MAY 20 1985

Docket No.: 50-423

Mr. John F. Opeka
Senior Vice President
Nuclear Engineering and Operations
Northeast Nuclear Energy Company
P. O. Box 270
Hartford, Connecticut 06141-0270

Dear Mr. Opeka:

Subject: Request for Additional Information for Millstone Nuclear Power Station, Unit No. 3

Enclosed are requests for additional information which the staff requires to complete its evaluation of your application for an operating license for Millstone 3. Enclosure 1 contains requests which are the result of the staff's review of your Final Safety Analysis Report. Enclosure 2 contains requests which resulted from the staff's review of the Millstone Nuclear Power Station Emergency Plan, Draft 2 to Revision No. 0 dated January 1985. Additionally, enclosed are requests for information related to Generic Letter (GL) 83-28, Generic Implications of Salem ATWS Events. The staff has reviewed your previous responses to GL 83-28, dated November 8, 1983 and March 16, 1984, and has determined that additional information is needed in order to complete its review of this matter. Please submit your response within 60 days of the date of this letter.

For further information or clarification, please contact the Licensing Project Manager, Elizabeth L. Doolittle at (301) 492-4911.

Sincerely,
(S)

B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing

Enclosures: As stated

cc: See next page

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MAY 20 1985

MILLSTONE

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ENCLOSURE 1

REQUEST FOR ADDITIONAL INFORMATION

MILLSTONE NUCLEAR POWER STATION, UNIT 3

NORTHEAST NUCLEAR ENERGY COMPANY

DOCKET NO.: 50-423

REQUEST FOR ADDITIONAL INFORMATION
MILLSTONE 3 NUCLEAR POWER PLANT
DOCKET NO. 50-423

241.0 Structural and Geotechnical Engineering Branch, Geotechnical Section

241.23 The staff must review the calculations associated with the fragility analysis of the retaining wall for better understanding. Therefore, provide these calculations with adequate explanations of assumptions, calculational approach, and the results.

241.24 The consequence of seismically induced liquefaction of beach sands is not specifically addressed in the Millstone seismic capability study (Reference 1). The beach sands could be liquefied under seismic events greater than SSE and could flow toward the intake structure, thus preventing the intake structure from conveying the cooling water for the safe shut down. Therefore, provide the analyses for the stability of the beach sand slope and assess its consequences under seismic events greater than SSE.

241.25 The staff review of the fragility analysis for the emergency enclosure (EGE) building has produced several concerns. Therefore, provide a sensitivity study taking the following into consideration:

a. As-built foundation support conditions should be used; and specifically, a 2-D model should be used to represent EGE building.

b. Newmark's non-symmetric formula should be used to calculate the seismic induced movements of the EGE building which is essentially non-symmetric with respect to sliding.

c. The variation in the assumed ratio of peak ground velocity to peak ground acceleration needs to be considered. For example, 36 inch/sec per peak ground acceleration of 1g is recommended value to be used for soil supported facilities.

d. The impact of longer duration associated with larger seismic events should be considered in the study.

241.26 For the buried service water piping system, confirm that buckling is the most critical failure mode as compared to shear caused cracking or breakage and to bending caused fracture. Newmark's non-symmetric displacement formula, appropriate velocity - acceleration ratio and seismic duration should be considered in the analysis.

Reference:

1 - "A Program to Determine the Capability of the Millstone 3 Nuclear Power Plant to withstand Seismic Excitation Above the Design SSE," prepared by NTS/Structural Mechanics Associates for Northeast, November 1984.

REQUEST FOR ADDITIONAL INFORMATION
MILLSTONE NUCLEAR POWER STATION, UNIT 3
DOCKET NO. 50-423

410.0 Auxiliary Systems Branch

410.32 As a result of recently identified ACRS concerns, provide a response to the following requests for information regarding the handling of heavy loads:

a. Describe the means provided to assure the integrity of concrete structures, lifting eyes, and any other heavy loads so that they will not fall apart while being handled during refueling should the lifting eye fail or the load impact other structures.

b. Alternatively, describe the consequences of failure of concrete structures or other heavy loads during handling. This evaluation should confirm that unacceptable fuel damage or damage to safety related equipment will not occur.

