



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

April 24, 1979

MEMORANDUM FOR: Victor Stello, Jr., Director
Division of Operating Reactors, NRR

FROM: James P. Murray
Office of Executive Legal Director

SUBJECT: FIVE-PERSON FIRE BRIGADES (PROPOSED
LETTER TO LICENSEES)

ELD has no legal objection to the proposed letter asking certain licensees to submit amendments to increase the size of their fire brigades to five persons. It is not, however, clear that an apparently contemplated follow-on step of issuing orders to licensees who do not want five-person brigades would be appropriate.

In the first instance, the Staff's evaluation does not make an overwhelming case for five-person brigades. Although some reasons justifying a minimum of five persons are given, the evaluation discusses for the most part the general objectives and expected performance of a fire brigade without demonstrating a strong link between those objectives and actions and the proposed five-person minimum brigade. Indeed, why cannot a four-person brigade effectively perform those functions and achieve those objectives? Why are five persons enough? The Staff's evaluation leaves these questions essentially unanswered.

As a justification for the five-person minimum, the Staff emphasizes the need for additional brigade support and "some margin" in brigade size to compensate for "potential unanticipated events", such as injuries to brigade members, or failure of administrative controls, detection systems, or automatic suppression systems. Although the Staff discounts some licensees' arguments, it fails to address others. Most importantly, why do conditions generally at each plant mandate a five-person brigade? Why do site-specific factors have no relevance in this evaluation? Licensees argue that provision of a fire brigade is only one element of "defense-in-depth". Administrative controls over combustibles and potential fire hazards, plant design, fire detection and suppression equipment also affect the impact and risk of fires and the effectiveness of fire fighting. The licensees also

Enclosure "C"

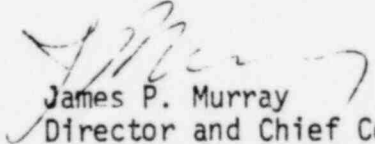
argue that full-fledged fire fighter training is not a prerequisite to performing some fire fighting functions; e.g., security or other personnel could perform some functions with limited training. How does the evaluation respond to these arguments?

Before we issue orders to compel licensees to accept a five-person brigade, I think we ought to be more certain that the technical basis for the orders can withstand the likely challenges in the adjudicatory process than we seem to be now. It appears likely that some licensees will fight the requirement, and they may demonstrate in a hearing to the satisfaction of the Licensing or Appeal Board why the five-person requirement is not necessary at their individual plants.

Moreover, this problem seems ideally suited to resolution in the context of a regulation rather than in individual orders. The Staff is essentially arguing that the need for a five-person brigade has general applicability to licensees and site-specific considerations have absolutely no bearing on the issue. The need for three, four, five or more persons on a brigade, therefore, seems the very paradigm of a policy determination, and matters of general policy are appropriately addressed by rulemaking rather than by means of individual adjudicatory proceedings. Because the Commission would be in any event the ultimate arbiter in adjudicatory proceedings to impose the five-person requirement, why not put the question of need of a five-person brigade squarely before the Commission now (in the form of a proposed rule) without confusing a supposedly generic issue with the facts and circumstances of individual sites?

If the reason not to proceed by rule is that rulemaking takes time, that rationale is unsound. Issuance of a regulation need not take a lengthy period of time. As indicated above, adjudicatory hearings can also be protracted proceedings as they move through various levels of review. It should also be noted that this question of minimum brigade size has been kicking around the Staff at least since November, 1977.

The package on minimum brigade size is returned with this memorandum.


James P. Murray
Director and Chief Counsel
Rulemaking and Enforcement Division

Enclosure:
As Stated Above

cc: M. Malsch, OELD

Historical Background Information on
Fire Protection Rule

Two recommendations made by the Special Review Group that investigated the March 22, 1975, fire at the Browns Ferry Nuclear Power Plant pertained to assurance that the fire protection program at operating nuclear power plants conform to General Design Criterion 3 - Fire Protection, of Appendix A of 10 CFR Part 50.

