

NORTHEAST UTILITIES

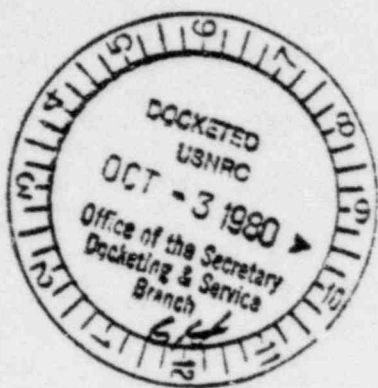


THE CONNECTICUT LIGHT AND POWER COMPANY
THE HARTFORD ELECTRIC LIGHT COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

DOCKET NUMBER
PROPOSED RULE **PR 50**
(45FR54708)

18

P.O. BOX 270
HARTFORD, CONNECTICUT 06101
(203) 666-8911



September 29, 1980

Docket Nos. 50-213
50-245
50-336
50-423
B10086

Secretary of the Commission
Attn: Docketing and Service Branch
U. S. Nuclear Regulatory Commission
Washington, DC 20555

- References:
- (1) W. G. Council letter to D. L. Ziemann and R. Reid dated February 8, 1980.
 - (2) D. G. Eisenhut letter to W. G. Council dated April 16, 1980.

Gentlemen:

Haddam Neck Plant
Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3
NUREG-0696 - Functional Criteria for
Emergency Response Facilities

On August 15, 1980, the Commission solicited comments on the document entitled "Functional Criteria for Emergency Response Facilities", NUREG-0696, via the Federal Register (45FR54708). On behalf of Connecticut Yankee Atomic Power Company (CYAPCO) and Northeast Nuclear Energy Company (NNECO), Northeast Utilities Service Company (NUSCO) is hereby offering the following comments on this document.

General Comments

It is noted that representatives from NUSCO participated in the formulation of comments which are being submitted by Mr. S. H. Howell on behalf of the Atomic Industrial Forum's Safety Parameter Integration Subcommittee. In general, NUSCO endorses the content of the AIF comment letter, and it is not intended to duplicate that material unless required for continuity or emphasis.

NUSCO strongly endorses the Staff's integrated approach regarding those facilities designed to facilitate mitigation of abnormal events. It is important to avoid disjointed, piecemeal backfitting of these facilities, and it is our belief that the Staff's implementation schedule should recognize that such an

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integrated approach will require additional time beyond that allowed in the current draft of NUREG-0696. Specific comments in this regard as they impact operating plants in the Northeast Utilities' system are provided later in this letter.

It is especially difficult to interpret the intent of the Staff requirements when frequent reference is made to Regulatory Guide 1.97, which is not in final form and has not been endorsed by the ACRS. There are many substantive differences between the NRC Staff and the nuclear industry regarding the content of this Guide, and reference to it should either be eliminated or qualified to clarify the intent.

In general, NUSCO finds the requirements of NUREG-0696 too restrictive to allow individual licensees to structure an emergency response plan customized to accommodate plant-specific or utility-specific characteristics. In response to Staff requirements in existence at that time, Reference (1) was docketed to justify the establishment of a Technical Support Center (TSC) and Emergency Operations Facility (EOF) which were not in total conformance with Staff guidance. The function, location, staffing, and size of the TSC and EOF were developed in recognition of plant-specific spatial limitations and unique characteristics of the sites involved. In response to the Staff endorsement of EOF construction docketed in Reference (2), CYAPCO and NNECO have been constructing EOF's, and emergency plans have been written to reflect these concepts. The most significant point in this regard is that a minimum TSC size to accommodate 25 people is excessive. The priority of personnel in the TSC is to bring the unit to a safe shutdown condition, and EOF personnel would be involved in minimizing the impact of an incident on the site and the public. In this regard, Staff attention is called to draft NUREG-0731, Criteria for Utility Management and Technical Competence. NUSCO personnel have participated extensively in the development of this document, and it is our belief that the language embodied in this NUREG is much more appropriate for issuance by the Nuclear Regulatory Commission.

It is NUSCO's preference that the Commission delineate functional requirements or objectives rather than mandating inflexible minimum specifications regarding emergency response facilities and staffing. This approach would allow utility specific design and organizational details to be incorporated without violating the functional criteria.

