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NUCLEAR ENERGY INSTITUTE

Ronald L. Simard, Ph.D.
DIRECTOR, ADVANCED TECHNOLOGY
NUCLEAR GENERATION DIVISION

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Chief, Rules Review and Directives Branch
Division of Freedom of Information
and Publication Services
Mail Stop 6D59
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

SUBJECT: Notice of Availability and Request for Comments on the Updated Standard Review Plan (USRP) – (61 Fed. Reg. 43092 – August 20, 1996)

Enclosed are comments by the Nuclear Energy Institute (NEI)[1] on behalf of the nuclear energy industry in response to the subject notice. The industry appreciates the opportunity to provide input on the Updated Standard Review Plan (USRP).

The draft USRP spans several thousand pages and is the result of five years of work by NRC contractors. We understand it represents a "work-in-progress" in that the NRC staff has not yet reviewed the document. Because of the length and preliminary status of the USRP and the relatively short time provided for public comment, the industry review has focused on new sections and sections judged to have the greatest potential impact on current and future licensees. As such, lack of industry comment on a particular USRP section should not be construed as agreement.

There are three additional areas where we intend to provide comments in the future. First, NEI will submit coordinated industry comments on Chapter 7, Instrumentation and Controls. Public release of this chapter was announced separately in a *Federal Register* notice dated December 3, 1996.

[1] NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including regulatory aspects of generic operational and technical issues. NEI 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.

Second, we understand that sections of the USRP dealing with use of PRA, graded quality assurance, technical specifications, and inservice testing/inspection are currently under review by the staff and will be released for public comment in the near future. As identified in SECY-96-218, the intent of these revisions is to incorporate risk-informed and performance-based approaches to NRC reviews in these areas. We look forward to the opportunity to comment on new or revised USRP sections resulting from this work.

Third, we have deferred comment on Section 14.3, "Inspections, Tests, Analyses, and Acceptance Criteria – Design Certification," pending completion of Westinghouse AP600 interactions with the NRC staff in this area. Section 14.3 is based solely on the evolutionary plant design certifications, whereas the ongoing AP600 interactions are the first for a passive plant design. We expect that application of lessons learned from the evolutionary plants and passive plant considerations will identify the need for appropriate changes to the USRP.

We expect the USRP to be extensively modified as a result of industry comments and NRC staff review. Accordingly, as work on specific chapters and sections is completed, we suggest that the revised material be published for an extended period of trial use and public comment. The purpose of the trial use period is to allow further refinement of the USRP on the basis of early experience in applying and interpreting the revised guidance. As confidence is established in specific chapters and sections, those portions could be published as final guidance. This approach will help to ensure that USRP guidance can be adjusted to reflect the increasing understanding and expanded use of risk-informed and performance-based regulatory approaches.

If you have questions concerning the enclosed comments, please contact Russ Bell at (202) 739-8087.

Sincerely,

R. Simard

Ronald L. Simard

RLS/RJB/ljw
Enclosure

Enclosure

Industry Comments on the Updated Standard Review Plan (USRP)

General Comments on the USRP

1. The draft USRP spans several thousand pages and is the result of five years of work by NRC contractors. We understand that the USRP represents a "work-in-progress" in that the NRC staff has not yet reviewed the document. Because of the preliminary status of the USRP and the relatively short time provided for public comment, the industry review has focused on new sections and sections judged to have the greatest potential impact on current and future licensees. As such, lack of industry comment on a particular USRP section should not be construed to indicate industry review and agreement.

2. There are three additional areas where we intend to provide coordinated industry comments on the USRP in the future:

   - Chapter 7, Instrumentation and Controls - Public release of this chapter was announced separately in a *Federal Register* notice dated December 3, 1996.

   - New or revised sections dealing with use of PRA, graded quality assurance, technical specifications, and inservice testing/inspection. We understand these sections are currently under review by the staff and will be released for public comment in the near future. As identified in SECY-96-218, the intent of these revisions is to incorporate risk-informed and performance-based approaches to NRC reviews in these areas.

