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April 12, 2000

Mr. Theodore S. Sherr
Chief, Regulatory and International Safeguards Branch
U.S. Nuclear Regulatory Commission
Two White Flint North 8A33
Washington, D.C. 20555

**Reference: Comments on the March 2000 Draft Version of NUREG-1520
'Standard Review Plan for the Review of a License Application
for a Fuel Cycle Facility': Chapter 4 – Radiation Protection**

Dear Mr. Sherr:

The Nuclear Energy Institute (NEI)¹ and its industry members have reviewed the March 2000 revision of draft Standard Review Plan (SRP) Chapter 4 entitled 'Radiation Protection'. Time has not permitted a comprehensive clause-by-clause review of this latest revision, but we have attempted to identify any significant, outstanding issues of concern. We have examined how the staff has addressed issues raised by NEI in its letter to you dated August 4, 1999 on the previous version of Chapter 4 (May 1999). We have also taken into consideration discussions that took place at the February 9-10, 2000 NRC Public Meeting ('*Comment Resolution on Part 70 Standard Review Plan*').

NEI appreciates the opportunity to have been able to review the March 2000 revisions to draft NUREG-1520 chapters. We are encouraged by the ongoing

¹ NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

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resolution of industry concerns and with other improvements that have been made to this guidance document. We look forward to working with you and your staff at the upcoming April 18-19, 2000 NRC Public Meeting on NUREG-1520 to continue these discussions.

Please feel free to contact me should you have any questions concerning the proposed improvements in the attachment to this letter.

Sincerely,

Felix M. Killar, Jr.
Director, Material Licensees and Nuclear Insurance

c. Mr. Marvin S. Fertel
Dr. William F. Kane, Director NMSS

REVIEW OF MARCH 2000 REVISION OF NUREG-1520
CHAPTER 4: RADIATION PROTECTION

General Comments:

Draft SRP Chapter 4 has been completely re-written and significantly improved. It generally provides clear and reasonable guidance, although several detailed requirements must be clarified. A new focus on licensee commitments has been added and the request for prescriptive detail reduced.

Outstanding Issues of Concern

- Role of ISA:
The role of the ISA in designing the RP still seems to be unrecognized. While adherence to the 10 CFR 20 requirements will dictate much of the RP design, other components should be directly tied to the ISA. For example, in §4.4.6.3(1), we would recommend addition of the underlined words: "*...to install appropriately-sized ventilation and containment systems in areas of the plant identified in the ISA [or ISA Summary] as having potential airborne concentrations...*". In §4.4.7, second sentence: "*...radiation surveys will focus on those areas of the plant identified in the ISA [or ISA Summary] where the occupational radiation dose limits could potentially be exceeded...*" Finally, in §4.4.7.3 (8): "*...to conduct a contamination survey program in areas of the plant identified in the ISA Summary to have a greater possibility of radiological contamination which includes the types and frequencies of surveys...*"

- Educational Requirements:
The SRP still sets the qualifications for the Radiation Safety Officer (§4.4.3.3(5)). While industry realizes a staff reviewer needs some acceptable standard against which to judge the qualifications of this (and other) individuals, the SRP should explicitly allow credit for relevant experience in lieu of formal education. It remains the licensee's responsibility for determining those experience and qualification levels.

- Prescriptiveness:
Several examples of unnecessary prescriptiveness remain. For example:
 - (i) §4.4.2.3(4): requirements for an ALARA Committee, whereas the Safety Committee would suffice.
 - (ii) §4.4.4.3(2): annual review of RP procedures. Revise text to read: "*...these procedures should be reviewed and revised, as necessary, to incorporate...*"

