

RELATED CORRESPONDENCE  
UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

DOCKETED  
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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of  
Public Service Company of  
New Hampshire, et al.  
(Seabrook Station, Units 1 & 2)

}  
} Docket No. 50-443 OL-1/444-OL-1  
} ONSITE EMERGENCY PLANNING  
} & TECHNICAL ISSUES  
}

NRC STAFF RESPONSE TO NECNP FIRST SET OF  
INTERROGATORIES AND REQUEST FOR THE PRODUCTION  
OF DOCUMENTS TO NRC STAFF ON NECNP CONTENTION I.B.2

INTERROGATORY 1

For each separate interrogatory below, identify each person who participated in any way in the development or preparation of answers thereto, and describe the information or ideas contributed by that person.

RESPONSE

For each interrogatory, the identities of the person(s) participating in the preparation of the answer thereto is listed in parentheses.

INTERROGATORY 2

What is your position with respect to NECNP Contention I.B.2?

RESPONSE

The Staff's position is that Applicants' environmental program, qualification as it relates to the use of RG-58 and RG-59 coaxial cable, complies with the requirements set forth 10 C.F.R. § 50.49.

(Staff Counsel)

INTERROGATORY 3

Please identify all individuals whom you intend to call as witnesses to support your position during the proceedings regarding Contention I.B.2, and describe the substance of their testimony.

RESPONSE

As of this writing, the Staff plans to call Harold Walker and Amritpal Gill as witnesses in the event a hearing is held on remanded NECNP Contention I.B.2. The Staff, of course, reserves the right to call other or additional witness if deemed necessary. The testimony of any witness offered by Staff will support the Staff's position that Applicants' environmental qualification program, insofar as RG-58 and RG-59 coaxial cable is concerned, complies with the requirements set forth in 10 C.F.R. § 50.49.

(Nurses)

INTERROGATORY 4

Please identify all individuals whose affidavits you intend to submit in summary disposition proceedings regarding Contention I.B.2, and describe the substance of their affidavits.

RESPONSE

See Response to Interrogatory 3.

(Nurses)

INTERROGATORY 5

At pages 6-7 of the NRC Staff's Response to Applicants' Suggestion of Mootness, dated June 2, you state that spare cables need not meet the requirements of 10 CFR § 50.49. What measures, if any, do you intend to require of or recommend to Applicants to ensure that at no time during plant life will the spare RG-58 cables inadvertently become energized, for example, by technician error or equipment malfunction? Please state the reason for your answer, describe any such measures, and state whether they would be required or recommended.

RESPONSE

As noted in the interrogatory, the spare cables need not meet the requirements of 10 C.F.R. § 50.49. In regards to the reconnection of

these spare cables, there already are procedures in place at the Seabrook Station (Bergeron affidavit dated May 19, 1988 at pp 5-6) that ensure that at no time during plant life will the spare RG-58 cables inadvertently become energized. Therefore, at this time, the Staff believes that adequate measures exist to control inadvertent energization of spare RG-58 cables.

(Nerses)

INTERROGATORY 6

In your opinion, are Applicants correct in asserting that 76 (See affidavit of Mr. Richard Bergeron dated May 26, 1988 for correction from 77 to 76 cables) of the RG-58 coaxial cables are located in a mild environment? Is your opinion based on a review of the Service Environmental Charts attached to Applicants' Reply to NRC Staff and NECHP's Response to Applicants' Suggestion of Mootness, filed June 17, 1988? What other documents or information is your opinion based on?

RESPONSE

It is the Staff's position that Applicants are correct in asserting that the 76 RG-58 coaxial cables are located in a mild environment. This position is based on a review of the methods the Applicants used to identify and track cable at Seabrook; a review of the service environmental charts attached to the Applicants' filing of June 17, 1988; and on the Staff's familiarity with Applicants' EQ Program. The Staff's familiarity of the EQ program is based on the review of the Seabrook EQ program transmitted to the Staff by letters from Applicant dated August 12, 1983, September 7, 1984, October 31, 1985, April 3, 1986, and FSAR Section 3.11, as well as an audit of similar information conducted at the plant in February 1986. The Staff's position is not based on any other information or documents.