   - Section 14.3, "Inspections, Tests, Analyses, and Acceptance Criteria - Design Certification" - We will submit comments after completion of Westinghouse AP600 interactions with the NRC staff in this area. Section 14.3 is based solely on the evolutionary plant design certifications, whereas the ongoing AP600 interactions are the first for a passive plant design. We expect that application of lessons learned from the evolutionary plants and passive plant considerations will identify the need for appropriate changes to this section of the USRP.

General Comments on the USRP (*con't.*)

3. In light of the substantial USRP revisions expected as a result of industry comments and NRC staff review, we urge the NRC to release specific chapters and sections as they are completed for an extended period of trial use and public comment. The purpose of the trial use period is to allow further refinement of the USRP on the basis of early experience in applying and interpreting the revised guidance. As confidence is established in specific chapters and sections, those portions could be published as final guidance. This approach will help to ensure that USRP guidance can be adjusted to reflect the increasing understanding and expanded use of risk-informed and performance-based regulatory approaches.

4. The language should reflect that the USRP represents guidance for NRC staff reviewers – not generic requirements for licensees. Licensees are required to meet applicable NRC regulations and specific licensing commitments. In Sections 3.11, Environmental Qualification of Mechanical and Electrical Equipment, (new) 3.13, Threaded Fasteners, and others, there needs to be a clear distinction between material that is needed by NRC reviewers to evaluate compliance versus informational material that is helpful to NRC reviewers in understanding the topic of the USRP section.

5. In a number of areas, the USRP is out of step with prevailing regulatory policy and guidance. The NRC staff should revise and maintain the document to reflect the current status.

6. The structure of the document needs substantial improvement.

    - Section numbering needs to be drastically improved (e.g., made consistent, complete, clear, etc.).

    - NRC staff should minimize redundancy, especially in subsections I-IV. There seems to be substantial opportunity to streamline this document.

    - To the extent repetitive sections are not combined, the NRC staff should ensure that multiple sections are consistent with each other (e.g., use the same wording to describe corresponding material).

7. Superseded references should be deleted for clarity and ease of use.

Detailed Industry Comments on the USRP

Note: To the left of each comment is a unique identifier, indicating the chapter and sequential comment number.

Section 2.4.14 – Technical Specifications and Emergency Operation Requirements

2-1 The title should be changed to "Flood Protection and Water Supply."

2-2 All references to technical specifications and emergency procedures should be clarified to indicate that the section applies only to the specific item of flood protection and adequate water supply, not a full scope review of all technical specifications.

Section 6.2.1 – Containment Functional Design

6-1 The following paragraph on page 6.2.1-2 should be revised, and the parenthetical "(see reference 46)" should be deleted.

> For new plant applicants and those PWRs subject to the guidance contained in reference 45 (Generic Letter 88-17), the containment analyses should also consider shutdown conditions, when appropriate, to ensure that a basis is provided for procedures, instrumentation, operator response, equipment interactions and equipment response. The analyses should encompass shutdown thermodynamic states and physical configurations to which the plant can be subjected during shutdown conditions (such as time to core uncovery during a loss of shutdown decay heat removal capability) and should provide sufficient depth such that adequate bases can be developed (see Reference 46).

Attachment A of Reference 46, NUREG-1449, *Shutdown and Low-Power Operation at Commercial Nuclear Power Plants in the United States,* explains that the NUREG documents the NRC staff's evaluation and recommendations for shutdown and low-power operations. The first attempt by the NRC staff to codify those recommendations was unsuccessful. Therefore, reference to NUREG-1449 and incorporation of its recommendations is inappropriate.

Chapter 11 – Radioactive Waste Management

General Comment:

11-1 Chapter 11 does not adequately cover the reality of portable equipment used to treat liquids and the use of off-site facilities to process and package wet and dry waste. Existing plants rely on these services extensively and the designs for advanced reactors, such as the Westinghouse AP600, anticipate heavy reliance on portable equipment and off-site processing facilities. How the NRC will review reliance on these non-installed services is not well addressed in the SRP.

