Filed: December 16, 1982

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

before the

ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, et al.	)	Docket Nos. 50-443 OL 50-444 OL
(Seabrook Station, Units 1 & 2)	)	

APPLICANTS' ANSWERS TO
"NECNP SECOND SET OF INTERROGATORIES AND
REQUEST FOR PRODUCTION OF DOCUMENTS TO
APPLICANTS ON CONTENTIONS
I.A.2, I.B.1, I.B.2, and I.C "
AND
MOTION FOR PROTECTIVE ORDER

Pursuant to 10 CFR § 2.740b, the Applicants hereby respond to the "NECNP Second Set of Interrogatories and Request for Documents to Applicants on Contentions I.A.2, I.B.1, I.B.2 and I.C," served on them by mail on November 23, 1982. (With the consent of counsel for NECNP, these answers are being filed three days beyond the time within which, absent agreement or leave, answers are nominally due.)

D503

SPECIFIC INTERROGATORIES

Interrogatory No. 1

Question:

In response to NECNP's first set of interrogatories on Contentions I.A.2, I.B.1., I.B.2., and I.C., Applicants consistently used the term "safety-related" and took the position that all safety-related equipment had been environmentally qualified. In response to Interrogatory 3, Applicants stated that, "no distinction was made between "safety-related" and "important to safety." In response to Interrogatory 21, Applicants asserted that all safety-related systems are also "important to safety."

a. Define the term "safety-related" as used by Applicants.

(1) State the technical, legal, regulatory, or other basis for this definition.

(2) State the criteria used by Applicants to determine whether equipment is safety-related.

(3) Is it Applicant's position that only safety-related equipment is required to be environmentally qualified? If so, state the technical, legal, regulatory or other basis for that position. If not, identify and describe all other equipment that must be environmentally qualified.

b. Define the term "important to safety" as used by Applicants.

(1) State the technical, legal, regulatory, or other basis for this definition.

(2) State the Applicant's understanding of the difference, if any, between "safety-related" equipment or systems and equipment or systems that are "important to safety." State the principle, if any, that distinguishes the two.

(3) Identify and describe all equipment and systems, if any, that are "important to safety," but are not "safety-related," and therefore,

according to Applicants, do not need to be environmentally qualified.

Answer: a. The term "safety-related" is used by the Applicant to pertain to any structure, system or component whose function is necessary to ensure:

i. The integrity of the reactor coolant pressure boundary,

ii. The capability to shut down the reactor and maintain it in a safe shutdown condition, or

iii. The capability to prevent or mitigate the consequences of plant conditions that could result in potential off-site exposures that are comparable to the guideline exposures of 10 CFR 100, "Reactor Site Criteria".

(1) This definition is consistent with the usage of the term or its equivalents in NRC, ANA, ASME, and IEEE documents.

(2) Criteria used to determine which equipment is classified safety-related and, therefore, given a safety classification is discussed in Section 3.2 of the FSAR.

(3) Yes, it is the Applicant's position that only safety-related equipment is required to be environmentally qualified. There are no regulatory requirements for environmental qualification of non-safety-related equipment.

b. The term "important to safety" when used by the Applicant to identify structures, systems and components that perform a safety function has the same definition as "safety-related." The Applicant has no structures, systems or components which are identified as important to safety that do not perform a safety function.

(1) The Applicant knows of no other accepted technical, legal, regulatory or other basis for this definition.

(2) In accordance with our response to above, the Applicant recognizes no difference between "safety-related" equipment and systems and equipment and systems "important to safety". The Applicant does not identify any structues, systems or components important to safety unless they perform a safety function.

(3) There are no equipment or systems that are designated important to safety" but are not "safety-related".

Interrogatory No. 2

Question:

In response to Interrogatory 5, Applicants noted that the proposed rule referred to in the interrogatory had been revised in April, 1982. NECNP is unable to find any reference to this revision. Please identify specifically, with appropriate citations, the document containing the April revision.

Answer:

The intended reference was to a revised proposed rule submitted to an ACRS review meeting noticed at 47 Federal Register 17699 (April 23, 1982). A copy of that to which we referred is attached.

Interrogatory No. 3

Question:

In response to Interrogatory 10, Applicants noted that while there were no environmentally qualified electrical connectors commercially available when CLI-80-21 was issued, that was not true of electric valve operators.

a. Describe and state the function of an electrical connector.

b. Identify all electrical connectors that are used in connection with safety-related electric valve operators.

