

Docket No. 70-7004

**ENVIRONMENTAL IMPACT STATEMENT SCOPING PROCESS**

**ENVIRONMENTAL SCOPING SUMMARY REPORT**

**Proposed USEC Inc.  
American Centrifuge Plant  
Piketon, Ohio**

**April 2005**



U.S. Nuclear Regulatory Commission  
Rockville, MD

## 1. INTRODUCTION

On August 23, 2004, USEC Inc. (USEC) submitted an application to the U.S. Nuclear Regulatory Commission (NRC) for a license to construct, operate, and decommission the American Centrifuge Plant (ACP), a gas centrifuge uranium enrichment facility located on the U.S. Department of Energy (DOE) reservation in Piketon, Ohio. The ACP, if licensed, would enrich uranium for use in commercial nuclear fuel for power reactors. Feed material would be comprised of non-enriched uranium hexafluoride (UF<sub>6</sub>). USEC proposes to use centrifuge technology to enrich the isotope uranium-235 in the UF<sub>6</sub> up to 10 percent. The initial license application is for a 3.5 million separative work unit (SWU)<sup>1</sup> facility. Because USEC indicated the potential for future expansion to 7.0 million SWU per year, the environmental review will look at the impacts from a 7.0 million SWU per year facility.

In accordance with NRC regulations in 10 CFR Part 51, and the National Environmental Policy Act (NEPA), the NRC is preparing an Environmental Impact Statement (EIS) for the proposed facility as part of its decision-making process. The proposed action is the issuance of an NRC license for USEC to possess and use special nuclear material, source material, and byproduct material at the proposed ACP. The activities to be conducted under the license would include the construction, operation and decommissioning of the proposed ACP. The EIS will examine the potential environmental impacts associated with the proposed ACP in parallel with the review of the license application. The EIS will be prepared by NRC staff with technical assistance from ICF Consulting Inc. and Trinity Engineering Associates. The NRC has not identified any cooperating agencies for the preparation of this EIS. In addition to the EIS, the NRC will prepare a Safety Evaluation Report (SER) which will document the staff's review of safety and security issues.

The NRC plans to operate on a 30-month licensing schedule with 19 months allocated for the environmental review. The current schedule for publication of the draft EIS is in August 2005, with a public meeting scheduled in September 2005 after publication of the draft EIS. The final EIS is tentatively scheduled for publication in March, 2006.

As part of the NRC's environmental review, and to comply with 10 CFR 51.26 and 51.27, scoping was initiated on October 15, 2004, with the publication in the *Federal Register* of a Notice of Intent to prepare an EIS and to conduct a scoping process (69 *Fed. Reg.* 61268). Scoping is an early and open part of the NEPA process designed to help determine the range of actions, alternatives, and potential impacts to be considered in the EIS, and identify significant issues related to the proposed action. The NRC solicits input from the public and other agencies in order to focus on issues of genuine concern.

On January 18, 2005, the NRC staff held a public scoping meeting in Piketon, Ohio, to receive both oral and written comments from interested parties. The public scoping meeting began with NRC staff providing a description of the NRC's role, responsibilities, and mission. A brief overview of the safety review process was followed by a description of the environmental review process and a discussion of how the public can effectively participate. The majority of the meeting was reserved for attendees to ask questions and make comments on the scope of the environmental review. The NRC postponed the originally scheduled public scoping meeting in Piketon, Ohio from November 15, 2004 until January 18, 2005 after removal of public

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<sup>1</sup> SWU relates to a measure of the work used to enrich uranium.

documents from the NRC public reading room and website for several weeks in November 2004 due to security concerns. Due to this delay, the public scoping comment period was extended from December 6, 2004 until February 1, 2005.

As part of the environmental review, NRC has begun a consultation process with the Ohio State Historic Preservation Officer (SHPO) as required by Section 106 of the National Historic Preservation Act. In accordance with 36 CFR 800.3(f), NRC will consult with Native American Tribal members identified by the SHPO and will consult with representatives of the Pike County Commission. Other consultations will include the Fish and Wildlife Service as required by Section 7 of the Endangered Species Act.

This report has been prepared to summarize the determinations and conclusions reached in the scoping process as required in 10 CFR 51.29(b). After publication of the draft EIS, the public will be invited to submit additional comments. Availability of the draft EIS, the dates of the public comment period, and information about a public meeting to be held to discuss the draft EIS will be announced in the *Federal Register*, on NRC's website (<http://www.nrc.gov/materials/fuel-cycle-fac/usecfacility.html>), and in the local news media when the draft EIS is distributed. After evaluating comments on the draft EIS, the NRC staff will issue a final EIS that will serve as the basis for the NRC's consideration of environmental impacts in its decision on the proposed ACP.

This report is organized into four main sections. Section 1 provides an introduction and background information on the environmental review process. Section 2 summarizes the comments and concerns expressed by government officials, agencies, and the public. Section 3 identifies the issues that the draft EIS will address and Section 4 describes those issues that are not within the scope of the draft EIS. Where appropriate, Section 4 also identifies other places in the decision-making process where issues that are outside the scope of the draft EIS may be considered.