Historically, the NRC was to approve portable equipment via Topical Reports; referencing an existing approved Topical Report would prove compliance. The NRC has abandoned the Topical Report program. In addition, such reports on portable liquid treatment systems ceased to be reviewed by the NRC long before they abandoned the review program. How one obtains approval by relying on the "marketplace" of portable ion exchange services, off-site evaporation services and off-site packaging services is not clearly incorporated into Chapter 11.

Comments on Section 11.1 – "Source Terms"

11-2 Subsection II, item 3c - revise text ". . . exhaust systems air filtration . ." to read "exhaust systems, air filtration."

11-3 Subsection 11.1a makes reference to Carbon-14 as an isotope to be included in the evaluation of effluent releases yet, due to its low abundance, was not included in the standard RETS, or the ODCM of all power plants. Isotopes that contribute less than 1% of the calculated dose should not require specific identification.

Comments on Section 11.2 – "Liquid Waste Management System"

11-4 Topical Reports on liquid treatment system are no longer reviewed by NRC. The allowance to reference generic vendor Ion Exchange systems with generic DFs should be allowed (USRP page 11.2-2 item 11).

11-5 Requirements for portable liquid processing systems should be included here. Suggest that the same language used for portable solid radwaste systems (pg. 11.4-15) be inserted here (USRP page 11.2-5 item 3).

11-6 Subsection II - The text "The liquid waste management system should have to treat radioactive waste." is redundant to the text contained above it (in what would be paragraphs A-I 1 through 5)

11-7 In what could be called Subsection II B.1.b, delete "In addition to 1.a above."

11-8 Technical requirements - revise "liquid radwaste treatment system" to "liquid waste management system" to be consistent throughout document.

11-9 Subsection III-1 - text did not change from previous document issue as indicated by revision item 43.

11-10 Subsection III-3 - revise "radwaste management system" to "liquid waste management system" to be consistent throughout document, and revise the following text (which appears in two places) " . . . responsibility given in section I, above." to " . . . responsibility given in section I-2-c, above."

11-11 Subsection IV-4 - revision marks 60 and 61 are transposed with actual revision.

11-12 Subsection VI - add reference to 10 CFR Part 52

Comments on Section 11.3 – "Gaseous Waste Management System"

11-13 Add tritium and carbon-14 to the parenthetical on page 11.3-11.

11-14 Subsection I - Review Interfaces, paragraph 2-b - Consider including the following Sections 11.2 and 11.4: "Upon request from SPLB, ... in accordance with Regulatory Guide 1.143."

11-15 Section I- Review Interfaces, last paragraph - The revised text "For those areas of review identified . . . in the referenced SRP section." no revisions item number is given. However, in Section 11.2 the same revision is listed as item 24.

11-16 Subsection II-B-1-d - For clarity, insert a comma between "ratio" and "effect" in as shown in the following: ". . . cost-<u>benefit</u> return, can for a favorable cost-benefit ratio, effect . . . "

11-17 Section III-1 - reference to Subsections II.B.1.c and II.B.1.d should be corrected to reference the revised text, including new and renumbered paragraphs c, d, and e.

11-18 Subsection III-2 - While the text states ". . . encompass two major areas:," three (not two) statements follow (numbered a, b and c).

11-19 Section IV & VI- add reference to BTP 11-5 to these paragraphs.

Comments on Section 11.4 – "Solid Waste Management System"

11-20 Some liquid waste concentrates are now being shipped off site for evaporation and packaging currently. The ability to reference these services should be permitted (Page 11.4-4 item 2). An item should be added to this listing to permit the use of off site services to process and package dry waste.

11-21 "Type A quantity as defined by 10 CFR part 61.55" has a typo. Either "Type A" should be changed to "Class A" or "10 CFR 61" should be changed to "49 CFR" (Page 11.4-7 item 7).

11-22 The use of dryers to process concentrates versus solidification with a binder should be added (Page 11.4-12 A & Page 11.4-13 B.I.2.)

11-23 "(m,MBq)" the "m" should be "m3" in the 2nd paragraph, 2nd to last line (Page 11.4-22 II).