(1) State the function of the electrical connector in each case.

(2) State whether the use of the electrical connector is essential to the use of the electric valve operator.

c. Identify and describe the function of all safety-related electrical connectors.

d. Explain how safety-related electrical connectors can comply with IEEE Standard 323-1974 when

the Commission stated in CLI-80-21 that there were, at that time, no commercially available electrical connectors that complied with IEEE Standard 323-1974.

Answer:

It should be noted that the Applicant did not state that there were no qualified electrical connectors commercially available. In fact, the Commission (in CLI-80-21) stated that "apparently" there are no such connectors commercially available.

a. As stated in IEEE "Dictionary of Electrical & Electronic Terms," an electrical connector is a coupling device employed to connect conductors of one circuit with those of another circuit.

b. Seabrook does not use electrical connectors in electric valve circuits.

c. Electrical connectors are used in the containment high-range radiation monitoring circuit to connect the detector and cable together.

d. As noted above, the Commission stated "apparently" there are no qualified connectors commercially available. There are qualified electrical connectors available. In some cases, the connector was qualified with the equipment it is to be used with. Some of the qualified tests for connectors were completed after June, 1980.

Interrogatory No. 4

Question:

In response to Interrogatory 15, Applicants stated that, "The safety-related equipment that is required to withstand the effects of the accident environment will do so for a minimum of one year". The answer did not explain the basis for that statement, as the interrogatory had requested.

a. Explain the basis for the statement quoted above.

b. Explain the basis for choosing one year as a sufficient period of time to assure adequate protection.

Answer:

a. The basis for the response was provided. However, the following revised response is provided for additional clarification. The safety-related electric equipment identified in Interrogatory 15 that is required to withstand the effects of the accident environment will do so for a minimum of one year. The one year minimum operating time will be documented in the detailed environmental qualification test results which will be maintained as indicated in our response to Interrogatory 1 (I.A.2).

b. The one year operating time is based on the environmental profiles in the service environment chart (see FSAR Section 3.11). The bases for these profiles is presented in FSAR Section 6.2.

The service environmental chart conservatively assumes elevated environmental conditions for a period of one year. The one year qualification period has been used as a conservative time period to assure safety systems are able to perform their safety function.

Interrogatory No. 5

Question:

Interrogatory 31 asked whether it was Applicant's position that structures, systems, and components governed by GDC 4 must be able to accommodate the effects of and be compatible with the environmental conditions associated with loss-of-coolant accidents throughout the operating lifetime of the plant. Applicants responded that such structures, systems, and components are able to withstand accident conditions during the operation of life of the plant, but did not state a position on the question that was asked. Accordingly, is it Applicant's position that safety-related structures, systems, and components must be able to accommodate the effects of and be compatible with the environmental conditions associated with loss-of-coolant accidents throughout the operating life of the plant?

a. If not, please respond to Interrogatory 31(a).

Objection:

Inasmuch as the Applicants have determined that they do meet the standard, the question of whether they must meet the standard is, in fact, a question of whether their meeting of the standard is gratuitous or not. As such, the question is plainly not relevant to any admitted contention and calls for an abstract legal opinion on the part of counsel. The Applicants object

to such a question and move for a protective order as to this question.

Interrogatory No. 6

Question:

Interrogatory 34 asked for Applicant's position on the question of whether Applicants need to establish that structures, systems, or components governed by GDC 4 will remain environmentally qualified for any period of time once an accident begins. It also asked the periods of time that Applicants contend they must show that structures, systems, and components governed by GDC 4 will remain environmentally qualified once an accident begins.

Applicants responded that all structures, systems, or components that are required to be operational are qualified to remain operational for the time required to perform their safety fuction. As a result, Applicants did not respond to either of the questions asked in the interrogatory.

a. Assuming the facts are as Applicants state them, is is Applicant's position that it must so convince the Board in order to meet its burden of proof?

b. For each structure, system, and component referred to in Applicant's answer, state the time required to perform its safety function under a design basis accident that represents the worst case for the structure, system, or component in question. In each case, describe the design basis accident.

