

UNITED STATES ENRICHMENT CORPORATION

Two Democracy Center • 4th Floor • 6903 Rockledge Drive • Bethesda, MD 20817

Fax Memorandum

DATE: February 20, 1997
TIME: 8:17 am

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NUMBER OF PAGES (including cover sheet): 24

SUBJECT: Handouts For This Mornings 9:00 Call

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NRC/USEC MEETING
10 CFR 76 PROCESS IMPROVEMENTS

February 20, 1997, 9:00 a.m.

NRC Offices, Rockville, MD

- Certificate Amendment Process Modifications
- Treatment of "As-Found" Conditions
- Safety Criteria/Standards

CERTIFICATE AMENDMENT PROCESS MODIFICATIONS

- Introduction
- Nature of the Problem
- Proposed Changes to 10 CFR 76.45
- Benefits of Proposed Changes

INTRODUCTION

PURPOSE: Present Proposed Modifications to the Certificate Amendment Approval Process

OBJECTIVE: Expedite and Improve the Review and Approval Process for Obtaining Amendments to the Certificate of Compliance.

NATURE OF THE PROBLEM

Current Amendment Process

- Potential for Significant Delays in Issuance of Final Amendment Due to 15 Day Petition Period or the 60 Day Review Period
- Inconsistent With Material License Amendment Process
 - No Delay in Effectiveness of Decision on Amendments
 - No Formal Public Notice for Non-Significant Amendments

RESOLUTION OF THE PROBLEM

Proposed Revision to 10 CFR 76.45

- See Attached Changes to 10 CFR 76.45

Attachment A

DRAFT
2/5/97

§ 76.45 Application for Amendment of Certificate

(a) Contents of amendment application - In addition to the application for certification submitted pursuant to § 76.31, the Corporation may at any time apply for amendment of the certificate to cover proposed new or modified activities. The amendment application should contain sufficient information for the Director to make findings of compliance or acceptability for the proposed activities as required for the original certificate. The amendment application must be executed in a signed original by the Corporation under oath or affirmation.

(b) Notice of proposed action - Upon receipt of the Corporation's application for amendment of the certificate, the Director will determine whether the proposed activities are significant. If the Director determines that the activities are significant, the Director shall, prior to acting on the amendment request, cause to be published in the Federal Register a notice of proposed action on the request. The notice of proposed action will set forth the nature of the action proposed and will:

- (1) provide an opportunity for written public comment on the Director's proposed action; and

- (2) identify the date of any scheduled public meeting on the Director's proposed action pursuant to § 76.39.

(c) Director's decision - (1) Upon a finding of compliance with the Commission's regulations for issuance of a certificate and/or approval of a compliance plan, the Director shall issue the amendment and a written decision explaining the decision. The Director may issue an amendment covering those areas where the Corporation is in compliance with applicable Commission requirements and approve a compliance plan for the remaining areas, if any, of noncompliance. The Director may impose any appropriate terms and conditions. Unless otherwise directed by the Director, the amendment and the Director's decision shall be final and effective upon issuance.

(2) The Director may deny an application for an amendment to a certificate of compliance or not approve a compliance plan upon a written finding that the application is in noncompliance with one or more of the Commission's requirements for the plant, or that the compliance plan is inadequate to protect the public health and safety or the common defense and security.

(d) Notice of decision - The Director shall publish notice of the decision in the Federal Register.

(e) Petitions for review - The Corporation, or any person whose interest may be affected and who submitted written comments in response to the notice of proposed action under § 76.45(b),

or provided oral comments at any meeting held on the Director's decision under § 76.39, may file a petition, not to exceed 30 pages, requesting review of the Director's decision. This petition must be filed with the Commission not later than 15 days after publication of the Federal Register notice.

Any person described in this paragraph may file a response to any petition for review, not to exceed 30 pages, within 10 days after the filing of the petition. The Commission shall rule on the petition for review within 60 days after the publication of the Federal Register notice, unless it extends the time for review. The Commission may adopt, by order, further procedures that, in its judgment, would serve the purpose of review of the Director's decision.

