

June 22, 2010

Mr. Timothy Trumbull, Director
Reactor Critical Facility
Nuclear Engineering and Science Building
Rensselaer Polytechnic Institute
110 8th Street
Troy, NY 12180

SUBJECT: RENSSELAER POLYTECHNIC INSTITUTE, REQUEST FOR ADDITIONAL
INFORMATION REGARDING THE RENEWAL OF FACILITY OPERATING
LICENSE (TAC NO. ME1591)

Dear Mr. Trumbull:

The U.S. Nuclear Regulatory Commission (NRC) is continuing the review of your application for renewal of Facility Operating License No. CX-22, Docket No. 50-225 for the Rensselaer Polytechnic Institute Reactor Critical Facility dated November 19, 2002, as supplemented on July 28, and September 3, 2008. During our review, questions have arisen for which we require additional information and clarification. Please provide responses to the enclosed request for additional information by July 31, 2010. In accordance with Title 10 of the *Code of Federal Regulations* Section 50.30(b), your response must be executed in a signed original under oath or affirmation.

If you have any questions regarding this review, please contact me at 301-415-2784 or by electronic mail at William.Kennedy@nrc.gov.

Sincerely,

/RA/

William B. Kennedy, Project Manager
Research and Test Reactors Licensing Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-225

License No. CX-22

Enclosure:
Request for Additional Information

cc w/encl: See next page

Rensselaer Polytechnic Institute
Reactor Critical Facility

Docket No. 50-225

cc:

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Schenectady, NY 12305

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DATE	6/15/2010	6/16/2010	6/21/2010	6/22/2010

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OFFICE OF NUCLEAR REACTOR REGULATION
REQUEST FOR ADDITIONAL INFORMATION
REGARDING FACILITY OPERATING LICENSE RENEWAL FOR
RENSSELAER POLYTECHNIC INSTITUTE REACTOR CRITICAL FACILITY
LICENSE NO. CX-22
DOCKET NO. 50-225

Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36, "Technical specifications," contains the requirements for proposed technical specifications (TS) submitted as part of a license application. American National Standards Institute/American Nuclear Society standard ANSI/ANS-15.1, 2007, "Development of Technical Specifications for Research Reactors," (ANSI/ANS-15.1) and NUREG-1537 (Part 1 and 2), "Guidance for Preparing and Reviewing Applications for the Licensing of Non-Power Reactors," provide guidance for satisfying the requirements of 10 CFR 50.36.

The following requests for additional information (RAIs) are related to the proposed TS submitted by letter dated July 28, 2008, for the Rensselaer Polytechnic Institute (RPI) Critical Experiments Facility (RCF). In responding to the following RAIs, provide a response to each individual RAI, including any revised wording of the proposed TS. Also, provide complete revised proposed TS that incorporates any changes made as a result of the responses to these questions and the questions issued May 5, 2010. The numbering of the following questions begins at 11 because questions 1 through 10 were provided by letter dated May 5, 2010.

11. The definition of core configuration states, "The core configuration includes the number, type, or arrangement of fuel..." Clarify whether the word "or" should be changed to the word "and".
12. The definition of core configuration contains a reference to "reflector elements." The reactor, as described in the SAR, does not appear to use reflector elements. Explain the reason for including reflector elements in the definition, and revise the proposed TS as appropriate.
13. The definition of excess reactivity states, "...from the point where the reactor is exactly critical ($k_{\text{eff}} = 1$) at reference core conditions..." The definition of reference core condition states, "The condition of the core when it is at ambient temperature (cold) and control rods are on the bottom." These definitions do not appear to be consistent because the definition of excess reactivity states that the reactor is critical and the definition of reference core condition states that the rods are on the bottom. Explain this apparent discrepancy and revise the proposed TS as appropriate.
14. The first definition of reactor secured states, "...control rods are inserted..." Clarify whether this refers to all control rods, and revise the proposed TS as appropriate.