(Walker)

INTERROGATORY 7

For the ten RG-58 coaxial cables that Applicants state are routed with other non-safety related cables outside the Seabrook nuclear island, you state on page 9 of the NRC Staff's Response to Applicants' Suggestion of Mootness that Applicants have not provided sufficient information to evaluate Mr. Bergeron's claim that failure of the RG-58 coaxial cable would not prevent the accomplishment of safety functions. Has this concern been resolved? If so, please identify and describe the specific documents or statements that have resolved your concern.

RESPONSE

Yes, this concern has been resolved. Resolution is based on the Staff's review and acceptance of the Applicants' environmental qualification program which demonstrates compliance with 10 C.F.R. § 50.49(b)(2) concerning nonsafety-related electric equipment whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety functions by safety-related equipment. This is covered in Applicants' demonstration of compliance with Regulatory Guide 1.75, "Physical Independence of Electric Systems." It is discussed in the Applicants' letters to the NRC dated June 10 and 13, 1986. A Staff review found the Applicant in compliance with the guidelines of RG 1.75. This review is documented in section 8.3.3.3 of NUREG-0896, Supplement No. 5, issued in July 1986. The Staff has also reviewed and found acceptable, the Applicants' method of identifying and tracking cable usage at Seabrook, and the service environmental charts. Both the method and the service environmental charts are included as part of the Applicants' June 17, 1988 Reply to NRC Staff and NECNP's response to Applicant's Suggestion of Mootness. In addition, the Staff has reviewed NECNP's Exhibit 4 and the affidavit of Harold Walker in the December 11, 1987 "NRC Staff Response to Memorandum on Licensing Board and New England Coalition on Nuclear Pollution Regarding Environmental Qualification of RG-58 Coaxial

Cable," in which it was concluded that RG-58 coaxial cable is environmentally qualified by "similarity" in accordance with 10 C.F.R. § 50.49(f)(2). These documents provide the Staff with confidence that the RG-58 cable will not fail as a result of being exposed to the environment(s) defined in the aforementioned service environmental charts.

(Walker)

INTERROGATORY 8

For the same ten cables, you also state, on page 9 of the NRC Staff's Response to Applicants' Suggestion of Mootness, that "the Staff is not able to take a position at this time as to whether the RG-58 coaxial cables routed with other nonsafety related cables outside the nuclear island must be environmentally qualified in accordance with 10 CFR § 50.49." Is this statement still correct? If you are now able to take a position, please describe that position and identify and describe the specific documents or statements that have enabled you to take that position.

RESPONSE

No, the statement no longer is correct. The Staff's position has been and continues to be that nonsafety-related cables, such as RG-58, routed with other nonsafety-related cables need not be environmentally qualified unless they fall within the scope of 10 C.F.R. § 50.49(b)(2) See NRC Staff Response To Applicants' Suggestion Of Mootness. The affidavits of Mr. Bergeron filed on June 17, 1988, in conjunction with Applicants' earlier submission, provide reasonable assurance that the RG-58 cables routed with other non-safety related cables outside the nuclear island are in compliance with 10 C.F.R. § 50.49(b)(2).

(Walker)

INTERROGATORY 9

No, the statement quoted no longer is correct. In Part A(5) of the NRC Staff's Response to Applicants' Suggestion of Mootness, you state that the Staff has no current position as to whether the nine cables alleged to be routed with nonsafety cables through a mild environment must be

environmentally qualified. Is this statement still correct? If you now have a position, please describe that position and identify and describe the specific documents or statements that you rely on to support that position.

RESPONSE

In accordance with 10 C.F.R. § 50.49(c)(iii), "environmental qualification of electric equipment important to safety located in a mild environment are not included within the scope of this section" (i.e., not within the scope of 10 C.F.R. § 50.49). Therefore the staff position is that equipment located in a mild environment is not required to be environmentally qualified in accordance with 10 C.F.R. 50.49. The affidavits of Mr. Bergeron submitted on June 17, 1988 and May 19, 1988 demonstrate to the Staff's satisfaction that the subject RG-58 cables are not located in a harsh environment.