ENCLOSURE 2

REQUEST FOR ADDITIONAL INFORMATION ON

MILLSTONE NUCLEAR POWER STATION, UNIT 3

EMERGENCY PLAN, DRAFT 2 TO REVISION NO. 0

NORTHEAST NUCLEAR ENERGY COMPANY

DOCKET NO.: 50-423

REQUEST FOR ADDITIONAL INFORMATION
MILLSTONE NUCLEAR POWER STATION, UNIT 3
DOCKET NO. 50-423

810.0 Emergency Preparedness Branch

We have completed our review of the Millstone Nuclear Power Station Emergency Plan, Draft 2 to Revision No. 0, dated January 1985. Your plan was reviewed against the requirements of 10 CFR 50.47 and Appendix E to 10 CFR 50 and the guidance criteria set forth in NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Plans and Preparedness in Support of Nuclear Power Plants," Rev. 1, November 1980.

Our review has indicated that additional information and commitments are required before we can conclude that your emergency plan provides an adequate planning basis for an acceptable state of onsite emergency preparedness for Millstone 3. Our comments on your emergency plan are enclosed. Your meteorological program for emergency response as described in the plan is currently under review and comments will be forwarded at a later date. We request that you provide responses to the enclosed comments and revise your emergency plan as required.

Review Comments on Millstone

Emergency Plan (Draft 2 to Revision 0)

Docket No. 50-423

810.1 A. Assignment of Responsibility (Organizational Control)

The plan should more clearly illustrate the interrelationships of each state and local organization having an operational role in both the plume and ingestion exposure Emergency Planning Zones. (A.1.C)

B. Onsite Emergency Organization

Additional clarification of the line of succession for the Director of Station Emergency Operations and specific criteria for assuming this position should be provided. (B.3)

Clearly specify which responsibilities of the Director of Station Emergency Operations may not be delegated to other elements of the emergency organization. (B.4)

Illustrate in a block diagram the interface between the onsite functional areas of emergency activity, such as radiological monitoring, assessment and protective action decision making, and state (Connecticut, New York and Rhode Island) and local government response organizations (Connecticut DEP, OCP, etc.). Include the location of these activities (TSC, EOF, OSC, etc). (B.6)

Provide information on shift staffing augmentation capability and, if significant differences from the staffing objectives of Table B-1 of NUREG-0654 (also Table 2 of Supplement 1 to NUREG-0737) exist, provide justifications and possible compensating measures. (B.7)

Illustrate the interfaces between onsite and corporate functional areas and local services support, contractor and private organizations. (B.6, B.8)

C. Emergency Response Support and Resources

Specify the person by title authorized to request Federal assistance and the process of requesting that assistance. (C.1.a)

Specify the Federal resources expected from the EPA and FDA and the expected times of arrival of all Federal response. (C.1.b)

Describe the Utility resources available to support the Federal response. (C.1.c)

Identify the assistance which may be provided by Yale University and Production Operation Services Laboratory (POSL) and provide letters of agreement to support that assistance. (C.4)

D. Emergency Classification System

The containment high range radiation monitor is a fundamental indicator of plant/core conditions. Readings from these monitors should be used as part of the emergency classification and action level scheme, in particular as an indicator of extensive core damage that would be associated with a General Emergency and the need for offsite protective actions. However, unless the relationship of the containment monitor readings to a range of core conditions has been predetermined, they would provide little useful information. A review of your emergency plan and procedures indicates that such information has not been provided. Therefore, we request that you provide the relationship of the containment high range radiation monitor readings for Millstone 3 to the radioactivity dispersed in the containment for a range of degraded core condition source terms such as 100% coolant activity, 20% and 100% gap activity, and 10% meltdown release fraction. Selected values from this relationship should be used as emergency action levels (EALs) to categorize the severity of a radiological incident. (D.1)

Additional comments on your Emergency Classification System are provided in Attachment 1.