ENCLOSURE

15. The “Applicability” section of proposed TS 2.2 appears to be an incomplete sentence. Revise the section as appropriate.
16. The bases for proposed TS 2.2 states, “Power increase and energy deposition subsequent to scram initiation are thereby limited to well below the identified safety limit.” As written, this statement implies that there are safety limits on reactor power and energy deposition. Ensure that this statement is consistent with every proposed safety limit (question 8 of the RAI transmitted by letter dated May 5, 2010, requested proposed safety limits for the RCF).
17. The current TS 3.2, “Reactor Parameters,” contains limits on the temperature and void coefficients of reactivity and minimum operating temperature. The proposed TS omit these requirements based on a justification that 1) excess reactivity defines the magnitude of the worst-case reactivity accident, and 2) reactivity coefficients do not contribute to the accident analyzed in the SAR because the accident does not lead to significant temperature change or void formation. This justification does not include consideration of accidents that involve positive reactivity coefficients for temperature increase (for example, heating of the moderator using the installed heaters) or void formation (for example, displacement of the moderator by foreign objects). Unless the proposed TS require negative temperature and void coefficients, the justification that temperature increase and voids can’t contribute to an accident is invalid. Revise the proposed TS to include the current TS 3.2 (the TS may be renumbered, but the technical content should remain unchanged), or justify not including such requirements. Justification should include analyses and discussions that show that the reactivity accident analysis in the SAR bounds all accidents that could result from positive reactivity coefficients for any core that could be configured within the requirements of the proposed TS.
18. Proposed TS 3.2.3 states, “The total control rod drop time for each control rod...” The term “control rod drop time” is not defined in the proposed TS. Clarify whether this term is synonymous with the term “scram time” defined in the proposed TS, and revise the proposed TS and the associated bases as appropriate.
19. Proposed TS 3.2.6 specifies, “The minimum safety channels that shall be operating during the reactor operation.” Clarify whether the term “operating” should be replaced with the term “operable,” and revise the proposed TS as appropriate. (Also, it appears that the proposed TS contains an extra word “the.”)
20. Proposed TS 3.2.6 specifies safety channels required during reactor operation. Explain the reason for not requiring any safety channels during reactor evolutions other than reactor operation, e.g., fuel movement, and revise the proposed TS as appropriate.
21. Proposed TS 3.2.7 states, “...all control rods are verified to have scrammed...” Explain what the term “scrammed” means, and revise the proposed TS as appropriate.
22. Proposed TS 3.2.7 states, “...and it is deemed wise to retain the moderator shielding in the reactor tank.” Given that this statement involves a judgment by the senior reactor operator and gives the reason for closing the moderator dump valve, it seems more

appropriate as part of the basis for allowing the senior operator to close the moderator dump valve. Explain the reason for making this statement part of the proposed TS, and revise the proposed TS as appropriate.

23. Proposed TS 3.2.7 allows the senior operator to close the moderator dump valve following a scram, but does not require the senior operator to verify that the scram has had the desired effect on the reactor, i.e., that the reactor is subcritical. The moderator dump is a backup shutdown mechanism that provides redundancy to the control rods. Explain the reason for not requiring the senior reactor operator to verify that the control rods have inserted sufficient negative reactivity to shut down the reactor prior to closing the moderator dump valve, and revise the proposed TS as appropriate.
24. Proposed TS 3.2.8 specifies interlocks required to be operable during reactor operation. Four of the interlocks prevent control rod withdrawal unless certain conditions are met. It seems that the intent of the "neutron flux" interlock and the "line voltage to recorders" interlock is to ensure that the reactor instrumentation is operable prior to initial withdrawal of the reactor control rods. Given that the reactor is not operating until a control rod is moved from the "bottomed" position (a condition in the definition of reactor operating), explain the reason for not requiring these interlocks prior to operation of the reactor, and revise the proposed TS as appropriate.
25. Other than the reporting requirement in proposed TS 6.7.1(b), the proposed TS do not appear to contain a surveillance requirement related to the integrated thermal power limit of 2 kilowatts in any consecutive 365 days specified in proposed TS 3.2.9. The requirement in proposed TS 6.7.1(b) is an annual requirement, whereas proposed TS 3.2.9 limits thermal power generation over any consecutive 365-day period. Explain the reason for not including a specific surveillance requirement to ensure that reactor operation will be in accordance with proposed TS 3.2.9, and revise the proposed TS as appropriate.
26. Table 1 of proposed TS 3.2 contains a column labeled "Functions." The first entry in this column is "Minimum Flux Level." Explain the function associated with the minimum flux level and revise the proposed TS as appropriate.
27. Table 1 of proposed TS 3.2 contains 3 safety channels labeled, "Manual Scram," "Building Power," and "Reactor Door Scram." The proposed TS require annual calibration of these channels, but do not require channel tests to ensure they are operable (other than the channel test included in the calibration) as recommended in ANSI/ANS-15.1, Section 4.2(5)(a). Explain the reason for not requiring channel tests of these safety channels. (See question 42.)
28. Footnote (b) of Table 1 of proposed TS 3.2 states, "...provided that no other scram channels are bypassed." The proposed TS do not appear to allow bypassing of any other safety channels. Explain this apparent inconsistency, and revise the proposed TS as appropriate.
29. Table 2 of proposed TS 3.2 contains interlocks labeled "Reactor Period <15 sec," "Neutron Flux <2 cps," and "Line Voltage to Recorders < 100 V." It appears that the less-

