



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

TERA

June 26, 1980

Docket No. 50-309

Mr. Robert H. Groce  
Senior Engineer-Licensing  
Maine Yankee Atomic Power Company  
25 Research Drive  
Westboro, Massachusetts 01581

Dear Mr. Groce:

The NRC Emergency Preparedness Review Team has completed a review of your Emergency Plan and has conducted a fact finding visit during the week of June 1, 1980, during which the review results were discussed with Maine Yankee personnel.

The enclosed comments are based on the team review and visits and are the comments discussed during the June 1 visit. As agreed to during the visit, responses to these comments must be submitted to the NRC by June 30, 1980.

Sincerely,

A handwritten signature in cursive script, appearing to read "T. M. Novak".

Thomas M. Novak, Assistant Director  
for Operating Reactors  
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Enclosure:  
Emergency Plan  
Review Comments

cc w/enclosure:  
See next page

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Maine Yankee  
Emergency Plan  
Review Comments

Acceptance Criteria

Comment

A.1

If the State Police are to be the 24 hour point of contact for offsite notification it must be clearly stated in the plans that they have the authority and responsibility to do the following during a general emergency: (1) activate the alerting system, (2) release public information messages, (3) initiate followup actions (door-to-door notification, etc).

A.2

Provide a summary showing the relationship between the site emergency activities and the functional areas listed in Criterion A.2.a. Figure 5-4 must be revised to insure the relationship to state and local agencies identified in the table prepared in the state plan in response to criterion A.2.a is clearly defined.

A.3/B.10

The written agreements with offsite response agencies attached to the plan must address the following areas as applicable:

Acceptance Criteria

Comment

1. implementation criteria,
2. measures to be provided,
3. information exchange,
4. authorities and responsibilities,
5. limits of action,
6. point of contact at site,
7. training and drills.

In addition, the NRC Region I response must be coordinated (with the Region) and described in the plan to include roles, interfaces, duty stations and response times of the NRC response personnel.

The state and local plan(s) can meet this requirements provided each agency is a signatory to the state or local plan concurring in their roles.

A.4

Identify by title the individual in the emergency organization who will be responsible for assuring continuity of resources (technical, administrative, and material) on a continuous (24 hour) basis.

Acceptance Criteria

Comment

B-1

Clarify the relationships between normal backshift assignments (position title) and emergency positions shown in Table 5-1.

Indicate how the various responsibilities for plant emergency response are transferred to newly arrived personnel (e.g., tag board). Also indicate how offsite response personnel (State/Federal/local) report to the site and how they will be factored into the response without conflict in roles.

B-2

Clearly state in Section 5.2 (page 5.4) that the emergency coordinator will unilaterally initiate an emergency response to include offsite notification as specified by the classification system contained in the plans.

B.3

Provide a line of succession for the emergency coordinator if the shift supervisor is disabled during the backshift.

B.4

Of the duties and responsibilities performed by the emergency coordinator on pages 5.4 or 5.5 identify those which cannot be delegated.

Acceptance Criteria

Comment

Specify that the emergency coordinator will not delegate the responsibility for initiation of offsite notification and that he/she will not perform any duty which could interfere with his/her initial coordination and notification functions during the backshift. It appears that the emergency coordinator has too many functions assigned. (pages 5-4, 5-5)

B.5

Revise Table 6-1 to cover the "Major Tasks" identified in Table B-1 of NUREG 0654 and also who will perform calculation of offsite dose projections and determination of the actions to be recommended offsite, and to specify the number of personnel available to perform these functions and tasks as a function of time (e.g., immediately available and as augmented within 30/60 minutes). Note: Span of Control must be considered with no more than 5 to 7 people reporting to a single supervisor.

The qualifications of emergency personnel must be described. This can be accomplished by

Acceptance Criteria

Comment

identifying their normal assignments (Criterion B.1) and the emergency tasks (that are not part of their normal assignments) for which they will be trained and qualified (tested) (See Criterion 0.4).

B-6

Clarify who will perform the "Major Tasks" discussed in Comment B-5. This should thereby identify their duty stations (under appropriate staffs). Clarify the role of corporate management during an emergency to insure there are no conflicts in roles (See page 5-1).

B-10

The letters of agreement for these services must be provided in accordance with Comment A3/B10 (Appendix 1 - not included).

