PUBLIC INFORMATION MEETING:
SAFETY EVALUATION REPORT
USEC'S PROPOSED
AMERICAN CENTRIFUGE PLANT

October 18, 2006

Piketon, Ohio

Objectives

- Provide brief summary of
  - Safety Evaluation Report (SER)
  - Environmental Impact Statement (EIS)
- Discuss future project milestones
- Answer public questions

NRC Licensing Process

- NRC is an independent agency responsible for ensuring protection of public and workers health and safety in use of radioactive materials
- NRC is not a promoter of proposed project
- Enrichment facility construction can not begin until a license for construction and operation is issued
- Hearing is required for uranium enrichment facility (10 CFR Part 2)

Project Background

- USEC is proposing to enrich uranium using a gas centrifuge process in Piketon, Ohio
- Enriched uranium is needed for fuel for nuclear power plants
- License application submitted in August 2004
- NRC's environmental review completed in April 2006; safety review completed in September 2006

NRC Review Process

- Used safety, environmental, and security review staff, as well as contractors
- Followed a standard review plan, NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility"
- Issued requests for additional information and conducted conference calls and meetings
- Conducted on-site reviews

NRC Review Process (cont'd)

- USEC revised license application accordingly
- Documented review in the safety evaluation report (SER) and the final environmental impact statement (FEIS)

NRC's Safety Evaluation Report (SER)

- NRC conducted safety reviews in the following areas:
  - General Information
  - Organization and Administration
  - Integrated Safety Analysis
  - Radiation Protection
  - Nuclear Criticality Safety
  - Chemical Safety
  - Fire Safety
  - Management Measures
  - Emergency Management

NRC's Safety Evaluation Report (SER) (cont'd)

- Environmental Protection
- Decommissioning
- Material Control and Accounting
- Physical Protection
- Transportation Security

- NRC's safety evaluation report documents the results of the safety review of the above areas

General Information

- General facility function and site information
- Financial qualifications
- Classified information security
- Foreign ownership and control
- Liability insurance

Organization and Administration

- Organization and management capable of performing safety functions
- Management and staff will have proper training and qualifications

Integrated Safety Analysis (ISA)

- Performed by USEC and WSMS
- ISA Summary reviewed by NRC staff during safety review
- Comprehensive evaluation of radiological and chemical risk from potential accidents
- Identifies measures to prevent or mitigate potential accidents

ISA Process

- Key elements
  - Determination of performance requirements
  - Evaluation of potential accident sequences and consequences
  - Identification of IROFS
  - Determination of management measures
  - Formulation of plant change process
  - Assurance of experience feedback to ISA

10 CFR 70.61 Performance Requirements

	Highly Unlikely	Unlikely	Not unlikely
High Consequence Publ Dose > 25 rem Worker Dose > 100 rem	Acceptable	Not Acceptable	Not Acceptable
Medium Consequence Publ Dose 5 - 25 rem Worker Dose 25 -100 rem Env releases > 5000 Tbl 2	Acceptable	Acceptable	Not Acceptable
Low Consequence Publ Dose < 5 rem Worker Dose < 25 rem	Acceptable	Acceptable	Acceptable

Categories of Events Evaluated

- Fire
- Explosion
- Loss of containment/confinement
- Direct radiological – chemical exposure
- Nuclear criticality
- External hazards
- Natural phenomena

Items Relied on for Safety (IROFS)

- Must be in place for higher-risk accident sequences
- Prevent or mitigate the consequences of such accidents
- Includes systems, structures, equipment, components, and personnel actions
- Management measures in place to ensure availability and reliability
- USEC provided adequate information about IROFS

ISA Review

- NRC staff reviewed the USEC ISA Summary and supporting documentation including the License Application
- Staff visited the Portsmouth site and conducted detailed reviews of various accident sequences and hazard/event categories

ISA Review Results

- USEC provided sufficient information about the site, facility processes, hazards, and types of accident sequences
- The ISA was performed using an approved hazard evaluation method by a qualified team
- USEC identified suitable IROFS and management measures to ensure the IROFS availability and reliability to perform their safety function

Radiation Protection

- USEC has an adequate program for protecting workers and members of the public from exposure to radiation
- Program includes testing, monitoring and surveys to assure that radiation control is adequate
- Training and procedures will be used to meet 10 CFR 19 and 10 CFR 20 requirements and ensure that worker and public doses are as low as reasonably achievable (ALARA)

Criticality Safety

- Facility design and operating procedures assume 10% enrichment, facility will only enrich to 5% presently and in the foreseeable future
- USEC has an adequate program for preventing criticalities, mitigation is not permitted as a protection strategy
- USEC performed hazard analyses that identified and evaluated potential criticality accidents
- Analyses included assumptions of two unlikely, independent, concurrent events to ensure against a criticality accident (double contingency principle)

