



Commonwealth Edison

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November 29, 1988

Dr. Thomas E. Murley, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attn: Document Control Desk

Subject: Braidwood Station Unit 1
Loose Parts Monitoring System (LPMS) Special Report
NRC Docket No. 50-456

Dear Dr. Murley:

In accordance with Braidwood Technical Specification 3/4 3.3.8, Commonwealth Edison is providing the required LPMS Special Report for Braidwood Station Unit 1. Per Specification 3/4 3.3.8, with one or more Loose-Part Detection System channels inoperable for more than 30 days (in Modes 1 and 2), prepare and submit a Special Report to the Commission, pursuant to Specification 6.9.2, within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.

This report provides the required information addressing the suspected causes of the LPMS problem, the proposed corrective action and the interim measures until such actions are completed. Please direct any questions regarding this matter to this office.

Very truly yours,

S.C. Hunsader
Nuclear Licensing Administrator

/scl:5298K:2

Att.

cc: S. Sands (NRR)
J. Hinds (RIII)
Braidwood Station Inspector

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LOOSE PARTS MONITORING SYSTEM

BRAIDWOOD UNIT 1

SPECIAL REPORT

SUMMARY

Technical Specification 3/4.3.3.8 requires that a special report be written to the NRC as per Reg. Guide 1.133. The purpose of this report is to delineate the cause of sensor channel malfunction, if known, and outline the steps required to correct the problem.

On 10/20/88 it was discovered that sensor channels LM001 and LM009 were in low alarm. Upon investigation by Technical Staff, it is believed that these channels' cables have lost continuity as very little signal is discernible at the auxiliary electric room monitoring panel. The locations of these sensors are the reactor vessel upper head and Steam Generator C inlet plenum respectively. Switching to the spare sensor channels at these locations (LM002 and LM010) proved successful for the Steam Generator C inlet plenum location, as the signal from sensor LM010 was characteristic of signals from other sensors at similar locations on Steam Generators A, B, and D. Sensor Channel LM002, however, indicated a very high level of buzzing indicative of a grounding problem with that channel. This grounding problem may be due to fraying of the insulated fibre jacket of the microdot connector cable. Regardless of cause, this sensor channel is also malfunctioning as the high level of buzzing prevents discerning any other signals present. Per Reg. Guide 1.133, the failure of both sensors at the reactor vessel head, a natural collection region, constitutes an inoperable system and therefore the LCOAR was entered.

PROPOSED ACTION

Upon entering an outage of sufficient duration the Instrument Maintenance Department, assisted by Tech Staff if necessary, will make a containment entry to determine the exact cause of sensor channel failure. It is believed that the microdot cables are the root problem in both instances. It has been verified that adequate spares are available for replacing the subject cables.

INTERIM MEASURES FOR LOOSE PARTS DETECTION

In the interim, the loose parts detectors are aligned to the following sensors: LM003, 4, 5, 7, 10, 12, 17 and 18. These sensors correspond to two at the reactor vessel bottom head and one each at the inlet plenums of Steam Generators A, B, C and D and the lower narrow range taps of Steam Generators A and B, respectively. The alarm level for Detector 1 (Sensor LM003) is 2, which corresponds to 110% above background ratio. For detectors 2 through 8 the alarm level is 6 which corresponds to a ratio of 200% above background level. These levels, coupled with the required daily operating surveillances for audible detection of a loose part, will adequately detect any loose part occurrence until the sensors at the reactor vessel upper head can be repaired.