(f) Commission action - The Commission may adopt, modify, or set aside the findings, conclusions, conditions, or terms in the Director's decision and will state the basis of its action in writing.

(g) Non-significant amendments - If pursuant to subparagraph (b), the Director determines that the activities are not significant, the Director shall issue a decision in accordance with subparagraph (c). No notice of proposed action or notice of the Director's decision shall be published. For such non-significant amendments, any person whose interest may be affected may file a petition, not to exceed 30 pages requesting review of the Director's decision. This petition must be filed with the Commission not later than 30 days from the date of the Director's decision. Any person described in this paragraph may file a response to any petition for review, not to

exceed 30 pages, within 10 days after the filing of the petition. The Commission shall rule on the petition for review within 60 days after the publication of the Federal Register notice, unless it extends the time for review. The Commission may adopt, by order, further procedures that, in its judgment, would serve the purpose of review of the Director's decision. The Commission may adopt, modify, or set aside the findings, conclusions, conditions, or terms in the Director's decision and will state the basis of its action in writing.

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Nuclear Regulatory Commission

FOR RENEWAL OF A
 CERTIFICATE OF COMPLIANCE
 §76.39

accordance with the requirements of subpart E;

nuclear material of significance will be produced with the relevant subpart E; and

is used to protect special areas while in transit; and areas, all of which are located at the same fixed site under the same applicant. The level of protection afforded the material may not be less than the same material while in the same protected area from an

describing the facility's procedures and conditions in §95.15(b) of this section of classified

to a written request on, the Corporation Commission the information described in the letter on Form N-71. It shall also permit verification of installation information. Atomic Energy Act of 1954, as amended, as set forth in the

of the program, as processing, management of mixed and radioactive depleted uranium isotopes. This description of processing, disposal activities, operation of the facility, lease to the Corporation must also include information of the waste enrichment operations of depleted uranium, expected, identification contained in the chemical forms of uranium and waste, plans for depleted uranium and ultimate disposal of depleted uranium at the facilities to the agency under the terms of the agreement between the parent Corporation

(n) A description of the funding program to be established to ensure that funds will be set aside and available for those aspects of the ultimate disposal of waste and depleted uranium, decontamination and decommissioning, relating to the gaseous diffusion plants leased to the Corporation by the Department of Energy, which are the financial responsibility of the Corporation. The Corporation shall establish financial surety arrangements to ensure that sufficient funds will be available for the ultimate disposal of waste and depleted uranium, and decontamination and decommissioning activities which are the financial responsibility of the Corporation. The funding mechanism, such as prepayment, surety, insurance, or external sinking fund, must ensure availability of funds for any activities which are required to be completed both before or after the return of the gaseous diffusion facilities to the Department of Energy in accordance with the lease between the Department and the Corporation. The funding program must contain a basis for cost estimates used to establish funding levels and must contain means of adjusting cost estimates and associated funding levels over the duration of the lease. The funding program need not address funding for those aspects of decontamination and decommissioning of the gaseous diffusion plants assigned to the Department of Energy under the Atomic Energy Act of 1954, as amended. The Corporation should address the adequacy of the financing mechanism selected in its annual application for certification.

§76.36 Annual renewals.

(a) After issuance by the Commission of the initial certificate of compliance and/or an approved compliance plan, the Corporation shall file an annual application for renewal, as required by §76.31.

(b) Information contained in previous applications, statements, or reports filed with the Commission may be referenced as part of the application, provided that the reference is clear and specific.

(c) An application for renewal is subject to the requirements in §76.33 and

must contain the following information:

(1) The information specified in §76.35; or,

(2) A statement by the Corporation that the NRC may rely upon the information provided in the previous application(s) upon which the existing certificate is based, except for:

(i) Any proposed changes in the existing certificate of compliance conditions or technical safety requirements;

(ii) Any proposed changes to the documents submitted with the previous application in accordance with §76.35;

(iii) Any changes which the Corporation has made without prior NRC approval pursuant to §76.56; and,

(iv) Any changes to certificate conditions or technical safety requirements for which the Corporation has sought and received Commission approval pursuant to §76.45.