than symbols are incorrect. Clarify whether the symbols should be greater-than symbols (>). Clarify whether the word “on” should be changed to “off” in the interlock labeled “Moderator-Reflector Water Fill On,” and revise the proposed TS as appropriate.

30. The “Applicability” section of proposed TS 3.7 states, “...requirements for reactor operation.” The proposed TS contains requirements for both reactor operation and fuel handling. Revise the “Applicability” section and/or the “Specification” section to be consistent.
31. The “Objective” section of proposed TS 3.7 states, “... preclude undetected radiation hazards or uncontrolled release of radioactive material.” Explain how the radiation monitoring requirements preclude the uncontrolled release of radioactive material.
32. Proposed TS 3.7.1.a requires a criticality detector system that monitors the fuel storage area during reactor operation. Given that fuel can be moved in and out of the fuel storage area when the reactor is not operating, explain the reason that the criticality detector is only required during reactor operation, and revise the proposed TS as appropriate.
33. Proposed TS 3.7.2 states, “During normal operation...” Clarify whether the term “normal operation” is synonymous with reactor operation.
34. Proposed TS 3.7.2 and proposed TS 3.7.3 both state that certain radiation monitors “*will* be available” during certain situations. Revise the proposed TS to use terminology consistent with the definitions in the proposed TS, i.e., “*shall* be available.”
35. The bases for proposed TS 3.7 contain a reference to particulate monitoring of the reactor room air, but the proposed TS do not contain any requirements for particulate air monitoring. Explain this apparent inconsistency, and revise the proposed TS as appropriate.
36. ANSI/ANS-15.1, Section 3.8.3 recommends that experiments shall be designed such that they will not contribute to the failure of other experiments or the fuel cladding and that reactor transients will not cause experiments to fail in ways that could contribute to an accident. Explain the reason for not including these design requirements in the proposed TS, and revise the proposed TS as appropriate.
37. Proposed TS 3.8.5 and 3.8.8 specify that the failure of a singly-encapsulated experiment shall not result in doses in excess of the regulatory limits for occupational personnel or members of the public. The SAR does not contain an analysis of this type of an accident. In accordance with 10 CFR 50.36(b), provide an analysis in the SAR, including all assumptions, of this type of an accident. (See NUREG-1537, Part 1, Chapter 13 for more information.)
38. The sixth paragraph of the bases for proposed TS 3.8 states, “...no experiment will be performed with materials that could... produce airborne activity...” This statement appears to be inconsistent with the requirements in proposed TS 3.8.5 and 3.8.8. Explain this apparent inconsistency, and revise the proposed TS as appropriate.