Answer:

b. In lieu of identifying a specific time for each structure, system or component to perform its safety function under a design basis event, the Applicant has specified a duration of one year. This time duration is conservative and envelopes the required operating times.

In some cases, where one year qualification may be impractical, the detailed equipment environmental test results, which will be maintained as indicated in our response to Interrogatory 1(I.A.2), will state the time required to perform its safety function, will identify the basis for this time and will show qualification. To date, we have not identified any equipment that cannot be qualified for one year.

Objection:

The Applicants object to, and move for a protective order as to, part (a) of this question, on the grounds: (1) that it calls for a pure and abstract opinion of law from Applicants counsel, whereas NECNP has its own counsel upon whom it can call for legal opinions, and (2), as phrased the question makes no sense, since if one assumes Fact X to exist, then one has already passed beyond the question of burden of proof as to Fact X.

Production of Documents

The Applicants are unable to identify any documents for which production has been requested.

Signatures

As to Answers:

I, Wendell P. Johnson, being first duly sworn, do depose and say that the foregoing answers are true, expect insofar as they are based on information that is available to the Applicants but not within my personal knowledge, as to which I, based on such information, believe them to be true.

Wendell P. Johnson

Sworn to before me this
17th day of December, 1982:

Notary Public
My Commission expires: September 7, 1984

As to Objections:

Thomas G. Dignan, Jr.
R. K. Gad III
Ropes & Gray
225 Franklin Street
Boston, Massachusetts 02110
Telephone: 423-6100

CERTIFICATE OF SERVICE

I, Robert K. Gad III, one of the attorneys for the Applicants herein, hereby certify that on December 17, 1982 I made service of the within "Applicants' Answers to 'NECNP Second Set of Interrogatories and Request for the Production of Documents to Applicants on Contentions I.A.2, 1.B.1, 1.B.2, and 1.C' and Motion for Protective Order" by mailing copies thereof, postage prepaid, to:

Helen Hoyt, Chairperson
Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dr. Emmeth A. Luebke
Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dr. Jerry Harbour
Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Atomic Safety and Licensing Appeal
Board Panel
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Philip Ahrens, Esquire
Assistant Attorney General
Department of the Attorney
General
Augusta, ME 04333

Rep. Beverly Hollingworth
Coastal Chamber of Commerce
209 Winnacunnet Road
Hampton, NH 03842

William S. Jordan, III, Esquire
Harmon & Weiss
1725 I Street, N.W.
Suite 506
Washington, DC 20006

E. Tupper Kinder, Esquire
Assistant Attorney General
Office of the Attorney General
208 State House Annex
Concord, NH 03301

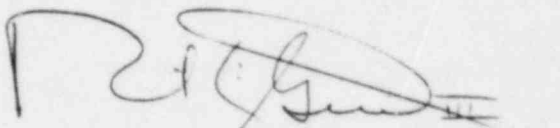
Roy P. Lessy, Jr., Esquire
Office of the Executive Legal
Director
U.S. Nuclear Regulatory
Commission
Washington, DC 20555

Robert A. Backus, Esquire
116 Lowell Street
P.O. Box 516
Manchester, NH 03105

Edward J. McDermott, Esquire
Sanders and McDermott
Professional Association
408 Lafayette Road
Hampton, NH 03842

David L. Lewis
Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory Commission
Rm. E/W-439
Washington, DC 20555

Jo Ann Shotwell, Esquire
Assistant Attorney General
Environmental Protection Bureau
Department of the Attorney General
One Ashburton Place, 19th Floor
Boston, MA 02108



Robert K. Gad III

COMMITTEE CORRESPONDENCE

MAY — copy J. McGowan
NANCY — to
R. E. Helfrich

SOCIETY/COMMITTEE: IEEE/NPEC/SC-2

ADDRESS CORRESPONDENCE TO:

S. K. Aggarwal
Electrical Engineering Branch
Division of Engineering Technology
Office of Nuclear Regulatory Research
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

SUBJECT: Final Rule - 10 CFR Part 50, Section 50.49

AGENDA ITEM:
FILE NO.:

DATE: APR 29 1982

TO: SC-2 Committee Members

Enclosed for your information and use is a copy of the final rule, Section 50.49 of 10 CFR Part 50, "Environmental Qualification of Electric Equipment for Nuclear Power Plants." Also enclosed is a copy of the resolution of public comments pertaining to the rule.

