



June 1, 2010  
AET 10-0038

ATTN: Document Control Desk  
Ms. Catherine Haney  
Director, Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

**American Centrifuge Plant  
Docket Number 70-7004; License Number SNM-2011  
Submission of Proposed Changes for USEC Inc.'s American Centrifuge Plant**

Dear Ms. Haney:

**Purpose**

The purpose of this letter is to request U.S. Nuclear Regulatory Commission (NRC) review of a proposed change to the License Application for the American Centrifuge Plant (ACP) (LA-3605-0001), in accordance with Section 1.4 of the license application which requires prior NRC review and approval before deleting or modifying a commitment to a code or standard contained in Section 1.4 of the license application.

**Background**

USEC Inc. (USEC) committed to follow a variety of codes, standards, and regulatory guidance in the license application and supporting documents. USEC also committed in the license application to obtain prior NRC review and approval before deleting or modifying the commitment to any code or standard contained in Section 1.4 of the license application.

**Discussion**

This proposed change request revises the license application to allow for compliance with later editions of the American Society for Nondestructive Testing Recommended Practice No. SNT-TC-1A.

Enclosure 1 to this letter provides a detailed description, justification for the proposed change, and USEC's determination that the proposed change associated with this request is not significant. Enclosure 2 provides a copy of the proposed changed pages for the license application. Concurrent with the license application change, USEC is also revising the Quality Assurance Program Description (QAPD) (NR-3605-0003) to support the proposed change to Section 1.4 of the license application. A copy of the proposed changed pages for the QAPD are also included in Enclosure 2.

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**Action**

In accordance with the commitment in the license application, USEC requests NRC prior review and approval of the proposed changes at your earliest convenience.

**Contact**

If you have any questions regarding this matter, please contact me at (301) 564-3470 or Terry Sensue at (740) 897-2412.

Sincerely,



Peter J. Miner  
Director, Regulatory and Quality Assurance

Enclosures: As Stated

cc: J. Downs, NRC HQ  
J. Henson, NRC RII  
O. Siurano, NRC HQ  
B. Smith, NRC HQ

**Enclosure 1 of AET 10-0038**

**Detailed Description, Justification for Change, and Significance Determination**

USEC Inc. (USEC) committed to follow a variety of codes, standards, and regulatory guidance in the license application and supporting documents for the American Centrifuge Plant (ACP). Section 1.4 of the license application states, "The Licensee will obtain prior NRC review and approval before deleting or modifying the commitment to any code or standard contained in Section 1.4 of the license application." USEC committed to use the June 1980 edition of "American Society for Nondestructive Testing Recommended Practice No. SNT-TC-1A". The proposed change described below modifies Section 1.4.9 of the license application (LA-3605-0001) to allow for the use of Recommended Practice No. SNT-TC-1A, June 1980 edition, or later.

### **Detailed Description of Change**

The proposed changes are identified by the following method:

- Strikeout - Identifies text being removed
- Bold and underline - Identifies text that is being added.

1. License Application, Section 1.4.9, third bullet revised as follows:

- American Society for Nondestructive Testing Recommended Practice No. SNT-TC-1A, June 1980 Edition, **or later**.

2. Quality Assurance Program Description, Section 2.0, tenth paragraph revised as follows:

Personnel performing nondestructive examination will meet the requirements of **a written practice established to implement SNT-TC-1A, The American Society for Nondestructive Testing Recommended Practice, June 1980 Edition, or later.**

3. Quality Assurance Program Description, Section 20.0, fifth reference revised as follows:

5. SNT-TC-1A, *The American Society for Nondestructive Testing Recommended Practice*, June 1980 Edition, **or later**

### **Justification for Change**

The proposed change to the license application is being made in conjunction with a change to USEC's Quality Assurance Program Description (QAPD) (NR-3605-0003) to allow for compliance with later editions of the "American Society for Nondestructive Testing Recommended Practice No. SNT-TC-1A" in addition to the 1980 edition. SNT-TC-1A is a guideline document that is used throughout the nuclear, aerospace, automotive, construction, and numerous other industries in the United States for developing company-specific training and qualification requirements for nondestructive testing or examination personnel. This guidance has been updated five times since 1980 to add new nondestructive testing or examination methods as new techniques were added or

technological advancements have proceeded. These updated editions have been widely adopted and they supersede the 1980 edition.

The 1980 edition of SNT-TC-1A identified eight nondestructive testing or examination methods, however, new methods have been added in nearly every edition update since then. The 1980 and earlier editions did not include a specific method associated with visual examination despite this method being arguably the most basic form of nondestructive testing or examination. When evaluating potential suppliers for placement on USEC's Approved Suppliers List, the suppliers often commit to later editions of SNT-TC-1A than the 1980 edition. Compelling them to commit to earlier editions of SNT-TC-1A would be forcing them to revise their policies only to agree with a superseded document.