E. Notification Methods and Procedures

Section 6.1 discusses notification of a General Interest Event. This classification is not consistent with Section 4, Classification System. (E.1)

The information provided in the Incident Report Form, EPIP Form 4112-4, for initial emergency messages does not include the potentially affected population and areas, whether a release is taking place or whether protective measures may be necessary. The information concerning protective actions and the release would have to be determined by referring to the Protective Actions and the Radiological Criteria corresponding to the State Posture Codes. These extra activities may be too time-consuming especially if the supplemental reference material was not immediately available. (E.3)

The information provided in the Incident Report Form, EPIP Form 4112-1x, for followup messages does not include information on the type of radioactive release, the quantity released, the release point or height, the chemical and physical form of the released material, the projected dose rates at the site boundary and at 2, 5 and 10 miles, the affected sector(s), an estimate of any surface contamination, utility response actions, recommended emergency actions or prognosis of event. (E.4)

The Overall Concept of Operations section of the plan briefly describes the public notification system. However, the plan should include an

adequate description of the administrative and physical means for prompt alerting of all individuals, resident and transient, in the plume exposure EPZ. (E.6, J.10.c)

Although the Connecticut State Radiological Emergency Response Plan contains messages intended for the public, either the messages or sufficient detail describing their contents should be included in the plan. (E.7)

F. Emergency Communications

A complete listing of organizational titles and alternates for both ends of the communications links (i.e., licensee and state/local/private) should be provided. This should include completion of Table 5-3. (F.1)

The provisions for communications between the Utility and the States of Rhode Island and New York are unclear. It appears that the only link is by non-dedicated telephone lines through the State of Connecticut Office of Civil Preparedness. (F.1.a)

The communication links between the Utility and the local EOCs, with the exception of Waterford, East Lyme and New London, are inadequate in that there is a single means of communication with no backup. (F.1.d)

Clarification about the communication link between the Utility and mobile medical facilities is need. (F.2)

The frequency of the Station and Corporate internal communications testing is unclear. (F.3)

G. Public Education and Information

Figure 5-4 indicates two Managers of Public Information, one reporting to the EOF and one to the State EOC. In Table 5-2 under Public Information, a Manager of Public Information in the Media Center is identified. In addition, there is, as indicated in Figure 5-4, a single Corporate Representative at the State EOC and Media Center. Section 5.3 describes corporate representatives who are dispatched to the State EOC and to the Media Center. Section 5.2.2 j, p. 5-11, specifies Corporate Managers of Public Information at the Corporate EOC and the State Media Center. The number of individuals, their titles, physical locations, interfaces with offsite organizations and specific duties as described in section 5.3 (p. 5-14), section 5.2.2 j (p. 5-10), section 5.3.1 (pp.5-18, 5-19), Table 5-1 under Corporate Manager of Public Information and Figure 5-4 are confusing. These items should be clarified and all citations checked for consistency. In addition, Table 5-1 discusses communications between "Special Parties" who are not identified and section 5.3.1 f (p.5-19) discusses a "Public Information Officer" whose position in the emergency organization is not identified.

The method of dissemination of information to the media, to other utility public information personnel and to other organization public information

personnel (i.e., who and where) is not clearly specified. (G.4.a, G.4.b, B.5, B.6, B.7)

It is not clear who, by title, is the "official company spokesman" designated in section 5.3.1 a. (G.4.a)

H. Emergency Facilities and Equipment

Additional description and clarification should be provided on the location, habitability, capabilities, staffing, concept of operations and interaction of the emergency response facilities. (H.1, H.2, H.4, H.9)

References to the OSC should be consistent. Section 7.1.5 uses "OSC", section 8.4 uses "Onsite RC" and Table E-4 uses "Assembly Area". It is not clear which Assembly Area is referenced in sec' on 6.2.3.d.1. (p.6-9). (H.1)

Table H-1 of the plan, a list of radiation process monitors for Unit 3, should include a description of non-radiation process monitors (e.g, pressure, temperature, liquid level, and flow rate) used as emergency action level indicators. (H.5.c)

A description should be provided of the offsite environmental radiological monitoring program; specifically the capabilities of the program for acquiring data from offsite monitoring and analysis equipment (to include

a description of hydrologic monitors and dose measuring capabilities of the radiation monitors) should be described. (H.6.a, H.6.b)

Describe provisions for approximately 50 TLD stations of 2 TLDS each in 2 rings and at special locations in accordance with the Radiological Assessment Branch Technical Position. (H.6.b)

It is not clear which of the emergency kits listed in Appendix E is intended for offsite EMT kits as referenced in section 6.2.3.f. (H.7)

The plan should provide additional information describing the CSC's physical capacity as an assembly area. (H.9)

I. Accident Assessment

Criterion I.1 will be evaluated upon satisfactory completion of Planning Standard D.

