

SUPPLEMENT TO DRAFT REGULATORY ANALYSIS
FOR PROPOSED 10 CFR PART 76,
"CERTIFICATION OF GASEOUS DIFFUSION PLANTS"

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SUMMARY

The attached table provides certain summary information on proposed 10 CFR Part 76, "Certification of Gaseous Diffusion Plants," which is being published in the Federal Register for public comment. The table is intended to assist persons reviewing and commenting on the proposed rule. The table provides a summary comparison of proposed Part 76 to existing Nuclear Regulatory Commission regulations and Department of Energy (DOE) requirements, and briefly summarizes the justification for the proposed Part 76 requirements and the expected impact on the operator of the gaseous diffusion plants, the U. S. Enrichment Corporation (USEC). Because the table is only a summary of information appearing elsewhere in the proposed rule and supporting information, commentors should base their comments on all of the information and not just the information in the table.

In developing proposed Part 76, the NRC staff attempted to the extent practicable to be consistent with existing NRC regulations applicable to licensed fuel cycle facilities, and with DOE requirements applicable to the gaseous diffusion plants. The DOE requirements, operations of the gaseous diffusion plants under the requirements, and status of compliance with the requirements are described in detail in the DOE document, "Safety Basis and Framework for DOE Oversight of the Gaseous Diffusion Plants," July 1, 1993. This document was included in Commission Paper SECY-93-285, dated October 15, 1993, which was discussed in a public Commission meeting on October 26, 1993, and is available in the NRC Public Document Room.

In general, the requirements in proposed Part 76 are similar to NRC regulations generally applicable to licensed fuel cycle facilities. However, in some cases, DOE requirements treated an important topic in more detail than the corresponding NRC regulation, and the staff believed that this level of detail was appropriate given the size and extent of the enrichment operations. In these cases, the staff chose requirements similar to the DOE requirements. Examples are safety analysis reports (section 76.35), quality assurance (section 76.93), and worker training (section 76.95). In other cases, the proposed Part 76 includes requirements from current NRC regulations which are not in the DOE requirements, but the staff believes that the requirements are appropriate and that the associated implementation burden will not be significant. An example is criticality monitoring (section 76.89).

For the reasons stated in the proposed rule and the supporting information, the staff believes that the proposed Part 76 requirements assure adequate protection of the public health and safety, provide for the common defense and security, and assure adequate safeguards. The staff also believes proposed Part 76 will not impose an unreasonable implementation burden. In this rulemaking on proposed Part 76 the NRC seeks comments on these and other relevant aspects of the proposed rule, and will consider all such comments before promulgating the final rule.

EXPLANATION OF COLUMNS IN THE TABLE

TOPIC - This column lists the regulatory topics from proposed Part 76 which are compared to existing NRC regulations and DOE orders.

PROPOSED PART 76 REQUIREMENT - This column cites the section of Part 76 related to a listed topic and summarizes the proposed requirement.

EXISTING NRC REGULATION - This column cites the existing CFR section which addresses a given topic for either all NRC licensees or fuel cycle licensees, summarizes the requirement, and identifies differences from Part 76. Note that USEC will not be an NRC licensee, but will be regulated as an NRC certificate holder.

DOE REQUIREMENT - This column cites the relevant DOE requirements currently applicable to gaseous diffusion plants, summarizes the requirements, and identifies differences from Part 76. Relevant DOE orders are cited, based on the Regulatory Oversight Agreement between DOE and USEC which incorporates the DOE document, "Safety Basis and Framework for DOE Oversight of the Gaseous Diffusion Plants," dated July 1, 1993. Identification of a DOE order does not imply that all provisions of a DOE order are mandatory requirements for the gaseous diffusion plants.

PART 76 JUSTIFICATION/IMPACT - This column summarizes the justification for the requirement specified in Part 76, and describes the expected impact of implementation by USEC.

