

WOLF CREEK

NUCLEAR OPERATING CORPORATION

John A. Bailey
Vice President
Operations

March 16, 1992

NO 92-0078

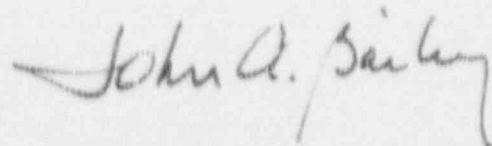
U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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Washington, D. C. 20555

Subject: Docket No. 50-482: Licensee Event Report 92-003-00

Gentlemen:

The attached Licensee Event Report (LER) is being submitted pursuant to 10 CFR 10.73 (a) (2) (i) concerning a Technical Specification violation.

Very truly yours,



John A. Bailey
Vice President
Operations

JAB/aem

Attachment

cc: A. T. Howell (NRC), w/a
R. T. Martin (NRC), w/a
G. ... Pick (NRC), w/a
R. D. Reckley (NRC), w/a

Handwritten initials/signature

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INITIATION

With Control Room Emergency Ventilation System (CREVS) [VI] Train "B" in a recirculation line up and operating, on February 13, 1992, at approximately 2110 CST, Control Room operators noted that SGK04A, the Train "A" Control Building air conditioning unit [VI-ACU], had been operating since 0937 CST instead of SGK04B, the Train "B" Control Building air conditioning unit. With SGK04A operating with CREVS Train "B", the recirculation mode of operation was not maintained as required by Technical Specification (T/S) 3.3.3.7 and T/S 3.3.3.1. Therefore, this condition is being reported in accordance with 10 CFR 50.73(a)(2)(i)(3) as a condition prohibited by the plant's technical specifications.

DESCRIPTION OF EVENTS

Technical Specification 3.3.3.7, applicable in all modes, requires two operable independent Chlorine Detection Systems [VI]. With one Chlorine Detection System inoperable, the T/S requires the inoperable system to be restored to operable status within seven days or within the next six hours initiate and maintain operation of the CREVS in the recirculation mode of operation. With both Chlorine Detecting Systems inoperable, the T/S requires the CREVS to be operated in the recirculation mode of operation within one hour. Technical Specification Surveillance Requirement 4.3.3.7 requires that each Chlorine Detection System to be demonstrated operable by performance of a channel check at least once per 12 hours, an analog channel operational test at least once per 31 days, and a channel calibration at least once per 18 months.

On February 12, 1992, at 1023 CST, surveillance test procedure STS IC-280A, "Analog Channel Op Test-Ctrl Rm Cl Det Train A," was initiated and Control Room Air Intake Chlorine Monitor GK AIT-3 [VI-AIT] was placed in its bypass position. Instrumentation and Control (I&C) personnel had increased the testing frequency of the chlorine monitors because the chlorine sensors had recently been found out of calibration. On February 12, 1992, at 1245 CST, Control Room operators were notified that Chlorine Monitor GK AIT-3 would not calibrate during performance of surveillance test procedure STS IC-280A. Chlorine Monitor GK AIT-3 was declared inoperable, a corrective work request was written to replace the chlorine sensor and the appropriate T/S action statement was entered. Because spare chlorine sensors were not available on site and replacements had been ordered but had not yet been received, the chlorine sensor could not be immediately replaced and returned to service.

On February 13, 1992, at 0854 CST, Control Room operators manually aligned CREVS Train "B" in accordance with system operating procedure SYS GK-122,

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"Manual Control Room Ventilation System CRVIS Line-Up," in preparation for the performance of surveillance test procedure STS IC-280B, "Analog Channel Op Test-Ctrl Rm Cl Det Train B," for Control Room Air Intake Chlorine Monitor GK AIT-2. System operating procedure SYS GK-122 provides procedural requirements for manually placing the CREVS into a recirculation line up. Because Chlorine Monitor GK AIT-3 had been previously declared inoperable, the Control Room operators entered the T/S action statement applicable for both chlorine monitors being inoperable prior to initiating the performance of surveillance test procedure STS IC-280B.