39. Proposed TS 3.9 states, "...and shall monitor the operation with appropriate radiation instrumentation." Explain what "the operation" means. Explain whether this requirement is specifically related to fuel transfers described in the preceding requirement in proposed TS 3.9, and revise the proposed TS as appropriate.
40. Proposed TS 4.1.c requires that the "reactor power measurement" be determined during testing of an unknown core. Clarify whether determining the reactor power measurement is the same as calibrating the "Linear Power" and "Log-N; Period" safety channels. If not, explain how this surveillance requirement ensures that known cores will satisfy the limiting conditions for operation for the nuclear instrumentation.
41. ANSI/ANS-15.1, Section 4.2 recommends measuring control rod drop time following work done on the rod or rod drive system. Explain the reason for not including such a requirement in proposed TS 4.2.1, and revise the proposed TS as appropriate.
42. ANSI/ANS-15.1, Section 4.2 recommends performing operability tests of reactor control and safety systems following modifications or repairs. Explain the reason for not including any such requirements in proposed TS 4.2, and revise the proposed TS as appropriate.
43. Proposed TS 4.2.3 requires all safety system channels to be calibrated annually. Clarify whether the intent is to include the "Manual Scram," "Building Power," and "Reactor Door Scram" safety system channels in the calibration requirement. If not, revise the proposed TS as appropriate.
44. Proposed TS 4.2.4 requires daily channel tests of the intermediate and power range instruments. Explain the reason for not requiring channel tests of all safety channels required by Table 1 of proposed TS 3.2, and revise the proposed TS as appropriate.
45. Proposed TS 4.2.4 requires "checks" and "rechecks" of the interlock system. Explain what "checks" and "rechecks" mean in terms of the surveillance activities defined in the "Definitions" section of the proposed TS (e.g., channel check, channel test, or channel calibration), and revise the proposed TS as appropriate.
46. Proposed TS 4.2.6 provides circumstances under which "tests" may be waived. The use of the word "tests" makes it unclear which surveillances may be waived. Clarify whether the meaning of the word "tests" includes all of the surveillance activities required by proposed TS 4.2, or if it only includes surveillance activities specifically referred to as tests (or channel tests). Revise the proposed TS as appropriate.
47. The bases for proposed TS 4.2 do not appear to contain a basis for proposed TS 4.2.6. In accordance with 10 CFR 50.36(a)(1), provide a basis for proposed TS 4.2.6.
48. The "Objective" section of proposed TS 4.3 states, "...ensure the continued validity of radiation protection standards in the facility." Explain the meaning of this statement as it applies to the reactor coolant system.

49. Proposed TS 5.3 gives the weight percent of uranium enrichment in the fuel as 4.81 weight percent or less. The current TS specifies the weight percent of uranium enrichment in the fuel as 4.8 weight percent. Explain the reason for the change in the specified uranium enrichment.
50. The last sentence of the first paragraph of proposed TS 5.3 states, "The core shall consist of all SPERT (F-1) fuel described in 5.4.3." It appears the reference to "5.4.3" is a holdover from a previous version of the proposed TS. Provide the correct reference, and revise the proposed TS as appropriate.
51. Proposed TS 5.3 references the SAR. Any portion of the SAR referenced in the "Specification" section of the proposed TS will become part of the TS and license. Clarify whether the intent is to make the referenced section of the SAR a requirement in the proposed TS. If not, revise the proposed TS as appropriate.
52. Proposed TS 5.4 specifies limits for storage tubes located in the fuel storage area in terms of the total weight of fuel and total number of fuel pins that may be stored in any tube. It appears that the weight limit is inconsistent with the limit on the number of pins per tube. Explain this apparent inconsistency, and revise the proposed TS as appropriate. Explain how the fuel storage tube limit is consistent with the requirement that the infinite multiplication factor is less than 0.9.
53. Proposed TS 5.4 references the SAR. Any portion of the SAR referenced in the "Specification" section of the proposed TS will become part of the TS and license. Clarify whether the intent is to make the referenced section of the SAR a requirement in the proposed TS. If not, revise the proposed TS as appropriate.
54. Figure 6.1 of proposed TS 6.1 does not indicate any communication lines as recommended in Figure 1 of ANSI/ANS-15.1. Proposed TS 6.1.2 and 6.2 describe communication lines between the Facility Director and the Nuclear Safety Review Board (NSRB) and the RPI Radiation Safety Officer. Revise Figure 6.1 to include communication lines, or justify not including such requirements.
55. Figure 6.1 of proposed TS 6.1 does not include Level 3 and Level 4 of the organizational structure. Revise Figure 6.1 to include Level 3 and Level 4 of the organizational structure, including appropriate reporting and communication lines, or justify not including such requirements.
56. Proposed TS 6.1.1 specifies that the Facility Director (Level 2) reports to the Chair, Mechanical, Aerospace, Nuclear Engineering for administrative purposes. The Chair, Mechanical, Aerospace, Nuclear Engineering is not assigned a level in the management structure, and the responsibilities of this position are unclear in terms of interactions with the Facility Director, the NSRB, and the Dean, School of Engineering (Level 1). Additionally, proposed TS 6.1.2 does not specify the responsibility of the Chair, Mechanical, Aerospace, Nuclear Engineering in terms of facility safety. Is the Chair, Mechanical, Aerospace, Nuclear Engineering considered part of a level (e.g., Level 1 or Level 2) in the organizational structure? Explain the function and responsibilities of the

Chair, Mechanical, Aerospace, Nuclear Engineering in terms of the management organizational structure and facility safety. Revise the proposed TS as appropriate.

