



REED COLLEGE

Dec. 10, 2018

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License No: R-112

As required by Reed Research Reactor Technical Specification (RRR TS) 6.7.2 (a), this is a report describing the events reported to Operations Center on Monday Dec. 3, 2018. NRC tracking #53771.

The following is a timeline of events of Dec. 1, 2018 that resulted in the reported violation.

- 13:12 Console power is turned on by the Reactor Operator of record (RO) as part of the Start- up procedure (SOP 20).
- 13:16 Console key is inserted into console by the RO. The key-in stamp is left incomplete. No second is listed.
- 13:25 The key is removed.
- 13:27 The key is inserted. The key-in stamp is left incomplete. No second is listed.
- 13:29 The RO emails the Senior Reactor Operator of record (SRO) and states that the second is not there and asks if they are allowed to do anything. Prior to this email the SRO was unaware that the second was not in the facility.
- 13:30 The SRO responds with "No, take the key out"
- 13:31 The key is removed.

At 13:44, the SRO and RO continue with normal operations. The SRO informs the RO that they need to fill out a Corrective Action Report (CAR).

On Dec. 3 2018, at approximately 16:15, the RO delivered the CAR, to the Director and Reactor Operations Manager. Upon hearing the description and reviewing the log book the Director reported the violation at 16:56.

The specific RRR TS is:

6.1.3 Staffing

- a. The minimum staffing when the reactor is not secured shall be:
 2. A second person present in the reactor facility able to scram the reactor and summon help;

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NRR

Additional information:

The RO's license was issued in June 2018 and has no restrictions. The SRO's license was issued in Sept. 2017 and is restricted to wearing glasses while operating.

Corrective Actions

1. There will be no reactor operations until the Reactor Operations Committee reviews the event and approves the corrective actions taken.
2. Four standard operating procedures (SOP) have been changed and the procedural change notices have been issued:
 - a. SOP 1. Operating
 - i. Access to the console key will be restricted to SRO's.
 - b. SOP 20. Start-up Checklist
 - i. SRO's must be at the facility for the console portion of the start-up checks including core excess.
 - c. SOP 66 and 66A. Corrective Action Reports
 - i. Reports are now mandatory for anyone operating without the SOPs, or operating with the swinging doors in the control room open.
 - ii. An additional line will be added to the corrective action report (SOP 66A) that will indicate if the event was a technical specification violation.
 - d. SOP 64. Work environment
 - i. Disciplinary actions have been clarified. The SOP now requires that operators who break RRR TS must immediately go out of requalification, and outlines other possible disciplinary actions for not using the SOPs.
3. The RO and SRO involved have been suspended from licensed duties until completion of an accelerated requalification plan.
4. All licensed staff were required to attend a mandatory lecture and complete mandatory homework prior to be allowed to return to normal operating status for the reactor.
5. A quiz or homework set will be included with each requalification lecture going forward.

Respectfully,



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

Cc: Geoffrey Wertz, P.E., Research and Test Reactors Branch