GLOSSARY OF TERMS AND ACRONYMS USED IN THE COMPARISON TABLE

Category I	This category of material refers to 5 kilograms or more of the uranium-235 isotope contained in uranium enriched to 20% or more in the uranium-235 isotope.
Category II	This category of material refers to (1) less than a Category I quantity but more than 1000 grams of the uranium-235 isotope contained in uranium enriched to 20% or more in the uranium-235 isotope; or (2) 10,000 grams or more of the uranium-235 isotope contained in uranium enriched to 10% but less than 20% in the uranium-235 isotope.
Category III	This category of material refers to (1) 1000 grams or less, but more than 15 grams, of the uranium-235 isotope contained in uranium enriched to 20% or more in the uranium-235 isotope; or (2) less than 10,000 grams but more than 1000 grams of uranium-235 contained in uranium enriched to 10% but less than 20% in the uranium-235 isotope; or (3) 10,000 grams or more of the uranium-235 isotope contained in uranium enriched above natural but less than 10% in the uranium-235 isotope.
CFR	Code of Federal Regulations
DOE	United States Department of Energy
IAEA	International Atomic Energy Agency
NQA-1	A publication of the American Society of Mechanical Engineers (ASME, 1989) NQA-1, "Quality Assurance Program Requirements for Nuclear Facilities"
NRC	United States Nuclear Regulatory Commission
QA	Quality assurance
SAR	Safety analysis report
SNM	Special nuclear material. For purposes of the table, it refers to uranium enriched in the uranium-235 isotope.
USEC	United States Enrichment Corporation

COMPARISON OF PROPOSED PART 76, EXISTING NRC REGULATIONS, AND DOE REQUIREMENTS

TOPIC	PROPOSED PART 76 REQUIREMENT	EXISTING NRC REGULATION	DOE REQUIREMENTS	PART 76 JUSTIFICATION/IMPACT
Annual Application for Certificate	76.31 requires USEC to submit an annual application for a certificate of compliance.	70.21 requires initial license application, and periodic renewal application (every 5 or 10 years).	NONE	The Energy Policy Act requires an annual application for the certificate of compliance. IMPACT: Resources required to prepare annual application.
Safety Analysis Report (SAR)	76.35(a) requires a safety analysis report with application.	70.22 requires an application to contain safety information, but does not explicitly require a safety analysis report.	5480.5 and 5480.23 require safety analysis reports.	Safety analysis reports are needed to document the safety basis of the plants. SAR's were prepared for the plants in 1985, and are being updated by DOE. IMPACT: Small, because existing SAR's appear to be comprehensive in scope and detail.
IAEA Compliance	76.35(j) requires submittal upon request by NRC of information related to compliance with IAEA requirements, and cooperation with IAEA inspectors.	75.11 - same as Part 76	1270.2B covers IAEA requirements, but they were not previously applicable to the DOE enrichment plants.	Transfer of plants to USEC places them under IAEA purview. IMPACT: Minor administrative resources needed to accommodate IAEA information requests and inspections.

COMPARISON OF PROPOSED PART 76, EXISTING NRC REGULATIONS, AND DOE REQUIREMENTS

TOPIC	PROPOSED PART 76 REQUIREMENT	EXISTING NRC REGULATION	DOE REQUIREMENTS	PART 76 JUSTIFICATION/IMPACT
Waste Management	76.35(k) requires a description of waste management program.	70.22(a)(7) and (8) require information on waste disposal procedures.	5400.3 and 5820.2A requires establishment of waste management programs.	Information on waste management is needed to assure safe operations and compliance with storage and disposal requirements. IMPACT: None, because existing program description appears to be comprehensive in scope and detail.
Financial Assurance for Waste Disposal	76.35(l) requires financial assurance for disposal of depleted uranium and waste.	70.25 - same as Part 76	NONE	NRC-regulated organizations should provide appropriate financial assurance for decommissioning, including waste disposal. If DOE confirms such arrangements will be made, NRC will defer to DOE and drop this requirement. IMPACT: None, because both USEC and DOE agree that USEC must provide for financing of disposal of depleted uranium and waste generated by USEC.
Instruction to Workers	76.60(c) requires compliance with Part 19, Notices, Instructions and Reports to Workers.	Part 19 - same as Part 76	5480.20 provides general training requirements.	Requirements for USEC regarding instructions to workers should be consistent with those for NRC licensees. IMPACT: Minor procedural changes to adopt Part 19.