Paragraph 2.7.3, EPIP 4229X, Revision 0 states that the effects of an overhead finite cloud are not included in the computerized dose assessment tool for determining whole body dose. Since whole body doses may be seriously underestimated near the plant, especially for stable conditions, the applicant should specify how doses will be corrected for these conditions. (I.4)

EPIP 4201X, Revision 0 Instruction 3.3 specifies a default value of 130 uCi/sec per cps as a release rate for estimating whole body doses when the MP1 Stack Monitor is offscale. Worksheet #1, EPIP Form 4201-1X, specifies a default value of 100 uCi/sec per cps. The applicant should resolve this difference. (I.6)

Instruction 3.6 and Worksheet #4, EPIP Form 4201-4X model an elevated finite plume through a series of correction factors to the noble gas release rate. The applicant should provide the technical justification for this type of modeling. (I.6)

In paragraph 6.2.3.e the applicant describes the environmental monitoring program to be implemented during an emergency. This program has omitted cow and goat milk sampling in the vicinity of the plant. Cow and goat milk sampling should be included in the program. (I.7)

The applicant should provide the technical justification for the Guidance on Survey Direction found in Table 4, EPIP 4229X. (I.7)

The means for relating the various measured parameters to dose rates for the key isotopes shown in Table 7, page 18, NUREG-0654 and gross radioactivity measurements should be discussed in the plan. (I.10)

J. Protective Response

Evacuation routes for onsite individuals and alternatives in case of inclement weather, high traffic density, or radiological conditions should be described. Figure F-1, Appendix F of the plan fails to designate evacuation route(s) to an offsite location. A map clearly showing evacuation routes by quadrants should be included in the plan. (J.2)

The specific sites where decontamination will be performed should be identified in the plan. (J.4)

Section 6.4.1 e is unclear as to whether, after an initial evacuation, security will provide continuous accountability of remaining emergency personnel. (J.5)

The plan should describe the capability to account for all individuals onsite at the time of the emergency and ascertain the names of missing individuals within thirty minutes. In a letter from W. G. Counsel to D. G. Eisenhut dated February 13, 1981, it states that the capability to relocate personnel to specified areas within thirty minutes exists. Since accountability is accomplished by computer, it seems reasonable that relocation and accountability can be accomplished within thirty minutes. (J.5)

The emergency plan and emergency procedures are required to contain a mechanism for formulating protective action recommendations for offsite authorities. These guidelines should include predetermined measurable/

observable emergency action levels used to assess the status of core and containment conditions on which offsite protective action recommendations will be made. Tables 4-1a, 4-1b and 4-1c categorize emergency action levels by standard emergency class. Table 4-6 describes protective actions to be taken based upon State of Connecticut Incident Posture Code and Plant Classification. The mechanism for recommending protective actions based directly on measurable/observable emergency action levels is not described in the plan or the implementing procedures. After the relationship between site-specific measurable/observable emergency action levels and core and containment conditions has been established, protective action recommendations should be associated with those emergency action levels. The mechanism for that decision making process should be clarified. (J.7)

Maps contained in Appendix C do not show relocation centers in host areas and shelter areas for implementing protective measures in the plume exposure pathway. The plan should include maps illustrating these. (J.10.a)

Maps showing population distribution around the Millstone site by evacuation areas and by sectors should be included in the plan. (J.10.b)

K. Radiological Exposure Control

The maximum exposure limit(s) for providing assessment actions, first aid, personnel decontamination, ambulance service and medical treatment services should be identified. (K.1.c-g)

The plan should provide more information on how the onsite emergency radiation protection program will differ from the normal program. (K.2)

The plan should specify the frequency that personnel dose monitoring devices will be read during emergency operations. (K.3.b)

Sufficient information concerning the capability for decontamination of personnel, decontamination of supplies and equipment and waste disposal should be included in the plan in addition to the reference to procedures. (K.5.b)

Additional information is needed to described the onsite contamination control measures for area access control and drinking water and food supplies. (K.6.a, K.6.b)

