



# REED COLLEGE

## REACTOR FACILITY

3203 Southeast

Woodstock Boulevard

Portland, Oregon

97202-8199

May 8, 2017

telephone

503/777-7222

fax

503/777-7274

email

reactor@reed.edu

web

<http://reactor.reed.edu>

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001  
Docket: 50-288  
License No: R-112

We are requesting a change in Reed's technical specifications. The requested change is an action item from the Reply to the Notice of Violation dated January 26, 2017. This change is consistent with the American National Standard ANSI/ANS 15.1-2007 section 4.2.

An original, marked-up version, proposed version and a table delineating the requested changes to Reed College's technical specifications are enclosed.

Please contact me if you have any further questions.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 5/8/2017

Melinda Krahenbuhl, Ph.D.  
Director, Reed Research Reactor

IE01  
ADZD  
NRR

#### **4.2 Reactor Control and Safety Systems**

Applicability. This specification applies to the surveillance requirements of reactor control and safety systems.

Objective. The objective is to verify performance and operability of those systems and components that are directly related to reactor safety.

Specifications.

- a. The control rod drives shall be visually inspected for damage or deterioration annually.
- b. The poison sections of the control rods shall be visually inspected for damage or deterioration biennially.
- c. The control rod scram time shall be measured annually.
- d. The total reactivity worth and reactivity addition rate of each control rod shall be measured annually or following any significant change ( $> \$0.25$ ) from a reference core.
- e. A channel check of each of the reactor power measuring channels in TS 3.2.2, Table 2 shall be performed prior to each operation of the reactor.
- f. A channel calibration of the Linear and Percent Power Channels in TS 3.2.2, Table 2, shall be performed annually.
- g. A channel test of each item in TS 3.2.3, Tables 3 and 4, shall be performed annually.

Basis. Experience has shown that the identified frequencies, as set forth in NUREG-1537 and ANSI/ANS 15.1, will ensure performance and operability for each of these systems or components.

#### **4.2 Reactor Control and Safety Systems**

Applicability. This specification applies to the surveillance requirements of reactor control and safety systems.

Objective. The objective is to verify performance and operability of those systems and components that are directly related to reactor safety.

Specifications.

- a. The control rod drives shall be visually inspected for damage or deterioration annually.
- b. The poison sections of the control rods shall be visually inspected for damage or deterioration biennially.
- c. The control rod scram time shall be measured annually.
- d. The total reactivity worth and reactivity addition rate of each control rod shall be measured annually or following any significant change ( $> \$0.25$ ) from a reference core.
- e. A channel check of each of the reactor power measuring channels in TS 3.2.2, Table 2 shall be performed prior to each operation of the reactor.
- f. A channel calibration of the Linear, ~~and~~ <sup>#1</sup> Percent Power Channels in TS 3.2.2, Table 2, shall be performed annually.
- g. A channel test of each item in TS 3.2.3, Tables 3 and 4, shall be performed annually.

Basis. Experience has shown that the identified frequencies, as set forth in NUREG-1537 and ANSI/ANS 15.1, will ensure performance and operability for each of these systems or components.

# and Logarithmic

#### **4.2 Reactor Control and Safety Systems**

Applicability. This specification applies to the surveillance requirements of reactor control and safety systems.

Objective. The objective is to verify performance and operability of those systems and components that are directly related to reactor safety.

Specifications.

- a. The control rod drives shall be visually inspected for damage or deterioration annually.
- b. The poison sections of the control rods shall be visually inspected for damage or deterioration biennially.
- c. The control rod scram time shall be measured annually.
- d. The total reactivity worth and reactivity addition rate of each control rod shall be measured annually or following any significant change ( $> \$0.25$ ) from a reference core.
- e. A channel check of each of the reactor power measuring channels in TS 3.2.2, Table 2 shall be performed prior to each operation of the reactor.
- f. A channel calibration of the Linear, Percent, and Logarithmic Power Channels in TS 3.2.2, Table 2, shall be performed annually.
- g. A channel test of each item in TS 3.2.3, Tables 3 and 4, shall be performed annually.

Basis. Experience has shown that the identified frequencies, as set forth in NUREG-1537 and ANSI/ANS 15.1, will ensure performance and operability for each of these systems or components.

Table 1. Proposed changes to RRR Technical Specifications

Affected RRR TS	Proposed changed	Basis (Why the change is necessary)	Justification (Why the change is acceptable)
4.2 f	Deletion “and”	Correct grammar for requested change in TS 4.2 f	Grammar
4.2 f	Addition of “,” “,” “and “Logarithmic”	The annual calibration of the log channel increases the monitoring capability to the full power range while still maintaining the required source interlock requirement.	The change is consistent with ANSI/ANS 15.1 section 4.2