Acceptance Criteria

Comment

- C-1 Identify who will request RAT assistance, summarize the assistance that is available under IRAP (this can be done by reference to Section 9.2.B.3 of the state plan), how the teams report to the site and their expected response time.
- C-2 Provide for the dispatch of a representative to the local and state EOC. Specify the criteria for dispatch (e.g., emergency class see NUREG 0610), position title of individual and expected response time. (Note: This can be at the request of state or local officials)
- C-3 Summarize the capabilities of the laboratory facilities (e.g., (1) capability to perform radioisotopic analysis in high level sample; (2) analyses of environmental samples (water, milk etc.); (3) interpretation of personnel and environmental monitoring devices (TLD etc.)) to include expected response times.



Acceptance Criteria

Comment

D1/2

Where appropriate Table 4-1 must be expanded to include the specific instrument and reading or other observable that will initiate the emergency condition (include the logic).

General emergency EALs must be developed for (in addition to those presented) loss of two of the three fission product barriers and potential loss of the third (to include failure to isolate). This should include the containment radiation monitor readings developed in response to acceptance criterion I.3.a.

Provide EALs for the following:

1. conditions when the effluent monitors are offscale or inoperable,
2. field monitoring results,

Acceptance Criteria

Comment

3. doses projected to exceed the lower limits of the EPA PAGs (1/5 Rem) for the projected duration of the release (up to 72 hours). These should be specified for effluent rates, containment levels/leak rate, and field monitoring results,
4. provide EALs for the ingestion pathway protective actions.

The assumptions used in development of the EALs associated with projected offsite doses (EPA PAGs) must be provided. Unique EALs for each of the "Example Initiatin Conditions" listed in NUREG-0610 are not required and may be counter productive. EALs should represent the minimum set of indicators to identify and confirm the existence of each emergency class. The relationship of the EAL to the conditions identified in NUREG-0610 and the accidents analyzed in the FSAR must be shown; however, the NUREG-0610 example conditions can be reclassified to reflect site conditions.

Acceptance Criteria

Comment

Clearly state that the offsite authorities responsible for implementation of offsite protective measures shall review and concur in the EALs.

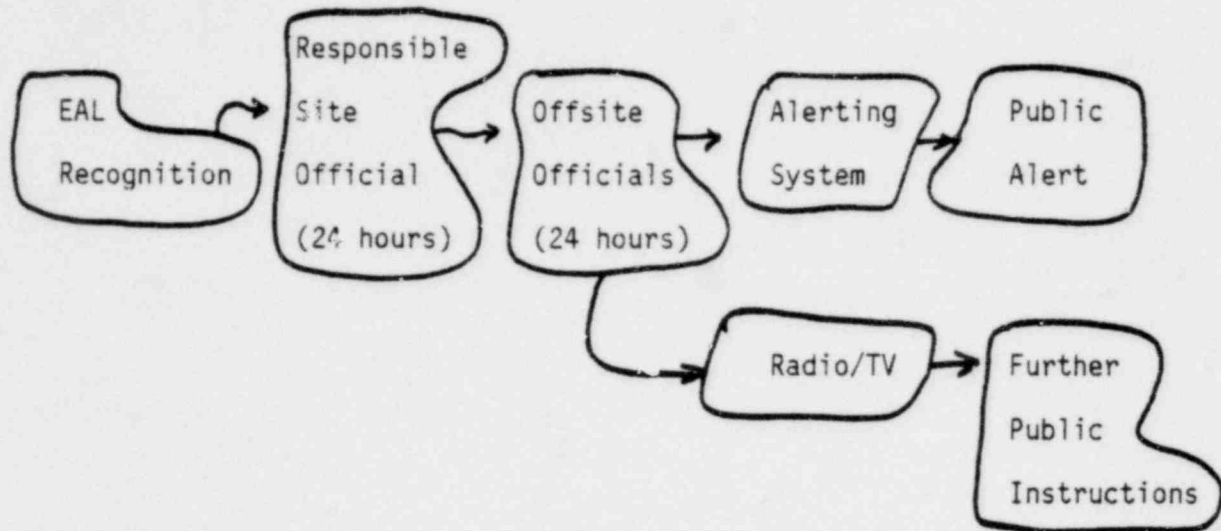
The EALs for the conditions specified in Table 4-1 for a general emergency must include corroborating evidence from two independent sources; in addition, time factors (e.g., containment pressure greater than 20 psi for 3 minutes) should be provided.