The plan should describe the onsite capability to decontaminate skin contaminated with radioiodine. (K.7)

L. Medical and Public Health Support

The plan should address the capability of medical personnel in the evaluation of radiation exposure and uptake of radioactive materials by contaminated individuals. (L.1)

M. Recovery and Reentry Planning and Postaccident Operation

General plans (i.e. criteria) and procedures for reentry and recovery are not discussed nor is the decision making process to relax protective measures described. Both of these concerns should be discussed in the plan considering existing and potential conditions. (M.1)

Section 9.1 states that the Recovery Organization will replace the emergency organizations in situations where the Recovery Phase involves extensive resources and/or will last months to years. It then states that the Recovery Organization is activated and terminated by the Director of CEO. Section 9.2 states that once the Recovery Organization is activated, it replaces both the SEO and the CEO. It is unclear whether the SEO and CEO remain in situations where the Recovery Phase does not involve extensive resources and/or is of short duration. It is also not clear how the Director of CEO terminates the Recovery Organization if the CEO is not in existence. (M.2)

More detail is needed describing the means of notifying members of the onsite and offsite response organizations that recovery has been initiated. (M.3)

The plan does not specifically commit to periodic estimating of total population dose. (M.4)

N. Exercises and Drills

The plan should address varying the elements of the scenario, varying the starting times of the exercise, conducting exercises under varied weather conditions, and beginning some exercises unannounced. (N.1.b)

The plan should describe how exercises and drills are to be carried out to allow free play for decision making. (N.3)

The information which is to be included in exercise scenarios is not described in the plan. (N.3.a-e)

A description of the arrangement for providing advance materials to official observers is not included in the plan. (N.3.f)

The plan should establish the means for evaluating observer and participant comments on areas needing improvement. The plan should also discuss the provisions for assigning responsibility for corrective actions in these areas. (N.5)

O. Radiological Emergency Response Training

More information concerning training for personnel of offsite organizations should be provided in the plan (See footnote 1, page 75 of NUREG-0654). This information should be specific for each offsite organization and include notification, site access and the position and title of the individual in the onsite emergency organization who will control the organization's support activities. (O.1.a)

The plan should indicate that the training for individuals assigned to licensee first aid teams, as described in section 5.2.3 e, is at least equivalent to Red Cross Multi-Media training. (O.3)

The plan should indicate that the emergency response training program provides for training of personnel responsible for protective action decision making, accident assessment, police security functions, repair and damage control/correctional action, Civil Defense/Emergency Services, medical support, and transmission of emergency information and instruction. Scope, nature and retraining frequency should be specified. (O.4 a-j)

P. Responsibility for the Planning Effort: Development, Periodic Review and Distribution of Emergency Plans

The plan should clearly designate which Emergency Planning Coordinator is responsible for coordinating the update of the Station emergency plan with other response organizations. (P.3)

ATTACHMENT 1

D. EMERGENCY CLASSIFICATION SYSTEM

Planning Standard

A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and state and local response plans call for reliance on information provided by the facility licensee for determinations of minimum initial offsite response measures.

Synopsis

Emergency classification and action level schemes compatible with NUREG-0654, Appendix 1 have been established by the Utility.

Most of the initiating conditions found in NUREG-0654, Appendix 1, and all of the FSAR postulated accidents were addressed.

Evaluation

The plan satisfies Planning Standard D except as noted.

GENERAL COMMENT EVALUATION CRITERIA. Initiating conditions and corresponding EALs were reviewed in Section 4.0 Classification System of the Millstone Nuclear Power Station Emergency Plan, dated September 1, 1985, Draft 2. The

the numbering system of NUREG-0654, as stated above, most of the NUREG-0654 Initiating Conditions and EALs were addressed. Following are comments on the Initiating Conditions and EALs in need of revision.

UNUSUAL EVENT

Plan Initiating Condition-Barrier Failure A (ECCS Initated and Discharge to Vessel). The EAL set is adequate for this condition, however, the applicant should consider revising the EAL set to include indications of flow in one or more of the ECCS systems (e.g., the high pressure injection system or low pressure injection system).