(Walker)

INTERROGATORY 10

In deciding whether a cable is environmentally qualified, do you agree that you must take into consideration the functional performance requirements of that cable in its particular functional application? For example, do you agree that the magnitude of leakage current permissible for a cable used in a power circuit could be significantly larger than the leakage current permissible for a cable used in an instrumentation circuit?

RESPONSE

The environmental qualification of a cable does not depend on the functional performance, as defined in a purchase specification. The characteristics which relate to environmental qualification are outlined in IEEE Standards 323-1974 and 323-1974 and may vary depending on the specific application. (IEEE Standards 323-1974 and 383-1974 have been endorsed by the Staff as being acceptable to meet the requirement of 10 C.F.R. § 50.49). For instrumentation cable, such as RG-58 and RG-59

coaxial cable, one of the more important criteria during environmental qualification testing is insulation resistance (IR). This is important because it provides an indication of the ability of a cable to maintain its integrity under accident conditions. IR is an indication of leakage current.

The Staff agrees that the magnitude of acceptable leakage current permissible for a cable use in a power circuit could be significantly larger than the leakage current permissible for cable used in an instrumentation circuit. However, the leakage current of cables used in power circuits is not related to the environmental qualification of RG-58 or RG-59.

(Walker)

INTERROGATORY 11

Have you evaluated the adequacy of RG-59 coaxial cable to meet functional performance requirements in the circuits that presently use RG-58 coaxial cable? If so, what was the result of your evaluation? If not, why not?

RESPONSE

Based on Applicants' affidavits before the Licensing Board (see Applicants' Suggestion Of Mootness, dated May 19, 1988), the RG-58 coaxial cables are used in nonsafety-related circuits. Applicants have identified 12 RG-58 coaxial cables from the installed RG-58 coaxial cables at the Seabrook plant that must meet the environmental qualifications set forth 10 C.F.R. 50.49. Applicant have also represented that the 12 RG-58 coaxial cables have been replaced with RG-59 coaxial cables.

The staff's review of the nonsafety-related circuits is limited to review of conformance to 10 C.F.R. § 50.49 for those circuits that are installed in a harsh environment. The Staff reviewed the RG-58 and RG-59

coaxial cables for compliance with 10 C.F.R. § 50.49 and accepted both cables as being environmentally qualified. The RG-59 cable was qualified by test and RG-58 was qualified on the basis of its "similarity" to RG-59 (see NRC Staff Response to Memorandum of Licensing Board and New England Coalition of Nuclear Pollution Regarding Environmental Qualification of RG-58 Coaxial Cable).

The functional adequacy of RG-59 coaxial cable as replacement of RG-58 coaxial cable is not germane to the environmental qualification issue. It is the responsibility of the Applicants to conduct adequate evaluations of all nonsafety applications for functional requirements and compatibility. In the case of RG-58 and RG-59 coaxial cables, Applicants evaluated the 12 RG-58 circuits in question to assess whether RG-59 coaxial cable is functionally compatible with RG-58 coaxial cable (see Gerald A. Kotkowski affidavit, dated May 19, 1988). In determining the functional acceptability of RG-59 coaxial cable for the 12 RG-58 circuits, the Applicant evaluated the attenuation characteristics, velocity of propagation and compatibility of connecting devices/instruments and found them acceptable. In addition, the Applicant contacted the vendors of the connected equipment and confirmed the use of RG-59 coaxial was acceptable. The Staff has no concern regarding the adequacy of Applicants' review or the conclusions reached.

(G111)

INTERROGATORY 12

What is the Staff's position regarding whether RG-59 coaxial cable is a technically acceptable replacement for the RG-58 coaxial cable? Please identify and describe the statements and/or documents on which your position is based.

RESPONSE

The Staff's position is that the RG-59 coaxial cable is technically acceptable replacement for RG-58 coaxial cable. The Staff's position is based upon the results of Applicants' functional evaluation of the RG-59 coaxial cable with respect to functional requirements of RG-58 coaxial cable and as documented in the response to Interrogatory No. 11. The documents forming the basis of the Staff's position are also described in the response to Interrogatory No. 11.

(G11)

INTERROGATORY 13

Do you continue to take the position described to the Licensing Board in a telephone conference call dated June 23, 1988, that "the record contains all the information necessary for the Board to issue a determination favorable to applicants on the remanded contention." Tr. at 1166. Please state the reason(s) for your answer.

