subsequent owner goes bankrupt, would DOE then be the primary responsible party responsible for cleanup and have priority access to the cleanup funds in the ACP’s surety bond (or other financial mechanisms) over other entities such as tax authorities and commercial lenders?
- 15) (Page 2-35, Line 1) The ACP DEIS states that the decontamination and decommissioning (D&D) activities for the proposed ACP are anticipated to occur approximately 30 years in the future, and therefore only a general description of the activities that would be conducted for the proposed ACP can be developed at this time for the DEIS. Will NRC review and approve the ACP engineering design prior to its construction? Does NRC require the concurrent development of a D&D plan while the facility is being designed? Does NRC regard issues such as cost, implementability, ease of D&D, worker safety during D&D, and waste minimization to be considerations in the design of radiological facilities such as the ACP?

### **Product Management**

- 16) We are concerned about the use and/or disposal of chlorofluorocarbons (CFCs) at the Portsmouth Reservation. We understand that there was a large use of CFCs at the reservation, and that a significant amount of the Nation’s CFC emissions came from the reservation. Therefore, the FEIS should describe the types and amounts of CFCs at the reservation, and it should describe the planned use and/or disposal of CFCs at the reservation. This discussion should describe how CFC management will comply with the Clean Air Act.
- 17) (Page 2-12, Line 48) The ACP DEIS states that uranium hexafluoride (UF<sub>6</sub>) cylinders may be stored in any storage yard. It should be clarified whether all of the cylinders will have comparable management and security whether they are depleted uranium or enriched product. Also, will there be any long-term staging of enriched materials for subsequent blending operations? It appears that distinctions should be



made between UF6 cylinders that are tails/waste (suitable for processing and disposal), UF6 product, and UF6 materials that support production. Otherwise, mixing these UF6 materials up on any of the storage yards seems to provide an opportunity for negative impacts related to UF6 management.

- 18) (Page 2-19, Line 29) The ACP DEIS text and Table 2-3 provide information that approximately 8,000 cubic meters of low-level waste will be generated during refurbishment and construction activities. The ACP FEIS should discuss its waste disposition, where the low-level waste is being shipped for processing and disposal, and whether any of this low-level waste is considered "mixed waste" under the Resource Conservation and Recovery Act (RCRA).
- 19) (Page 2-27, Line 18) This section of the FEIS should discuss: 1) at what point the depleted uranium tails are considered a waste or a product; 2) who has the authority to make the determination that the depleted uranium tails are waste (especially considering that DOE may be the recipient of these materials); 3) at what time is the waste determination made; 4) how much tailings/waste is expected to be generated annually; 5) whether there will be sufficient capacity on-site to process the tailings/waste for use or disposal; and 6) the disposal options currently available and potentially available in the future for the off-site storage or disposal of the tailings/waste.
- 20) (Page 2-30, Line 45) The United States has produced depleted uranium hexafluoride (DUF6) since the early 1950s as part of the process of enriching natural uranium for both civilian and military applications. DOE's Paducah DUF6 conversion facility will process that site's estimated 450,000 metric tons of DUF6 over a 25 year processing period. DOE's Portsmouth DUF6 conversion facility will process that site's estimated 250,000 metric tons of DUF6 that is currently stored in about 16,000 cylinders on the Portsmouth Reservation, as well as process an additional 4,800 cylinders that will be transferred from the Oak Ridge ETTP facility to the Portsmouth Reservation; the overall processing period is expected to be 18 years. DOE expects the conversion of all its stored DUF6 to cost approximately \$2.6 billion, excluding costs for the decontamination and decommissioning of the conversion facilities.