11-24 Delete all reference to 5 years! (Page 11.4-23 2nd paragraph) Refer to comments on Appendix 11.4-A related to the 5 year guidance.

11-25 Delete the sentence on page 11.4-23 (Subsection III- b, 2nd paragraph, last line). Utilities have stored hot BWR resin for over a year without problem.

11-26 Subsection II (Acceptance Criteria) - Add reference and applicable text for BTP 11-3 and Appendix 11.4 -A to concur with technical rationale paragraph.

11-27 Subsection III-5 - Text needs clarification.

11-28 The acronyms "BTP" and "GDC" are used frequently in conjunction with the longer definition of each acronym. Simplify the verbiage by only citing the definition the first time each acronym is used.

11-29 In several locations throughout the document, reference is made to shipping waste to a licensed burial facility. Some waste may be shipped to a processor in lieu of a burial facility. Ensure that the wording does not preclude this option.

11-30 Criterion 9 on p. 11.4-4 refers to "longer" on-site storage as "significantly less than the life of the plant." This criterion is confusing for plants nearing decommissioning.

11--31 Items 4 and 5 under Technical Rationale refer to staff positions described in Section 11.4. No description of staff positions is found in SRP 11.4. Verify that the reference to SRP 11.4 is correct.

Comments on Appendix 11.4-A:

11-32 The Appendix makes reference to the likelihood of state compact site availability's within the next five years. This seems to be an overly ambitious assumption.

11-33 Subsection III(d) of the Appendix specifies certain criteria for outside storage. It is not clear if these criteria are for waste stored outside in containers, stored in outside buildings, etc. If the reference is to waste stored in outside facilities, what is the purpose of hold-down systems for waste containers if the facility meets the design bases for severe environmental conditions?

11-34 The industry is concerned about the rewrite of USRP Appendix 11.4-A, "Design Guidance for Temporary Storage of Low Level Radioactive Waste." Our concern is with the provisions that tend to limit the duration of storage to 5 years or less. This limit is reflected in the statement from Part I, "[F]or purposes of this document, the duration of temporary waste storage is to be up to five (5) years..." and this from Part II, "[I]n addition, waste should not be stored for a duration that exceeds five years. Storage of waste in excess of the quantities and duration described herein requires Part 30 licensing approval...Regional state compacts to create additional low-level waste disposal sites should also be established within the next five years..."

These requirements are in direct conflict with SECY-94-198, "Review of Existing Guidance Concerning the Extended Storage of Low-Level Radioactive Waste."

11-34 (cont.) As identified in SECY-94-198, the 5 year limitation on storage has no regulatory basis, and seems to be without a valid technical rationale. With the proper facility design and the appropriate administrative controls, waste can be stored for an indefinite period without compromising the licensing basis of a nuclear power plant. The requirement appears to be based on the NRC's belief that disposal is preferable to storage, and on the assumption that regional state compacts will develop sufficient disposal capacity - which is no longer valid.

Presently, only limited disposal site capacity is available to licensees outside of the northwest compact. Burial site owners and operators thus have unreasonable leverage in setting prices and conditions for disposal.

Licensees need an alternative to burial in the event that burial prices or conditions become unreasonable. This is certainly an increased consideration in a competitive environment.

The statement that a Part 30 license would be required for storage longer than 5 years is also without a valid rationale, since Part 50 licenses allow power reactor licensees to possess all licensed material generated by the operation of the facility, without any restrictions on quantities or duration.

Based on the above, we request that this draft of Appendix 11.4-A be rewritten to remove any restrictions on the storage period for radioactive waste.

Specific Comments on BTP ETSB 11-3:

11-35 In Section A of the BTP, reference is made to compaction of dry waste and solidification of wet waste. No reference is made to potential use of other forms of volume reduction, e.g., shredding, vitrification, incineration. The option for use of a variety of volume reduction or processing techniques should be specified.

11-36 Subsection IV.3 suggests use of concrete pads as a minimum for portable systems. This requirement is too restrictive for systems that deal exclusively with dry waste or have other suitable containment devices built in to the system.