COMPARISON OF PROPOSED PART 76, EXISTING NRC REGULATIONS, AND DOE REQUIREMENTS

TOPIC	PROPOSED PART 76 REQUIREMENT	EXISTING NRC REGULATION	DOE REQUIREMENTS	PART 76 JUSTIFICATION/IMPACT
Radiation Protection Standards	76.60(d) requires compliance with Part 20, Standards for Protection Against Radiation, recently revised in its entirety.	Part 20 - same as Part 76	5400.5 and 5480.11 provide requirements similar to Part 20.	Radiation protection requirements should be consistent for USEC and NRC licensees. IMPACT: Because uranium is a relatively low radiation hazard, the impact of adopting Part 20 is expected to be relatively small.
Reporting of Defects and Non-Compliance	76.60(e) requires compliance with Part 21, Reporting of Defects and Noncompliance.	Part 21 - same as Part 76	NONE	Part 21 implements a statutory requirement; NRC implementing requirements should be consistent for USEC and NRC licensees. IMPACT: Minor procedural changes to assure compliance with Part 21.
Fitness for Duty	76.60(f) requires compliance with Part 26, Fitness for Duty Programs, if USEC chooses to engage in activities involving Category I special nuclear material.	Part 26 - same as Part 76	5631 provides the personnel security program, but does not include routine random chemical testing.	Fitness for duty programs should be consistent for USEC and NRC licensees, if they possess Category I quantities of special nuclear material. IMPACT: None, because USEC does not plan to possess Category I material, which would trigger Part 26 fitness for duty requirements.
Transportation	70.60(g) requires compliance with Part 71, Packaging and Transportation of Radioactive Material	Part 71 - same as Part 76	1540.1A and 5480.3 - similar to Part 76	Transportation requirements should be consistent for USEC and NRC licensees. DOE and NRC requirements are similar. IMPACT: Minor procedural changes to comply with Part 71.

COMPARISON OF PROPOSED PART 76, EXISTING NRC REGULATIONS, AND DOE REQUIREMENTS

TOPIC	PROPOSED PART 76 REQUIREMENT	EXISTING NRC REGULATION	DOE REQUIREMENTS	PART 76 JUSTIFICATION/IMPACT
Operational Changes	76.68 allows operational changes without prior NRC approval, subject to certain limitations.	Part 70 contains no specific provision for such changes. They are normally addressed by license condition.	5480.21 - similar to Part 76	The staff believes that some operational flexibility should be provided, as long as safety and safeguards remain adequate. IMPACT: Some resources savings by reducing number of routine certificate amendments.
Transfer of Radio-active Material	76.83 specifies requirements for transfer of radioactive material to other parties.	Part 70.42 - same as Part 76	NONE - USEC follows a procedure similar to Part 76.	Transfer requirements should be consistent for USEC and NRC licensees. IMPACT: None, because proposed requirements are similar to existing USEC practice.
Accident Assessment	76.85 requires assessment of potential accidents.	70.23 requires submittal of safety information, but does not explicitly require accident assessment.	5480.5 and 5480.23 require assessment of potential accidents.	Assessment of potential accidents is appropriate to assess the safety of plant operations. Existing SAR's include accident analyses which are being updated by DOE. IMPACT: Small, because existing analyses appear to be comprehensive in scope and detail.

COMPARISON OF PROPOSED PART 76, EXISTING NRC REGULATIONS, AND DOE REQUIREMENTS

TOPIC	PROPOSED PART 76 REQUIREMENT	EXISTING NRC REGULATION	DOE REQUIREMENTS	PART 76 JUSTIFICATION/IMPACT
Technical Safety Requirements	76.87 requires establishment of operational safety requirements to assure safe operation.	70.23 requires submittal of safety procedures, but does not explicitly require operational safety requirements.	5480.22 requires establishment of operational safety requirements, similar to Part 76.	Operational safety requirements are appropriate to assure that plants are operated within safe limits. Such requirements have already been implemented pursuant to DOE requirements. IMPACT: Small, because existing requirements appear to be comprehensive in scope and detail. Some resources will be necessary to update existing requirements.
Criticality Accident Monitors	76.89 requires each area where special nuclear material is used or stored to be covered by two criticality monitors.	70.24 - same as Part 76	5480.5 and 5480.24 - similar to Part 76, except redundant coverage by 2 detectors is not mandatory.	Criticality monitors are important to safety, and staff experience is that existing Part 70 requirements provide adequate protection. Requirements should be consistent for USEC and NRC licensees. IMPACT: Additional monitors may be required, or USEC may need to justify an alternative approach.
Emergency Planning	76.91 specifies emergency planning requirements.	70.22(i) - same as Part 76	5500.2B and 5500.3A - similar to Part 76, plus requirements for more frequent drills and additional coordination with offsite organizations.	Staff experience is that existing NRC requirements are adequate to assure protection of the safety of the public. The additional provisions in the DOE requirements are minor. IMPACT: Minor procedural changes to adopt NRC requirements.