Subsequently, Results Engineering personnel contacted Control Room operators and requested the Control Room secure SGK04B and run SGK04A to allow vibration testing on SGK04A. System operating procedure SYS GK-122 was reviewed and discussed by Control Room operators in an effort to ensure that the resulting line up would satisfy the T/S action statement. As a result of this review and discussion, Control Room operators determined that securing SGK04B and running SGK04A would not impact the CREVS Train "B" recirculation line up as long as the exhaust dampers for SGK04B, Dampers GKD084 and GKD085 [VI-DMP], were ensured closed as required by system operating procedure SYS GK-122 upon failure of SGK04B. Therefore, on February 13, 1992, at 0937 CST, Control Room operators started SGK04A and secured SGK04B and Dampers GKD084 and GKD085 were verified closed.

On February 13, 1992, at approximately 1120 CST, I&C personnel determined that Chlorine Monitor GK AIT-2 had failed to calibrate during the performance of surveillance test procedure STS IC-280B and notified the Control Room operators. Because Chlorine Monitor GK AIT-2 had failed to calibrate, the Control Room operators suspended surveillance test procedure STS IC-280B and the CREVS Train "B" recirculation line up, with SGK04A running, was maintained to satisfy the appropriate action statement of T/S 3.3.3.7.

Following Control Room shift turnover, on February 13, 1992, at approximately 2110 CST, the on-duty Reactor Operator noted that although the CREVS Train "B" was in a recirculation line up, the Train "A" Control Room air conditioning unit SGK04A was operating rather than the Train "B" unit SGK04B. The on-duty crew determined that this line up was in conflict with the required CREVS Train "B" recirculation line up. Therefore, at 2112 CST, Control Room operators started SGK04B in accordance with system operating procedure SYS GK-122. At 2115 CST, SGK04A was secured and the appropriate dampers realigned in accordance with system operating procedure SYS GK-122 returning CREVS Train "B" to its proper recirculation line up.

On February 15, 1992, new chlorine sensors were installed in GK AIT-2 and GK AIT-3. At 1514 CST, GK AIT-3 was restored to service following the successful completion of surveillance test procedure STS IC-280A. Control

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Room operators declared GK AIT-3 operable and exited the T/S 3.3.3.7 action statement for both chlorine monitors inoperable while remaining in the appropriate action statement for one inoperable chlorine monitor since GK AIT-2 was still out of service. At 1557 CST, Control Room operators restarted the Control Room Building normal supply and exhaust fans in accordance with plant procedures. The restoration from the CREVS recirculation line up was then completed.

On February 15, 1992, at 1823 CST, GK AIT-2 was restored to service following the successful completion of surveillance test procedures STS IC-280B. Control Room operators declared GK AIT-2 operable and exited the T/S 3.3.3.7 action statement for one inoperable chlorine monitor.

Technical Specification 3.7.6, which is applicable in all modes, requires two independent CREVS trains to be operable. In part, Technical Specification Surveillance Requirement 4.7.6.3 requires that each CREVS train shall be demonstrated operable at least once per 18 months by verifying that the system maintains the Control Room at a positive pressure of greater than or equal to .25-inch water gauge relative to the outside atmosphere during system operation. The CREVS initiates filtered ventilation of the Control Room following receipt of an actuation signal to provide the Control Room with a conditioned atmosphere following various design basis accidents. The CREVS ensures that the ambient air temperature does not exceed the allowable temperature for continuous-duty rating for the equipment and instrumentation cooled by CREVS and the Control Room will remain habitable for Control Room personnel during and following all credible accident conditions including potential chlorine gas sources which may have the potential for incapacitating Control Room personnel if mitigating actions are not taken. During the emergency mode of operation, the CREVS maintains the Control Room at a positive pressure of greater than or equal to .25-inch water gauge relative to the outside atmosphere to prevent infiltration.