- (iii) §4.4.4.3(3): prescriptively sets the approval level for RWPs. However, Radiation Job Procedures (RJPs), which are a sub-set of RWPs, may be approved by radiation protection technicians
 - (iv) §4.4.5.3(5): review training programs every 2 years and refresher training at least annually
 - (v) §4.4.6.3.1: requires containment in any area of the plant where DAC limits could be exceeded. This is not current practice and is not practicable to implement.
 - (vi) §4.4.6.3(3) & (4): some data for the ventilation systems are required, including frequency of testing.
 - (vii) §4.4.7.3(4): seems to require that the licensee specify measures to ensure the accuracy of bioassay measurements. This should be revised to require the licensee to have a program to ensure the accuracy of those measurements, but not require detailed information on specific measures involved in such a program
- Terminology Consistency and English Expression :
New language added to chapter is pretty clumsy and should be re-written (e.g. last three sentences of introductory paragraph (§4.1)). Several incorrect regulatory citations & typographical errors occur (e.g. §4.4.7.3(4): correct citations are 10 CFR 20.1201, 20.1203 and 20.1502(a)). SNM is variously referred to as '*licensed material*', '*radioactive material*' or '*fissile material*'. For consistency, only one of these terms should be used throughout the chapter.

Specific Comments:

- §4.4.2.3(4): several changes:
 - (i) 2nd sentence: "...*The ALARA Committee membership should include management...industrial safety, operations, etc...*"
 - (ii) the English expression in the penultimate sentence is poor. This sentence should be restructured into 3 sentences as follows: "...*The review should determine if there are any upward trends in personnel exposure for identified categories of workers and types of operations. The review should identify any upward trends in effluent releases and contamination levels. Finally, the review should determine if exposures, releases and contamination levels are in accordance with the ALARA concept...*"
- §4.4.4.3(2): the 2nd sentence of this acceptance criterion is too prescriptive and should be deleted. This criterion should be rewritten as: "...*these procedures should be reviewed and revised, as necessary, to incorporate any facility or operational changes, or changes to the facility's ISA...*"

- §4.4.4.3(3): the 1st and 2nd sentences of this acceptance criterion are too prescriptive and should be modified to read: "...to specify written, approved RWPs for activities involving SNM that are not covered by written radiation protection procedures. RWPs should define the authorized activities ..."
- §4.4.5.3(5): to concur with present industry practice, this criterion should be rewritten as: "...to review the radiation training programs at least every three years and to conduct refresher training at least every two years to address changes in policies, procedures and requirements..."
- §4.4.5.3(6): simplify this sentence to read: "...to evaluate the effectiveness and adequacy of the training program curriculum and instructors ..."
- §4.4.6.2(1): editing error in positioning the revision date: "...Regulatory Guide 8.24, Rev. 1, October 1979, "Health Physics Surveys During Enriched Uranium-235 Processing and Fuel Fabrication"
- §4.4.6.3(3): last clause in this sentence seeks information that is far too detailed for the application. Revise to read: "...systems, maximum differential pressure across filters and types of filters to be used..."
- §4.4.6.3(7): recommend adding some words to read: "...respiratory protection equipment, as applicable, when processing, facility..."
- §4.4.6.3(8): simplify this sentence to read: "...to maintain records of the respiratory protection program, including training for respirator use and maintenance ..."
- §4.4.7: 2nd item in 1st sentence. Simplify to read: "...to detect releases of SNM from plant equipment and operations. Radiation surveys..."
- §4.4.7.3: administrative exposure levels are referenced -- and are likely 'action levels' below the regulatory thresholds at which some licensee action is expected. Is use of this term appropriate here?
- §4.4.7.3(3) & (4): specification of QA measures is required. Discussion and assignment of QA should be deferred to SRP Chapter 11
- §4.4.7.3(8): delete the text in parentheses -- unnecessary information
- §4.4.7.3(9): incorrectly commits the licensee to implement a CAP for RP when personnel contamination exceeds administrative levels. Correct terminology should be for the licensee to commit to refer issues to the CAP. The cost of corrective actions must be commensurate with the risk significance of the contamination. Re-write this sentence to read: "...to refer to the facility's corrective action program instances in which the results of personnel monitoring or contamination surveys exceed the applicant's administrative personnel contamination levels..."
- §4.4.7.3(13): imposes a new requirements or leak-testing of sealed sources. Why has this requirement been added to Chapter 4?
- §4.4.7.3(15): the substance of this criterion is covered by items (1), (3) and (4) above and need not be repeated in criterion (15).

- §4.4.7.3(16): requires establishment and implementation of a reporting system. Why should not the licensee simply commit to reporting the RP data as per Part 19 & 20?