## **2. ISSUES RAISED DURING THE SCOPING PROCESS**

### **2.1 OVERVIEW**

Approximately 80 individuals not affiliated with the NRC attended the January 18, 2005 public scoping meeting concerning the USEC license application for the ACP. During the meeting, five individuals asked specific questions about the scoping process. Sixteen individuals offered specific oral comments related to the proposed ACP. In addition, 24 written comments, including 1 duplicate, were received from various individuals during the public scoping period, which ended on February 1, 2005. The scoping meeting transcript (ML050590321) and the 24 written comments received by the NRC are available on the NRC website, electronic reading room, at <http://www.nrc.gov/reading-rm/adams/web-based.html>.

The active participation of the public in the scoping process is an important component in determining the major issues that the NRC should address in the draft EIS. Individuals providing oral and written comments addressed several subject areas related to the proposed USEC facility and the draft EIS development. In addition to private citizens, the various commenters included:

- A representative of the Governor of Ohio.
- A local official from the Village of Piketon.
- Pike and Scioto County Commissioners.
- Representatives of the Pike County Chamber of Commerce and the Chillicothe/Ross County Chamber of Commerce.
- Representatives of State of Ohio agencies or departments.
- Representatives of local businesses.
- Representatives of other organizations including:
  - Public Citizen
  - Portsmouth/Piketon Residents for Environmental Safety
  - National Nuclear Workers for Justice
  - Paper, Allied-Industrial, Chemical and Energy Workers International Union
  - Sierra Club, Central Ohio Group and Appalachian Ohio Section
  - Southern Ohio Diversification Initiative

The following general topics categorize the comments received during the public scoping period:

- NEPA and public participation.
- Need for the proposed facility.
- Land use.
- Alternatives.
- Ecology, air quality, soil and water resources.
- Socioeconomics.
- Transportation.
- Waste management.
- Historic and cultural resources.
- Cumulative impacts.
- Decommissioning.
- Safety and risk.
- Nuclear nonproliferation and security.
- Terrorism.
- Credibility.

In addition to raising important issues about the potential environmental impacts of the proposed facility, some commenters offered opinions and concerns that typically would not be included in the subject matter of an EIS - these include general opinions about nuclear proliferation and the use of nuclear energy. Comments of this type do not fall within the scope of environmental issues to be analyzed. Other statements may be relevant to the proposed action, but they have no direct bearing on the evaluation of alternatives or on the decision-making process involved in the proposed action. For instance, general statements of support for or opposition to the proposed action fall into this category. Again, comments of this type have been noted but are not used in defining the scope and content of the draft EIS.

Section 2.2 summarizes the comments received during the public scoping period. Most of the issues raised have a direct bearing on the NRC's analysis of potential environmental impacts.

## **2.2 SUMMARY OF ISSUES RAISED**

As noted above, a number of commenters expressed support for the facility. Several individuals, on the other hand, raised concerns regarding the construction and operation of the proposed ACP. The following summary groups the comments received during the scoping period by technical area and issue.

### **2.2.1 NEPA and public participation**

Several commenters expressed general support for the ACP stating that the facility would be beneficial to the economy. One commenter questioned the role of members of the public not located in the Piketon area and their possible impact on the decision-making process. The commenter stated that the focus of public participation should be on those members of the public most directly affected by the proposed facility. However, another commenter disagreed, stating that because materials, including wastes, would be shipped from the facility to various points around the country, everyone who is potentially affected by the facility should be included in the public participation process.

A number of commenters requested an extension of the time period for submitting comments on the scope of the draft EIS. These commenters cited several reasons for the extension request, but the reason cited most often was the lack of availability of documents on NRC's website because of security concerns. Two commenters noted that the public was not made aware of a public meeting on November 9, 2004, where USEC's record of accidents and contamination releases was discussed. Several commenters also noted that some of the information on NRC's website is not accessible, including information on reportable events such as releases from the plant. One commenter also noted that answers to questions that she submitted to the NRC on December 2, 2004 had not yet been answered.

Several commenters raised concerns regarding the availability of information contained in the license application and the Environmental Report. One commenter stated that some of the information related to the application has been classified as confidential for security purposes and therefore the public does not have access to it. Another commenter stated that the public should have access to all the information it may reasonably be expected to have known about. This commenter requested that NRC make all redactions in the ER available to the public, including Appendices B, D, and E. If not, the commenter requested an explanation as to why the information was redacted. Another commenter stated that restricting the public from information for reasons other than security protection constitutes an infringement on the democratic involvement of the people in the actions of its government. One commenter noted that an EIS had been completed for the Piketon site in the past, and that this document should be reviewed to determine if any information contained in that report is relevant to the proposed ACP.

Other comments included one person who indicated that she is entitled to a full copy of the license application. Another commenter stated that scoping should include perspective of those outside of the local community. A commenter also thought that it is important that impacts and alternatives must be assessed before an action is taken, not to justify a decision already made. Another commenter stated that it is expected that NRC will provide regulatory guidelines that will allow USEC to operate a plant efficiently with protection for both workers and the community.

A commenter specifically stated that the draft EIS should carry out a comprehensive evaluation that honestly takes into account the long-term environmental impacts of the proposed project. This commenter noted that this type of evaluation is especially relevant to facilities involved in the production of fuel for nuclear reactors because of the length of time the waste material is dangerous and the need for containment and monitoring for the duration of that time. Finally, two commenters requested waivers of fees for documents related to the licensing action.

