

FEB 19 1976

Docket No. 50-29

Yankee Atomic Electric Company
ATTN: Mr. Robert H. Groce
Licensing Engineer
20 Turnpike Road
Westboro, Massachusetts 01581

THIS DOCUMENT CONTAINS
POOR QUALITY PAGES

Gentlemen:

RE: YANKEE-ROWE

On May 5, 1975, the Commission published Appendix I to 10 CFR Part 50 which sets forth numerical guides for design objectives and limiting conditions for operation to meet the criterion "as low as practicable" regarding releases of radioactive materials in effluents from light-water-cooled nuclear reactors. Section V.B of Appendix I requires the holders of permits or licenses authorizing the operation of light-water-cooled reactors, for which application was filed prior to January 2, 1971, to file with the Commission by June 4, 1976:

1. Such information as is necessary to evaluate the means employed for keeping levels of radioactivity in effluents to unrestricted areas as low as practicable, including all such information as is required by paragraphs 50.34a(b) and (c) not already contained in his application; and
2. Plans and proposed Technical Specifications developed for the purpose of keeping releases of radioactive materials in unrestricted areas during normal reactor operations, including expected operational occurrences, as low as practicable.

In a letter to you from D. Muller dated June 27, 1975, we indicated that the staff was in the process of developing guidance for licensees required to file information with the Commission under the provisions of Section V.B of Appendix I. This guidance is set forth in Enclosure 1.

Enclosure 1 makes reference to proposed Regulatory Guides 1.AA, thru 1.FF. These guides have been published in draft form and are available in the Commission's public document room. Copies of these guides are being forwarded to you under separate cover. We are preparing additional guidance regarding the formulation of Technical Specifications to implement Appendix I which will be forwarded to you in the near future. It is recommended that proposals to modify Technical Specifications related to Appendix I be deferred pending the completion of this guidance in order to obtain a consistent format for radiological effluent release Technical Specifications.

OFFICE ➤

SURNAME ➤

DATE ➤

8011040 738

[Handwritten mark]

FEB 19 1976

Yankee Atomic Electric Company - 2 -

Enclosure 2 provides a list of information we will need to evaluate your facility.

The staff is in the process of determining whether plants for which application was filed prior to January 2, 1971, can be treated in a manner similar to the treatment given to later plants in the Commission's September 4, 1975, Amendment to Appendix I. On this basis, the information called for by Enclosures 1 and 2 would be sufficient to determine compliance with the criteria set forth in Section II, paragraphs A, B and C of Appendix I and the design objectives set forth in the Concluding Statement of Position of the Regulatory Staff in Docket RM-50-2, which is reproduced as an Annex to Appendix I as amended September 4, 1975. If further information is required to satisfy a plant specific assessment under Section II.D of Appendix I, we will so inform you at a later time.

Within 30 days of the receipt of this letter, you should inform us of the measures you intend to adopt or propose to meet the requirements of paragraph 50.34a. We suggest that a meeting between your staff and the NRC staff be arranged shortly thereafter to discuss the submittal of data and methods of evaluation.

Sincerely,

Robert A. Purple, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Enclosures:

1. Guidance to Holders of Permits to Construct or Licenses to Operate Light-Water-Cooled Reactors for which Application was Filed Prior to 1/2/71 to Meet the Requirements of Appendix I to 10 CFR Part 50
2. Additional Information Needed from Holders of Permits or Licenses to Construct or Operate Light-Water-Cooled Reactors for which Application was Filed Prior to 1/2/71

cc: with enclosures
See next page

DISTRIBUTION
NRC DPR DEisnhut
Local PDR VStello
Docket File ACRS (16)
ORB#1 Reading
KRGoller
TJCarter
OELD
OIEE (3)
RAPurple
ABurger
SMSheppard
JCollins
TBAbernathy
JRBuchanan

OFFICE →	ORB#1	KX OELD	ORB#1			
SURNAME →	ABurger:lb	See 50-219	RAPurple			
DATE →	2/18/76		2/19/87/6			

cc: Mr. Donald G. Allen, President
Yankee Atomic Electric Company
20 Turnpike Road
Westboro, Massachusetts 01581

Greenfield Public Library
402 Main Street
Greenfield, Massachusetts 01581

ENCLOSURE 1

Guidance to Holders of Permits to Construct or Licenses to Operate Light-Water-Cooled Reactors for Which Application was Filed Prior to January 2, 1971 to Meet the Requirements of Appendix I to 10 CFR Part 50