57. ANSI/ANS-15.1, Section 6.1 and Section 6.1.2 recommend the TS contain information on functions, assignments, and responsibilities of key organization staff. Revise proposed TS 6.1.2 to include this information for the Chair, Mechanical, Aerospace, Nuclear Engineering and Level 4 personnel, or justify not including such requirements.
58. ANSI/ANS-15.1, Section 6.1.2 recommends that the TS contain information that individuals at the various management levels, in addition to having responsibility for the policies and operation of the reactor facility, shall be responsible for safeguarding the public and facility personnel from undue radiation exposures and for adhering to all requirements of the operating license and technical specifications. Revise the proposed TS to include similar requirements, or justify not including such requirements.
59. ANSI/ANS-15.1, Section 6.1.2 recommends that in all instances, responsibilities of one level may be assumed by designated alternates or by higher levels, conditional upon appropriate qualifications. Revise the proposed TS to include similar requirements, or justify not including such requirements.
60. Proposed TS 6.1.3(a)(2) states, "...certified by the Reactor Supervisor as qualified..." The term "Reactor Supervisor" is not defined in the proposed TS. Revise proposed TS 6.1.3(a)(2) to use defined terminology.
61. Proposed TS 6.1.3(b) states, "...but not in safe shutdown is a..." The term "safe shutdown" is not defined in the "Definitions" section of the proposed TS. Revise proposed TS 6.1.3(b) to use defined terminology, or define the term "safe shutdown" in the proposed TS.
62. Proposed TS 6.1.4 states that years spent in baccalaureate or graduate study may be substituted for operating experience when meeting the minimum requirements for the Operations Supervisor position. Explain what fields of study are acceptable to substitute for operating experience, and revise the proposed TS as appropriate.
63. Proposed TS 6.1.4 does not provide explicit qualification requirements for Level 2 of the organizational structure. Clarify whether the reference to ANSI/ANS-15.4 covers the qualification requirements of Level 2 facility management (i.e., the minimum requirements in ANSI/ANS-15.4 for Level 2 management apply to the Facility Director). If not, revise the proposed TS to include the minimum qualification requirements for Level 2 facility management.
64. ANSI/ANS-15.1, Section 6.2.1 recommends that the review and audit group shall be composed of a minimum of 3 members. Proposed TS 6.2.2 does not specify the minimum number of NSRB members. Revise the proposed TS to include the minimum membership allowed by the NSRB Charter, or justify not including such requirements.
65. ANSI/ANS-15.1, Section 6.2.2(2) recommends that operating personnel do not constitute the majority of a quorum. Proposed TS 6.2.2 does not specify that operating

staff shall not constitute the majority of a quorum. Revise the proposed TS to specify that operating staff shall not constitute the majority of a quorum, or justify not including such requirements.