The ACP DEIS states that 571,000 metric tons of DUF6 will be generated during ACP operations, in 30 years generating as nearly as much DUF6 as DOE has over nearly 50 years. This is a large amount of DUF6 material that should be fully characterized in the ACP FEIS. Detailed information should be provided on DUF6 management and disposal including: how long the ACP-generated DUF6 will be stored on site prior to conversion; whether the Portsmouth DUF6 conversion facility has the capacity to process ACP-generated DUF6 in an expedient timeframe; whether there are off-site facilities that have the capacity to process ACP-generated DUF6,

cost data, financial responsibilities and liabilities; and any NRC requirements for financial assurance or surety funds that will ensure that DUF6 and other wastes generated due to ACP activities are properly managed, processed and disposed, without the cost passed on to other federal agencies and the public. Specifically, the ACP FEIS should include:

- a) Detailed information on the Portsmouth DUF6 conversion facility since conversion of DUF6 is really an integral part of the overall enrichment process, with conversion of the mostly unmarketable DUF6 being necessary for the long-term stability and management of that waste stream. Does the Portsmouth DUF6 conversion facility have adequate capacity to process the DUF6 that the ACP will generate, in addition to the DUF6 already in DOE's inventory? Is there off-site DUF6 conversion capacity in case that the Portsmouth DUF6 conversion facility cannot meet demand?
- b) Section 3113 of the 1996 United States Enrichment Corporation Privatization Act that states the DOE "shall accept for disposal low-level radioactive waste, including depleted uranium if it were ultimately determined to be low-level radioactive waste, generated by [...] any person licensed by the Nuclear Regulatory Commission to operate a uranium enrichment facility under Sections 53, 63, and 193 of the Atomic Energy Act of 1954 (42 U.S.C. 2073, 2093, and 2243)." If the gas centrifuge facility proposed by Louisiana Energy Services (LES) near Eunice, New Mexico is licensed by the NRC, is DOE obligated to accept its waste and DUF6? Could accepting LES wastes impact the capacity of the Portsmouth DUF6 conversion facility and the ACP's ability to deal with the DUF6 that it generates?
- c) How long is the ACP-generated DUF6 expected to be stored or accumulate on the Portsmouth Reservation prior to its conversion and off-site disposal? Information should be provided on a total inventory and per cylinder basis.
- d) Considering the number of DUF6 cylinders stored on the Portsmouth Reservation, and the number that will be generated by the ACP, is the Portsmouth Reservation the most suitable environment for the long-term storage of DUF6, whether prior to or after conversion?
- e) What are all of the facilities available for the off-site storage and/or disposal of the post-conversion DUF6, both currently available and anticipated for licensing in the future? Will they have the capacity to accept all of the post-conversion DUF6 generated as a result of ACP and historic ACP operations? Are there any issues that could affect DOE's ability to dispose of post-conversion DUF6 off-site from the Portsmouth reservation?

- f) The Portsmouth DUF6 conversion facility is stated to have an operating life of 18 years, while the ACP is expected to operate for 30 years. Where will the ACP-generated DUF6 be converted after operation of the Portsmouth DUF6 conversion facility ceases? Does DOE have an obligation to operate a conversion facility to accommodate DUF6 generated by the ACP and other enrichment facilities licensed by the NRC?

21) (Page 2-48, Line 23) The ACP DEIS states:

“The NRC staff has determined that unless USEC can demonstrate a use for uranium in the depleted tails as a potential resource, the depleted UF6 generated by the proposed ACP should be considered a waste product.”

The ACP FEIS should state who has the authority to make the waste determination: NRC, DOE or USEC? The ACP FEIS should state when that determination is required to be made, or whether that determination should be made immediately upon DUF6 generation. The ACP FEIS should define “depleted uranium” in terms of its uranium-235 content for the purposes of management and waste disposition. Although depleted uranium is commonly referred to as uranium having a percentage of uranium-235 smaller than the 0.7 percent found in natural uranium, does that definition hold true for the purposes of management and waste disposition, and DOE’s acceptance of depleted uranium materials generated by NRC-licensed enrichment plants?

22) (Page 3-71, Line 42) The ACP DEIS states:

“Section 3113(a) of the USEC Privatization Act (Public Law 42 104-134) requires DOE to accept low-level radioactive waste, including depleted uranium that has been determined to be low-level waste, for disposal, upon the request of, and reimbursement of costs by, the United States Enrichment Corporation. To date, this provision has not been invoked, and the form in which the depleted uranium would be transferred to DOE has not been specified.”