SNT-TC-1A is a guideline document that is implemented via a separate written document that details how each company implements the guidelines for their specific processes. Whether a company cites the 1980 edition or a later edition of SNT-TC-1A, the actual changes to their written policies that implement their nondestructive testing or examination practices will be insignificant. For both USEC and its strategic suppliers, remaining committed to the 1980 edition of SNT-TC-1A results in being inconsistent with current industry standard practice. This proposed change, allows USEC and its strategic suppliers the flexibility to adopt any aspect of any year's edition, as needed, while maintaining a high level of quality.

USEC currently trains, qualifies, and certifies its visual inspectors in accordance with a procedure that implements the requirements of ANSI/ASME NQA-1-1994, Supplement 2S1. Upon approval of this change to license application, Section 1.4.9, USEC intends to update its inspector qualification procedures to follow the guidelines in later editions of SNT-TC-1A for training, qualifying, and certifying visual inspectors as part of the commercial plant construction and operation.

Recommended Practice No. SNT-TC-1A was prepared to establish guidelines for qualification and certification of testing personnel whose specific jobs required appropriate knowledge of the technical principles underlying the nondestructive tests they perform, witness, monitor, or evaluate. The later editions of SNT-TC-1A provide additional nondestructive testing or examination methods for which personnel may qualify and/or certify. The purpose of nondestructive testing or examination methods is to ensure the form, fit, and function of safety related structures, systems, and components (SSCs). Whether personnel are trained to the testing methods included in the 1980 edition of SNT-TC-1A, or a later edition, the form, fit, and function of safety related SSCs will still be assured by USEC's Quality Assurance personnel when performing oversight activities.

### **Significance Determination**

USEC has reviewed the proposed change associated with this request and provides the following Significance Determination for consideration. The QAPD applies to both the Lead Cascade Facility (Docket Number 70-7003; License Number SNM-7003) and the ACP, therefore, the answers to the questions in this significance determination apply to both facilities.

1. No significant change to any condition to the License.

There is no License Condition that pertains to the American Society for Nondestructive Testing Recommended Practice No. SNT-TC-1A; therefore, making the proposed change to allow use of 1980 or later editions of this recommended practice will not make any significant change to any condition to the license.

2. No significant increase in the probability of occurrence or consequences of previously evaluated accident.

The proposed change is an administrative change associated with qualifications for nondestructive testing personnel that will not change any accident scenario identified in the Integrated Safety Analysis (ISA) Summary or exceed the performance requirements of 10 *Code of Federal Regulations* (CFR) 70.61; therefore, there is no significant increase in the probability of occurrence or consequences of the previously evaluated accident.

3. No new or different type of accident.

The proposed change is an administrative change associated with qualifications for nondestructive testing personnel that does not create new or different types of accident sequences that, unless mitigated or prevented, would exceed the performance requirements of 10 CFR 70.61 and that have not previously been described in the ISA Summary.

4. No significant reduction in margins of safety.

The proposed change is an administrative change associated with qualifications for nondestructive testing personnel that does not decrease the margin of safety associated with any Items Relied On For Safety that are being credited to ensure the performance requirements of 10 CFR 70.61 are met.

5. No significant decrease in the effectiveness of any programs or plans contained in the licensing documents.

Based on the justification for the proposed change provided above, the change will not decrease the overall level of quality assurance applied to construction, operations, or maintenance activities as described in the QAPD. The proposed change does not affect any other plant safety, safeguards or security programs or any other programs or plans contained in the license application and supporting documents. Therefore, this change will not decrease the effectiveness of any program or plan contained in the license application and supporting documents.

6. The proposed change does not result in undue risk to: 1) public health and safety; 2) common defense and security; and 3) environment.

The proposed change is an administrative change to the qualifications of nondestructive testing personnel that has no impact on the ISA or any event sequences included therein. There is no increase in the probability of occurrence or consequences of a previously evaluated accident or malfunction of equipment important to safety. There are no new accident initiators, increases in hazardous materials or waste streams. The proposed change is administrative and will not increase the likelihood the protected material or special nuclear material will be accessible to unauthorized personnel. The proposed change is administrative and will not decrease the effectiveness of the Emergency Plan or QAPD. Therefore, this proposed administrative change does not result in undue risk to public health and safety, the environment, or to the common defense and security.

7. There is no change in the type or significant increases in the amounts of any effluents that may be released off-site.

The proposed change is an administrative change to the qualifications of nondestructive testing personnel that does not create any new or unusual sources of hazardous substances, hazardous waste, or new waste streams that could be generated or used in unacceptable levels that exceed applicable regulatory requirements. Therefore, there is no change in the type or significant increases in the amounts of any effluents that may be released off-site.

8. There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed change is an administrative change to the qualifications of nondestructive testing personnel that will not increase radiological or chemical releases beyond applicable regulatory limits and will not create any new or unusual sources of radioactive waste. Therefore, the change will have no significant increase in individual or cumulative occupational radiation exposure.

9. There is no significant construction impact.

Modifying Section 1.4.9 of the License Application for the ACP to allow use of later editions of a nondestructive testing and examination recommended practice will not require a change to any facilities; therefore, the proposed change will have no significant construction impact.

**Enclosure 2 of AET 10-0038**

**Proposed Changed Pages**

The Licensee takes exception to the contents of IEEE 1050 Clause 2 and Annexes A and B. The Licensee does not commit to all of the standards listed in Clause 2. Annexes A and B provide only “informative” references.