(d) The changes which are submitted as part of an application for renewal in accordance with paragraph (c)(2) of this section, must be in the form of specific changes to the documentation specified in §76.35. The changes must be marked and dated for easy identification.

§76.37 Federal Register notice—

The Director shall publish in the FEDERAL REGISTER:

(a) A notice of the filing of an application, specifying that copies of the application, except for Restricted Data, Unclassified Controlled Nuclear Information, Classified National Security Information, Safeguards Information, Proprietary Data, or other withholdable information will be made available for the public inspection in the Commission's Public Document Room at 2120 L Street, NW. (Lower Level), Washington, DC, and in the local public document room at or near the location of the plant;

(b) A notice of opportunity for written public comment on the application; and

(c) The date of any scheduled public meeting regarding the application.

§76.38 Public meeting—

(a) A public meeting will be held on an application if the Director, in his or her discretion, determines that a meet-

FOR RENEWAL OF A
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ing is in the public interest with respect to a decision on the application.

(b) Conduct of public meeting.

(1) The Director shall conduct any public meeting held on the application.

(2) Public meetings will take place near the locale of the subject plant, unless otherwise specified by the Director.

(3) A public meeting will be open to all interested members of the public and be conducted as deemed appropriate by the Director.

(4) Members of the public will be given an opportunity during a public meeting to make their views regarding the application known to the Director.

(5) A transcript will be kept of each public meeting.

(6) No Restricted Data, Classified National Security Information, Unclassified Controlled Nuclear Information, Safeguards Information, Proprietary Data, or other withholdable information may be introduced at the meeting.

§ 76.41 Record underlying decisions.

(a) Any decision of the Commission or its designee under this part in any proceeding regarding an application for a certificate must be based on information in the record and facts officially noticed in the proceeding.

(b) All public comments and correspondence in any proceeding regarding an application for a certificate must be made a part of the public docket of the proceeding, except as provided under 10 CFR 2.790.

§ 76.42 Annual date for decision.

The Director will render a decision on an application within 6 months of the receipt of the application unless the Director alters the date for decision and publishes notice of the new date in the FEDERAL REGISTER.

§ 76.43 Application for amendment of certificate.

(a) Contents of amendment application. In addition to the annual application for certification submitted pursuant to § 76.31, the Corporation may at any time apply for amendment of the certificate to cover proposed new or modified activities. The amendment application should contain sufficient information for the Director to make find-

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ings of compliance or acceptability for the proposed activities as required for the original certificate.

(b) Director's decision. Upon receipt of the Corporation's application for amendment of the certificate, the Director will determine whether the proposed activities are significant, and if so, follow the procedures specified in §§ 76.37 and 76.39. If the Director determines that the activities are not significant, the Director will, after appropriate review, issue a decision pursuant to subpart C of this part.

(c) Oath of affirmation. An application for an amendment of the certificate of compliance must be executed in a signed original by the Corporation under oath or affirmation.

Subpart C--Certification

§ 76.51 Conditions of certification.

The Corporation shall comply with the certificate of compliance, any approved compliance plan, and the requirements set forth and referenced in this part, except as may be modified by the certificate or approved compliance plan.

§ 76.52 Consultation with Environmental Protection Agency.

In reviewing an application for a certificate, including the provisions of any compliance plan, the Director shall consult with the Environmental Protection Agency and solicit the Environmental Protection Agency's written comments on the application.

§ 76.53 Timely renewal.

In any case in which the Corporation has timely filed a sufficient annual application for a certificate of compliance, the existing certificate of compliance or approved compliance plan does not expire until the application for a certificate of compliance has been finally determined by the NRC. For purposes of this rule, a sufficient application is one that addresses all elements of § 76.36.

§ 76.54 Regulatory requirements which apply.