Chemical Safety

- USEC has adequately described and assessed chemical accident consequences
- USEC performed hazard analyses that identified and evaluated chemical processes and potential accidents
- USEC established safety controls for potential accidents that meet regulatory requirements

Fire Safety

- USEC has a program in place that uses building design, automatic and manual fire suppression and administrative measures to protect against fire hazards
- Program uses compliance with NFPA codes and other national consensus standards to meet baseline design criteria requirements
- Fire safety strategy uses multiple IROFS and defense-in-depth philosophy to protect public from credible high consequence fire events

Management Measures

- USEC provided adequate information about measures that will be applied to the project, including:
  - Overall change process and policy
  - Maintenance program
  - Training program
  - Process for development, approval, and implementation of procedures

Emergency Management

- USEC provided an adequate Emergency Plan (EP) for the facility
- USEC commits to maintaining and executing the EP for responding to chemical and radiological hazards if they occur
- EP requirements are implemented through approved written procedures and in coordination with local response organizations

Environmental Protection

- USEC has an adequate program for protecting the environment
- Program includes environment and effluent monitoring
- Program includes controls to maintain effluent releases as low as reasonably achievable (ALARA)

Decommissioning

- USEC proposed an adequate decommissioning funding plan (DFP)
- DFP provides a reasonable cost estimate for decommissioning
- DFP addresses costs for decontaminating the facility and for waste management, include dispositioning of depleted uranium tails

Security

- USEC provided adequate programs for
  - Physical security of the facility – includes classified information and enriched material
  - Controlling and accounting for enriched material
  - Transportation of enriched materials

Future Project Milestones

• Mandatory hearings	Winter 2006
• Licensing Board public limited appearance meeting	Dec 2006
• Licensing Board decision	Feb 2007
• License issued, if positive decision	Feb 2007
• Construction begins	Spring 2007
• Operation begins	2009
• Full production	2011

NRC Contacts

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Information Locations

- SER is available at:

http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1851/

- FEIS is available at:

http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1834/

- NRC has USEC project and gas centrifuge websites:

http://www.nrc.gov/materials/fuel-cycle-fac/usecfacility.html

http://www.nrc.gov/materials/fuel-cycle-fac/gas-centrifuge.html

Summary

- Provide Brief Summary of
  - Safety Evaluation Report
  - Environmental Impact Statement
- Discuss future project milestones

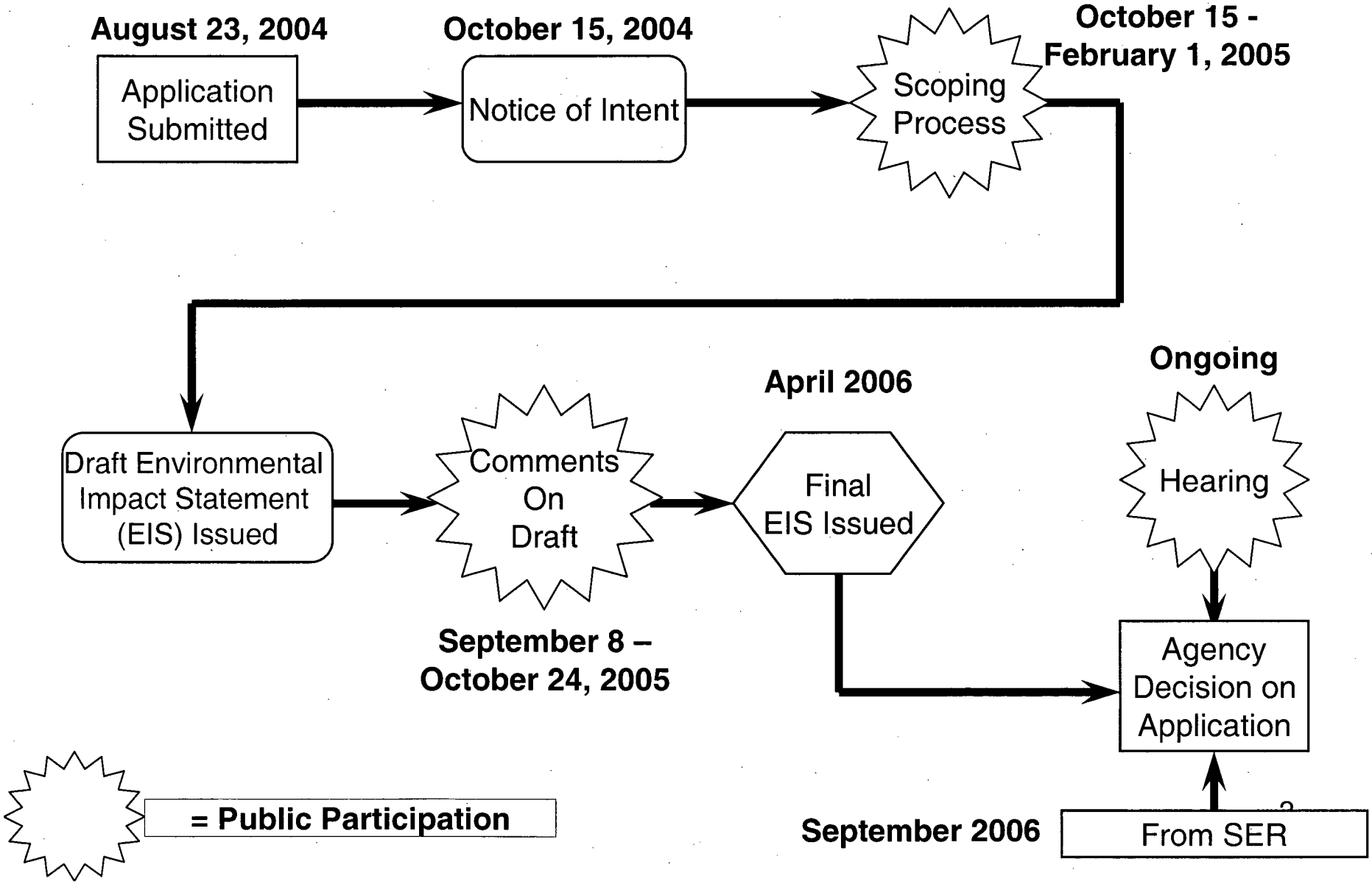
PUBLIC INFORMATION MEETING:
SAFETY EVALUATION REPORT
AND
FINAL ENVIRONMENTAL IMPACT STATEMENT