Acceptance Criteria

Comment

E.6, Appendix 3

Describe the total public alerting system to include:



1. initial offsite contact (Criterion A.1.e),
2. physical alerting system (siren, EBS, NOAA, etc.) (Criterion E.6),
3. use of a public media system (Radio, TV) to provide clear instruction to the public (NUREG 0654 Appendix 3). The system described in the State plan is not acceptable since the Governor's approval is required before issuance of general emergency protective action instructions.

Acceptance Criteria

Comment

4. the messages to be transmitted to the public (Criterion E.7). The general emergency messages in Section 12.5 of the State plan must include a description of protective actions to be taken. (Cover the range of protective actions that may be recommended by the site),
5. a description of how ~~the~~ performance objective specified in NUREG 0654, Appendix 3 are met (state these objectives in realistic terms of coverage etc. and describe how your system will meet this requirement),
6. a description of the public education program to include information to be provided and means of distribution (Criteria G.1 & G.2),
7. a statistical survey to verify public awareness and the corrective measures to be taken if deficiencies are found (NUREG 0654, Appendix 3).

Acceptance Criteria

Comment

Note: If the public notification system is to be administered by state or local officials it must still be described or referenced in the licensee plan.

E-1

Specify for alerts, site, and general emergencies that the appropriate offsite officials will be notified within 15 minutes of the time the emergency has been declared. The notification time for an unusual event must be specified in the plan based on an agreement with the agencies to be notified.

E-3

Specify that the precise format of the notification messages will be established (use the same form to send and receive) to include units and "to - from" for wind direction. Note:-Clearly specify that if a general emergency is declared the responsible site staff member (Criterion B.1) will be directly notified and advised the appropriate authorities responsible for implementation of plume protective measures (Criterion A.1.e) of the recommended protective actions within 15 minutes of the detection of the emergency condition.

Acceptance Criteria

Comment

Note: The initial protective measure recommended may be prearranged to be sheltering throughout the plume EPZ with continued monitoring of TV or radio provided further instructions (within 30 min.) are forthcoming indicating more detail protective measure (See Criterion J.7).

E-4

Indicate what followup information would be supplied to the various offsite agencies (by agency and emergency class). This can be done by reference to the appropriate section of the state and local plans (e.g., Section 9.3 of State plan)

E-6

The early warning system must be described to include the assumptions used in its development. (e.g., 10dB drop with doubling of distance) The use of cruisers with public address speakers for the towns of

. South Bristol

Acceptance Criteria

Comment

. West Bath

. Bowdoinham

will not be acceptable. Why are the towns of Topsham and Damairscotta not included.

The warning system must also include the water ways within 10 mile EPZ (Coast Guard?).

E-7

See previous comment.



Acceptance Criteria

Comment

F-1

Expand Table 7.1 or provide additional figures to:

1. indicate which communication systems are the backups (not vulnerable to normal power loss or vulnerable to public overloading and diversified),
2. show the communication links to the alternate site ECC and monitoring teams (to include the airhorne team). (Note: provisions must be made for team communications out to 10 miles),
3. identify the TSC as the primary communication interface with the control room (See NUREG 0654, Appendix 5),
4. identify a system with adequate capacity to provide information discussed in Section 9.3 of the state plan and which will provide a dedicated link to State EOC & County EOCS during emergencies as specified in NUREG 0610 (if telephone system is to be used, discuss how vulnerability to power loss and overloading will be decreased) ,

Acceptance Criteria

Comment

5. the Lincoln & Soryadobor county EOCS,
6. describe how the link(s) will be manned.

F.2

Commit to conduct tests of the entire alerting system in accordance with forthcoming FEMA guidance to include the system used to alert the public and specify the test periods for each part of communication system (e.g., site to local response officials; public notification system).

Acceptance Criteria

Comment

G 1/2

Describe the provisions for periodic dissemination of information to the public regarding how they will be notified and what their actions should be in an emergency. This information shall include, but not necessarily be limited to:

- a. contacts for additional information
- b. respiratory protection
- c. sheltering
- d. evacuation routes

G3

Designate the principal points of contact and physical locations for use by news media during an emergency.

The operator should provide briefing space for the news media at the nearsite ECC (EOF).

Acceptance Criteria

Comment

G5

Provide for inviting the local media to training sessions on:

1. alerting system
2. classification system
3. protective measures
4. public information contacts.

Specify how often the sessions will be conducted and who will be invited.

Acceptance Criteria

Comment

H-1/2

The TSC and ECC (EOF) must be in accordance with the enclosed April 25 letter. The use of the Visitors Center as the ECC (EOF) will be acceptable once the required information displays are provided.