The Nuclear Regulatory Commission will use the following requirements for

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certification of

(a) The adequate health and security

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REPLACE WITH
REVISED § 76.45

§76.62

§76.62 Issuance of certificate and/or approval of compliance plan.

(a) Upon a finding of compliance with the Commission's regulations for issuance of a certificate and/or approval of a compliance plan, the Director shall issue a written decision explaining the decision. The Director may ~~issue a~~ certificate of compliance covering those areas where the Corporation is in compliance with applicable Commission requirements and approve a compliance plan for the remaining areas, if any, of noncompliance. The Director may impose any appropriate terms and conditions.

(b) The Director shall publish notice of the decision in the FEDERAL REGISTER.

(c) The Corporation, or any person whose interest may be affected and who submitted written comments in response to the FEDERAL REGISTER Notice on the application or compliance plan under §76.37, or provided oral comments at any meeting held on the application or compliance plan conducted under §76.39, may file a petition, not to exceed 30 pages, requesting review of the Director's decision. This petition must be filed with the Commission not later than 15 days after publication of the FEDERAL REGISTER notice. Any person described in this paragraph may file a response to any petition for review, not to exceed 30 pages, within 10 days after the filing of the petition. Unless the Commission grants the petition for review or otherwise acts within 60 days after the publication of the FEDERAL REGISTER notice, the Director's initial decision on the certificate application or compliance plan becomes effective and final. The Commission may adopt, by order, further procedures that, in its judgment, would serve the purpose of review of the Director's decision.

(d) The Commission may adopt, modify, or set aside the findings, conclusions, conditions, or terms in the Director's decision and will state the basis of its action in writing.

§76.64 Denial of certificate or compliance plan.

(a) The Director may deny an application for a certificate of compliance or not approve a compliance plan upon

a written finding that the application is in noncompliance with one or more of the Commission's requirements for the plant, or that the compliance plan is inadequate to protect the public health and safety or the common defense and security.

(b) The Director shall publish notice of the decision in the FEDERAL REGISTER.

(c) Before a denial of an application for a certificate of compliance, the Director shall advise the Corporation and the Department in writing of any areas of noncompliance with the Commission's regulations and offer the Department or the Corporation an opportunity to submit a proposed compliance plan prepared by the Department regarding the identified areas of noncompliance. The Director shall take this action even if the Department or the Corporation has previously submitted a proposed compliance plan addressing in whole or in part the identified areas of noncompliance.

(d) The Corporation, or any person whose interest may be affected and who submitted written comments in response to the FEDERAL REGISTER notice on the application or compliance plan under §76.37 or provided oral comments at any meeting held on the application or compliance plan conducted under §76.39, may file a petition, not to exceed 30 pages, requesting review of the Director's decision. This petition must be filed with the Commission not later than 15 days after publication of the FEDERAL REGISTER notice. Any person described in this paragraph may file a response to any petition for review, not to exceed 30 pages, within 10 days after filing of the petition. Unless the Commission grants the petition for review or otherwise acts within 60 days after the publication of the FEDERAL REGISTER notice, the Director's initial decision on the certificate application or compliance plan becomes effective and final. The Commission may adopt, by order, further procedures that, in its judgment, would serve the purpose of review of the Director's decision.

(e) The Commission may adopt, modify, or set aside the findings, conclusions, conditions, or terms in the Director's decision and will state the basis of its action in writing.

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BENEFITS OF PROPOSED CHANGES

- Minimizes the Changes to Part 76
 - Proposed Changes Rely on Much of the Language in Existing Rule
 - Consolidates Amendment Process into One Regulation
- Eliminates Unnecessary Delays In Implementing Plant or Program Changes
 - Amendments Become Effective Upon Issuance of Directors Decision
- Maintains Current Provisions for Public Notice on Significant Amendments
- Maintains Current Provisions for Written Public Comments and Public Meetings for Significant Amendments
- Petitions for Commission Review May Be Filed
- Consistent with Materials License Amendment Process