Plan Initiating Condition-Loss of Power C.. (Loss of Assessment Capability). The EAL presented is inconsistent with NUREG-0654 example Initiating Condition 11 and appears to be inappropriate for an Unusual Event declaration. The Emergency Response Facilities are not usually activated prior to an Alert declaration (EOFs or TSC). The applicant should consider changing the EAL set to read "Indications or alarms on process or effluent monitoring system parameters not functional in Control Room to an extent requiring plant shutdown, or other significant loss of communication capability offsite, or loss of radiological assessment capability, e.g., loss of the plant computer, loss of all meteorological instrumentation, or loss of the process or radiation monitoring system."

NUREG-0654 Example Initiating Condition No. 17 (Rapid Depressurization of PWR Secondary Side) was not addressed by the applicant.

ALERT

Plan Initiating Condition-Barrier Failure G (Fuel Damage Accident). The applicant should consider dropping the EAL "direct observation of fuel handling accident," since it may not always be possible to make such an observation even though fuel damage has occurred. Instead a "Shift Superviors's opinion" EAL could be added to take into account such observations as well as false alarms or radiation releases from other events that could give the same instrument readings.

Plan Initiating Condition-Equipment Failure D (Loss of Safety Systems). The initiating condition and the EAL set appear to be in error. Loss of safety systems or compromise of functions of safety sytems constitutes a Site Area Emergency. See NUREG-0654 Example Initiating Condition 11.

SITE AREA EMERGENCY

Plan Initiating Condition-Barrier Failure C (Degraded Core). The EAL set proposed by the applicant is adequate but appears to be incomplete. The applicant should consider changing the EAL set to read (core damage) core uncovered, or inadquate subcooling margin, or high core temperature, or gap activity in the primary coolant, and (possible loss of coolable geometry), Shift Supervisor's opinion or no temperature drop across the core, or temperature drop across the core increasing.

Plan Initiating Condition-Barrier Failure E (LOCA). The EAL set proposed by the applicant is incomplete. The applicant should consider changing the EAL set to conform to the set derived from the Westinghouse Owner's Group Guide

lines pertaining to diagnosis of LOCAs. Recommended EALs are: "A pressurizer low pressure reactor trip or reactor coolant system pressure decrease uncontrollably" indicate either a loss of primary fluid or overcooling, and "changes in reactor building conditions (e.g., pressure, sump level, humidity, or radiation)" to indicate either a steamline break or a LOCA, and "absence of a difference in the pressures between steam generators" eliminates all events except a LOCA. Since subcooling meters are being installed on all PWRs, another EAL set could be: "Decrease in reactor coolant system pressure," and "Loss of subcooling margin."

Plan Initiating Condition-Barrier Failure E1 (Steam Generator Tube Rupture). The initiating condition proposed by the applicant is inconsistent with NUREG-0654 Example Initiating Condition 3. It should read "Rapid failure of steam generator tubes (several hundred gpm leakage) with loss of offsite power." The corresponding EAL set should read "Under voltage alarms on 1DA and 1DB busses and reactor trip on low pressure, or reactor pressure decreasing uncontrollably, and steam generator blowdown high alarm or condenser exhaust high alarm, and no significant increase in reactor building pressure, sump level, or reactor building air high alarm." "A Shift Supervisor's opinion," could also be used as an adequate EAL.

Plan Initiating Condition-Barrier Failure G (Major Damage to Spent Fuel). The EAL set proposed by the applicant is adequate but incomplete. The applicant should consider adding the following EALs: "Water loss from the spent fuel pool to below fuel level or Shift Supervisor's opinion."

Plan Initiating Condition-Radioactive Releases A (Radioactive Effluent Discharge). The proposed initiating conditions and EALs are inconsistent with the requirements of NUREG-0654 Example Initiating Conditions 13.a,b, and c. The applicant should consider changing the Initiating Conditions to correspond to the Initiating Conditions of NUREG-0654 and the EALs to reflect the appropriate dose rates for the whole body and thyroid at the site boundary for adverse meteorological conditions as stated in NUREG-0654.

Plan Initiating Condition-Equipment Failure C (Loss of Alarms). The applicant's proposed EAL is inadequate. The applicant should consider changing the EAL set to read "All alarms lost for 15 minutes and Shift Supervisor's opinion that transient has occurred or is in progress." The large number of possible transients makes a "Shift Supervisor's opinion" EAL mandatory.