### **2.2.2 Need for the proposed facility**

A number of commenters raised concerns about the need for a uranium enrichment facility. One commenter argued that the public must agree on the need for the facility. Several commenters stated that the draft EIS must analyze the need for the proposed facility given the existing enriched uranium stockpiles that could meet the needs for nuclear energy for several years. A commenter also stated that the draft EIS should consider that the proposed LES facility in New Mexico could actually start operations first, lessening the need for the ACP. Commenters indicated that the potential for an international moratorium on uranium enrichment exists, and the ramifications of this action should be accounted for in the analysis. Other commenters indicated that recent budget cuts and uncertainty in energy policy lessen the need for additional enriched uranium production. Specifically, one commenter stated that the draft EIS should evaluate the potential for a pause in production of nuclear fuel, which would allow the NRC and other agencies to focus resources in other areas such as cleaning up existing contamination, developing safe and permanent waste disposal options, lowering transportation risks, better documenting releases and events, and encouraging development of clean, safe, well-paying jobs.

Another commenter stated, however, that there will be an increase in demand for electricity in the future and that nuclear power will be critical to ensuring this supply and promoting energy independence. The commenter noted that the ACP would play a key role in providing that energy.

Other commenters stated that the draft EIS should evaluate the development of other less expensive, renewable energy resources with less significant environmental impacts. Commenters also suggested that material from disassembled nuclear weapons could be used as an alternate source for uranium enrichment.

A commenter stated that the draft EIS should address whether the operation of the ACP will have a negative impact on the “Megatons to Megawatts” program, in which highly enriched uranium from dismantled Russian nuclear weapons is down-blended and used as fuel in U.S. nuclear power plants. Another commenter requested an explanation as to why USEC requires a license for 10 percent assay when the license application states that USEC believes its customers only require 5 percent assay UF<sub>6</sub>.

### **2.2.3 Land use**

A commenter expressed concern that the increased safety and security restrictions accompanying the proposed ACP would limit alternative use of the site. In addition, a commenter stated that the proposed ACP would eliminate the opportunities for cleanup and reuse of certain facilities on DOE’s Portsmouth Reservation, beyond the scope of the USEC license. Another commenter asked whether the existing contamination cleanup at the site is far

enough along to ensure protection of site workers. The commenter wondered whether existing contamination could be cleaned up prior to the start of operations at the ACP. Another commenter was concerned that the ACP would restrict the possibility of public use of undeveloped parts of the site. Another commenter asked how the proposed ACP will affect farmland.

#### **2.2.4 Alternatives**

Several commenters noted that the draft EIS needs to address the full range of “reasonable alternatives.” Commenters stated that alternative uses for the site, including private leasing and other governmental uses, must be developed and considered in the draft EIS. A commenter also stated that the reasonable alternatives must encompass not only the centrifuge buildings, but a “multiplicity of other uses” for other parts of the site. A commenter suggested instituting accelerated site cleanup as an alternative to allow the facility to be used for nonnuclear industry development. Another commenter suggested specifically that the draft EIS should analyze the Southern Ohio Diversification Initiative suggestion to locate a truck manufacturing company in one of the buildings. A commenter also suggested that the X-326 building could be entombed as a National Monument. A commenter stated that the draft EIS should consider expanding the “Megatons to Megawatts” program as an alternative to licensing the ACP. This commenter also stated that a reasonable alternative would be to consider reviving the Atomic Vapor Laser Isotope Separation process because the centrifuge technology concentrates uranium-234. A commenter suggested moving the environmental cleanup research program located at Oak Ridge National Laboratory to Piketon since the site will be the subject of ongoing environmental cleanup.

Another commenter stated that the cultural value of the Piketon site and the potential adverse impacts to these resources that have not been studied indicates two alternatives that should be considered including (1) moving the ACP to the Paducah site, and (2) opening part of the Piketon site as a cultural resource park with restoration of the earthworks.

Commenters also suggested that the draft EIS should analyze scenarios under which the ACP fails or the project is cancelled. A number of commenters stated that if the plant proceeds and becomes operational, this will preclude the site from any future use because of security restrictions and contamination, and will change or eliminate possibilities for reuse of certain facilities. A commenter stated that the impacts of the no-action alternative should be considered in terms of the site, not USEC’s commitments to DOE to provide enriched uranium for nuclear fuel.

Another commenter stated that the draft EIS should focus on evaluating the impacts of a 3.5 million SWU per year plant and that any evaluation of impacts for a 7.0 million SWU per year plant should be done separately under a different licensing action.

#### **2.2.5 Ecology, air quality, soil and water resources**

**Ecology:** Several commenters stated that the wildlife of the region, including deer and fish, has been shown to be contaminated with radioactivity and expressed concern about the migration of wildlife in and out of the plant boundaries. One commenter suggested that procedures be put into place to ensure that wildlife that travel outside the plant boundaries will not carry additional contamination into the greater community. Another commenter was

concerned with the protection of birds and other animal species from future contamination. One commenter expressed general concern over the impact of air and water emissions on wildlife. Another commenter expressed the specific concern that chemical and radioactive leakage from DUF<sub>6</sub> cylinders might adversely affect fish downstream in the Scioto and Ohio rivers.