Safety Parameter Display System

Regarding the Safety Parameter Display System (SPDS), NUSCO takes exception to the requirement for seismic qualification to the OBE level. For operating plants in the NU system, conformance to this requirement would necessitate the installation of a new, seismically qualified, Class 1E power source. Based upon preliminary investigations, it also appears that new, seismically designed structures would have to be erected to house the new, uninterruptable power source (UPS) system for the plants in the NU system. To fully comply with this provision, it would also be necessary to seismically qualify the data acquisition system, which while feasible, exceeds the specifications of any computer application utilized by NUSCO to date. Based upon this singular requirement, it is physically unfeasible to comply with an inservice date of April, 1982. Recognizing the appropriateness of integration of the design and implementation of the subject emergency response facilities, this delay would also prohibit full

operability of the remaining emergency response facilities. Although a detailed study which would result in a projected reasonable inservice date has not been performed, it is obvious that the April, 1982 date is premature by many, many months.

In light of the above considerations, NUSCO suggests that the Staff should allow sufficient flexibility in the schedule to accommodate NUSCO's ongoing "generic approach" for computer replacement into the design of the emergency response facilities. It is our understanding that the Staff is aware that the existing computers at NU's plants do not have the capability to meet the requirements of NUREG-0696. Failure of the Staff to authorize integration of the computer replacement effort into the NUREG-0696 program would necessitate the utilization of a separate computer system. This divergence of plant information is inconsistent with the Staff's philosophy of an integrated approach to the presentation of plant data. It is NUSCO's preference to have the information being transmitted to the TSC, EOF, SPDS, etc., originate from a central, highly reliable data base that contains information about the entire plant. In this case, all parties involved in the mitigation of an accident would have available information about the total plant, with data that were acquired and transmitted by one central system. Furthermore, NUSCO's generic approach would have significantly greater capacity and flexibility to respond to future plant needs and NRC requirements. Any other alternative would merely serve to exacerbate the escalating concern of piecemeal backfitting and insufficient attention to human factors engineering.

Please recognize that the computer replacement effort was initiated and committed to approximately two years ago, before the TMI-2 accident. A generic system is presently operable in our Berlin offices, and members of both the Inspection and Enforcement and Nuclear Reactor Regulation Staffs have toured the facility. Judging from their response, it appears that the superiority of this system was recognized, and it is suggested that the members be consulted directly for their opinion. NUSCO would welcome the opportunity to demonstrate the capabilities of this system to members of the Staff associated with the content and schedular requirements of NUREG-0696.

The current schedule for computer replacement is addressed for Millstone Unit No. 2 as follows. The system in Berlin is currently in software development being customized for the plant-specific application. It is expected that delivery of some equipment to the site will take place in 1982. The exact date of operability is dependent upon coordinating the system's development and implementation schedule with planned refueling outages, but partial operability is targeted for early 1983. There will be some interval when the existing and replacement computer will be operable in parallel, until full operability of the replacement is assured. This milestone could be expected to be achieved in late-1983. Integration of the requirements of NUREG-0696 has not been considered in the above schedule, although most NUREG-0696 related work could be accomplished in parallel with other activities.

The necessity for undertaking this effort using NUSCO personnel results in a staggered schedule for replacement of computers in the NU system. The Haddam Neck Plant is scheduled for replacement in 1984, and Millstone Unit No. 1, in 1985. This staggered approach allows for refinements in the evolution as experience is gained. It may be argued that outside vendors could be employed to expedite the schedule, but past experience has proven this alternative to

be significantly inferior. The most glaring example supporting this contention concerns escalated NRC requirements in the plant security systems. When contacted in mid-1978, nearly all vendors expressed confidence in their ability to comply with the NRC-mandated completion date of February, 1979. As of this writing, the systems are not yet complete, some one and one-half years beyond an original nine-month projection. Even when finished, the security systems will be a lesser product than those which would have been inservice if NRC's original schedule allowed for NUSCO to utilize in-house resources. NUSCO's experience in this regard is not unique, as discussions with industry personnel have revealed that similar problems have been encountered at other nuclear facilities. NUSCO has also had similar experiences in non-nuclear computer applications in the recent past. NRC personnel familiar with the security issue can also attest to the extensive resources invested into the development of compensatory measures which are required when unrealistically compressed implementation dates are imposed.

