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(53FR 32624)

[7590-01]

NUCLEAR REGULATORY COMMISSION

10 CFR Part 50

[Docket No. PRM-50-50]

Charles Young; Denial of Petition for Rulemaking

AGENCY: Nuclear Regulatory Commission.

ACTION: Denial of petition for rulemaking.

SUMMARY: The Nuclear Regulatory Commission is denying a petition for rulemaking submitted on April 18, 1988, by Mr. Charles Young of Glen Ellyn, Illinois, in his own behalf which requests that the Commission rescind 10 CFR 50.54 paragraphs (x) and (y) to preclude deviation from license conditions or technical specifications for licensed nuclear power plants in an emergency when this action is immediately needed to protect the public health and safety and no action consistent with license conditions and technical specifications that can provide adequate or equivalent protection is immediately apparent.

ADDRESSES: Copies of comments and documents cited in this notice are available for public inspection at the NRC Public Document Room, 2120 L Street, (Lower Level), NW., Washington, D.C.

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FOR FURTHER INFORMATION CONTACT: Mr. Morton R. Fleishman, Office of Nuclear Regulatory Research, U. S. Regulatory Commission, Washington, D.C. 20555, Telephone 301-492-3794.

SUPPLEMENTARY INFORMATION

Background

By letter dated April 18, 1988, Charles Young, 262 Sheffield Lane, Glen Ellyn, Illinois, petitioned the U.S. Nuclear Regulatory Commission to rescind the provision that authorizes nuclear power plant operators to deviate from technical specifications during an emergency. The petitioner notes that the technical specifications (a) prescribe settings for safety systems at nuclear power plants, such as the emergency core cooling system, so that action of a safety system will correct an abnormal condition before fuel design limits are exceeded; and (b) require an automatic safety system to operate as long as the abnormal condition which threatens the nuclear fuel exists in the plant. The petitioner cites several cases of practices involving nuclear power reactors that he considers to be hazardous. In his opinion, these practices could lead to an accident similar to the one at Three Mile Island, Unit 2. The petitioner claims that three official investigations have confirmed that damage to the nuclear reactor at Three Mile Island, Unit 2, could have been prevented if the operators had followed the requirements of the plant's operating license and technical specifications.

According to the petitioner, the three investigations and their applicable findings are as follows:

(1) The President's Commission found that reactor core damage would have been prevented if the high pressure injection system had not been throttled. [Kemeny Commission Finding #4, pg 28]

(2) Calculations by the Special Inquiry Group show that use of the high pressure injection system would have prevented overheating of the fuel and release of radioactive material. [Rogovin, Vol II, Part 2, pgh D.2.b, pgs 558, 561]

(3) The Special Investigation by the Senate Subcommittee on Nuclear Regulation found the cause of severe damage to the reactor core was the inappropriate overriding of automatic safety equipment by plant and managers. [Hart Report Chapter 2, Findings and Conclusions, #2, pg 9]

The petitioner believes that the NRC should rescind the existing provisions in paragraphs (x) and (y) of 10 CFR 50.54 to adequately protect the public health and safety from the hazards of nuclear radiation from nuclear power reactors.

Notice of receipt of the petition and request for public comment was published in the Federal Register on August 26, 1988 [53 FR 32624]. On October 20, 1988 the original notice of receipt for PRM-50-50 was corrected to provide additional information in support of the petitioner's original intent by revising two sentences in the Grounds for the Petition. The correction had the effect of increasing the number of plants included in the basis for the petition [53 FR 40432]. The sixty-day comment period of the original petition expired on October 18, 1988. A total of seven (7) public comment letters were received, representing eleven organizations. All of the

commenters were opposed to the petition for rulemaking. The comment letters may be examined in the NRC public document room. All comment letters have been evaluated by the NRC staff.

Discussion

It is the Commission's position that emergency conditions can arise during which a license condition could prevent necessary protective action by the licensee. Technical specifications contain a wide range of operating limitations and requirements concerning actions to be taken if certain systems fail and if certain parameters are exceeded. Most technical specifications are devoted to keeping the plant parameters within safe bounds and keeping safety equipment operable during normal operation. However, technical specifications also require the implementation of a wide range of operating procedures which go into great detail as to actions to be taken in the course of operation to maintain facility safety. These procedures are based on the various conditions - normal, transient, and accident conditions - analyzed as part of the licensing process.

