



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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JUN 28 1979

MEMORANDUM FOR: B. Grimes, Assistant Director for Systems and Engineering, Division of Operating Reactors

FROM: G. Lainas, Chief, Plant Systems Branch, Division of Operating Reactors

SUBJECT: STATUS OF PSB REVIEWS IN CONNECTION WITH LICENSEE'S RESPONSES TO IE BULLETIN 79-01

OFFICE OF THE SECRETARY
D.C.
JUN 21 1979

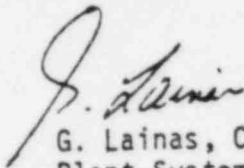
IE Bulletin 79-01 requires that all licensees review the environmental qualification of electrical equipment installed in their plants and report the results to the NRC within 120 days of receipt of the Bulletin. The bulletin further requires that any items of equipment found to be unqualified must be reported to the Director of the Division of Operating Reactors within 24 hours. If plant operation is to continue with the unqualified equipment, a safety basis must be included in the 24 hour report. The purpose of this memorandum is to provide you with the status of our reviews in connection with the 24 hour notifications received to date.

There have been 19 separate reports of equipment which the licensees believe may not be qualified to perform its safety function in an accident environment. Each of these reports was reviewed by PSB and a determination was made as to whether the proposed resolution, including the bases for continued operation, where appropriate, was acceptable. These determinations were made in consultation with the DOR Project Managers and where necessary additional information was requested via telephone and telecopy from the licensees. A summary of the status of all these reviews is provided in Enclosure 1.

With the exception of item 4 of Enclosure 1, all our reviews are complete and we have achieved a satisfactory resolution with the licensees. In the case of item 4 (stem mounted limit switches on MSIV's at Browns Ferry Units 1, 2 & 3), TVA does not propose to replace the unqualified limit switches. While we do not believe that there is any immediate hazard to the health and safety of the public we do believe that several conditions must be satisfied if the switches are not replaced. These conditions are set forth in our memorandum to T. Ippolito dated June 6, 1979 (see Enclosure 2).

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As the licensee reviews required in connection with IE Bulletin 79-01 continue, we expect to receive additional reports of equipment considered to be unqualified for its accident environment. We will evaluate these reports immediately and update Enclosure 1 at appropriate intervals.



G. Lainas, Chief
Plant Systems Branch
Division of Operating Reactors

Contact:
E. Butcher, X28077

Enclosures:
As stated

cc w/enclosure:

D. Eisenhut
S. Hanauer
G. Lainas
R. Satterfield
V. Moore
V. Thomas
D. Tondi
E. Butcher
DOR Branch Chiefs
PSB Section A
DOR AD's
E. Jordan

STATUS OF DOR Reviews
In Connection With IE Bulletin 79-01
24 Hour Notifications

Plant Name	Unqualified Equipment Reported	Date of 24hr Notification	Date of 14 Day Detailed Report	Status of DOR Review
1. Indian Point Unit 3	<p>NAMCO Model EA-700 stem mounted limit switches on valves in the following systems:</p> <ul style="list-style-type: none"> a. High Head Safety Injection System - 1st Leg Injection (Indication) b. Containment Pressure Relief (Control and Indication) c. Containment Purge (Control and Indication) 	2/14/79	2/16/79	<p>Complete - Continued operation is justified on the basis of redundant position indication, redundant equipment not exposed to the accident environment and administrative procedures in effect until the switches can be replaced. The switches will be replaced as soon as a replacement is available at an outage of sufficient duration.</p>
2. Vermont Yankee	<p>NAMCO Model SL-3CM-7L and SL-3C-11L stem mounted limit switches on main steam isolation valves which provide position indication and input to the RPS.</p>	<p>2/14/79 4/4/79 letter reports replacement switches were unqualified.</p>	2/28/79	<p>Complete - Continued operation is justified on the basis that the RPS functions do not require position indication and the RPS switches are not required for a minimum of 110% of the available time. The switches were scheduled for replacement on 2/28/79. The switches were replaced on 2/28/79.</p>
3. Cooper	<p>NAMCO Model 3LSML stem mounted limit switches on main steam isolation valves which provide position indication and input to the RPS</p>	2/21/79	2/21/79	<p>Complete - Continued operation justified on the same basis as Vermont Yankee. The limit switches will be replaced at the next refueling outage scheduled for April 1979.</p>