In part, T/S 3.3.3.1 requires the Control Room Air Intake High Radiation Monitors, JF RE-04 and GK RE-05 [IL-MON], to be operable at all times. With one radiation monitor inoperable, the T/S requires isolating the CREVS and initiating operation of the CREVS in the recirculation mode within 72 hours. With no operable radiation monitor, the T/S requires isolating the CREVS and initiating operation of the CREVS in the recirculation mode within one hour.

The Control Room ventilation normal supply and exhaust fans [VI-FAN] are secured when the CREVS is placed into a recirculation mode of operation. Radiation Monitors GK RE-04 and GK RE-05 are supplied by the normal supply fans. Therefore, when the CREVS is placed into a recirculation mode of operation, Radiation Monitors GK RE-04 and GK RE-05 are no longer capable of performing their specified functions.

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TEXT (If more space is required, use additional NRC Form 388A's) (12)

Engineering personnel evaluated the system configuration with SGK04A running with CREVS Train "B" in a recirculation line up. It was determined that although the CREVS trains have excess pressurization capabilities, it was unlikely that in this configuration the Control Room would have been maintained at a positive pressure greater than or equal to .25-inch water gauge since direct pressurization and filtration flow into the Control Room was interrupted. Since it is believed that the Control Room would not have been maintained at a positive pressure greater than or equal to .25-inch water gauge, the potential for infiltration of unfiltered air into the Control Room existed. Therefore, the configuration did not comply with the T/S 3.3.3.7 and T/S 3.3.3.1 requirements to maintain the CREVS in a recirculation mode of operation.

ROOT CAUSE AND CORRECTIVE ACTIONS

The root cause of this event is inattention to detail by the Control Room operators and Results Engineering personnel who failed to recognize the effect on the CREVS recirculation line up when securing SGK04B and running SGK04A for vibration testing. Neither group looked sufficiently into the ventilation line up details to ensure that the effects of the equipment changes on the CREVS recirculation line up were recognized and the T/S action statement for the inoperable chlorine monitors was satisfied. Although system operating procedure SYS GK-122 was reviewed by the Control Room operators, they did not properly review or interpret the line up checklist included in the procedure or the controlled drawings prior to securing SGK04B and running SGK04A. Additionally, system operating procedure SYS GK-122 is not specific in its direction of any line up changes that may be required in the event of a component status change. Although system operating procedure SYS GK-122 indicates that on failure of SGK04B, the operators should ensure that the exhaust dampers have closed, it does not indicate that starting SGK04A would be incorrect.

To prevent recurrence of this event, the Manager Operations has revised a Standing Order for Control Room operators to require a face-to-face briefing with the system or testing engineer prior to authorizing testing while in a T/S action statement that is related to equipment that is to be tested to allow for proper evaluation of the effects of the testing on the equipment and system line up. The Supervisor Results Engineering has informed Results Engineering personnel of this requirement for a face-to-face briefing with the Control Room operators. System operating procedure SYS GK-122 will be revised to provide specific instructions on changes to the configuration once the CREVS has been aligned in the recirculation mode. This revision to system operating procedure SYS GK-122 will be completed by July 31, 1992. Additionally, the details of this event will be added to Licensed Operator Requalification training by June 1, 1992, to ensure the licensed operators are aware of the potential effects of changing a system line up.

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ADDITIONAL INFORMATION

The chlorine sensors are manufactured by Rosemount Unilock/Delta, part/model number XB0161-01E.

During this event, the plant was in Mode 1, Power Operations, at 100 percent power. Although this CREVS recirculation line up did not satisfy the T/S requirements, both trains of CREVS were operable and available to respond had an isolation signal been received. There was no threat to the health or safety of the public. There was no damage to plant equipment or release of radioactivity as a result of this event.

There have been no previous similar occurrences.