10 CFR 76.68(b)
Treatment of "As-Found" Conditions

- 10 CFR 76.68(b):
 - "...The Corporation shall evaluate any as-found conditions that do not agree with the plant's programs, plans, policies, and operations in accordance with paragraph (a) of this part...."
- Treatment of As-Found Conditions
 1. Identification
 2. Evaluation
 - Operability determination
 - Place plant in a safe condition
 - Reportability determination
 3. Ultimate Resolution
 - (a) Correct the as-found condition to conform to the Application, or
 - (b) Correct the Application to conform to the as-found condition

10 CFR 76.68(b)
Treatment of "As-Found" Conditions

- The wording of 10 CFR 76.68(b) does not add any value to the above process:
 - The focus should be on operability and then the corrective action.
 - 10 CFR 76.68(a) is directed at proposed changes to the plant or plant operations (i.e., prior review and approval). An as-found condition is not a proposed change.
 - Operability determinations could be unnecessarily impacted or delayed.
 - Additional submittals will need to be made to the NRC.

- Conclusions:
 - 10 CFR 76.68(a) is properly focused on proposed changes to the plant or plant operations.
 - The evaluation of original as-found conditions in accordance with 10 CFR 76.68(a) serves no useful purpose.
 - NRC Generic Letter 91-18 provides useful guidance in this area.

SAFETY CRITERIA/STANDARDS NEEDED

- New Safety Analysis - August 1997
- Purpose of safety analysis:
 - screen hazards
 - determine consequences of significant sequences
 - determine if structures/systems/components/processes are adequate
 - determine what SSCs require additional assurance measures
- 10 CFR 76 SoC Criteria = 30 mg U uptake, 25 REM offsite
- Dominant risk is onsite i.e. Worker Safety; no criteria for
- NEI Proposed 10 CFR 70
- USEC Comments re: 10 CFR 70 - 2/10/97
- Needed
 - recognition of benefit of unambiguous criteria
 - good faith effort to address



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February 10, 1997

Secretary
US Nuclear Regulatory Commission
Washington, D.C. 20555-0001
Attention: Docketing and Service Branch

SERIAL: GDP 97-005

Paducah Gaseous Diffusion Plant (PGDP)
Portsmouth Gaseous Diffusion Plant (PORTS)
Docket Nos. 70-7001 and 70-7002
PRM-70-7, NEI's Petition for Rulemaking on 10 CFR Part 70

Dear Sir:

On behalf of the United States Enrichment Corporation (USEC), I am pleased to provide comments on NEI's "Petition for Rulemaking on 10 CFR Part 70" as noticed in the Federal Register on November 26, 1996. Although the gaseous diffusion plants managed by USEC are certified under 10 CFR Part 76 and, therefore, not subject to the proposed revisions to Part 70, USEC offers these comments 1) in the interest of the USEC AVLIS facility which is docketed under Part 70, 2) to share USEC's experience assessing the integrated safety of the gaseous diffusion plants, and 3) to provide as much consistency as is appropriate between Part 70, Part 76, and other NRC guidance and regulations.

As noted in the enclosed comments, USEC endorses NEI's petition and is providing certain suggested changes to further the objectives of the petition. USEC believes that the language of the proposed rulemaking should be revised to explicitly clarify the intended use of the performance criteria; namely that the purpose of the criteria is to guide the Commission and licensee in their evaluation of the suitability of (1) the events chosen for evaluation (i.e., those with consequences of concern) and (2) the identification determination as to the safety significance of Structures, Systems and Components (SSCs). The revisions proposed by USEC are intended to ensure that the primary intent of the rule is to provide reasonable assurance of public health and safety rather than that specific performance criteria are not exceeded. Revisions are also suggested to the criteria themselves.

Finally, USEC suggests revising the proposed language of §70.40 to clarify that the backfit provision applies to the results of the ISAs.