Nevertheless, unanticipated circumstances can occur during the course of emergencies. These circumstances may call for responses different from any considered during the course of licensing. For example, the need to isolate the accumulators to prevent nitrogen injection to the core while there was still substantial pressure in the primary system was not foreseen in the licensing process before TMI-2; thus, the technical specifications prohibited this action. Other circumstances requiring a deviation from license requirements can arise during emergencies involving multiple equipment failure

or coincident accidents where plant emergency procedures could be in conflict, or not applicable to the circumstances.

An accident can take a course different from that visualized when the emergency procedure was written, thus requiring a protective response at variance with a procedure required to be followed by the licensee. In addition, performance of routine surveillance testing, which might fall due during a period for which the plant is in an emergency status, may have to be delayed or cancelled because it could either divert the attention of the operating crew from the emergency or cause loss of equipment needed for proper protective action. It was for these reasons that the Commission added paragraphs (x) and (y) to 10 CFR 50.54 (47 FR 35996).

Paragraph (x) of 10 CFR 50.54 is similar to the so-called "General Prudential Rule" contained in both the International Regulations for Preventing Collisions at Sea, 1972, and the Inland Navigational Rules Act of 1980. This rule states:

"In construing and complying with these Rules due regard shall be had to all dangers of navigation and collision and to any special circumstances, including the limitations of the vessels involved, which make a departure from those rules necessary to avoid immediate danger."

Thus, a Commanding Officer of a ship is permitted to deviate from written rules to the extent necessary to save the ship.

Paragraph (x) of 10 CFR 50.54 is also very similar to a Federal Aviation Administration (FAA) rule governing the operation of aircraft, 14 CFR 91.3, which states that "[i]n an emergency requiring immediate action, the pilot in

command may deviate from any rule . . . to the extent necessary to meet that emergency. Each pilot in command who deviates from a rule . . . shall, upon the request of the Administrator, send a written report of that deviation to the Administrator."

As the Commission stated in the Statement of Considerations for the final rule adopting 10 CFR 50.54 paragraphs (x) and (y), "The Commission had both the General Prudential Rule and the FAA rule in mind when it framed the proposed rule" [48 FR 13966; April 1, 1983].

All of the public comments received by the staff on the petition opposed any change to 10 CFR 50.54 paragraphs (x) and (y). Most of the commenters observed that technical specifications do not dictate mitigation strategies or recovery actions under accident conditions as the petitioner states; rather, generic emergency operating procedures approved by the NRC are relied upon for this purpose instead. Examples of proceduralized deviations from technical specifications were cited. These examples included: inhibiting detrimental automatic plant responses; defeating interlocks to allow preferred flow paths; taking manual control of automatic systems; maintaining plant parameters (such as reactor water level) outside normal ranges; and cross-tying non-safety equipment to perform accident mitigation functions.

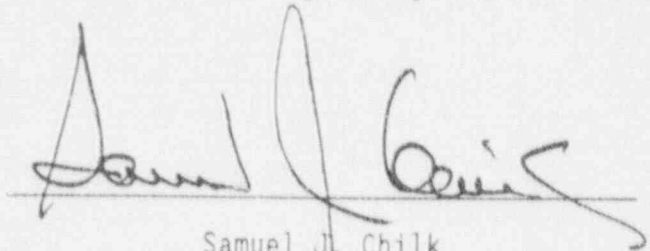
One commenter noted that without 10 CFR 50.54 paragraphs (x) and (y), operators may be reluctant to take reasonable actions in an emergency immediately needed to protect the health and safety of the public. Another commenter noted that requiring operators to obtain permission from the NRC to deviate from technical specifications during an emergency could result in diversion of personnel resources at a critical time.

A third commenter, a legal firm representing five utility licensees, stated that even if the petitioner's statement that the TMI accident would not have occurred had operators complied with technical specification and operating license conditions were true, this conclusion did not support elimination of 10 CFR 50.54 paragraphs (x) and (y). As the Kemeny Commission found, "[t]he accident at . . . TMI occurred as a result of a series of human, institutional, and mechanical failures." The commenter further stresses that "10 C.F.R. §§ 50.54(x) and (y) were promulgated subsequent to TMI." Furthermore, the commenter pointed out that one of the lessons learned from TMI is that the range of circumstances addressed by the technical specifications is limited and that strict adherence to them in an emergency can actually be hazardous to public health and safety.

The petitioner has not shown that the requested rule change to rescind paragraphs (x) and (y) of 10 CFR 50.54 would enhance the public health and safety or lessen the impact on the environment. Hence, the Commission has decided to deny the petition for rulemaking.

Dated at Rockville, Maryland this 11th day of January 1991.

For the Nuclear Regulatory Commission.



Samuel J. Chilk

Secretary of the Commission