**Air Quality and Soil:** A number of commenters were concerned about the release of radioactive materials into air and soil. One commenter asked for a list of the kinds of air emissions likely to be released from the plant and another thought that emissions should be monitored by an independent agency.

**Water Resources:** A number of commenters were concerned with the plant's water usage, specifically the source of water and estimated volumes that will be used. Many commenters were concerned that chemical and radioactive leakage from plant operations and waste, including DUF<sub>6</sub> cylinders, might adversely affect the groundwater and surface water quality of the region. Several commenters asked for information about the kinds of contaminants likely to be released into the water and about current and future stream protection measures. Another stated that stream sediments have been found to have radioactivity five times the natural levels as well as increased levels of arsenic, cadmium, chromium, and mercury. The same commenter stated that Little Beaver Creek has a total uranium level nearly twice the level at which corrective action would be required at civilian nuclear plants. A commenter asked for the location of discharge points, any associated discharge standards (especially for radioactive contaminants), and the consequences for exceeding release limits. Another commenter requested information about radioactive concentration limits for discharges, and asked who was responsible for monitoring water discharges. One commenter recommended that an independent agency be in charge. A commenter recommended that storm-water analysis include scenarios of extreme climate conditions (i.e., flooding, tornados, earthquakes) that may be expected to occur over the projected lifetime of the plant. Another commenter stated that as an alternative to releases in streams and rivers, USEC should consider a "closed lid" system for managing effluents from plant operations.

### 2.2.6 Socioeconomics

A number of commenters expressed their support for the approximately 500 permanent high-paying, high-tech jobs and the hundreds of construction jobs that USEC expects to bring to the region. One commenter was in support of USEC's "long-term commitment to provide jobs to this region" and thought that "the plant represents an investment in the future of southern Ohio." Another expressed the desire to have future job opportunities in the area for his children and grandchildren. Many commenters stated their belief that having a new \$1.5 billion plant will help boost the local economy. One commenter stated that the presence of a uranium enrichment facility has not depressed land values or resulted in a decrease in population in Pike County, like some have claimed. The commenter pointed to the existence of expensive property values and a 12.5 percent population increase in the last decade.

One commenter stated that the proposed plant would be bad for the local economy. Another said that the proposed ACP will inhibit the creation of thousands of jobs because a similar investment of \$1.5 billion by any other company should generate 7,000 or 8,000 jobs instead of the 500 expected for the proposed facility.

### 2.2.7 Transportation

A commenter expressed satisfaction with current transportation regulations and specifications for the materials, construction, and procedures for containerizing/packaging contaminated material. The commenter stated that it would be “virtually impossible in a derailment scenario for contaminated material to get out.” Another commenter expressed no confidence that USEC will actually meet the U.S. Department of Transportation’s safety requirements when shipping radioactive materials. Several commenters had concerns about the safety of road conditions along the routes across Ohio and to other States like Tennessee, especially in regard to the transport of radioactive waste. They asked for information regarding evaluations of the roads for trucks and rail systems for trains and the standard procedures for transporting materials to and from the facility.

### 2.2.8 Waste management

**General Waste Management:** Several commenters stated that waste management must be analyzed in detail in the draft EIS. A commenter expressed concern that the Piketon site is already a nuclear waste disposal site and that the ACP will only add to the problem. Another commenter stated that DOE has already been shipping wastes to Piketon from other sites including Fernald, Oak Ridge, and Paducah and that the transfers would not happen if the ACP were not licensed. The commenter stated that there is a need to identify all the wastes that have been shipped to the site and what will ultimately happen to these wastes. Another commenter stated that all “newly generated” waste streams associated with the ACP should be fully characterized in the draft EIS.

**Depleted UF<sub>6</sub> Storage and Disposal:** An issue raised by numerous commenters concerned the plans for management of the DUF<sub>6</sub> tails currently stored onsite from past operations, similar wastes from other sites, and those tails expected to be generated as part of the ACP operations. These commenters stated that the draft EIS must address how much waste will be generated by the ACP, where the tails will ultimately go, and whether they could potentially be left onsite for long-term storage. Several commenters indicated that long-term storage of DUF<sub>6</sub> onsite at Piketon is not a reasonable waste management alternative. Two commenters noted that the possible conversion of DUF<sub>6</sub> by the DOE could take years (possibly up to 25 years), with the material being stored onsite in the meantime. A commenter stated that there are currently thousands of these waste cylinders at Piketon and they present a higher risk of radiation contamination to the environment. Another commenter noted that the ACP will only add to the amount of existing DUF<sub>6</sub> that needs to be converted or disposed.

Commenters also stated that, prior to licensing, a contract should be in place describing how and where DUF<sub>6</sub> tails will be disposed. A commenter recommended that the draft EIS describe in detail how much tails disposal will cost and consider the cost of disposal on USEC’s ability to pay for the ACP (including decommissioning). Another commenter asked what limitations would be placed on the onsite storage of DUF<sub>6</sub> and whether any fines for noncompliance would be sufficient to motivate USEC to remove the wastes from the site for disposal.