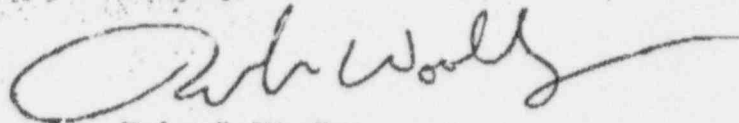
Docketing and Service Branch

February 10, 1996

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We would be pleased to discuss these comments with you. Please contact me at (301) 564-3413 or Ms. Lisamarie Jarriel at (301) 564-3247.

Sincerely,



Robert L. Woolley

Nuclear Regulatory Assurance and Policy Manager

Enclosure

cc: M. Fertel, NEI

UNITED STATES ENRICHMENT CORPORATION

Comments

on

NEI's Petition for Rulemaking on 10 CFR Part 70, PRM-70-7

Introduction

USEC has been engaged with the NRC since 1993 in rulemaking and certification of the two gaseous diffusion plants under 10 CFR Part 76, which bears a very close relationship to Part 70. Indeed, in the Part 76 Statements of Consideration, the Commission wrote:

"In developing Part 76, the staff took into account the ongoing effort to revise Part 70, which applies to licensing of other fuel cycle facilities. The staff believes that Part 76 will be compatible with anticipated future changes to Part 70. However, if the final revisions to Part 70 (in 1996) call for a revision to Part 76, appropriate revisions will be considered and the backfit rule would apply."

USEC clearly has an interest in the content of Part 70 due to its relationship to Part 76. Based on our experience, we believe that formalization, by rulemaking, of criteria for determining areas of concern and the importance of SSCs for fuel cycle facilities is essential.

There is little stored energy at the fuel cycle facilities nor are there large concentrations of radioactivity that would pose a significant public safety concern offsite except in the most extreme and unusual scenarios. However criticality, exposure to chemical hazards from radioactive materials of either the public or workers, and material diversion are areas of concern. To date, the NRC has not established clearly identified safety criteria or goals for these hazards. Explicit goals against which these plants can be evaluated should be established clearly and unambiguously as part of this rulemaking.

Key policy issues that should be considered by the Commission as part of the rulemaking include:

- Worker Safety
- Prevention of Accidental Criticalities
- Operability Assurance of Systems, Structures and Components

These fundamental policy issues were integral to the GDP certification experience, are embedded in this rulemaking and, USEC believes, are best addressed through the rulemaking process. The following comments address each of these issues and how they relate to our clarifying comments on NEI's Petition.

Enclosure to GDP 97-005

USEC's Comments on PRM-70-7

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Comments on NEI's Proposed Revisions to Part 70

USEC fully supports the concept, and many of the details, of the NEI proposed revisions to Part 70. In particular, we support the requirement that similar integrated safety analyses be performed for the existing fuel cycle facilities; that standards be established to determine the areas of concern to be analyzed; and that a backfit provision be included to assure that costs, as well as benefits, are considered for changes to the facilities. Incorporating the backfit provision into the rulemaking will allow for reasoned evaluation of the need for changes to these facilities and the most cost effective means of obtaining those changes. NEI's proposed revisions would require these analyses to be completed before the NRC imposes changes in programs or procedures which might not prove necessary after the results of the analyses are evaluated. USEC recommends certain modifications to NEI's proposal as follows:

Reasonable Assurance of Public Health and Safety

The language of the proposed rulemaking should be revised to explicitly clarify the intended use of the performance criteria, namely that the purpose of the criteria is to guide the Commission and the licensee in their evaluation of the suitability of (1) the events chosen for evaluation (i.e., those with consequences of concern) and (2) the determination as to the safety significance of SSCs. Numerical limits can not represent the correlation of all factors significant to the question of reasonable assurance of public health and safety. Factors that go to the credibility of the event such as, probability of occurrence, existing administrative controls, existing physical and engineering controls, and the detectable nature of these hazards (i.e., visible and noxious) need to be appropriately considered before making a finding that "reasonable assurance" has not been provided. The current language of the proposed rulemaking might be interpreted to suggest that the performance criteria are absolute limits, exceedance of which implies that the public health and safety cannot be reasonably assured. Rather, the criteria should be used to identify the events of concern to be considered in the ISA and SSCs of importance. The regulation should provide a mechanism for determining whether there is reasonable assurance of public health and safety and not reasonable assurance that the criteria are not exceeded. USEC has proposed a modification to the NEI wording to strengthen this concept.

