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U. S. Nuclear Regulatory Commission
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Subject: **Indian Point 3 Nuclear Power Plant**
Docket No. 50-286
James A. Fitzpatrick Nuclear Power Plant
Docket No. 50-333
Response to Generic Letter 89-10
Safety-Related Motor-Operated Valve Testing and Surveillance

References:

1. NRC Generic Letter 89-10, dated June 28, 1989, regarding "Safety-Related Motor Operated Valve Testing and Surveillance."

2. NRC IE Bulletin 85-03, dated November 15, 1985, and Supplement 1 regarding Motor-Operated Valve Common Mode Failures During Plant Transients Due to Improper Switch Settings.

3. NYPA letter from J. C. Brons to NRC, dated October 27, 1989, regarding response to Generic Letter 88-20 "Individual Plant Evaluations."

Dear Sir:

Reference 1 requested implementation of a program for testing, inspection, and maintenance of all safety-related Motor-Operated Valves (MOVs) to assure that they would function when subjected to design-basis conditions during both normal operations and abnormal events. This program expands NRC IE Bulletin 85-03 (Reference 2) which required licensees to develop and implement a program to ensure that MOV switch settings in several specified systems were selected, set, and maintained so that MOVs would operate under design-basis conditions for the life of the plant.

In accordance with 10 CFR 50.54(f), the Authority is submitting the following response to the Request for Information discussed in the subject Generic Letter (GL). The Authority intends to develop a program in response to GL 89-10 which will enhance MOV reliability.

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The Authority has been addressing MOV reliability systematically with continual improvements in preventive maintenance. In 1983 the Indian Point 3 plant (IP3) was one of the first plants to voluntarily undertake an MOV pilot testing program using the Motor Operated Valve Analysis and Test System (MOVATS). In 1985, the Authority undertook a significant maintenance effort at both plants with respect to motor-operated valves. In addition, the Authority has expended significant resources to perform MOV testing in response to IE Bulletin 85-03, and has voluntarily expanded this testing to include valves beyond the scope of this bulletin.

In the past two years, a significant testing and maintenance effort at both Authority Nuclear Facilities has been ongoing for MOVs, including implementation of modifications that enhance MOV reliability. At the James A. Fitzpatrick plant (JAF), the Authority is currently replacing ten MOVs. Many of these new valves use a parallel double disc design which is superior to the traditional flex or solid wedge gate valve design. Similarly, at IP3, a number of actuator upgrades are being considered for future implementation.

Development of the GL 89-10 program will require significant monetary and personnel resources, and depends on several factors outside the Authority's control. Some of these factors are:

- obtaining design information from vendors inundated with similar requests from other utilities,
- questions raised by NRC sponsored testing pertaining to the validity of the industry operator sizing design methodology,
- plant conditions which prohibit full flow and full differential pressure testing; and
- questions as to what constitutes an acceptable test and test equipment.

The Authority will perform GL 89-10 recommended testing to the fullest extent that is practical. As recognized in the GL, in-situ full flow and full differential pressure testing cannot be performed in many instances. For cases where full flow and full differential pressure testing is not feasible, testing will be performed at less than full flow and full differential pressure conditions and the results will be extrapolated by the best available means. The Authority will investigate the merits of prototype testing both in-situ and in the laboratory and will utilize prototype testing as appropriate.

Regarding the GL implementation schedule, the NRC assumed three refueling outages of ten weeks duration each. The next three IP3 and JAF refueling outages are currently scheduled to average seven to eight weeks in length. Many activities involving field verification and testing require the plant to be shut down. The design-basis verification effort represents a formidable task and may adversely impact the ability to properly plan for the next scheduled refueling outages. Therefore, completion of the actions in response to items a through h of GL 89-10, could extend beyond the recommended schedule.

In addition, for the Fitzpatrick plant, a Probabilistic Risk Assessment (PRA) is currently being performed. This PRA will be useful in determining systems and component importance factors which would establish priorities for MOV testing. The initial outputs of the PRA will not be available until Fall 1990.

For Indian Point 3, the existing full scope PRA is scheduled to be updated upon completion of the Fitzpatrick plant PRA study as stated in the Authority's response to Generic Letter 88-20 (Reference 3). Therefore, the existing Indian Point Probabilistic Safety Study will be used to provide input in determining systems and component importance factors to be incorporated in the MOV program.

The next Fitzpatrick refueling outage is scheduled to begin on March 31, 1990. This outage is considered to be essentially "unavailable" for significant GL 89-10 testing due to the extensive engineering effort and pre-planning required. Based on the above, the Authority will require extension of the schedule recommended in item i of GL 89-10, to exclude the Spring 1990 Refueling Outage for the Fitzpatrick plant. The currently scheduled Fall 1991 Outage would constitute the first refueling outage with respect to GL 89-10 and the third refueling outage would be the Fall 1995 Outage, which would constitute the program completion date. For IP3, the Authority will attempt to meet the five year schedule recommended by the GL. However, as detailed previously, the Authority may extend the recommended schedule for IP3 as the MOV program develops.

Generic Letter 89-10 states that it supersedes the recommendations in IE Bulletin 85-03. The Authority will include the valves previously under the scope of Bulletin 85-03 in the program being developed in response to GL 89-10. Therefore, commitments made in response to the bulletin (see IP3-88-004 and JAFP-88-047, both dated January 15, 1988) will be modified, as necessary.

The Authority is following the work of various industry organizations and groups, to further address the concerns raised in the subject generic letter. These organizations and groups include: the Nuclear Management and Resources Council (NUMARC), the Boiling Water Reactor Owners Group (BWROG), the Westinghouse Owners Group (WOG), the Electric Power Research Institute (EPRI), the Motor-Operated Valve User Group (MUG), the Institute of Nuclear Power Operations (INPO), and the Nuclear Backfitting and Reform Group (NUBARG). The Authority shares the concern of certain of these groups about the manner in which the new staff position on MOVs and MOV testing is being imposed on the nuclear industry.

While the Authority agrees with the Commission staff on the importance of additional research, testing, and analysis to assure MOV reliability under design-basis conditions, the Authority remains legally bound to existing testing requirements, such as the ASME Section XI In-service Testing (IST) program required by 10 CFR 50.55 (a). These legally required testing programs will remain the basis for determination of operability and operational readiness. If the NRC staff has determined that Section XI testing is inadequate, as implied in GL 89-10, then a revision to the appropriate regulations should be proposed.

The Authority may take exception to certain items of the generic letter, and reserves the right to pursue all available appeal options under 10 CFR 50.109. The Authority is particularly concerned about aspects of the GL which the staff admits to be backfits, and NRC stated positions at the MOV workshops that appear to contradict the GL recommendations.

Should you or your staff have any questions regarding this matter, please contact Mr. P. Kokolakis or Ms. S. M. Toth of my staff.

Very truly yours,

John C. Brons

John C. Brons
Executive Vice President
Nuclear Generation

STATE OF NEW YORK
COUNTY OF WESTCHESTER

Subscribed and sworn to before me
this 28th day of December 1989

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Notary Public
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Notary Public, State of New York
No. 4869557
Qualified in Westchester County
Commission Expires September 8, ~~1988~~ 90

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