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UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, DC 20555

January 14, 1986

IE INFORMATION NOTICE NO. 86-03: POTENTIAL DEFICIENCIES IN ENVIRONMENTAL
QUALIFICATION OF LIMITORQUE MOTOR VALVE
OPERATOR WIRING

Addressees:

All nuclear power reactor facilities holding an operating license (OL) or a construction permit (CP).

Purpose:

This notice is provided to alert recipients of potential generic problems regarding the environmental qualification of electrical wiring used in Limitorque motor valve operators. It is expected that recipients will review this information for applicability to their facilities and consider actions, if appropriate, to preclude a similar problem occurring at their facilities. However, suggestions contained in this notice do not constitute NRC requirements; therefore, no specific action or written response is required.

Description of Circumstances:

On September 30, 1985, Commonwealth Edison (Zion Generating Station) reported to the NRC that it had discovered four Limitorque motor valve operators with jumper wires different from those tested by Limitorque in its environmental qualification program. Subsequently, the Tennessee Valley Authority (TVA) notified the NRC that the manufacturer of the internal control wiring of its Limitorque operators at Sequoyah Nuclear Plant either could not be identified or qualification could not be established where the manufacturer was known. Similar circumstances have recently been identified at other nuclear plants.

Discussion:

The results of NRC inspections at Limitorque and TVA have determined that even though Limitorque has conducted environmental qualification testing of motor valve operators, the qualification test reports do not specifically address wiring or wiring qualification. Limitorque has installed wires from several different manufacturers in safety-related operators.

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Limatorque stated that it can provide or reference documentation to support qualification of wires it has installed; however, valve manufacturers, licensees, and/or others may have added additional wires that are not qualified by this data. The NRC physical inspection of Limatorque operators at the Sequoyah plant determined that some valve operators contained wires not qualified by the Limatorque tests.

The NRC staff considers the resolution of this issue to be part of the licensee's environmental qualification program to establish and maintain the qualified status of electrical equipment within the scope of 10 CFR 50.49.

Because qualification of Limatorque installed wiring may be based on separate qualification tests of wire, it is important that adequate analyses have been performed and that documentation exists to demonstrate that the separate wire qualification tests encompass the parameters for the valve operator qualification.

If additional wiring has been added or replaced after operator shipment from Limatorque, then additional documentation may be appropriate for establishing qualification of the additional wires and subsequently the valve operators for the valve operator specific application.

No specific action or written response is required by this information notice. If you have any questions about this matter, please contact the Regional Administrator of the appropriate NRC regional office, or this office.


Edward L. Jordan, Director
Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement

Contact: G. Hubbard, IE
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Attachment: List of Recently Issued IE Information Notices

LIST OF RECENTLY ISSUED
 IE INFORMATION NOTICES

| Information Notice No. | Subject | Date of Issue | Issued to |
|------------------------|----------------------------------------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------|
| 86-02 | Failure Of Valve Operator Motor During Environmental Qualification Testing | 1/6/86 | All power reactor facilities holding an OL or CP |
| 86-01 | Failure Of Main Feedwater Check Valve Causes Loss Of Feedwater System Integrity And Water-Hammer Damage | 1/6/86 | All power reactor facilities holding an OL or CP |
| 85-101 | Applicability of 10 CFR 21 To Consulting Firms Providing Training | 12/31/85 | All power reactor facilities holding an OL or CP |
| 85-100 | Rosemount Differential Pressure Transmitter Zero Point Shift | 12/31/85 | All power reactor facilities holding an OL or CP |
| 85-99 | Cracking In Boiling-Water-Reactor Mark I And Mark II Containments Caused By Failure Of The Inerting System | 12/31/85 | All BWR facilities having a Mark I or Mark II containment |
| 85-98 | Missing Jumpers From Westinghouse Reactor Protection System Cards For The Over-Power Delta Temperature Trip Function | 12/26/85 | All Westinghouse designed PWR facilities holding an OL or CP |
| 85-97 | Jail Term For Former Contractor Employee Who Intentionally Falsified Welding Inspection Records | 12/26/85 | All power reactor facilities holding an OL or CP |
| 85-96 | Temporary Strainers Left Installed In Pump Suction Piping | 12/23/85 | All power reactor facilities holding an OL or CP |
| 85-95 | Leak Of Reactor Water To Reactor Building Caused By Scram Solenoid Valve Problem | 12/23/85 | All BWR facilities holding an OL or CP |

OL = Operating License
 CP = Construction Permit