Chapter 12 – Radiation Protection

General Comments

12-1 NUREG-0718, Item III.D.3, and draft NUREG-0761 have been superseded by 10 CFR Part 20, §20.1101, which specifically requires a radiation protection program. The NUREG references in Subsection I.4 of Sections 12.1-12.5 should be deleted and replaced by reference to §20.1101.

12-2 10 CFR Part 19, §19.2, is cited as referring to "workers entering restricted areas." In 1995, §19.2 was revised to refer to "all individuals who in the course of employment are likely to receive in a year an occupational dose in excess of 100 mrem (mSv)..." Revise the USRP to accurately reflect the basis for requirements in the current version of Part 19, i.e., based on anticipated annual dose, rather than on access to restricted areas. This revision needs to be reflected in Subsection II.1 of Sections 12.1-12.5, and all other locations where §19.2 is cited incorrectly.

12-3 References to "MPC-hours" (e.g., on page 12.3-11) should be revised to refer to "DAC-hours" to be consistent with the current version of 10 CFR Part 20. These changes should be reflected throughout Sections 12.3-12.5.

Comments on Section 12.2 – Radiation Sources

12-4 Page 12.2-4 - Item (1) refers to "an offgas rate of 370 Mbq/sec 100,000 uCi/sec..." "370 MBq/sec" should be corrected to read "3700 MBq/sec." (10^5 uCi x 3.7 x 10^4 Bq/uCi = 3700 Mbq). Also, "100,000 uCi/sec" should be enclosed in parentheses.

12-5 Page 12.2-4 - "1.3 x 10^{14} Bq/gm should be corrected to read "1.3 x 10^5 Bq/gm" (3.5 uCi/gm x 3.7 x 10^4 Bq/uCi = 1.3 x 10^5 Bq/gm).

12-6 Page 12.2-5 - Item 1 of the Technical Rationale should be revised to read "...10 CFR Part 20 requires that the licensee control both occupational dose ~~limits~~ and dose ~~limits~~ to individual members of the public..." Licensees control doses, not dose limits.

Comments on Sections 12.3 - 12.4 – Radiation Protection Design Features

12-7 Page 12.3-8 - References to 10 CFR Part 20.1202, 20.1203, 20.1204 should be deleted from the listing of "dose limiting requirements" because those sections do not contain dose limits.

Comments on Section 12.5, Operational Radiation Protection Program

12-8 Page 12.5-8 - In Subsection II, add ANSI N13.11-1993, "Personnel Dosimetry Performance - Criteria for Testing." This ANSI standard specifies the criteria for NVLAP testing of dosimetry as required by 10 CFR Part 20.

12-9 Page 12.5-11 - The second sentence of paragraph C describes a "special control procedure for any area zoned 4 or higher..." Zone 4 areas include exposure levels of 15-100 mrem/hr. This section should be revised to reflect that a special control procedure is appropriate for high and very high radiation areas (i.e., areas in which exposure levels are 100 mrem/hr or greater).

12-10 Page 12.5-11 - The Part 20 citations regarding "criteria for radiation surveys, personnel monitoring, bioassay, record keeping and reporting" are incorrect and incomplete. References in paragraph C to §20.1601 and §20.1602 should be changed to §20.1501 and §20.1502. Reference to §20.20.1205 should be changed to §20.2105. Reference to §20.2201 should be changed to §20.2022. References to §20.2204, §20.2205, and §20.2206 should be added for completeness. Reference to §20.2306 should be deleted.

12-11 Page 12.5-15 - The Subsection IV description of personnel monitoring practices and related regulatory references should be rewritten because it does not accurately reflect current regulatory requirements and guidance and accepted industry practices. For example, not "all permanent and temporary plant personnel will be assigned [a dosimeter] to be worn in restricted areas at all times..."; dosimeters are frequently processed on a quarterly basis, not "monthly"; and whole body counts are no longer conducted of "all plant personnel." In addition, many of the references to Part 20 are incorrect with regard to the context of this section.