For the reference to this standard see Section 2.6.4 of the ISA Summary for the ACP.

#### 1.4.9 Other Codes, Standards, and Guidance

- ASCE 7-2002, *Minimum Design Loads for Buildings and Other Structures*

The Licensee will satisfy the provisions of this standard.

For the reference to this standard, see Sections 1.3.3.1 and 1.3.3.3 of this License Application.

- Federal Guidance Report No. 11, *Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion*

The data contained in Tables 2-1 and 2-2 of this document used to calculate dose conversion factors for radionuclides of concern. This data is also used to calculate the Derived Air Concentrations (DACs) listed in Table 4.7-4.

For the reference to this guidance document, see Section 4.7.4 of this license application.

- American Society for Nondestructive Testing Recommended Practice No. SNT-TC-1A, June 1980 Edition, or later.

The Licensee satisfies the provisions of this recommended practice.

For the reference to this recommended practice, see Section 2.0 of the QAPD for the ACP.

- IAEA Safeguards Technical Manual, Part F, Volume 3

The method used to establish sample sizes for item monitoring activities was obtained from this manual.

For the reference to this recommended practice, see Section 7.4 of the FNMCP for the ACP.

- ANSI/ISA 67.04.01-2000 *Setpoints for Nuclear Safety-Related Instrumentation*

The IROFS related setpoints are determined utilizing methodologies in accordance with this standard. The Licensee commits to utilizing ISA 67.04.01 Clause 1

By appropriately balancing considerations of importance and process capability, an appropriate level of quality is achieved commensurate with the activity's importance to safety.

The results of the application of the graded approach to quality are incorporated into design requirement documents, specifications, procedures, instructions, drawings, inspection plans, test plans, procurement documents, and other documents that establish the requirements for items or activities.

Compliance with QAPD requirements and associated procedures is mandatory. Questions on QAPD requirements are referred for resolution to the QA Manager, who is the final authority on QAPD requirements.

The terms used in the QAPD are as defined in 10 CFR 70.4, *Definitions* and American Society of Mechanical Engineers (ASME) NQA-1—1994, Part I, Section 4. The term “design output” as used in this QAPD means “drawings, specifications, and other documents used to define technical requirements of IROFS.”

Indoctrination and training of personnel performing or managing activities affecting quality will meet the requirements of Part 1 of ASME NQA-1—1994, Supplement 2S-4, *Supplementary Requirements for Personnel Indoctrination and Training*.

Quality Control personnel performing inspection and testing will meet the requirements of Part 1 of ASME NQA-1—1994, Supplement 2S-1, *Supplementary Requirements for the Qualification of Inspection and Test Personnel*.

Personnel performing nondestructive examination will meet the requirements of a written practice established to implement SNT-TC-1A, *The American Society for Nondestructive Testing Recommended Practice*, June 1980 Edition, or later.

QA audit personnel will meet the requirements of ASME NQA-1—1994, Part 1, Supplement 2S-3, *Supplementary Requirements for the Qualification of Quality Assurance Program Audit Personnel*.

Each manager is responsible for the applicable indoctrination, training, and qualification of their personnel.

Management of those organizations implementing the QAPD, or portions thereof, regularly assesses the adequacy of that part of the program for which they are responsible and will assure its effective implementation.

Responsible senior managers regularly assess the adequacy and effective implementation of the QA elements through methods such as review meetings, audit reports, and corrective action reports.

The external audit report includes the following information, as appropriate:

- Description of the audit scope;
- Identification of the auditors;
- Identification of persons contacted during audit activities;
- Summary of audit results, including a statement on the effectiveness of the QA program elements audited; and
- Description of each reported adverse audit finding in sufficient detail to enable corrective action to be taken by the audited organization.

Follow-up action is taken by the QA organization to verify the implementation and effectiveness of the corrective action and to determine if repetitive problems require further corrective action in accordance with Section 16.0 of this QAPD. Audit records include audit plans, audit reports, written replies, and the record of completion of corrective action.

## 19.0 PROVISIONS FOR CHANGES

QAPD changes are controlled by 10 CFR 70.72, *Plant Changes and Change Process*. QAPD changes may be initiated by events such as reorganizations, revised activities, as a result of lessons learned, changes to applicable regulations, process changes, or other reasons. QAPD changes are governed by approved procedures.

Changes not requiring NRC approval prior to implementation will be submitted to the NRC annually, in accordance with 10 CFR 70.72.

## 20.0 REFERENCES

1. 10 CFR 70.4, *Definitions*
2. 10 CFR 70.72, *Facility Changes and Change Process*
3. American Society of Mechanical Engineers (ASME) NQA-1, 1994, *Quality Assurance Requirements for Nuclear Facility Applications*
4. NR-2605-0001, Quality Assurance Program Description for the American Centrifuge Lead Cascade Facility in Piketon, Ohio
5. SNT-TC-1A, *The American Society for Nondestructive Testing Recommended Practice*, June 1980 Edition, or later
6. 10 CFR 830, Exemption Decision, August 31, 2007