### 2.2.9 Historic and cultural resources

Two commenters stated support for NRC to conduct a separate cultural resources assessment under Sections 106 and 110 of the National Historical Preservation Act (NHPA) at the Piketon site. These commenters indicated that DOE, which owns the site, has failed to conduct such

reviews previously. One commenter indicated that DOE has never attempted to identify properties that qualify for historic preservation on or near its land in Piketon.

A commenter stated that NRC must consider that in failing to conduct its own Section 106 review properly, DOE may have undermined the legal basis of its agreement with USEC to turn over its facilities for USEC's use.

One commenter stated that omissions of known archaeological sites in the DOE "Risk-Based End-State" report has allowed DOE to avoid its obligation of conducting a thorough cultural resource impact assessment of the site.

These same commenters indicated that the Piketon site has tremendous historical and prehistorical value that has never been studied. One commenter indicated that Pike County has two prehistoric sites (the Piketon Works and the Scioto Township Works), one on DOE's property and the other extending onto it. The commenter noted a third site (the Barnes Home) borders the proposed plant and once included land underneath the existing centrifuge plant. The commenter stated that the Barnes Home is currently under consideration for listing on the National Register of Historic Places, which qualifies it for full protection.

One commenter stated that the Piketon Works (National Register site 74001599) is located in the area where DOE uses earthen embankments to shield its water wells, which provide water to the site. The commenter indicated that pumping from these wells would resume with the operation of the ACP, but the possible effects of the pumping on the Piketon Works have not been studied. This same commenter stated that there has not been a recent survey of the Scioto Township Works (National Register site 74001600).

A commenter stated that DOE should make public a report that was used by USEC to support its contention that no important cultural resources survive on the site, so that the public can evaluate its contents.

One commenter argued that claims by DOE, USEC, and NRC that responsibility for adverse impacts extends only as far as the footprint of the proposed centrifuge plant is incorrect. This commenter stated that DOE and NRC, as Federal agencies, have the following responsibilities at the Piketon site:

- To assess the broad range of potential impacts of major Federal actions on cultural resources as part of the environmental review under NEPA;
- To assess and mitigate adverse impacts of major federal actions on sites that qualify for the National Register of Historic Places under Section 106 of the NHPA; and
- To protect and steward any historic or prehistoric resources on federal land under Section 110 of the NHPA.

The commenter went on to state that NRC must greatly expand the scope of its cultural resource impact analysis as part of the draft EIS and must conduct its own Section 106 review in compliance with NHPA. The commenter indicated that a review of the environmental impacts under NEPA is not a substitute for a Section 106 review unless the agency follows the

requirements of 36 CFR 800.8(c) regarding notifications, identification of historic properties and effects, consultation, and resolution of adverse comments. The commenter requested that NRC include in its review all kinds of effects on all kinds of properties, not simply direct effects on historic buildings or specific archaeological sites. The commenter noted that it may also be important for NRC to consider the possible need to address impacts on Native American graves and cultural items under the Native American Graves Protection and Repatriation Act; archaeological, historic, and scientific resources under the Archaeological and Historic Preservation Act; and cultural resources under NEPA.

#### **2.2.10 Cumulative impacts**

A commenter expressed concern over the cumulative effect and long-term public health impacts of building another uranium enrichment facility on the site of a retired one and stated that the draft EIS should consider this issue with increased scrutiny. Another commenter asked if the impact analysis considers that the site has existing contamination and that workers and community members have already had exposure.

#### **2.2.11 Decommissioning**

Several commenters expressed concern over USEC's financial standing and whether or not there was a funding plan for the plant's decontamination and decommissioning. There was concern that if USEC goes bankrupt, by default, DOE and taxpayer money would be utilized. Several commenters pointed out the fact that in 2004, DOE spent almost \$300 million in taxpayer money for cleanup and that the same is projected for 2005. The commenters recommend that NRC require USEC to create a performance bond, escrow account, or similar fund sufficient to cover the facility's cleanup prior to issuing a license. One commenter suggested that Pike County should possibly play a role in paying for the cleanup of the facility. Others recommended that cleanup costs should be paid by USEC up-front. Commenters also recommended that a study be done to assess total cleanup, waste storage, and decommissioning costs. One commenter asked about the existence of monitoring plans for radioactive landfills when the plant decommissions. The commenter recommended some kind of written agreement in advance to ensure that the DOE reservation does not become a waste dump.

Another commenter requested a detailed account of how Paducah decontamination and decommissioning operations would impact USEC's ability to pay for the development and operation of the ACP.

#### **2.2.12 Safety and risk**

**Plant Safety:** A number of commenters expressed confidence in the safety of the ACP, citing USEC's skilled, highly trained employees, strong employee safety programs and past safety record, and formalized programs to mitigate potential impacts in the event of emergencies. One commenter also noted that the likelihood of an accident that could affect the public is extremely low. Another commenter expressed confidence that USEC will continue to coordinate with the Ohio Environmental Protection Agency and the NRC, and will continue to utilize the most sophisticated tools available to assure the safety of its workers and the community. Another commenter requested information on noncritical, nonexplosive, and

accidental events that are apparently not contained in USEC's Environmental Report. The commenter indicated that information on the source of the contamination and cleanup actions for these releases should be made available and reviewed. The commenter also asked for an explanation of an apparent increase in worker exposure to UF<sub>6</sub> over time as seen from the Contaminated Feed Cleanup Project Dose Trend described in the Environmental Report.