The ACP FEIS should state who makes the low-level waste determination. Considering that during its operation the ACP is expected to generate about 571,000 metric tons of DUF6, nearly as much as DOE generated during its 50 years of enrichment operations, the ACP FEIS should clearly specify how ACP will manage DUF6 throughout the full term of the NRC license, including the form in which the depleted uranium would be transferred to DOE. The FEIS should describe an implementable and legally defensible disposition path for all of the wastes that the ACP will generate.

- 23) (Page 3-75, Line 5) The ACP DEIS states:

“Classified/sensitive waste is any waste considered as such for security reasons. These materials may be classified due to configuration, composition, contamination, or contained information. Classified waste may be categorized as non-hazardous waste or as low-level radioactive depending upon its point of and method of generation.”

The ACP will be a commercial facility operating on leased federal property for commercial production purposes. The ACP FEIS should state and describe: 1) who will have the authority at the ACP to make “classified/sensitive” determinations; 2) 3<sup>rd</sup> party federal reviews of the “classified/sensitive” waste determinations that are made; 3) whether any of the “classified/sensitive” wastes are exempt in any way from U.S. Environmental Protection Agency (U.S. EPA), Ohio Environmental Protection Agency, or NRC regulatory authority; 4) whether it is possible for ACP personnel to make “classified/sensitive” waste determinations; 5) whether ACP personnel will have authorities delegated to it by DOE, such as under the Atomic Energy Act; 6) whether there will be activities at the ACP that are subject to DOE oversight and exempt from NRC regulation; and 7) why a commercial facility with a civilian mission would generate “classified/sensitive” wastes requiring “classified/sensitive” determinations. Also, the ACP FEIS should state whether RCRA-regulated mixed wastes could be generated that are considered classified.

- 24) (Page 3-75, Line 12) The ACP DEIS states:

“Classified waste is stored onsite prior to disposal in classified offsite disposal facilities.”

The ACP FEIS should state the duration that classified waste is stored on site prior to offsite disposal and who has the regulatory authority for classified waste generated by ACP personnel or any other personnel at the USEC-leased areas.

## **Modeling data**

- 25) (Page 4-11, Table 4-1) We are concerned about modeling data for air contaminants missing from the DEIS. The DEIS provides predicted concentrations for some criteria pollutants during site preparation and construction activities at the project site. The DEIS, however, omits data for ozone and lead. In order to complete the modeling data provided in the DEIS, the FEIS should include this information. The ozone forecast data should be presented as an 8-hour average, and the lead forecast data should be presented as a quarterly average, in order to compare the data to the

National Ambient Air Quality Standards for these pollutants.

- 26) (Page C-3) Throughout this appendix, the isotope list should include technetium and transuranic isotopes such as those listed on page 3-31 to reflect activities anticipated at the ACP.

#### **Proposed monitoring scheme**

- 27) (Page 2-28, Line 20) Considering the emissions from the former gaseous diffusion plant, the processing of recycled material and the processing of former Russian materials, ACP emissions should also be analyzed for transuranic radionuclides routinely.
- 28) (Page 2-28, Line 20) The ACP DEIS states that recycled feed may be used, and that four radionuclides will be analyzed in the ACP emissions routinely, although this paragraph discusses five radionuclides (uranium-234, uranium-235, uranium-236, uranium-238 and technetium-99). The ACP FEIS should clearly state which radionuclides will be analyzed, as well as any non-radioactive hazardous emissions.
- 29) (Page 6-3, Line 14) The ACP DEIS states that uranium isotopes anticipated to be released as airborne emissions would include uranium-234, uranium-235, uranium-236, and uranium-238. The ACP FEIS should also include the isotopes of americium, neptunium, plutonium, and technetium (listed on the bottom of page 3-31) that have been known emissions from the former Portsmouth Gaseous Diffusion Plant, which had uranium feed similar to what is anticipated for the ACP.

#### **Proposed mitigation**

- 30) (Page 4-10) We commend NRC for proposing mitigation measures during construction of the proposed project to reduce air quality impacts. According to the DEIS, the NRC staff determined that the majority of particulate emissions emitted during construction would come from construction vehicle exhaust. Therefore, in order to reduce particulate emissions from construction vehicle exhaust, NRC recommended that USEC: (1) use Tier 2 construction-related vehicles, which would reduce diesel particulate emissions by about 40%, and (2) use ultra-low sulfur diesel fuel. We urge NRC to establish these mitigation measures in the construction contracts for the proposed project, and to document these mitigation measures in the Record of Decision (ROD).