COMPARISON OF PROPOSED PART 76, EXISTING NRC REGULATIONS, AND DOE REQUIREMENTS

TOPIC	PROPOSED PART 76 REQUIREMENT	EXISTING NRC REGULATION	DOE REQUIREMENTS	PART 76 JUSTIFICATION/IMPACT
Quality Assurance (QA)	76.93 requires a quality assurance program in accordance with NQA-1-1989.	70.22 requires information on safety procedures, but explicitly requires QA information for plutonium facilities only.	5700.6C similar to Part 76, plus additional requirements for continuing quality improvements.	QA programs are generally recognized as appropriate safety practice. NQA-1 is a generally recognized QA standard for fuel cycle facilities. USEC inherited an existing QA program based on NQA-1. IMPACT: Minor resources needed to fully implement QA procedures.
Training	76.95 requires a training program which includes a systems approach to training.	70.22 requires information on training, but does not require detailed information on training programs.	5480.18A, 5480.19, and 5480.20 require comprehensive, detailed training programs.	A comprehensive training program is appropriate to assure safe plant operation. USEC has inherited a training program which appears to be comprehensive in scope and detail and incorporates the systems approach. IMPACT: Minor administrative resources to fully implement the training program.

COMPARISON OF PROPOSED PART 76, EXISTING NRC REGULATIONS, AND DOE REQUIREMENTS

TOPIC	PROPOSED PART 76 REQUIREMENT	EXISTING NRC REGULATION	DOE REQUIREMENTS	PART 76 JUSTIFICATION/IMPACT
Safeguards: Category I	76.113 requires programs for the accounting, control, protection against theft, and protection against sabotage of Category I material, if USEC elects to engage in activities involving that material.	Requirements in Parts 70, 73, and 74 are same as Part 76.	5633.3A requires a program for material control and accounting for SNM, including Category I. 5632.2A requires a program for protection of SNM, including Category I. Requirements are less prescriptive than NRC requirements.	SNM must be accounted for and protected in the interest of the common defense and security and to satisfy the treaty with the IAEA. Requirements for NRC licensees and USEC should be consistent, because the safeguards concerns are the same. IMPACT: None, because USEC does not plan to possess Category I material.
Safeguards: Category II	76.115 requires programs for the accounting, control, and protection against theft of Category II material, if USEC elects to engage in activities involving that material.	Requirements in Parts 70, 73, and 74 are same as Part 76.	5633.3A requires a program for material control and accounting for SNM, including Category II. 5632.2A requires a program for protection of SNM, including Category II. Requirements are less prescriptive than NRC requirements.	SNM must be accounted for and protected in the interest of the common defense and security and to satisfy the treaty with the IAEA. Requirements for NRC licensees and USEC should be the consistent, because the safeguards concerns are the same. IMPACT: None, because the USEC does not possess Category II material.

COMPARISON OF PROPOSED PART 76, EXISTING NRC REGULATIONS, AND DOE REQUIREMENTS

TOPIC	PROPOSED PART 76 REQUIREMENT	EXISTING NRC REGULATION	DOE REQUIREMENTS	PART 76 JUSTIFICATION/IMPACT
Safeguards: Category III	76.117 requires programs for the accounting, control, and protection against theft of Category III material.	Requirements in Parts 70, 73, and 74 are same as Part 76.	5633.3A requires a program for material control and accounting for SNM, including Category III. 5632.2A requires a program for protection of SNM, including Category III. Requirements are less prescriptive than NRC requirements.	SNM must be accounted for and protected in the interest of the common defense and security and to satisfy the treaty with the IAEA. Staff experience is that existing NRC requirements provide adequate protection. Requirements for NRC licensees and USEC should be consistent, due to similar safeguards concerns. IMPACT: Small for accounting programs because of NRC detailed diversion detection requirements. Possible resource savings due to reduced physical protection requirements.
Protection of Classified Matter	76.119 requires a program for the protection of classified matter.	Requirements in Part 95 are same as those of Part 76.	5632.5 requires protection of classified matter. 5634.1B governs facility approvals. 5635.1A requires control of classified documents and information. Requirements are similar to Part 76.	Classified matter must be controlled and protected against unauthorized disclosure. Staff experience is that existing requirements provide adequate protection. IMPACT: None; DOE and NRC requirements are essentially the same.

COMPARISON OF PROPOSED PART 76, EXISTING NRC REGULATIONS, AND DOE REQUIREMENTS

TOPIC	PROPOSED PART 76 REQUIREMENT	EXISTING NRC REGULATION	DOE REQUIREMENTS	PART 76 JUSTIFICATION/IMPACT
Reporting of Incidents	76.120 requires reporting of certain incidents to the NRC.	70.50 - same as Part 76	5000.3B requires establishment of a comprehensive reporting system covering a wide range of incidents, including many that are not safety related.	Incident reporting requirements for USEC and NRC licensees should be consistent. IMPACT: Some additional resources required to adapt to NRC reporting system.