One commenter noted that safety violations in earlier years were due in part to an incomplete understanding of the technology, putting workers at unnecessary risk. As a result, the community has taken a stronger interest in the safe operation of the plant. The commenter noted that it is believed that centrifuge technology is a "much safer and more efficient technology." Several commenters highlighted the great improvement in plant safety and efforts by both union and management working together as a team to ensure that workers and the public are protected. One person commented that "this plant is one of the safest in the country."

One commenter requested further information about the extent of personnel training to validate USEC's statement that "continuing education of employees and a closer monitoring by management can be used to help alleviate incidents." The commenter also asked about the procedure for a public alert after accidental releases. Another commenter recommended that NRC consider the effects of fire and ruptures in process piping in its safety analysis. A commenter also requested that the draft EIS investigate the claim by USEC that no regulated substances will be stored on the site in excess of threshold levels.

One commenter suggested that USEC's training programs should be reviewed because they are inadequate to the point where the plant would be unable to operate safely. The commenter referred to a management culture that "drags its heels to cover up mistakes."

**Worker Health and Safety:** Several commenters expressed concern over the general health of employees on the site. One commenter asked about the extent of worker monitoring programs and if monitoring will be done by an independent entity. Another commenter stated that "health issues and premature deaths are not being considered." Another questioned how occupational health and safety will be guaranteed and how it will be different from what was previously done during operation of the gaseous diffusion plant. The commenter expressed concern that USEC needs to be forthcoming and honest about the chemicals and substances the workers will be exposed to. One commenter suggested that NRC take into account a 1985 General Accounting Office report that the Portsmouth Gaseous Diffusion Plant workers had the highest exposure of any other gaseous diffusion plant. One commenter wanted assurance from NRC that USEC will always use the latest technology to ensure best possible safety practices to protect workers and the community.

A commenter also questioned the role of the Ohio Army National Guard workers at the site. The commenter asked for information on how many of these workers are at the site, where they are located, and what their role is, if any, in relation to the operation of the ACP.

### **2.2.13 Nuclear nonproliferation and security**

Several commenters stated that operation of the ACP could have nonproliferation impacts. One of these commenters noted that the implications of the proposed ACP are international in scope. Another commenter indicated that the Carnegie report, "A Strategy for Nuclear

Security” states that production of even lower levels of enriched uranium than proposed at ACP could have a destabilizing effect on nuclear treaties and initiate a stepped-up arms race. Similarly, two commenters stated that initiatives such as operation of new uranium enrichment facilities might actually risk rather than enhance our national security by encouraging other countries’ nuclear weapons initiatives.

In a separate but related comment, one person indicated that the draft EIS should model the effect of security breaches by USEC.

#### **2.2.14 Terrorism**

Two commenters expressed concern that the ACP would present a significant risk as a terrorist target, leading to increased terror alerts. Several commenters recommended studies to consider scenarios involving terrorist attacks and to assess security and terrorist risks. A commenter requested information about measures that will be taken to increase security and keep unauthorized people away from the plant.

#### **2.2.15 Credibility**

Several commenters indicated that USEC has a good record as a corporate citizen and a good safety record, and people trust that the licensing process is fair and open. These commenters stated that they believe the ACP will be operated in a safe manner, protective of public health and the environment. One commenter noted that an important factor is USEC meeting expectations. One commenter stated, however, that USEC has 16 violation notices, more than any other NRC materials licensee. The commenter noted that USEC has been ordered by NRC to pay civil penalties totaling \$378,000. The commenter stated that these past violations warrant exceptional scrutiny of the license application. A commenter stated that the draft EIS should model the impacts associated with uranium enrichment in excess of 10 percent, given USEC’s previous enforcement actions for exceeding its possession limit for such material. Commenters also questioned the viability of USEC to see the project through to completion. Other commenters stated that the draft EIS should critically examine the relationship between DOE and USEC.

Other commenters questioned the credibility of past operators of the site, and indicated that this lack of credibility should be considered when making a licensing decision. A few commenters described the past practices at the site as an indication that safety during past operations was a significant issue. For example, one commenter noted plutonium contamination at the site from past operations, which resulted in monetary compensation for plant workers. Another commenter noted that a 1985 GAO report states that workers at the Piketon Gaseous Diffusion Plant had the highest exposures of all the gaseous diffusion plants. Another commenter indicated that there had been several instances when apparent releases occurred at the site, but no notification was made to the public regarding these releases. One commenter stated that all indications point toward the operation failing and that USEC’s promises will not be fulfilled.

### **3. SCOPE OF THE ENVIRONMENTAL IMPACT STATEMENT**

The NEPA (Public Law 91-190, as amended), and the NRC’s Implementing Regulations for NEPA (10 CFR Part 51), specify in general terms what should be included in an EIS prepared by the NRC staff. Regulations established by the Council on Environmental Quality (40 CFR

Parts 1500-1508), while not binding on NRC staff, provide useful guidance. Additional guidance for meeting NEPA requirements associated with licensing actions can be found in NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with Office of Nuclear Material Safety and Safeguards (NMSS) Programs."