The alternate ECC (EOF) must be located beyond the area where evacuation is most probable - the current alternate is too close.

Describe the provision made to assure that the command/control functions are transferred to the alternate ECC without interruption if the primary site ECC must be evacuated (include communications).

H.6

Specify how fast the centers can be activated (Can be addressed as part of response to comment on Criterion B-5).

H.5

Section 7.3 must provide a more detailed description of the instrument etc., used in the EALs to include location, type, range, and alarm setpoints etc.

Acceptance Criteria

Comment

H.10

Specify in Section 8.3 that there shall be sufficient reserves of instruments/equipment to replace those which are removed from emergency kits for calibration or repair. Calibration of equipment shall be at intervals recommended by the supplier of the equipment.

H.11

Provide in an appendix for an inventory of emergency kits by general category (protective equipment, communications equipment, radiological monitoring equipment and emergency supplies) - also indicate where the equipment is stored.

Acceptance Criteria

Comment

I.1

See Criteria D.1/2

Describe how the NUREG 0578 requirements will be incorporated into the emergency operations (B 5/8, D 1/2). In particular, describe how and how fast iodine concentrations are to be determined in effluent and containment activities and factored into the protection action recommendations and PAG's and how the effluent monitor (all exit pathways) readings will be used as EALs.

I.3.a

The source term requirement should be met by containment radiation monitor readings for the following accident conditions:

- a. release of coolant activity,
- b. release of gap activity,
- c. fuel melt.

Describe the assumptions used in meeting this requirement to include containment leak rate,

Acceptance Criteria

Comment

and meteorological conditions. If Figures 6-9 through 11 are to be used to meet this requirement:

1. describe how the curves relate to the above conditions,
2. describe the assumptions used,
3. define the terms used (LOCA I, II, III)

I-4

Figures 6-7 & 6-8 must be expanded to include distances out to 10 miles or describe how this will be done during an emergency and how the full range of stability classes will be considered.

Also describe how field monitoring results will be related to EPZ dose.

I-6

Provide a method for determining the release rate/projected doses if the instrumentation used for assessment are offscale or inoperable.

I-7

Indicate how this capability will be provided.



Acceptance Criteria

Comment

I-8

Provide for monitoring at least to the site boundary within 30 minutes.

Specify the following information about the offsite monitoring teams:

1. notification coordination methods (how deployed),
2. composition (numbers, titles, qualifications)
3. transportation,
4. communications (out to 10 miles),
5. monitoring instruments  
(Note: EAL must be established for),
6. detection capabilities.

I-9

A means for plume location must be described (e.g., aircraft with monitoring team) to include deployment time and interface (communication) with ECC and offsite officials.

Acceptance Criteria

Comment

I-10

Provide for relating the various measured parameters (e.g., contamination levels, water and air activity levels) to dose rates for key isotopes and gross radioactivity measurements. Provisions shall be made for estimating integrated dose from the projected and actual dose rates and for comparing these estimates with the protective action guides. Describe the equipment, personnel to be used, and expected response times. (If this is provided for in the State plan this can be addressed by reference)

Acceptance Criteria

Comment

J-1

Specify the levels requiring evaluation of the ECC.

J-2

Further describe the provision for plant evacuation to include maps showing evacuation routes and assembly areas. Describe how evacuees will be informed to reassemble beyond the plume EPZ if further monitoring or decontamination is required.

Further describe the procedures for monitoring visitors and plant evacuees to include how it will be determined when monitoring is required and by whom, how fast monitoring can be accomplished (all shifts) and what provisions have been made if plant condition will not allow onsite monitoring.

J-3

Revised Section 6.5.1 to specify that non-essential personnel will be evacuated in the event of a site or general emergency.

J-5

Commit that personnel accountability can be accomplished within 30 minutes and describe how this will be accomplished.

Acceptance Criteria

Comment

J-6

Specify the provisions made for the use of radioprotective drugs for emergency works.

J-7

Describe how the following will be considered during the determination of the protective actions to be recommended offsite: (See Criteria E1/2 & I4/6)

- a. plant status, NUREG 610 initiating conditions,
- b. local protection factors for typical residential units (Criterion J.10.m),
- c. weather conditions (wind direction),
- d. evacuation times and routes (Criterion J.8) Islands,
- e. release potential,
- f. projected or potential doses.

Note: Protective actions must not be recommended based only on wind direction.