Plan Initiating Condition-Security Threat A (Security Threat). The applicant's proposed EAL set is incomplete. The applicant should consider changing the EAL set to read "Notification by security of a physical attack on the plant involving imminent occupancy of the Control Room, Auxiliary shutdown panels, or other vital areas as defined in the station modified amended security plan."

Plan Initiating Condition-Other Hazards B (Control Room Evacuation). The initiating condition and the EAL set should be the same, namely "Evacuation of Control Room and control of shutdown systems not established from local stations in 15 minutes."

GENERAL EMERGENCY

Plan Initiating Condition-Barrier Failure A (Loss of Fission Product Barriers). The applicant's proposed EAL set is incomplete. There are three permutations covering two of three fission product barriers lost with a potential loss of the third barrier. The applicant should consider adding an EAL set which covers each permutation. These are:

1. Failure of cladding and primary coolant boundary with potential loss of containment.
2. Failure of cladding and containment with potential loss of primary coolant boundary.
3. Failure of containment and primary coolant boundary with potential loss of cladding.

Plan Initiating Condition-Radioactive Releases A (Radioactive Effluent Discharge). The applicant's proposed Initiating Condition is inconsistent with NUREG-0654 Example Initiating Condition No. 1. The applicant should consider correcting the symptom to read "a. Effluent monitors detect levels corresponding to 1 rem/hr whole body or 5 rem/hr thyroid at the site boundary under actual meteorological conditions. b. These dose rates are projected based on other plant parameters (e.g., radiation levels in containment with leak rate appropriate for existing containment pressure with some confirmation from effluent monitors) or are measured in the environs." The corresponding EAL set should be corrected to reflect the appropriate dose rate figure.

Plan Initiating Condition-Security Threat A (Security Threat). The applicant's proposed EAL set is incomplete. The applicant should consider changing the EAL

set to read "Notification by security of a physical attack on the plant that has resulted in unauthorized personnel occupying the control room, or any other vital area described in the station modified amended security plan."

ENCLOSURE 3

REQUEST FOR ADDITIONAL INFORMATION FOR

GENERIC LETTER 83-28

GENERIC IMPLICATIONS OF SALEM ATWS EVENTS

MILLSTONE NUCLEAR POWER STATION, UNIT 3

NORTHEAST NUCLEAR ENERGY COMPANY

DOCKET NO.: 50-423

REQUEST FOR ADDITIONAL INFORMATION
MILLSTONE NUCLEAR POWER STATION, UNIT 3
DOCKET NO. 50-423

100.0 Licensing Branch No. 1, Generic Letter 83-28

100.2 Item 2.1 (part 2) - Incomplete

Applicant needs to submit detailed information describing his vendor interface program for reactor trip system components. Information supplied should state how the program assures that vendor technical information is kept complete, current and controlled throughout the life of the plant and should also indicate how the program will be implemented at MILLSTONE 3.

Item 2.2.2 - Incomplete

Applicant needs to present his evaluation of the NUTAC program and describe how it will be implemented at MILLSTONE 3. The staff found the NUTAC program fails to address the concern about establishing and maintaining an interface between all vendors of safety-related equipment and the utility. Accordingly the licensee will need to supplement his response to address this concern. This additional information should describe how current procedures will be modified and new ones initiated to meet each element of item 2.2.2 concern.

Item 3.1.3 - Incomplete

Applicant should commit to resolving this concern when Technical Specifications are written.

Item 3.2.3 - Incomplete

Applicant should commit to resolving this concern when Technical Specifications are written.

Item 4.5.3 - Incomplete

Applicant needs to provide results of review of existing or proposed intervals for on-line testing considering the concerns of 4.5.3.1 to 4.5.3.5 in the generic letter. Proposed Technical Specification changes resulting from this review shall be submitted for review.

