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Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

Re: Reportable Occurrence: Violation of Tech Spec 6.1.3.a.1  
License No. R-2, Docket No. 50.005

Dear Sir or Madame:

This 14-day report is being submitted in accordance with Sections 6.5.2.f and 6.6.2.a.3 of the Penn State Breazeale Reactor (PSBR) Technical Specifications (TS). Telephone notification of this reportable occurrence was made to the NRC Operations Center at 1638 hours on December 23, 2003 (NRC Notification # 40411) and confirmed by a subsequent email that same date.

TS 6.1.3.a.1 states: "The minimum staffing level when the reactor is not secured shall be: 1) A licensed operator present in the control room, in accordance with applicable regulations."

Description of Event:

On December 23, 2003 at approximately 1338 hours the Duty SRO and the Duty RO (also a licensed SRO) completed SOP-4, Radiation, Evacuation, and Alarm Checks. This procedure required the use of the reactor console key in order to acknowledge and deactivate the facility evacuation horn during the required surveillance testing. During that usage the reactor was shutdown with all control rods fully inserted and no reactivity or core/experiment changes in progress. Following their verification that the procedure had been properly completed they left the control room to secure the Primary Heat Exchanger Pump. They did not remove the key from the reactor console prior to leaving the control room. After securing the pump the two individuals were in the process of securing the building for the day when they received a call from another licensed SRO to come to the control room. This third licensed SRO was passing by the control room and observed the key in the console with no licensed operator present. At 1349 hours this third individual removed the key from the console and secured it in the SRO lockbox. With that action the reactor was secured and the conditions of TS 6.1.3.a.1 were met. The Director, RSEC was notified by telephone of the event at 1355 hours.

Review of the Event:

The Duty SRO completed an Event Evaluation Form as required by AP-4, Identification, Evaluation and Documentation of Safety System Failures, Abnormal Events, and Operational Events. Upon his return to the facility later that afternoon, the Director, RSEC interviewed the Duty SRO and the Duty RO. He also reviewed the console logbook and the console computer printouts. Appropriate notifications to the NRC, the Penn State administrative chain, and the Penn State Reactor Safeguards Committee (PSRSC) Chair were made.

The Director's review of the event did not identify any extenuating circumstances or distractions. Both duty personnel indicated they were not rushed nor did they feel any time constraints in performing their duties.

During the time the key was in the console and unattended the reactor bay was locked and closed due to security conditions. The only entrance to the control room is from the reactor bay. Only minimal reactor staff was present at this time as this was the afternoon leading to an extended holiday period. Based on the console printout, no activities occurred during the time period the control room was unattended. No operations were being conducted, the control

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rods were scrambled and fully inserted, and no personnel were present in the reactor bay. Thus this event is not considered to be safety significant.

This is the fifth event of this nature since February 9, 1998. The first event was discussed in our letter of February 20, 1998. Subsequent related events were discussed in our letters of April 7, 2000, June 13, 2001, and November 8, 2002. The current event had a minor difference from the previous four events in that it occurred following a routine surveillance test and not during normal operations. The previous events had led us to modify our checkout procedure and logbook stamp in an effort to provide ticklers to the console operators to prevent the mental lapses that had led to the previous events. In addition we had provided staff briefings and discussions to further enhance attention to detail and focusing on the work at hand.

In determining corrective and preventative actions for the previous four events we had not considered the likelihood of such an event occurring following the use of the console key for conducting surveillance testing. The Duty SRO and RO for the event were tasked with conducting an initial assessment of further corrective and preventative actions for events of this type which might occur during surveillance testing.

This event was briefed to the staff by email the afternoon of the event. It was discussed in the next status meeting on the morning of Monday, January 5, 2004 (for all practical purposes the facility was closed during the period December 23, 2003 until January 5, 2004 for the Christmas and New Years holidays). The minimal staff present for operations during the holiday period was familiar with the event via personal knowledge or the email. The event will be briefed to the PSRSC during their regular meeting on January 13, 2004. They, as well as the facility executive chain, were notified and briefed on the event by email on December 23, 2003.

Corrective and Preventative Actions:

In addition to the staff briefings (email and status meeting) mentioned in the Description of Event section we are evaluating modifications to our surveillance procedures to further heighten the operator awareness of the key being in the console during those procedures. If found appropriate, these modifications might include actual procedure reordering, explicit steps for removal and insertion of the key, and use of explicit logbook entries and/or logbook stamps. We will continue to emphasize the need for operators to fully complete the task at hand prior to beginning the next task.

Due to the holidays we have not had the opportunity to conduct staff meetings to identify and evaluate potential corrective and preventative actions beyond those from the Duty SRO and RO. We will complete those meetings and incorporate feedback from those meetings and from the PSRSC discussion into our corrective and preventative actions. These assessments and determination of corrective and preventative actions will be completed by the end of February 2004. Implementation of corrective and preventative actions will be completed by the end of December 2004. Our regular operator training and requalification program will continue to emphasize operator attention and responsibilities.

If you have any questions regarding this event, please contact Dr. Sears, the RSEC Director, at 814-865-6351 or via email at <cfsnuc@enr.psu.edu>.

Sincerely,



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cc: M. Mendonca (NRC Headquarters)  
T. Dragoun (NRC Region 1)  
F. Sears (RSEC Director)  
L. Burton (Assoc. Dean)  
T. Litzinger (PSRSC Chair)