1. Licensees should provide an evaluation showing their facility's capability to meet the requirements set forth in Section II of Appendix I to 10 CFR Part 50.
2. Radioactive Source Terms used in the evaluation should be consistent with the parameters and methodology set forth in Draft Regulatory Guides 1.BB or 1.CC (as appropriate). Note: For BWRs gaseous releases from the containment building and auxiliary building should be combined to form reactor building release for pre-BWR/6 Mark III Containment designs.
3. Meteorology/Hydrology information used in the calculation of doses should be consistent with Draft Regulatory Guides 1.DD and 1.EE.
4. Dose Calculations should be consistent with Draft Regulatory Guide 1.AA.
5. Effluent Release Data from previous reactor operation should be provided, if available, for use in evaluating the source term calculations. Such data should include at least one full year of effluent release data tabulated by effluent release point, month, mode of operation (e.g., full power operation, refueling shutdown), excluding the first year of reactor operation.

6. The above evaluations should be accompanied by the information requested in Enclosure 2. Exceptions from the information requested will be considered on a case-by-case basis.
7. The staff is preparing standard Technical Specifications and will issue further guidance to licensees regarding changes to Technical Specifications to implement the Appendix I objectives. Proposed revisions to Technical Specifications by licensees based on the limiting conditions for operation set forth in Section IV of Appendix I should be withheld pending further guidance from the staff.

ENCLOSURE 2

Additional Information Needed from Holders of
Permits or Licenses to Construct or Operate
Light-Water-Cooled Reactors for Which
Application was Filed Prior to January 2, 1971

1. Provide the information requested in Appendix D of Draft Regulatory Guide 1.BB or 1.CC, as appropriate.
2. Provide, in tabular form, the distances from the centerline of the first nuclear unit to the following for each of the 22-1/2 degree radial sectors centered on the 16 cardinal compass directions.
 - a) nearest milk cow (to a distance of 5 miles)
 - b) nearest meat animal (to a distance of 5 miles)
 - c) nearest milk goat (to a distance of 5 miles)
 - d) nearest residence (to a distance of 5 miles)
 - e) nearest vegetable garden greater than 500 ft² (to a distance of 5 miles)
 - f) nearest site boundary

For radioactivity releases from stacks which qualify as elevated releases as defined in Draft Regulatory Guide 1.DD, identify the locations of all milk cows, milk goats, meat animals, residences, and vegetable gardens, in a similar manner, out to a distance of 3 miles for each radial sector.

3. Based on considerations in Draft Regulatory Guide 1.DD, provide estimates of relative concentration (X/Q) and deposition (D/Q) at locations specified in response to item 2 above for each release point specified in response to item 1 above.

4. Provide a detailed description of the meteorological data, models and parameters used to determine the X/Q and D/Q values. Include information concerning the validity and accuracy of the models and assumptions for your site and the representativeness of the meteorological data used.
5. If an onsite program commensurate with the recommendations and intent of Regulatory Guide 1.23 exists:
 - a) Provide representative annual and monthly, if available, joint frequency distributions of wind speed and direction by atmospheric stability class covering at least the most recent one year period of record, preferably two or more years of record. Wind speed and direction should be measured at levels applicable to release point elevations and stability should be determined from the vertical temperature gradient between measurement levels that represent conditions into which the effluent is released.
 - b) Describe the representativeness of the available data with respect to expected long-term conditions at the site.
6. If recent onsite meteorological data are not available, or if the meteorological measurements program does not meet the recommendations and intent of Regulatory Guide 1.23:
 - a) Provide the best available meteorological data in the format described in item 5.a above.

- b) Describe the representativeness of the available data with respect to onsite and near site atmospheric transport and diffusion conditions, and with respect to expected long term conditions at and near the site.
 - c) Provide a description of the meteorological measurements used for collection of the data presented. This description should include the location of the sensors with respect to the power plant(s) and other prominent topographic features (including buildings) and accuracy of the instrumentation.
 - d) Provide a commitment to establish a program to meet the recommendations and intent of Regulatory Guide 1.23, or provide sufficient justification to allow the present program to remain unchanged.
7. Describe airflow trajectory regimes of importance in transporting effluents to the locations for which dose calculations are made.
8. Provide a map showing the detailed topographical features (as modified by the plant, on a large scale, within a 10-mile radius of the plant and a plot of the maximum topographic elevation versus distance from the center of the plant in each of the sixteen 22-1/2 degree cardinal compass point sectors (centered on true north), radiating from the center of the plant, to a distance of 10 miles.

9. Provide the dates and times of radioactivity releases from intermittent sources by source location based on actual plant operation and, if available, appropriate hourly meteorological data (i.e., wind direction and speed, and atmospheric stability) during each period of release.