66. ANSI/ANS-15.1, Section 6.2.2(4) recommends that the NSRB Charter include provisions for dissemination, review, and approval of NSRB minutes. Proposed TS 6.2.2(c) requires distribution of the NSRB meeting minutes, but does not require any review or approval of the minutes. Revise the proposed TS to include requirements for review and approval of meeting minutes, or justify not including such requirements.
67. ANSI/ANS-15.1, Section 6.2.3 recommends that the NSRB review determinations that proposed changes in equipment, systems, tests, experiments, or procedures do not require a license amendment, as described in 10 CFR 50.59. The proposed TS do not require the NSRB to review such changes to equipment or systems. Explain the reason for not requiring the NSRB to review determinations that proposed changes in equipment and systems do not require a license amendment, as described in 10 CFR 50.59, or justify not including such requirements.
68. ANSI/ANS-15.1, Section 6.2.3 recommends that the NSRB review proposed changes in reactor facility equipment or system having safety significance. The proposed TS do not require the NSRB to review such changes. Revise the proposed TS to require the NSRB to review proposed changes in reactor facility equipment or system having safety significance, or justify not including such requirements.
69. ANSI/ANS-15.1, Section 6.2.3 recommends that the NSRB review audit reports. Proposed TS 6.2.3 does not contain any such requirement. Revise the proposed TS to require the NSRB to review audit reports, or justify not including such requirements.
70. ANSI/ANS-15.1, Section 6.2.4 recommends audits of the facility emergency plan and implementing procedures. Proposed TS 6.2.4 does not explicitly require such audits. Revise the proposed TS to require audits of the facility emergency plan and implementing procedures, or justify not including such a requirement.
71. ANSI/ANS-15.1, Section 6.2.4 recommends that deficiencies identified by the audit group be reported in writing to Level 1 management. Proposed TS 6.2.4 does not contain such a requirement. Revise the proposed TS to require deficiencies identified by the audit group to be reported in writing to Level 1 management, or justify not including such requirements.
72. Proposed TS 6.4.4 states that there will be procedures for the periodic surveillance of continuous air monitors. The proposed TS do not contain any requirement to have continuous air monitors. Explain this apparent inconsistency, and revise the proposed TS as appropriate.
73. Proposed TS 6.4.4 states that there will be procedures for the implementation of the facility emergency plan in accordance with 10 CFR 50, Appendix E. The reference to 10 CFR 50, Appendix E seems inappropriate given that Appendix E states that for licensees other than power reactors, the required degree of compliance with the

requirements will be determined (by the NRC) on a case-by-case basis. The approved facility emergency plan should satisfy the required degree of compliance with Appendix E. Revise the proposed TS to require procedures for the implementation of the approved facility emergency plan, or justify the need for the reference to 10 CFR 50, Appendix E.

74. ANSI/ANS-15.1, Section 6.4(8) recommends that procedures be established for the use, receipt, and transfer of byproduct material. If these activities are carried out under the reactor license, revise the proposed TS to include requirements for procedures for use, receipt, and transfer of byproduct material or provide justification for not requiring such procedures.
75. ANSI/ANS-15.1, Section 6.4 recommends that temporary deviations from procedures be reported to Level 2 management within 24 hours. Revise the proposed TS to include such a requirement, or justify not including such a requirement.
76. Proposed TS 6.5 uses the term “unreviewed safety question.” This term is no longer used in the regulations. ANSI/ANS-15.1, Section 6.5 recommends that all new experiments or class of experiments shall be reviewed by the NSRB and approved in writing by the Facility Director or designated alternates. Revise the proposed TS to eliminate the term “unreviewed safety question” and require that all new experiments or class of experiments shall be reviewed by the NSRB and approved in writing by the Facility Director or designated alternates, or justify not including such requirements.
77. Proposed TS 6.5 contains a duplication of a large portion of 10 CFR 50.59, which is unnecessary given that it is a regulatory requirement and may be incorporated by reference (Note: The duplication begins with “A licensee shall obtain a license amendment...” and ends with proposed TS 6.5.1(h)). ANSI/ANS-15.1, Section 6.2.3 recommends that the NSRB review determinations that proposed changes in tests and experiments do not require a license amendment, as described in 10 CFR 50.59. Revised the proposed TS to include such a requirement and eliminate the duplication with the regulations, or justify not making these changes.
78. ANSI/ANS-15.1, Section 6.5(2) recommends that substantive changes to previously approved experiments shall be made only after review by the NSRB and approved in writing by the Facility Director. Proposed TS 6.5.2 does not require approval in writing by the Facility Director. Revise the proposed TS to require approval in writing by the Facility Director, or justify not including such a requirement.
79. 10 CFR 50.36 requires that records of the results of each review of exceeding the safety limit, the automatic safety system not functioning as required by the limiting safety system settings, or any limiting condition for operation not being met be retained by the licensee until the Commission terminates the license for the facility. Proposed TS 6.8.1(b) requires records of reportable occurrences be retained for five years. The regulations in 10 CFR 50.36 require some records categorized in the proposed TS as records of reportable occurrences to be retained for the life of the facility. Revise the proposed TS to include a requirement that records of the results of each review of exceeding the safety limit, the automatic safety system not functioning as required by the

limiting safety system settings, or any limiting condition for operation not being met be retained until the U.S. Nuclear Regulatory Commission terminates the license for the facility.