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ACCESSION NBR: 9202100249 DOC. DATE: 92/02/05 NOTARIZED: NO DOCKET #
FACIL: 50-263 Monticello Nuclear Generating Plant, Northern States 05000263

AUTH. NAME AUTHOR AFFILIATION
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PARKER, T.M. Northern States Power Co.
RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 92-003-00: on 920107, inoperable offgas radiation
monitors. Caused by inadequate procedure. Monitor sample sys.
was drained & returned to service.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 7
TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES: NRR/LONG, W.

05000263

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NRR/DET/ECMB 9H	1 1	NRR/DET/EMEB 7E	1 1
NRR/DLPQ/LHFB10	1 1	NRR/DLPQ/LPEB10	1 1
NRR/DOEA/OEAB	1 1	NRR/DREP/PRPB11	2 2
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RGN3 FILE 01	1 1		
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414 Nicollet Mall
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February 5, 1992

Report Required by
10 CFR Part 50, Section 50.73

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22

Inoperable Offgas Radiation Monitors Caused by Inadequate Procedure

The Licensee Event Report for this occurrence is attached.

This event was reported via the Emergency Notification System in accordance with 10 CFR Part 50, Section 50.72 on January 7, 1992.

Thomas M Parker
Manager
Nuclear Support Services

c: Regional Administrator - III NRC
Sr Resident Inspector, NRC
NRR Project Manager, NRC
MDH

Attn: Dr R Thron

Attachment

92
9202100249 920205
PDR ADOCK 05000263
S PDR

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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-52), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-spaced typewritten lines) (16)

On January 7, 1992, at 0630 hours it was determined that the Offgas Radiation Monitors were not operable as required by Technical Specifications. The cause was an inadequate procedure for startup of the Offgas Monitor Sample system. The procedure for placing the sample system in service did not require checking for moisture during startup. Contributing factors were an error in logging by a control room operator, and misleading indications at the local sample system controls. Corrective actions included draining and returning the sample system to service, and revising the control room logs and the system startup procedure. Actions to be completed are changes to chemistry computer displays, training for shift chemists, and cleaning of the offgas flow monitor.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TEXT (If more space is required, use additional NRC Form 365A's) (17)

DESCRIPTION

The plant was shutdown on January 2, 1992 for a short maintenance outage. At that time and prior to the shutdown the Offgas Radiation Monitors (EIIS System: WF)(EIIS Component: DET) were functioning properly. On January 5, 1992 the plant commenced a reactor start up. At 2205 hours on January 5, 1992 the Steam Jet Air Ejectors (EIIS Component: EJ) were placed in service. As required by procedures the shift chemist was notified of the air ejectors being placed in service and the requirement to ensure the Offgas Sample system was placed in service. The shift chemist performed the required procedure which included checking the proper valve line-up, manipulating valves to insure adequate flow using the local flow indicator (EIIS Component: FI), and establishing the proper system differential pressure using local pressure (vacuum) gauges both upstream and downstream of the sample flow throttle valve (See attached figure). Although the inside surface of the glass flow indicator was discolored, the shift chemist was able to observe the proper position of the flow indicator device.

The plant startup continued and Offgas Radiation Monitor channels A and B values were logged by the control room operator during the midnight shift. The values logged were 1.97 and 1.89 millirem per hour. This was not considered to be abnormal because of the low power (less than 10%). With the local and remote indications available it appeared that the sample system was operating properly. On January 6, 1992, values for the Offgas Radiation Monitors were again taken as required by the control room daily log (Required reading on log was once per day, typically logged just prior to 2400 hours). The values logged were 572 and 589 millirem per hour. The control room operator at the time did not consider this to be abnormal because the specification on the log was 1 to 3000 millirem per hour and the downscale alarm had cleared. Later during the same shift, at about 0600 hours, on January 7, 1992, the Shift Manager was performing his rounds and noticed the monitors were actually reading 5.72 E 00 and 5.89 E 00 millirem per hour. He then concluded that the operator had made an error in logging and that the monitors were not functioning properly. He contacted the shift chemist to investigate and then consulted technical specifications.