MILLSTONE NUCLEAR POWER STATION, UNIT 3
REQUEST FOR ADDITIONAL INFORMATION
GL 83-28, ITEMS 4.1, 4.2.1 AND 4.2.2

100.3 INTRODUCTION

Northeast Utilities, the applicant for Millstone Nuclear Power Station, Unit 3, submitted their responses to Generic Letter 83-28 on November 8, 1983 and March 16, 1984. The responses have been reviewed with respect to Items 4.1, 4.2.1 and 4.2.2 of the Generic Letter. The applicant's responses were not sufficiently detailed to permit an evaluation of the adequacy of the periodic maintenance and trending programs for the breakers. The following additional information is required to evaluate compliance with Items 4.2.1 and 4.2.2.

I. Item 4.2.1 - Periodic Maintenance Program for Reactor Trip Breakers.

Criteria for Evaluating Compliance with Item 4.2.1

The Millstone Nuclear Power Station, Unit 3 Reactor Trip System utilizes Westinghouse DS-416 circuit breakers. The primary criteria for an acceptable maintenance program for the DS-416 Reactor Trip Breaker (RTB) are contained in Westinghouse Maintenance Manual for the DS-416 Reactor Trip Circuit Breaker, Revision 0, October 1984. The NRC staff, Equipment Qualification Branch, has reviewed this document and endorsed the maintenance program described in it. More specifically, the criteria used to evaluate compliance include those items in this document that relate to the safety function of the breaker, supplemented by those measures that must be taken to accumulate data for trending.

Issues Relating to Item 4.2.1

The applicant's response states that Millstone Unit 3 is currently in the process of establishing the preventative maintenance program.

The Millstone Nuclear Power Station, Unit 3 Periodic Maintenance Program for the reactor trip breakers should include, on a six-month basis (or when 500 breaker operations have been counted, whichever comes first):

1. General inspection to include checking of breaker's cleanliness, all bolts and nuts, pole bases, arc chutes, insulating link, wiring and auxiliary switches;

2. The retaining rings inspection, including those on the undervoltage trip attachment (UVTA) and shunt trip attachment (STA);

3. Arcing and main contacts inspection as specified by the Westinghouse Maintenance Manual;

4. UVTA check as specified by the Westinghouse Maintenance Manual, including replacement of UVTA if dropout voltage is greater than 60% or less than 30% of rated UVTA coil voltage;

5. STA check as specified by the Westinghouse Maintenance Manual;

6. Lubrication as specified by the Westinghouse Maintenance Manual;

7. Functional check of the breaker's operation prior to returning it to service.

The Millstone Nuclear Power Station Unit 3 Periodic Maintenance Program for the reactor trip breakers should include, on a refueling interval basis (or when 500 breaker operations have been counted, whichever comes first):

1. Pre-cleaning insulation resistance measurement and recording;

2. RTB dusting and cleaning;

3. Post-cleaning insulation resistance measurement and recording, as specified by the Westinghouse Maintenance Manual;

4. Inspection of main and secondary disconnecting contacts, bolt tightness, secondary wiring, mechanical parts, cell switches, instruments, relays and other panel mounted devices;

5. UVTA trip force and breaker load check as specified by the Westinghouse Maintenance Manual;

6. Measurement and recording RTB response time for the undervoltage trip;

7. Functional test of the breaker prior to returning to service as specified by the Westinghouse Maintenance Manual.

The maintenance procedure should include a caution to the maintenance personnel against undocumented adjustments or modifications to RTBs.

The applicant is to confirm that the periodic maintenance program will include these fourteen items at the specified intervals or commit to their inclusion.

II. Item 4.2.2 - Trending of Reactor Trip Breaker Parameters to Forecast Degradation of Operability.

Criteria for Evaluating Compliance with Item 4.2.2

Four parameters have been identified as trendable and are included in the criteria for evaluation. These are (a) undervoltage trip attachment dropout voltage, (b) trip force, (c) breaker response time for undervoltage trip, and (d) breaker insulation resistance.

Issues Relating to Item 4.2.2

The applicant states in his March 16, 1984 response that trending of trip shaft torque and undervoltage testing results will be implemented for the Millstone Unit No. 3 reactor trip beakers in the same manner as for Millstone Unit No. 2 reactor trip breakers.

The applicant should clarify what he means by "undervoltage testing results" and whether or not these tests include both breaker response time and the dropout voltage for the undervoltage trip. The applicant should also state his position concerning trending the breaker insulation resistance. He should also identify how often the analysis will be performed and how the information derived from the analysis will be used to affect periodic maintenance.

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