#### **Environmental impacts**

- 31) (Environmental Impacts Section 4.2.4.2, Facility Operation, Radiological Emissions,

Pages 4-14, 4-15) Several different isotopes are mentioned in this discussion, but emissions appear to be aggregated without a clear discussion of the relative percentages of each radionuclide's contribution to the total emissions. Disaggregating should be done in the FEIS, so that a more accurate determination of potential exposures can be made and evaluated for the resulting health consequences, if any, attributable to ACP.

- 32) (Executive Summary, Public and Occupational Health and Safety, Page xxvi) In the statement of standards that protect the health and safety of the public, 40 CFR 61, Subpart H, has been left out of the DEIS. That reference should be properly incorporated throughout the document. This regulation was used to determine public health protection, whereas the NRC regulations deal more with occupational levels for exposures rather than a public health exposure level.
- 33) (Alternatives, Section 2.4 Comparison of Predicted Environmental Impacts, Table 2-8, Page 2-60) The NESHAPs 40 CFR 61 Subpart H evaluation has not been submitted for determination of appropriateness and to demonstrate potential compliance status of this type of facility to the regulating agency as of this time. The DEIS characterized impacts as "SMALL." Until this determination is made under Subpart H, classifying impacts is premature. We encourage NRC to involve us and other appropriate Federal agencies earlier in this determination process.
- 34) (Affected Environment Section 3.5.3.1 Current Emissions at the DOE Reservation, Radiological Emissions, Page 3-20) The regulations for the radionuclide NESHAPs are dose standards from emissions, so the notation of the becquerel and/or curie emissions is misleading. A variety of radionuclides are potential contributors, each with different doses associated with each becquerel or curie amount. The standard is a maximum dose to the potential Maximally Exposed Individual (MEI) of 10 millirem per year in excess of background exposures. The 2004 values should be referenced, since this is an annual compliance demonstration and earlier demonstrations are not relevant to the current compliance status of the Portsmouth Reservation.
- 35) (Environmental Impacts Section 4.2.4.1 Site Preparation and Construction, Radiological Emissions, Page 4-11 paragraph 1) The statements here regarding 40 CFR 61, Subpart H are potentially misleading as to the potential health effects from exposures, by subtly indicating that the data and standard are not based on any measured data. This is incorrect. This should be either appropriately discussed in the FEIS, or the FEIS should state the standard's requirements or demonstration of compliance.

## **Cumulative impacts**

- 36) (Page 4-16, Line 21, and Page 4-19, Line 3) We are concerned about cumulative erosion and sedimentation impacts which could be caused by construction of Cylinder Storage Yard X-745H. According to the DEIS, the cylinder storage yard would be constructed in an area characterized by steep slopes. The DEIS states, "During excavation and grading, the steep slopes would be more susceptible to soil erosion, and the streams at the bottom of the slopes may receive an increased amount of silt." Construction activities would be close to Little Beaver Creek, an impaired stream. Presently, siltation and sedimentation are two causes of the creek's impairment. Additional erosion and sedimentation from the construction of the cylinder storage yard could result in cumulative impacts to Little Beaver Creek. The DEIS does not perform a cumulative impact analysis for this case. Such an analysis should be included in the FEIS. We commend the project proponents for proposing the use of best management practices to mitigate erosion and sedimentation impacts (e.g., silt fences, straw bales, re-seeding disturbed areas, etc.). In addition, the project proponents should commit to evaluating significant characteristics for the Little Beaver Creek habitat (e.g., fish spawning periods, mussel locations), and conducting appropriate mitigation activities to preserve these characteristics. We urge NRC to establish such mitigation commitments in the construction contracts for the proposed project, and to document these mitigation measures in the Record of Decision (ROD).
- 37) (Page 6-9, Line 3) The ACP DEIS states that due to historical operations, The DOE reservation has multiple plumes of groundwater contamination. The ACP FEIS should also describe: 1) whether any of these plumes reside in areas leased for the ACP facilities; 2) whether the ACP facilities and areas have been certified as being free of environmental media contamination (soil, groundwater, etc.); 3) whether ACP operations are expected to contribute to groundwater contamination and to what extent; and 4) whether the ACP will have its own groundwater monitoring program independent of DOE's. The FEIS should include maps of groundwater contamination at the Portsmouth complex to aid in the description.