USEC'S PROPOSED
AMERICAN CENTRIFUGE PLANT

October 18, 2006

Piketon, Ohio

Environmental Review Process



Environmental Review

- Draft EIS published in September 2005
  - 300 comments
    - 17 individuals at public meeting
    - 15 individuals submitted letters
- Final EIS published in April 2006
  - Comment responses in Appendix J

Areas Evaluated in Final EIS

- Water Resources
- Environmental Justice
- Ecological Resources
- Public and Occupational Health
- Air Quality
- Waste Management
- Noise
- Socioeconomics
- Land Use
- Historic and Cultural Resources
- Transportation
- Visual and Scenic Resources
- Geology and Soils
- Cumulative Effects

Evaluation of Impacts

- Impacts from construction, routine operations, transportation, decommissioning, and credible accidents are analyzed
- The possible impact categories were small, moderate, or large
- Impacts can be negative or positive
- Mitigation measures are described

Categories of Environmental Impacts

- Small: Not detectable or are so minor that they would neither destabilize nor noticeably alter any important attribute of the resource
- Moderate: Sufficient to noticeably alter but not destabilize important attributes of the resource
- Large: Clearly noticeable and sufficient to destabilize important attributes of the resource

Small Impacts of the Proposed Action

- Land use
- Historical and cultural resources
- Visual and scenic resources
- Geology and soils
- Water resources
- Ecological resources
- Environmental justice
- Noise

Small to Moderate Impacts of the Proposed Action

- Air quality
- Socioeconomics
- Transportation
- Public and occupational health
- Waste management

Air Quality

- Short-term increases in particulate matter during construction phase
  - Primarily from construction equipment
  - Recent mitigation measures should reduce this impact to SMALL
- Operational emissions of HF and uranium considered SMALL

Socioeconomics

- Analyzed employment, population, housing, public services and finances
- Employment would increase moderately
- Impacts to population, housing, and public services would be small

Transportation

- Impacts during construction would be moderate, due to increased traffic on Highways 23 and 32

- Impacts of transportation accidents would be moderate
  - Probability of severe transportation accident is very unlikely

Public and Occupational Health

- Analyzed non-radiological and radiological impacts for both the public and workers
- Non-radiological and radiological impacts for construction, normal operations, and decommissioning are small
- Radiological impacts during operations:
  - less than 1 mrem/yr for the nearest member of public
- Impacts for accidents are small to moderate
  - safety procedures make severe accidents highly unlikely

Waste Management

- Evaluated non-radiological and radiological waste
- Impacts from construction, operations, and decommissioning are small because there is adequate capacity at associated disposal facilities
- Moderate impacts to depleted uranium conversion facility