Worker Safety

A key challenge in certifying the gaseous diffusion plants has been addressing the NRC staff's appropriate concern for the protection of onsite workers under accident conditions. Besides NRC's oversight, the fuel cycle facilities are also regulated in this area by OSHA and, under these regulations, perform Process Safety Management and Hazard Analyses. 10 CFR 76 does not explicitly address chemical toxicity from radioactive materials for workers. However, many of the systems that have been identified for additional quality controls at the gaseous diffusion plants and many of the restrictions in the Technical Safety Requirements were established specifically in response to worker safety considerations under accident conditions. Imposition of requirements without a clear basis against which to demonstrate adequate safety is not an appropriate way to establish regulatory requirements. Because worker safety appears to be a key underlying motive behind the NRC staff's interest in revising 10 CFR 70 and imposing new requirements on fuel cycle facilities, it is essential that this issue be explicitly recognized and considered in this rulemaking proceeding.

NEI's proposal in this regard suggests that the requirements of 10 CFR 20 be satisfied. We believe that NEI's intention was to make it clear that the ISA be used to demonstrate compliance with 10 CFR 20. Fuel cycle facilities are currently required to comply with 10 CFR 20. First, USEC believes that

Enclosure to GDP 97-005

USEC's Comments on PRM-70-7

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analysis is not required to comply with 10 CFR 20. Compliance with this requirement has been achieved to date through the implementation of Radiation Safety Programs and without specific analysis requirements. Second, this would be a new use of analysis to demonstrate compliance with this 10 CFR 20 requirement. The analytical methods to demonstrate compliance with 10 CFR 20 are not demonstrated and, without further guidance on how to demonstrate compliance using analysis, the requirements to do so remain unclear. Therefore, USEC has proposed to delete reference to 10 CFR 20 in NEI's rule language.

Accidental Criticalities

Fuel cycle facilities are already required to detect accidental criticalities under 10 CFR 70.24. This regulation does not, however, specifically address prevention of accidental criticalities. Currently, the Nuclear Criticality Safety Program requires analyses of the potential for accidental criticalities during operations. Criticality has long been a risk at fuel cycle facilities that has been considered acceptable if compliance with the double contingency principle is demonstrated. The double contingency principle as stated in ANSI/ANS-8.1-1984, Section 4.2.2 is as follows: "Process designs should, in general, incorporate sufficient factors of safety to require at least two unlikely, independent, and concurrent changes in process conditions before a criticality accident is possible." USEC has proposed a modification to 70.24 to clarify that licensees be required to demonstrate that adequate controls and protective measures are in place to provide reasonable assurance that accidental criticalities are prevented and that compliance with this requirement may be achieved through satisfaction of the double contingency principle.

Assurance

The last sentence of NEI's proposed 70.40(a) indicates that SSCs be classified on the basis of safety significance and commensurate controls applied. USEC understands this to allow for the imposition of controls to assure operability based on the importance to safety of SSCs and the risk to the facility their inoperability poses. The determination of the safety significance of SSCs and commensurate controls to assure operability has been a challenging issue for certification of the gaseous diffusion plants. Indeed, no clear criteria or standards were adopted as part of the certification process to classify SSCs. Lacking a clear method of determining the safety significance of SSCs and appropriate quality controls, we believe a larger number of SSCs were selected as safety significant than if consistent classification criteria had been utilized in the process. Significantly, SSC's that are relied on to demonstrate compliance with the double contingency principle for criticality prevention were included in the quality program. This may or may not have been appropriate. USEC believes the ISA should provide the basis for determining the importance of the SSCs and that operability assurance should then be applied commensurate with risk. USEC has proposed a modification to the NEI wording to strengthen this concept.