Pursuant to 10 CFR 51.71(a), in addition to public comments received during the scoping process, the contents of the draft EIS will also address the matters discussed in the USEC Environmental Report. In accordance with 10 CFR 51.71(b), the draft EIS will consider major points of view and objections concerning the environmental impacts of the proposed action raised by other Federal, State, and local agencies, by any affected Indian tribes, and by other interested persons. Pursuant to 10 CFR 51.71(c), the draft EIS will list all Federal permits, licenses, approvals, and other entitlements that must be obtained in implementing the proposed action, and will describe the status of compliance with these requirements. Any uncertainty as to the applicability of these requirements will be addressed in the draft EIS.

Pursuant to 10 CFR 51.71(d), the draft EIS will include a preliminary analysis that considers and weighs the environmental effects of the proposed action; the environmental impacts of alternatives to the proposed action; and alternatives available for reducing or avoiding adverse environmental effects. In the draft analysis, due consideration will be given to compliance with environmental quality standards and regulations that have been imposed by Federal, State, regional, and local agencies having responsibilities for environmental protection. The environmental impact of the proposed action will be evaluated in the draft EIS with respect to matters covered by such standards and requirements, regardless of whether a certification or license from the appropriate authority has been obtained. Compliance with applicable environmental quality standards and requirements does not negate the requirement for NRC to weigh all environmental effects of the proposed action, including the degradation, if any, of water quality, and to consider alternatives to the proposed action that are available for reducing adverse effects. While satisfaction of NRC standards and criteria pertaining to radiological effects will be necessary to meet the licensing requirements of the Atomic Energy Act, the draft EIS will also, for the purposes of NEPA, consider the radiological and nonradiological effects of the proposed action and alternatives.

The following documents are environmental assessments and other EISs which have been prepared that are related to the action under consideration. The following list is not intended to be a comprehensive list:

- Programmatic EIS for Alternative Strategies for the Long-Term Management and Use of Depleted Uranium Hexafluoride (DOE/EIS-0269, March 1999)
- Environmental Assessment of the USEC Inc. American Centrifuge Lead Cascade Facility at Piketon, Ohio (DOE/EA-1495, January 2004)
- Environmental Impact Statement for Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Paducah, Kentucky, Site (DOE/EIS-0359, December 2003)

- Environmental Impact Statement for Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at Portsmouth, Ohio Site (DOE/EIS-0360, December 2003)

Pursuant to 10 CFR 51.71(e), the draft EIS will include a preliminary recommendation by the NRC staff with respect to the proposed action. Any such recommendation would be reached after considering the environmental effects of the proposed action and reasonable alternatives, and after weighing the costs and benefits of the proposed action.

The scoping process summarized in this report will help determine the scope of the draft EIS for the proposed facility. The draft EIS will contain a discussion of the cumulative impacts of the proposed action as referenced in NUREG-1748. The development of the draft EIS will be closely coordinated with the SER prepared by the NRC staff to evaluate the health and safety impacts of the proposed action.

One goal in writing the draft EIS is to present the impact analyses in a manner that makes it easy for the public to understand. This draft EIS will provide the basis for the NRC decision with regard to potential environmental impacts. Significant impacts will be discussed in greater detail in the draft EIS, and explanations will be provided for determining the level of detail for different impacts. This should allow readers of the draft EIS to focus on issues that were determined to be important in reaching the conclusions supported by the draft EIS. The following topical areas and issues will be contained within the draft EIS.

- *Alternatives.* The draft EIS will describe and assess the no-action alternative and other reasonable alternatives to the proposed action. Other alternatives may include alternative sites, enrichment sources, or technological alternatives to the proposed centrifuge technology.
- *Need for the Facility.* The draft EIS will provide a discussion of the need for the proposed ACP.
- *Compliance with Applicable Regulations.* The draft EIS will present a listing of the relevant permits and regulations that are believed to apply to the proposed ACP. These would include air, water, and solid waste regulations and disposal permits.
- *Land Use.* The draft EIS will discuss the potential land use impacts associated with the proposed construction, manufacturing, and operating activities.
- *Transportation.* The draft EIS will discuss the impacts associated with the transportation of construction materials, centrifuge parts, feed material, product, and waste tails during both normal transportation and under credible accident scenarios. The impacts on local transportation routes due to workers, delivery vehicles, and waste removal vehicles will be evaluated.
- *Geology and Soils.* The draft EIS will assess the potential impacts to the geology and soils of the proposed ACP site due to soil compaction, erosion, contamination, landslides, and disruption of natural drainage patterns. Evaluation of the potential for

earthquakes or any other major ground motion considerations will be addressed mainly in the SER and only in terms of possible environmental impacts in the draft EIS.

