

October 4, 2001

Mr. Michael Kansler
Sr. Vice President and Chief
Operating Officer
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

SUBJECT: REPORTING REQUIREMENTS FOR ACTUATION OF ENGINEERED SAFETY
FEATURES FOR INDIAN POINT NUCLEAR GENERATING UNIT NO. 3 (TAC
NO. MB1126)

Dear Mr. Kansler:

By letter IPN-01-008, dated January 19, 2001, Mr. Robert J. Barrett, Vice President Operations, Indian Point Nuclear Generating Unit 3 (IP3), License No. DPR-64, requested clarification of reporting requirements for actuation of an engineered safety feature (ESF) in accordance with 10 CFR 50.72(b)(2)(ii) and 50.73(a)(2)(iv). Mr. Barrett requested clarification after NRC staff questioned IP3's interpretation of the rule. We provide the following findings concerning this issue.

The staff reviewed the applicable documentation and discussed the intent of the reporting requirements and the supplemental guidance provided in NUREG-1022 in order to determine whether the licensee's interpretation of the rule was correct.

BACKGROUND

The reporting requirements of 10 CFR 50.72(b)(2)(ii) in effect at the time of the events in question (August and September 2000) stated that the licensee shall notify the NRC within 4 hours of:

Any event or condition that results in a manual or automatic actuation of any engineered safety feature (ESF), including the reactor protection system (RPS), except when: (A) The actuation results from and is part of a pre-planned sequence during testing or reactor operation...

Similar wording could be found in 10 CFR 50.73(a)(2)(iv), indicating that a Licensee Event Report (LER) was also required for an ESF actuation.

DISCUSSION

The new reporting requirement under 10 CFR 50.72(b)(3)(iv), which became effective in January 2001, replaces the old 10 CFR 50.72(b)(2)(ii) requirement for reporting the "actuation of an engineered safety feature" with a list of systems that should be reported whether or not the systems are designated as ESF's for a particular licensee. 10 CFR 50.72(b)(3)(iv) states that the licensee shall report within 8 hours:

- (A) Any event or condition that results in valid actuation of any of the systems listed in paragraph (b)(3)(iv)(B) of this section except when the actuation results from and is part of a pre-planned sequence during testing or reactor operation.
- (B) The systems to which the requirements of paragraph (b)(3)(iv)(A) of this section apply are: ... (6) PWR auxiliary or emergency feedwater system..."

In addition to the change in the 10 CFR 50.72 ESF actuation reporting requirement, the 10 CFR 50.73 requirement also changed in the revised rule that took effect in 2001. 10 CFR 50.73(a)(2)(iv) now states that the licensee shall submit an LER within 60 days for: "(A) Any event or condition that resulted in manual or automatic actuation of any of the systems listed in paragraph (a)(2)(iv)(B) of this section, except when:

- (1) The actuation resulted from and was part of a pre-planned sequence during testing or reactor operation; or
- (2) The actuation was invalid and;
 - (i) Occurred while the system was properly removed from service; or
 - (ii) Occurred after the safety function had been already completed.
- (C) The systems to which the requirements of paragraph (a)(2)(iv)(A) of this section apply are: ... (6) PWR auxiliary or emergency feedwater system..."

NUREG-1022 was revised concurrent with the January 2001 rule change, and Revision 2 was issued in October 2000, in advance of the revised rule, to allow licensees to become familiar with the changes in the guidance before the rule took effect.

The guidance on Page 49 of NUREG-1022, Revision 2 indicates that a valid actuation of the auxiliary feedwater system is reportable as a 50.72, 8-hour report. A "valid" actuation is one that results from "valid signals" or from intentional manual initiation, unless it is part of a preplanned test. An invalid actuation, is one that is not the result of a valid signal or intentional manual initiation.

An invalid actuation of one of the systems described in 50.72(b)(3)(iv) is NOT reportable as an 8-hour report. However, an invalid actuation is still reportable as a 60-day LER report under the 10 CFR 50.73(a)(2)(iv) requirement if the system is not properly removed from service, or if the system has not already completed its safety function.

The rule change and revised guidance provides some relief from submitting a written LER for invalid actuations. As explained on Page 47 of NUREG-1022, Rev. 2:

.. in the case of an invalid actuation reported under § 50.73(a)(2)(iv)(A) other than actuation of the reactor protection system when the reactor is critical, the licensee may, at its option, provide a telephone notification to the NRC Operations Center within 60 days after discovery of the event instead of submitting a written LER. In these cases the telephone report:

- (1) Is not considered an LER.
- (2) Should identify that the report is being made under 10 CFR 50.73(a)(2)(iv)(A).
- (3) Should provide the following information:

- (a) The specific train(s) and system(s) that were actuated.
- (b) Whether each train actuation was complete or partial.
- (c) Whether or not the system started and functioned successfully.

Reporting actuations of one of the specified systems is based on the premise that these systems mitigate the consequences of a significant event and therefore, should work properly when called upon, and should not be challenged frequently or unnecessarily. The Commission is interested both in events where a system was needed to mitigate the consequences of an event (whether or not the equipment performed properly) and events where a system actuated unnecessarily.

CONCLUSION

Clearly licensees should report via 50.72 and/or 50.73, valid or invalid actuations of auxiliary feedwater system train(s) unless they **result from and are part of** a pre-planned sequence during testing or reactor operation. The IP3 licensee included a caution in the RPS logic test procedure that if manual action does not occur within 28 seconds, the AFW pumps will start. The staff does not agree with the licensee's interpretation that including a cautionary statement in a test procedure relieves the licensee from reporting an actuation, if it does occur. Rather the cautionary statement should be seen as encouragement to the licensee personnel to ensure that the manual action is performed within the 28 seconds to prevent the unintended actuation of the AFW system. It is not the intent of the test procedure to start the AFW pumps, but to test the RPS logic. Thus, it is incorrect to interpret such an actuation to be an expected occurrence as part of a preplanned test.

These AFW pump starts may not be valid actuations. Page 49 of NUREG-1022, Revision 2, states that:

Valid actuations are those actuations that result from "valid signals" or from intentional manual initiation, unless it is part of a preplanned test. Valid signals are those that are initiated in response to actual plant conditions or parameters satisfying the requirements for initiation of the safety function of the system. They do not include those which are the result of other signals. Invalid actuations are, by definition, those that do not meet the criteria for being valid. Thus, invalid actuations include actuations that are not the result of valid signals and are not intentional manual actuations."

If the licensee can make a case that the actuation was not initiated in response to actual plant conditions or parameters satisfying the requirements for initiation of auxiliary feedwater flow, the event is not reportable under 50.72 requirements, but is still reportable under 50.73 requirements, with the licensee having the option of making a telephone notification or writing an LER within 60 days.

M. Kansler

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If there are questions concerning the above you may contact me at 301-415-1441 or e-mail at gsv@nrc.gov.

Sincerely,

/RA/

Guy S. Vissing, Senior Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-286

cc: See next page

M. Kansler

- 4 -

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*See Memo dated August 6, 2001

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