In response to the first recommendation that NRC should develop additional specific guidance for implementation of GDC 3 requirements, NRC issued Branch Technical Position Auxiliary Power Conversion Systems Branch 9.5-1, "Guidelines for Fire Protection For Nuclear Power Plants" (BTP 9.5-1), and Appendix A to BTP 9.5-1, "Guidelines for Fire Protection In Nuclear Power Plants Docketed Prior to July 1, 1976" (Appendix A).

Appendix A to BTP 9.5-1 provides acceptable fire protection alternatives for areas where, depending on the construction or operational status of a given plant, application of the preferred guidance of BTP 9.5-1 would be difficult or impossible without major design and construction changes on an operating plant or a plant under construction and nearing completion.

These alternative guidelines in Appendix A are intended to provide adequate and acceptable fire protection consistent with safe plant shutdown requirements without a significant impact on plant design, construction, and operation.

In response to the second recommendation that NRC should make a detailed review of the fire protection program at each operating plant comparing it to that guidance, the NRC has requested each operating plant to submit a revised

Fire Hazard Analysis. The staff then reviewed each of these licensee analyses in conjunction with a site visit against the guidance contained in Appendix A to the BTP 9.5-1 and has requested that modifications needed to comply with the guidance be implemented by the end of October 1980, or, for good cause shown, the first refueling outage thereafter.

In addition to reviewing the revised fire hazards analysis for each plant and the individual site visits, the staff has, on a case-by-case basis, considered other licensee proposals for situations not adequately covered by Appendix A.

During the course of these reviews, the majority of licensees were proposing modifications which would bring their facilities into compliance with the staff guidelines by the end of October 1980. Therefore, the staff decided to issue Safety Evaluation Reports to set the schedule for completing such modifications as license conditions. Most Safety Evaluations contained open items that were to be resolved on a schedule consistent with that set by the license conditions.

At the present time, there are about 500 open items in all of the Safety Evaluations. About half of these open items consist of licensee commitments to provide design descriptions or design verifications. The other half of the items consist of incomplete evaluations because of: (a) omissions by the licensees in their analyses; (b) additional consideration by the licensees of the need to comply with certain NRC guidelines which were to be permitted in lieu of ordering compliance; and (c) untimely licensee submittals that the staff could not review prior to issuing the Safety Evaluation Report. In an effort to expedite the resolution of these open items, as they came up, the staff continued to

develop acceptance criteria that represented their recommendations regarding the minimum requirements needed to comply with GDC-3 and informed the licensees of these recommendations. These recommendations have been included in Appendix R as the 17 specific requirements.

These minimum fire protection requirements to comply with GDC-3 were also considered during the staff's review of the UCS Petition for Emergency and Remedial Action and the UCS petition for reconsideration. The Commission's Memorandum and Order concerning the UCS Petition dated April 13, 1978, ordered the staff to use its best efforts to maintain current schedules for implementation of the Fire Protection Action Plan. Those schedules had the goal of implementing all modifications by November 1, 1980, or, for good cause shown, the first refueling outage thereafter.

Early in 1977, the staff began to consider various methods for enforcing compliance with the revised fire protection guidelines by November 1, 1980, i.e., (a) adopting a policy of not permitting startup after that date if certain fire protection modifications are not complete, (b) setting a schedule for completion by license conditions, (c) ordering compliance under the provisions of 10 CFR 2.202 or 10 CFR 2.204, and (d) rulemaking. When it became apparent that certain of these minimum requirements would not be accepted by all licensees, the staff initiated an action in December 1978 to order compliance on the specific issue related to fire brigade shift size. When this action was processed through OELD, they expressed the view that rulemaking was a more appropriate way to resolve this issue.

The staff accepted this legal advice, but instead of limiting the rulemaking effort to the single issue of fire brigade size, proceeded to resolve all of the remaining open generic type issues.