12-12 Page 12.5-17 - The Subsection VI listing of referenced regulatory guides and other documents should be updated to remove outdated documents and to add current standards. For example, Regulatory Guide 8.3 has been superseded by Part 20 requirements for NVLAP testing and related standards, Regulatory Guide 8.xx is not an approved regulatory guide, and ANSI N13.11-1993 should be added to reflect the Part 20 requirements for NVLAP testing.

Chapter 13 – Conduct of Operations

Comments on Section 13.2.1 – Reactor Operator Training

13-1 Reference 9, H. R. Denton letter of March 28, 1980, is obsolete and should be deleted. Throughout the text, change reference to "upgrading in reactor operator and senior reactor operator qualification" per the TMI Action Plan and Denton letter, to "establish a training program using a systems approach to training that meets 10 CFR 50.55 requirements."

13-2 In Subsection IV, delete the requirement (which appears in two places) for research reactor training. With the capabilities of the modern simulator, separate training on a research reactor provides no additional value.

Comments on Section 13.6 – "Physical Security"

General Comment

13-3 The USRP generally reflects established NRC staff positions and existing regulations that have been used to review Physical Security Plan (PSP) changes under § 50.54(p). However, the USRP appears to go beyond the regulatory requirements by incorporating "additional criteria" from regulatory guidance documents. Because the only time a Regulatory Guide, NUREG, *etc.*, can be considered binding is if a licensee has committed to it in the PSP, there must be a clear distinction in the USRP as to what is required by regulation versus what is "a preferred NRC method of implementation."

The USRP raises the concern that, even though there is a unique PSP for each site, use of this document could result in a "one size fits all" regulatory approach and the potential for imposition of unreviewed requirements. Use of the USRP should not result the imposition of requirements. Rulemaking, supported by a backfit analysis justifying the need and including a commensurate safety benefit, would be the appropriate process to accomplish that end.

Specific Comments on Section 13.6

13-4 The following statement from Section III, Review Procedures, should be revised to ensure that NRC reviews are based solely on regulatory requirements and licensee commitments.

At the FSAR stage, and for applications referencing a certified design, the physical security plan is reviewed to determine its conformance with the regulations, the information requirements of Section I above, and the acceptance criteria of Section II above. Applicable regulations and the requirements and recommendations of industry standards (such as ANSI N18.17) are used as checklists for this review"

Of particular concern, the referenced acceptance criteria of Section II contain guidance that has the potential to go beyond the scope of regulatory requirements. ANSI N18.17 is not a regulatory document, is out of date, and is not used by the industry. Regulatory Guide 5.66 is the operative manual in the context of this SRP because it has been committed to in each PSP.

13-5 Regulatory Guides 5.12, 5.44, and 5.66, and NUREGs 0674 and 0908, are identified in Subsection II under the page 4 heading: "Specific criteria necessary to meet the relevant requirements of the Commission's regulations ...." These and other regulatory guides are also identified in Subsection IV as forming the basis for NRC reviews.

Subsections II and IV are written as though these Regulatory Guides and NUREGs have the effect of being security regulation. They are not. For example, Revision 3 to Regulatory Guide 5.44, Perimeter Intrusion Alarm Systems, (61 Fed. Reg. 16016, April 10, 1996) evoked industry concern due to new requirements in the proposed revision. In a letter dated June 25, 1996, NEI commented in detail to the NRC that some newly included "requirements" had no regulatory basis and had not been justified through backfit analysis. As discussed in the General Comment on Section 13.6 above, regulatory guidance can be considered binding only if a licensee has committed to it in the PSP.

13-6 Section VI, References, should be divided into two parts. Items 1-13 are regulatory, but Items 14-27 are only informational in nature. We also recommend adding the following regulatory references:

- Generic Letter 95-08, *10 CFR 50.54(p), Process for Changes to Security Plans Without Prior NRC Approval*
- Generic Letter 96-02, *Reconsideration of Nuclear Power Plant Security Requirements Associated with an Internal Threat*

13-7 Obsolete documents, *e.g.*, ANSI N18.17, should be deleted from Subsection VI.