#### **Applicable regulations**

- 38) (Introduction, Section 1.5 Applicable Regulatory Requirement, Pages 1-11 through 1-33) Executive Directive and Presidential Orders that make specific requirements on all Federal Agencies that would apply or impact this project need to be included.
- 39) (Introduction, Table 1-3, Pages 1-20 through 1-29) Table 1-3 is incomplete. All potential applicable requirements for the construction of the ACP have not been included and need to be thoroughly re-evaluated.
- 40) (Alternatives, Section 2.1.4.3 Facility Operations, Air Emissions Monitoring and Treatment Systems, Page 2-28, paragraph 3) The appropriate regulations should

include 40 CFR 61, Subpart H for this facility. This facility is subject to this regulation and must meet all of the requirements of this rule before construction of this project can begin.

- 41) (Alternatives, Section 2.1.4.3 Facility Operations, Liquid effluent Collection and Treatment Systems, Page 2-29, paragraph 4) The appropriate regulations have not included 40 CFR 61, Subpart H for this facility. This facility is subject to this regulation and must meet all of the requirements of this rule before construction of this project can begin.

#### **Affected environment**

- 42) (Affected Environment Section 3.10.2 Low-Income Populations, Table 3-25, Page 3-59) There appears to be a typographical error in the Weighted Average Threshold for "One Person" in the table. This needs to be clarified for any type of comparability.
- 43) (Affected Environment Section 3.13.1 Background Radiological Exposure, Page 3-65 paragraph 1) The standard is a maximum dose to the potential Maximally Exposed Individual (MEI) of 10 millirem per year in excess of background exposures. The 2004 values should be referenced since this is an annual compliance demonstration and earlier demonstrations do not reflect the current compliance status of the facility. Neither of the new proposed facilities at the Portsmouth Reservation has submitted information to demonstrate their potential compliance status in an operating status to date. The estimates provided cannot be considered to be adequate until such time as they have been fully evaluated.
- 44) (Page 1-4, Line 23) The ACP DEIS states that the Portsmouth Gaseous Diffusion Plant is currently in "cold standby" mode (possible to restart in 18 to 24 months). The FEIS should include a schedule for when the facility will be placed into "cold iron" mode (unable to be restarted) and become ready for decontamination and demolition (D&D) work to proceed.
- 45) (Page 2-6, Line 1) Under DOE's RCRA Corrective Action activities, various facilities across the Portsmouth Reservation had their environmental assessment and restoration activities "deferred" until the time when the gaseous diffusion plant (GDP) D&D work is performed. The ACP FEIS should state whether any of the facilities under Table 2-1 are considered "deferred," and if so, whether RCRA corrective actions have been performed at those facilities. This table should also state which facilities will have NRC-licensed activities occurring.
- 46) (Page 2-7, Line 2) The ACP FEIS should list and describe the primary facilities and areas leased by DOE for the proposed ACP.



## **Agency Involvement**

- 47) (Introduction, Section 1.5.5 Cooperating Agencies, Page 1-19) The DEIS states that during the scoping process, no Federal, State, or local agencies were identified as potential cooperating agencies in the preparation of the DEIS. It is not addressed that there was any contact with other regulating Agencies at any level that could have been considered cooperating Agencies. All of the current Federal, as well as State and Local regulators for this site would have been potential Cooperating Agencies in the development of this document and process.
- 48) (Introduction, Section 1.5.6 Consultations, Page 1-19) When the NRC was first given some regulatory authority at this site, a consultative procedure was to have been used with U.S. EPA, to assure that the site could be “certified” for their regulation. A similar process should have been used with all current regulating Agencies of this facility prior to preparation of this document.

## 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 state, 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 alternative 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