RESPONSE

Yes. The Staff's Reply to Applicants' Suggestion Of Mootness describes the showing necessary for Applicants to prevail on remanded NECMP Contention I.B.2. The testimonial and documentary evidence submitted by Applicants' on May 19, 1988 and June 17, 1988 demonstrates that there is reasonable assurance that there no longer are any RG-58 cables installed in harsh environments and that RG-59 cable (the environmental qualification of which is not subject to dispute in this proceeding) is an acceptable replacement for RG-58 cables which previously were located in harsh environments.

(Staff Counsel)

INTERROGATORY 14

Please identify and describe all telephone conversations and meetings with Applicants in which you have discussed RG-58 coaxial cable.

RESPONSE

The Staff (Harold Walker) has had two or three telephone conversations with the Applicant (Mr. Richard Bergeron) to discuss RG-58 cable. The conversation took place in April and or May 1988. However, no records of the conversation and no notes were taken. The conversation were all quite short and restricted to clarifying information contained in the public record.

(Walker)

INTERROGATORY 15

Please identify any future meetings or conversations you intend to hold with Applicants for the purpose of discussing RG-58 coaxial cable.

RESPONSE

There are no scheduled future discussions concerning RG-58 coaxial cable.

(Walker)

INTERROGATORY 16

Please describe any investigations or evaluations you have conducted regarding RG-58 coaxial cable at Seabrook, and identify any future investigations or evaluations you intend to undertake.

RESPONSE

On February 25, 26, 27, 1986, the Staff, with assistance from EGG Idaho, Inc., an NRC contractor, conducted an audit of the Applicant's qualification files and equipment installed at the plant. Twelve files were audited to determine if the documents in the qualification files supported the qualification status determined by Applicants. A file (File #113-19-01) documenting the qualification of RG-58 was included in the twelve files audited. The results of that audit were transmitted to Applicants by letter dated April 10, 1986. The Staff has reviewed NECNP

Exhibit 4 which also included File #113-09-01. The Staff has also reviewed the affidavits of Mr. Richard Bergeron dated May 19, May 26 and June 16, 1988 and the affidavits of Mr. Gerald A. Kotkowski and Mr. Ted C. Feigenbaum dated May 19, 1988, these reviews constitute all aspects of the Staff investigation regarding RG-58 coaxial cable. The Staff recently (July 14, 1988) received a test plan and results of the environmental qualification testing rectly completed by National Technical Systems/Action Division on RG-58 coaxial cable manufactured by ITT Suprenant. The Staff may review this data and the completed test report when it becomes available sometime in the future.

(Walker)

INTERROGATORY 17

Please identify any members of the NRC Staff who disagree with the answers to these interrogatories, and describe their position(s), the reason(s) for their position(s), and the reason(s) that you disagree with their position(s).

RESPONSE

The Staff is unaware of any member who disagrees with any of the answers to these interrogatories.

(Nerses)

REQUEST FOR IDENTIFICATION AND PRODUCTION OF DOCUMENTS:

REQUEST 1

Please identify all documents on which you rely to support your position with respect to Contention J.B.2.

RESPONSE

The documents upon which the Staff relies are identified in the foregoing responses to these interrogatories.

REQUEST 2

Please identify all documents in your possession which discuss or refer to whether environmental qualification is required for RG-58 cable; why it is or is not environmentally qualified; why it does or does not need to be environmentally qualified; what environmental qualification specifications, if any, have been required or considered for RG-58 cable; whether RG-59 cable meets qualification specifications or other specifications for RG-58 cable; the locations of RG-58 cable in the Seabrook plant; the functions served by RG-58 cable; and whether or not those functions are considered important to safety.

RESPONSE

All documents in the Staff's possession which are responsive to Document Request 2 are identified in the Staff responses to these Interrogatories.

REQUEST 3

Please identify all documents relied on for purposes of answering the foregoing interrogatories.

RESPONSE

See response to Document Request 1 above.

REQUEST 4

Within 14 days, please produce the documents identified in response to the preceding requests for the identification of documents.

RESPONSE

Objection. The documents sought by this document request readily are obtainable from the Applicants or NPC Public Document Room.