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October 5, 1989

Mr. John B. Martin, Regional Administrator
U. S. Nuclear Regulatory Commission, Region V
1450 Maria Lane, Suite 210
Walnut Creek, California 94596-5368

Dear Mr. Martin:

Subject: **Docket No. 50-206**
10CFR21 Notification Concerning Conoflow Transducers
San Onofre Nuclear Generating Station, Unit 1

SUMMARY

On October 3, 1989, I was informed of a condition which reflects a potential defect which would be reportable in accordance with 10CFR21.21. The information currently available is as follows.

Between March 1986 and April 1989 instruments identified as ITT Conoflow I/P Transducers, model number GT25CA1826, were installed in applications as discussed below. Because calibration of the transducers could not be maintained in service, they were replaced by transducers from another manufacturer.

Since the replacement of the Conoflow I/P Transducers, Edison has reviewed its calibration experience and sought to determine if the problems were a result of installation conditions or maintenance procedures which would be unique to the application in San Onofre Unit 1. We have not been able to identify a cause other than a possible, unidentified defect in the design or manufacture of the devices. Accordingly, we have concluded that this report is appropriate.

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DISCUSSION

From March 1986 until April 1989, four ITT Conoflow I/P Transducers were installed associated with Auxiliary Feedwater Flow Control Valves FCV 2300, 2301, 3300 and 3301. Following initial successful calibration of the devices, the valves were placed in service.

During an outage in June 1987, routine preventive maintenance identified that all four transducers were out of calibration, resulting in Nonconformance Report (NCR) SO1-P-6177. It was determined at the time that remote positioning capability of the flow control valves was not restricted by the out-of-calibration condition of the I/P transducers, as demonstrated by flow control valve inservice tests and visual confirmation of the local indication. (Visual inspection of the valve position indication demonstrated that the local and remote indication was in agreement.)

During an outage in February 1988, the originally installed transducers were replaced in-kind. However, before the end of that outage the replacement transducers were found to be out of calibration, and this condition was documented in NCR SO1-P-6410. A vendor representative visited the site at that time and verified the procedures and methods being used for calibration.

The replacement transducers were removed from the plant and returned to the vendor facility for disassembly, cleaning and bench verification of calibration. Metal filings which may have been from connecting conduit were reportedly found in the air gap between the magnetic block and the coil. As corrective action, upon reinstallation in the plant an RTV seal was placed inside the conduit leading to the transducers in accordance with the manufacturer's recommendation.

Nevertheless, the recalibrated transducers continued to demonstrate drift. Again, it was established that valve positioning capability from the Control Room remained unrestricted. NCR SO1-P-6410 was dispositioned to replace the transducers in the future.

Finally, during plant modification work during an outage in April 1989, two additional flow control valves were initially installed with Conoflow I/P Transducers. Before entering service, these transducers also demonstrated problems with calibration. Prior to the plant returning to service from this outage, all 6 Conoflow I/P Transducers were replaced with devices from another manufacturer. No Conoflow I/P Transducers remain in use at San Onofre.

Edison has not been able to determine a reason for the inability of the Conoflow I/P Transducers installed at San Onofre to maintain their calibration. Discussions with the vendor have not identified a cause. Accordingly, Edison concludes that there is a possible, unidentified defect in the devices themselves. However, since Edison does not plan to reinstall Conoflow I/P Transducers, we do not intend to further pursue the nature and extent of this possible defect.

In their application at San Onofre, the loss of calibration by the transducers was considered to not prevent effective control of valve position. However, this consideration is being reviewed and any change in conclusion will be reported in a Licensee Event Report.

If you have any questions, or if you would like additional information, please let me know.

Sincerely,

cc: Director, Office of Nuclear Reactor Regulation, USNRC (3)
C. W. Caldwell, Senior Resident Inspector, USNRC, San Onofre
C. Trammell, Senior Project Manager, NRR, USNRC
Institute of Nuclear Power Operations