- *Water Resources.* The draft EIS will assess the potential impacts on surface water and groundwater quality and water use due to the proposed action and alternatives.
- *Ecological Resources.* The draft EIS will assess the potential environmental impacts on ecological resources including plant and animal species. Threatened and endangered species and critical habitats will also be discussed, along with the appropriate consultation as required by Section 7 of the Endangered Species Act (16 USC Section 1536(a)(2)). As appropriate, the assessment will include an analysis of mitigation measures to address potential adverse impacts.
- *Air Quality.* The draft EIS will make determinations concerning the meteorological conditions of the site location, the ambient air quality, and the contribution of other sources. In addition, the draft EIS will assess the impacts of the ACP's refurbishment, construction, and operation on local air quality.
- *Noise.* The draft EIS will discuss potential impacts associated with noise levels generated from refurbishment, construction, and operation of the proposed ACP.
- *Historic and Cultural Resources.* The draft EIS will address the potential impacts of the proposed ACP on the historic and archaeological resources of the area. Additionally, as described in a letter dated December 28, 2004 to the Ohio State Historic Preservation Officer, the EIS will also be used to fulfill NHPA Section 106 (36 CFR Part 800) requirements. Potential impacts to the overall visual and scenic character of the facility may also be addressed.
- *Socioeconomics.* The draft EIS will address the demography, economic base, labor pool, housing, utilities, public services, education, and recreation as impacted by the proposed action and alternatives. The hiring of new workers from the outside area could lead to impacts on the regional housing, public infrastructure, and economic resources. Population changes leading to changes to the housing market and demands on the public infrastructure will be assessed.
- *Costs and Benefits.* The draft EIS will address the potential cost/benefits of constructing and operating the ACP, and will discuss the cost/benefits of tails disposition options.
- *Resource Commitments.* The draft EIS will identify the unavoidable adverse impacts and irreversible and irretrievable commitments of resources. It will also address the relationship between local, short-term uses of the environment and the maintenance and enhancement of long-term productivity. Associated mitigative measures and environmental monitoring will be presented, if applicable.
- *Public and Occupational Health.* The draft EIS will include a determination of potentially adverse effects on human health that result from chronic and acute exposures to ionizing radiation and hazardous chemicals as well as from physical safety hazards. These potentially adverse effects on human health might occur during facility refurbishment, construction, or operation. Impacts associated with the implementation

of the proposed action will be assessed under normal operation and credible accident scenarios.

- *Waste Management.* The draft EIS will discuss the management of wastes, including by-product materials, generated from the refurbishment, construction, and operation of the ACP to assess the impacts of generation, storage, and disposal. Onsite storage of wastes will also be included in the assessment.
- *Depleted Uranium Disposal.* The draft EIS will discuss the DUF<sub>6</sub> material, or tails, that results from the enrichment operation over the lifetime of the proposed plant's operation. These concerns include the safe and secure storage and ultimate removal of the material from the site, and the potential conversion of the DUF<sub>6</sub> to U<sub>3</sub>O<sub>8</sub> and ultimate disposition.
- *Decommissioning.* The draft EIS will include a discussion of facility decommissioning and associated impacts.
- *Cumulative Impacts.* The draft EIS will address the potential cumulative impacts from past, present, and reasonably foreseeable activities at and near the site
- *Environmental Justice.* The draft EIS will address environmental impacts of the proposed ACP on low-income or minority populations if disproportionately high and if low-income or minority populations are identified. The impacts that could be evaluated include health, ecological (including water quality), social, cultural, and economic resources.

#### **4. ISSUES CONSIDERED TO BE OUTSIDE THE SCOPE OF THE ENVIRONMENTAL IMPACT STATEMENT**

The purpose of an EIS is to assess the potential environmental impacts of a proposed action in order to assist in an agency's decision-making process – in this case, NRC's licensing decision. As noted in Section 2.2, some issues and concerns raised during the scoping process are not relevant to the draft EIS because they are not directly related to the assessment of potential impacts or to the decision-making process. The lack of in-depth discussion in the draft EIS, however, does not mean that an issue or concern lacks value. Issues beyond the scope of the draft EIS either may not yet be at the point where they can be resolved, or are more appropriately discussed and decided in other venues.

Some of the issues raised during the public scoping process (e.g., the Carnegie Report, the "Hobson Doctrine," and the "Megatons to Megawatts" program) will not be addressed in the draft EIS. Other issue areas including nonproliferation concerns, security and safety issues (e.g., the domino effect, tornado effects due to climate change), and credibility are also beyond the scope of the EIS. In *The Matter of Private Fuel Storage, LLC* (Independent Spent Fuel Storage Installation), 56 NRC 340 (2002), the Commission held that NRC staff is not required to consider terrorism in its EISs. The Commission indicated, "the possibility of a terrorist attack...is speculative and simply too far removed from the natural or expected consequences of agency action to require a study under NEPA."

Some of the issues raised during the public scoping process for the proposed facility are outside the scope of the draft EIS, but they will be analyzed in the SER. For example, health

and safety issues will be considered in detail in the SER prepared by NRC staff for the proposed action and will be summarized in the EIS. The draft EIS and the SER are related in that they may cover the same topics and may contain similar information, but the analysis in the draft EIS is limited to an assessment of potential environmental impacts. In contrast, the SER primarily deals with safety evaluations and procedural requirements or license conditions to ensure the health and safety of workers and the general public. The SER also covers other aspects of the proposed action such as demonstrating that the applicant will provide adequate funding for the proposed facility in compliance with NRC's financial assurance regulations.