Chapter 15 – Accident Analysis

General Comments

15-1 In various sections of Chapter 15, it is difficult to understand if the revised source term is being imposed on operating plants or if it is merely an option. The statement of considerations for the recently approved revision to 10 CFR Part 100 stated that application of the revised source term to operating plants is optional. The NRC staff should ensure in all cases that Chapter 15 of the USRP makes clear that use of the revised source term by current licensees is optional.

15-2 During a November 7, 1996, meeting of the ACRS, the NRC staff stated it is delaying a decision on whether rulemaking is necessary for existing plants to apply the revised source term until after a technical baseline evaluation is completed in mid-1997. The rule, if necessary, will define actions necessary for operating plants to use the revised source term. The USRP should not identify any requirements on how the revised source term is to be used at existing plants prior to the completion of these activities.

Section 17.4 – Reliability Assurance Program

General Comments

17-1 This USRP section should be re-titled, "*Design* Reliability Assurance Program" (D-RAP) and be focused accordingly. A focus on D-RAP is consistent with the design certifications and Commission guidance specifically disapproving a requirement for a follow-on reliability assurance program during plant operations. In its SRM on SECY-94-084, the Commission directed that reliability objectives during the operational phase be incorporated into existing licensee programs for maintenance and quality assurance. The NRC is expected to evaluate these programs, including aspects relating to reliability assurance, using appropriate regulatory guidance based on 10 CFR 50.65 and Appendix B.

Accordingly, the proposed SRP guidance on reliability assurance activities during operation is neither necessary nor appropriate. The scope of USRP Section 17.4 should be limited to guidance for determining the adequacy of design certification and combined license applications and that implementation of detailed design and equipment specification processes meets the D-RAP requirements of the license.

17-2 The NRC staff should ensure that the USRP guidance is consistent with the D-RAP requirements of the design certifications.

Specific Comments on Section 17.4

17-3 Refer only to D-RAP, not RAP. Where it is necessary to discuss the operational phase, refer to "reliability assurance activities during operation," not a "Reliability Assurance Program."

17-4 The objectives in Section I should be taken from the D-RAP Design Description in the design certifications as these are the requirements to which the NRC and licensee will be bound. The correct language is used in Section II under Technical Rationale, Item 1.

17-5 The SRP should be revised to reflect that the design certification rules will contain none of the proposed new "applicable regulations."

17-6 References throughout Section 17.4 to "procurement, fabrication, construction and preoperational testing" should be deleted as these activities are beyond the scope of D-RAP. As identified in the design certifications, the scope of D-RAP is limited to detailed design and equipment specification phases prior to initial fuel load. Other licensee programs and processes, e.g., the Quality Assurance Program, will ensure proper "procurement, fabrication, construction and preoperational testing."

17-7 Acceptance Criterion A of Subsection III, "applicable regulation for RAP," should be deleted. The correct reference is to the DCRs.

17-8 Acceptance Criteria B and C, and corresponding Technical Rationale paragraphs 2 and 3, of Subsection III should be deleted because they pertain to operational reliability assurance activities that are beyond the scope of D-RAP. Likewise, Subsection III.4, "Reliability Assurance During Operations," and the portion of Attachment A referenced therein, should be deleted. See General Comment 1 on Section 17.4, above.

17-9 Under Subsection II.2, COL Applicant D-RAP," item (b) should be deleted. The COL applicant's D-RAP will be that from the referenced DCR. The DCR is identified under item (a).

Comments on Section 18 – Human Factors Engineering

18-1 It is recommended that reference to "Higgins (1995)" be deleted and that BNL Technical Report E2090-T4-3-1/95 be removed from the list of references in Part VI.

18-2 Some Section 18 references to NUREG-0700 should be more explicit. For example, in the last paragraph of II.B, "criteria 3 and 4 of NUREG-0700, Revision 1" should be "criteria 3 and 4 of Section 3.2.2 of Part I of NUREG-0700, Revision 1." There are other cases where "Part I" has been left out of the reference.