STATUS OF DOR Reviews
In Connection With IE Bulletin 79-01
24 Hour Notifications

Plant Name	Unqualified Equipment Reported	Date of 24 hr Notification	Date of 14 Day Detailed Report	Status of DOR Review
4. Browns Ferry Units 1, 2 & 3	NAMCO Model SL3-B2W1000 mounted limit switches on main steam isolation valves which provide position indication and input to the RPS.	2/23/79	3/9/79	Incomplete - Continued operation justified on the same basis as Vermont Yankee. The licensee does <u>not</u> propose to replace the limit switches on the basis that they are not required to function in a LOCA environment. DOR review is continuing.
5. Indian Point Unit 2	NAMCO Model EA-170 stem mounted limit switches on valves in the containment pressure relief and containment purge systems (Control and Indication).	2/27/79	Not required an earlier report was provided 3/23/79	Complete - Continued operation is justified on the same basis as Indian Point Unit 3. The limit switches will be replaced during the refueling outage scheduled for the summer of 1979.
6. Fort Calhoun	NAMCO Model D2400X limit switches on 18 different containment isolation valves (position indication only). Also later informed in letter dated 7/6/79 that the following additional switches were unqualified: NAMCO D200G 17X2 - 26 switches Fisher Type 704 14X2 - 28 switches	3/16/79	3/28/79 IER 3/29/79 letter 6/6/79 letter	Incomplete - Continued operation is justified since 18% of the switches are not used as in <u>industrial</u> related situations. Outstanding information can be affords the DOR is waiting the licensee decision regarding to replace the switches. per IER provided cont. A.C. 1.1

STATUS OF DOR REVIEWS
In Connection with IE Bulletin 79-01
24 Hour Notifications

Plant Name	Unqualified Equipment Reported	Date of 24hr Notification	Date of 14 Day Detailed Report	Status of DOR Review
7. Salem Units 1 & 2	The licensee reported several types of equipment without qualification documentation (NARCO limit switches, Interlock Panels, Air operated solenoids, and Transmitters). Only the NARCO Model D2400X limit switches on containment isolation valves were declared unqualified. These limit switches are in control and position indication circuits.	3/6/79	None planned	Complete - Since only the limit switches were declared unqualified continued operation is justified on the same basis as Indian Point Unit 3. All of the equipment identified including the unqualified limit switches will be replaced at the first refueling shutdown the first week in April, 1979.
8. Millstone 2 (Hale Corner X2743C)	The licensee has identified 26 valves with stem-mounted limit switches that they say "may not be suitable for service in the LOCA environment." No function of these switches was not identified.	3/23/79	4/6/79	Incomplete - valve repair will lock valves in the closed position (i.e. closed) until licensee determines the long term effects of the repair measures. 14 day report will be submitted to replace the operator for the spray head spray isolation valves. Additional discussions are being held with the licensee.
9. Browns Ferry Units 1, 2, 3	Motor operators for Main Steam Line Drain and RHR Head Spray isolation valves.	3/10/79	3/27/79	Incomplete - valve repair will lock valves in the closed position (i.e. closed) until licensee determines the long term effects of the repair measures. 14 day report will be submitted to replace the operator for the spray head spray isolation valves. Additional discussions are being held with the licensee.