In summary, authorization to integrate the computer replacement program into the emergency response facilities' effort without the requirement to have the SPDS seismically qualified would be achievable on approximately the same schedule as an independent emergency response facilities' upgrade with a seismically qualified SPDS.

Nuclear Data Link

Regarding the proposed Nuclear Data Link (NDL), NUSCO believes the concept proposed in NUREG-0696 is far too sophisticated, elaborate, and ill-defined to respond to the recommendations of the many review groups of the TMI-2 accident, regarding providing timely and accurate information to the NRC. It has been our observation that the NDL design concept is still changing, that the specifications for the NDL are confusing or contradictory, and that the system has a very real potential to degrade plant safety. It is, therefore, premature to consider any implementation date. Some consideration should be given to prototypical installations at one or two operating facilities such that operating experience can be gained before mandating installations at all facilities. The basis for this position is summarized below.

On Page 4 of NUREG-0696, it is stated that:

"Details of NRC response procedures and organization may evolve somewhat, but the roles and functions for which technical data will be required are not expected to change."

It is difficult to accept this statement in light of the history of requirements associated with the current dedicated phone lines. In May of 1979, we were informed of NRC's intention to install "emergency use only" dedicated phones. In June of 1979, it was confirmed that these phones were not for routine communications. In July of 1979, we were informed that due to public and media interest, daily plant status would be provided to NRC via these phones. Later in the year, it became necessary to report LER's, labor strikes, and incidents of media interest such as sprained ankles. The absence of universally understood message protocol has resulted in some very undesirable miscommunications. During the February, 1980 incident at Crystal River, there was confusion over

whether containment pressure was being reported in psig or psia. At another facility, a question regarding operating engineered safety features (ESF) was interpreted as operable ESF's, such that when these were listed, normal plant operation was interpreted as an ATWS with all ESF's running. NUSCO has also had experiences with our nuclear facilities which are indicative of the need for improvements in this area. If such confusion exists with a phone system, it is difficult to believe that the roles or functions of a still-evolving NDL are well-defined at this juncture.

A very significant number of interfaces with Reactor Protection System (RPS) and ESF sensors and actuation logic are being proposed. Just by the volume of these interfaces, it will be challenging to maintain all systems in a well-calibrated and functional state during installation, testing, and maintenance intervals. In light of previous NRC decisions rendered in March, 1978 regarding the ANO-2 plant, it is difficult to reconcile this system with the provisions of General Design Criterion 24.

No matter how extensive this fixed hardware system is conceived to be, it will lack the necessary versatility to respond to each and every incident. Examples of previous incidents include the Browns Ferry Fire in 1975 and the various off-gas explosions that have occurred at several BWR's.

Perhaps most significantly, there is a very serious potential for the use of an NDL to further decrease the morale of plant operators. The thought that several hundred miles away there exists what amounts to a second control room is not conducive to maintaining a positive attitude. Questions from NRC personnel on trivial or misunderstood incidents diverts attention from other matters more important to plant safety. As licensees, it must always remain the exclusive responsibility of the utilities to respond to accident situations. The NUREG-0696 concept of an NDL suggests the sharing of this responsibility, even though this is not intended. In light of the above, NUSCO suggests the issue of a NDL should be discussed further within the nuclear industry before any firm requirements are mandated.

In summary, it is emphasized that:

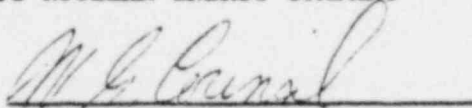
- (1) Reference to Regulatory Guide 1.97 should be eliminated or qualified;
- (2) The NRC should delineate functional requirements or objectives without mandating inflexible minimum specifications regarding the TSC's and EOF's;
- (3) Integration of the computer replacement program with emergency response facilities implementation should be authorized. The schedule should be relaxed accordingly. A detailed cost/benefit analysis, if performed, would support this position;

(4) The current concept of the Nuclear Data Link is far too elaborate and requires further study.

We appreciate the opportunity to present our views and trust you find them useful in your future deliberations regarding the content of NUREG-0696.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY



W. G. Council
Senior Vice President