Acceptance Criteria

Comment

Show the relationship between recommended protective actions and the factors listed above.

Note 1: It may be prudent to recommend protective actions for the islands at a site level.

Note 2: Provision for protective action beyond 10 miles using existing emergency capabilities must still be recommended by the site if appropriate.

Note 3: Protective actions based on assumption of no release of iodine is acceptable provide "rapid" confirmation of the iodine release is provided (see Criteria I-1).

The immediate protective action for a general emergency must be sheltering not just turn on radio as indicated in the State plan (this should be for the entire EPZ). The concept in the State plan under which the Governor must approve protective action is unacceptable - these must be precoordinated.

Acceptance Criteria

Comment

Commit that the provisions for recommending protective actions will be reviewed by the implementing authorities. This review must be documented.

J.8

Place this information in the plans along with a discussion of how it is used to determine the protective actions recommended offsite. (See Criterion J.7).

J.10

This information must be provided in the required format. It can be addressed by reference to the State plan.

Acceptance Criteria

Comment

K-2

Provide an onsite radiation protection program to be implemented during emergencies, including methods to implement exposure guidelines. The plan shall identify individual(s), by position or title, who can authorize emergency workers to receive doses in excess of 10 CFR Part 20 limits. Procedures should be worked out in advance for permitting onsite volunteers to receive radiation exposures in the course of carrying out lifesaving activities. These procedure shall include expeditious decision-making and a reasonable consideration of relative risks.

K.3a/b

Describe the provisions for 24-hour doses determination and the records to be maintained for emergency workers to include the offsite individuals (e.g., NRC, State officials) who are to arrive on site or at the near site ECC (EOF). Who performs these functions?

K.5.a

Specify the action levels for determining the need for decontamination.

Acceptance Criteria

Comment

K.5.b

Describe the means for radiological decontamination of emergency personnel, supplies, instruments and equipment, and for waste disposal. The provision for decontamination must be described for all assembly areas.

Who is the senior medical representative during the backshift discussed on page 6-16?



Acceptance Criteria

Comment

- |     |   |
|-----|---|
| L.2 | Who is qualified to perform 1st aid during the backshift?                   |
| L.4 | A letter of agreement with the Wiscoset Ambulance Service must be included. |

Acceptance Criteria

Comment

M.4

Describe the method used to estimate total population dose during accident conditions (Coordinate with state and local agencies). The discussion should include methods to determine the population exposed.

Acceptance Criteria

Comment

N.1/2

Revise Section 8.1.3 to provide for the drills and exercises on a schedule as discussed in this criteria.

N.3

Describe the information to be provided in the drill scenarios to include:

1. A basic objective (an objective is measurable and observable) for each major action to be accomplished must be provided. Specify the tasks or functions for which objectives will be established such as:
  - a. EAL recognition and reporting,
  - b. accident classification and dose assessment,
  - c. activation of the centers,
  - d. offsite notification,
  - e. response to contaminated personnel,
  - f. ambulance response,

Acceptance Criteria

Comment

- g. exercise of the hospital plan,
  - h. simulated evacuation of non-restricted area,
  - i. field monitoring,
  - j. damage control.
2. date, time place(s),
  3. simulated events,
  4. time schedule,
  5. narrative summary,
  6. arrangements for observers and their qualifications,
  7. how the exercise will be scored (use objectives).

Acceptance Criteria

Comment

0.1/2

Describe the provisions to identify the crucial emergency tasks performed (not part of normal duties) by onsite personnel.

This can be accomplished by referencing the procedures the individual must implement.

Describe the provisions for development of lesson plans and student performance objectives (see NUREG-0219 for a discussion of performance objectives) for the training and qualificative of personnel on the tasks identified. Describe how it will be assured that the students meet the objectives.

0.5

Specify the specific frequency of qualifications & requalification.

Acceptance Criteria

Comment

- P.1 Identify as part of the response to Criterion 0.4 the emergency task performed by the individuals responsible for planning (identify by job title) and how qualified.
- P.2/3 Identify the individual responsible for planning and show his/her position in the normal organization.
- P.4 Specify that all the attached plans and agreements will be revised annually and this will be documented. (Not every 2 years as specified on page B.5.)
- P.5 Commit to provide updated copies of the plan to all holders of the plan, and that revised pages will be marked as required.
- P.7 Procedures must be listed and referenced to the appropriate sections on the plans.
- P.8 The index must cover the attached state and local plans to be attached. Pages must be numbered.