On January 7, 1992, at 0630 hours, with the plant operating at 97% power it was determined that both Steam Jet Air Ejector Process Radiation Monitors were not operable because the sample system was found to be full of water. The sample system was drained and returned to service at 0700 hours on January 7, 1992.

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Technical Specification 3.8.5.c states "The activity of radioactive material in the gaseous form removed from the main condenser shall be continuously monitored by the steam jet air ejector monitors in accordance with Table 3.8.2.". The table states "Upon loss of both steam jet air ejector off-gas radiation monitors, be in Hot Standby within six hours". The monitors were considered to be inoperable from 2205 hours on January 5, 1992 to 0700 hours on January 7, 1992, resulting in a maximum of 33 hours when the monitors were required to be operable but were not. Therefore, this event is reportable as a condition prohibited by Technical Specification.

CAUSE

The root cause of this event was an inadequate procedure. The startup procedure for the Offgas Radiation Monitors at the time of the event did not include instructions for draining moisture from the system. This failure to include draining the system during startup was not a cognitive error.

Contributing factors were the misleading local indications available to the shift chemist when placing the offgas monitor sample system in service (See attached system drawing). The pressure gauge down stream of the sample throttle valve, OG-9, indicated a vacuum, which is normal when the system is in operation. The pressure gauge upstream of the sample throttle valve indicated normal operating pressure, although this was most likely caused by the head of water which had accumulated in the system. Both pressure gauges are included in the calibration program. The local flow indicator likely had a small amount of water in it and, if the flow indicator had not been discolored, this condition may have been detected by the shift chemist. However, the presence of water was not noted and all three devices indicated normal values for system operation. Readings logged by the turbine building operator also indicated normal parameters for system operation.

A factor contributing to the length of time before discovery of the event was the logging error by the control room operator. This was a cognitive error. There were no unusual characteristics of the work location. The error was not contrary to or associated with an approved procedure.

An additional factor contributing to the time the monitor was inoperable was the requirement to log the reading only once per day.

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ANALYSIS

During the time the Offgas Radiation Monitors were inoperable the Stack Wide Range Gas Monitors (EIIS System: IL) were inservice and operable. These monitors continuously monitor all elevated releases from the plant including all releases from the Offgas System. The basis for these monitors is to insure monitoring capabilities during and following an accident. If high stack releases were detected the Offgas discharge to the stack would automatically isolate. During the time the Offgas Radiation Monitors were inoperable no abnormal releases occurred. If release rates had increased, the Wide Range Gas Monitors would have provided the operators with alarms and indications in the control room. Based on the above this event did not pose any threat to the health and safety of the public. The basis for the Offgas Radiation Monitors is to provide reasonable assurance that the total body exposure to an individual at the restricted area boundary will not exceed the limits of 10 CFR Part 20.

This event could not have had more severe consequences. If radiation levels had increased significantly the stack would have isolated and the operations staff would have been alerted by other instrumentation to take corrective action.

CORRECTIVE ACTIONS

The following actions have been completed:

1. The Offgas Radiation Monitor sample system was drained and returned to service.
2. The Reactor Control Room Log was revised to require that both channels of the Offgas Radiation Monitor be logged every four hours.
3. The minimum and maximum acceptance band on the control room log were revised to reflect typical operating Offgas radiation values.
4. The chemistry department Reactor Startup Checklist was revised to include draining the Offgas Radiation Monitor moisture separator and sample chamber loop seal drain.
5. The control room operator has been counseled on the importance of proper log keeping.

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The following actions will be completed:

1. A training session will be conducted with all chemistry personnel regarding results of the investigation of this event as well as the revised startup procedure for the Offgas Radiation Monitor system.
2. The local Offgas sample flow indicator will be cleaned at the next system shutdown.
3. Near "real time" process radiation monitor outputs will be added to the chemistry department computer database. These values will be displayed at a dedicated video terminal. If a radiation monitor output is outside the limits established in the database, then the parameter will flash on the video screen thus drawing the attention of chemistry shift personnel for further investigation.

ADDITIONAL INFORMATION

None

FAILED COMPONENT IDENTIFICATION

None

PREVIOUS SIMILAR EVENT

None

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