Backfit Provision

USEC especially supports the inclusion of the backfit provision (§70.76) as a sound basis for determining if modifications or additions to systems, structures or components of a plant, or to the procedures or organization required to operate the plant are justified by considering both their benefits and associated costs. The existing facilities that will be subject to this proposed rule, like our gaseous diffusion plants, have been operated safely for many years. While safety can almost always be improved, the key question for existing facilities is what improvements to safety, if any, are necessary to achieve an acceptable level of safety, and, beyond that, what changes are clearly beneficial given

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USEC's Comments on PRM-70-7

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fair consideration of associated costs. The backfit proposal provides for these determinations to be made in an open, public process. To assure that there is no ambiguity about the timing of the applicability of the proposed backfit provision, USEC suggests an addition to the proposed language of §70.40. This addition would make it clear that plant or procedure changes proposed by the NRC as a result of its consideration of the results of the ISAs for existing facilities would be subject to the backfit rule. This is consistent with NET's intent as reflected on page 8 of its petition, but it should be made clear in the rule text itself.

Implementing Guidance

Establishment of the requirement is only the first step. Guidance should be promulgated on the required format and content of the analysis required. This guidance would logically follow imposition of the requirement by rule, but, as discussed in reference to 10 CFR 20, it should be clear before rulemaking that guidance is indeed available. The AIChE "Guidelines for Hazard Evaluation Procedures, Second Edition with Worked Examples," 1992 is representative of the types of analysis that should be required.

Enclosure to GDP 97-005

USEC's Comments on PRM-70-7
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USEC's Modifications to NEI's Proposed Rule Language

USEC's modifications to the NEI proposed 10 CFR 70 language reflect the recommendations discussed above. USEC recommends that the NRC approve the NEI petition, as modified by below:

§ 70.4 Definitions

~~Double contingency principle means that sufficient factors of safety should, in general, be incorporated in process designs to require at least two unlikely, independent, and concurrent changes in process conditions before a criticality accident is possible.~~

§ 70.40 Integrated Safety Assessment

(a) Uranium processing, fuel fabrication, and uranium enrichment plant licensees licensed under 10 CFR Part 70, shall perform an integrated safety assessment (ISA), or provide an acceptable alternative integrated approach to safety, to determine the ~~Structures, Systems and Component (SSCs)~~ and programs that will be used by the licensee to protect public health and safety and, on the basis of the results of the ISA, implement changes to SSCs or associated licensee programs ~~as necessary to that~~ provide reasonable assurance ~~of public health and safety~~ that the performance criteria set forth in § 70.40 (b) are not exceeded. Licensees will classify SSCs on the basis of safety significance and will apply ~~controls~~ ~~operability assurance~~ commensurate with that classification.

(b) The ISA will identify and evaluate those hazards that could result in not meeting any of the following performance criteria and will determine whether adequate controls and protective measures are in place to provide reasonable assurance ~~of public health and safety~~ that:

~~(1) the requirements of 10 CFR Part 20 are satisfied;~~

~~(2) accidental criticality are avoided; and~~

~~(1-3)~~ for accident conditions, it is unlikely that any member of the public off the site will receive a radiation dose of 25 rem total effective dose equivalent, an intake of 30 milligrams of uranium in soluble form, or an exposure to hydrogen fluoride in air equivalent to immersion for 30 minutes in a concentration of 25 milligrams per cubic meter.

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~~(f) No change or addition to systems, structures, components, procedures or organization shall be required by the NRC for existing facilities based upon the results of the ISA, or otherwise by this Part, except in accordance with § 70.76.~~

§ 70.24 Criticality accident requirements

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~~(e) Each licensee authorized to possess special nuclear material in quantities in excess of those in paragraph (a) shall demonstrate that adequate controls and protective measures are in place to provide reasonable assurance that accidental criticalities are prevented. Compliance with this requirement may be achieved through satisfaction of the double contingency principle or through other appropriate means as approved by the NRC. SSCs that are relied on for compliance with the double contingency principle must have operability assurance commensurate with their importance to safety.~~