Stat of DOR Reviews
In Connection With IE Bulletin 79-0
24 Hour Notifications

Plant Name	Unqualified Equipment Reported	Date of 24 hr. Notification	Date of 14 Day Detailed Report	Status of DOR Review
16. Surry Unit 1	ASCO solenoid pilot valve model No. 8520A102 used for inside confinement isolation valves on steam generator blowdown lines.	5/23/79	N/A	Incomplete - All valves for access committed to replace the pilot valves before re-start. Removal of current outage or basis for completion without replacing the valves.
17. Brunswick Units 1 & 2	AMP Special Industries control and instrumentation cable terminal logs	5/25/79 Verbal 5/29/79 Ldr	6/6/79	Incomplete - 2 units, 1 day now shutdown. The 62' for continued operation will be provided prior to restart. Control LCU has verified that terminations will not fail even if the logs become totally unisolated in an accident mode. Continued operation is justified on this basis. A fully qualified method of insulating the terminations will be implemented as required.
18. Hatch Unit 1	Stem mounted limit switches on MSIV providing input to the RPS	6/10/79 Verbal		Incomplete - The unit is now shutdown. The basis for continued operation will be provided prior to restart.
19. Dresden Units 2 & 3	Limit switches on testable check valves in the core spray system. NAMCO SL2-C-11	LER 79-9/070 5/24/79	N/A	Complete - The unqualified switches are only associated with the test actuator. No failure mode of the switches could impair the safety function of the check valve. No corrective measures are required.



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JUN 6 1979

MEMORANDUM FOR: T. Ippolito, Chief, Operating Reactors Branch #3,
Division of Operating Reactors

FROM: G. Lainas, Chief, Plant Systems Branch, Division of
Operating Reactors

SUBJECT: BROWNS FERRY UNITS 1, 2 AND 3 - ENVIRONMENTAL
QUALIFICATION OF STEAM MOUNTED LIMIT SWITCHES ON
MSLIV's (IE BULLETIN 79-01)

In connection with their response to IE Bulletin 79-01, TVA has reported that the stem mounted limit switches on the MSLIV's which provide input to the RPS are not qualified for an accident (e.g. LOCA) environment. (Ref. TVA letters dated February 23, 1979 and March 9, 1979 and Telecon dated May 17, 1979). TVA has stated that these limit switches need not be environmentally qualified for an accident environment for the following reasons and, therefore, will not be replaced with qualified switches.

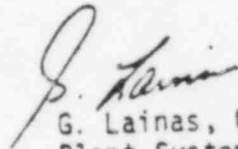
1. The switches are not needed to mitigate any accident or transient including a fast closure of the MSIV's. No credit has been taken for these limit switches in the analyses provided in the FSAR.
2. The switches do not have any control function and are isolated from all control circuits and the RPS by an interposing relay.
3. The only possible deleterious effect of a failure would be a loss of the position indication derived from the limit switches.

We have reviewed the information provided by TVA and have concluded that the following conditions must be satisfied if the unqualified limit switches are not replaced.

1. An analysis must be provided (or a reference if it has previously been provided) to show that the MSLIV closure input to the RPS is not required to mitigate the consequences of a closure of three or more MSLIV's. Such an analysis does not appear to be included in the FSAR.

2. Schematic diagrams must be provided which show all circuits with inputs from the unqualified limit switches and the interposing relay isolating the limit switches from the RPS so that we can verify that the switches do not have any safety function and that they are adequately isolated from the RPS. (Note: The isolation relay and circuit must be Class IE).
3. An environmentally qualified method of determining MSLIV position from the control room must be provided and the indication devices with input signals derived from the unqualified limit switches must be clearly identified with a permanent tag which: (1) states that they should not be relied on for position indication except during normal operation; and (2) provides a reference to an instrument located in the control room which should be relied on during transient or accident conditions.

Please inform the licensee of our position and request that they provide the information identified above and make any modifications necessary to satisfy these conditions if they do not elect to replace the unqualified limit switches.



G. Lainas, Chief
Plant Systems Branch
Division of Operating Reactors

Contact:
E. Butcher, X28077

cc: V. Stello
D. Eisenhut
R. Vollmer
P. Check
R. Satterfield
G. Lainas
D. Tondi
M. Chiramal
J. Burdoin
R. Clark
E. Butcher