As stated in the San Francisco meeting, NRC staff will meet with the ACRS Subcommittee on "Qualification Program for Safety-Related Equipment" on May 5 and with the full ACRS on May 7, 1982. A copy of the Federal Register notice (47 FR 17698) is enclosed for your information.

Sincerely,

S K Aggarwal

S. K. Aggarwal, Member
IEEE/NPEC/SC-2

Enclosures: As stated

NRC FORM 158
(10-75)
GPO 916-707

For the Nuclear Regulatory Commission.

B. J. Youngblood,

Chief, Licensing Branch No. 1, Division of Licensing.

[FR Doc. 82-11239 Filed 4-23-82; 8:45 am]

BILLING CODE 7590-01-M

[Docket Nos. 50-445; 50-446]

Texas Utilities Generating Co., et al., (Comanche Peak Steam Electric Station, Units 1 and 2), (Application for Operation License); Continuation of Evidentiary Hearing

April 19, 1982.

Please take notice that a continuation of an evidentiary hearing will be held in this operating license proceeding before an Atomic Safety and Licensing Board (Board), pursuant to the Atomic Energy Act of 1954 as amended (the Act), and the regulations in Title 10, Code of Federal Regulations (CFR), Part 50, "Licensing of Production and Utilization Facilities," Part 51, "Licensing and Regulatory Policy and Procedures for Environmental Protection," and Part 2, "Rules of Practice." The prior portion of the evidentiary hearing was held December 2, 1981.

This continuation of the evidentiary hearing will commence on June 7, 1982, at 9:00 a.m., local time,[1] at the Fort Worth Hilton Hotel, located at 1701 Commerce Street, Fort Worth, Texas 76101 and will continue until completion of taking evidence on the issues and contentions described hereafter. This evidentiary hearing will address the matters in controversy resulting from Contention 5 (QA/QC), and from Board Questions 1 and 3, if necessary.

A final prehearing conference, pursuant to 10 CFR 2.752, will be held at the same location immediately prior to the resumed evidentiary hearing.

On February 5, 1979, the Nuclear Regulatory Commission (NRC) issued a notice in the **Federal Register** of the "Availability of Applicants' Environmental Report, Consideration of Issuance of Facility Operating Licenses, and Opportunity for Hearing" for Comanche Peak (44 FR 8995). The notice stated that a petition for leave to intervene must be filed by March 5, 1979. Timely petitions were received from the State of Texas for participation as an interested state under 10 CFR 2.715(c), and from Citizens Association for Sound Energy (CASE), Citizens for Fair Utility Regulation (CFUR) and the Texas Association of Community Organizations for Reform Now/West Texas Legal Services (ACORN).

By its Order Relative to Standing of Petitioners to Intervene, entered June 27, 1979, the Board admitted these petitioners as intervenors in this proceeding. Subsequently, ACORN's motion for its voluntary dismissal as a party was granted by Memorandum and Order entered July 24, 1981. CFUR's motion for withdrawal as a party was granted by an April 2, 1982 Order.

Any person who wishes to make an oral or written statement in this proceeding but who has not filed a petition for leave to intervene, may request permission in writing to make a limited appearance pursuant to the provisions of 10 CFR § 2.715 of the Commission's Rules of Practice. Limited appearances will be permited in this proceeding at the discretion of the Board, but at times, within such limits and on such conditions as may be determined by the Board. Persons desiring to make a limited appearance are requested to inform in writing the Secretary of the Commission, United States Nuclear Regulatory Commission, Washington, D.C. 20555, not later than May 24, 1982. A person permitted to make a limited appearance does not become a party, but may state his or her position and raise questions which he or she would like to have answered to the extent that the questions are within the scope of the hearing as specified above. A member of the public does not have the right to participate unless granted the right to intervene as a party or the right of limited appearance.

Written limited appearance statements may be submitted to the Board at any time prior to closing the record in this phase of the proceeding. Oral statements will only be received at times designated by the Board in order not to interfere with the taking of evidence in this adjudicatory proceeding. Oral limited appearance statements may be made on Tuesday, June 8, 1982, at 9:00 a.m., and at such other times as the Board shall specify. Both oral and written statements will be made a part of the official record of this proceeding.

It is so ordered.

Dated at Bethesda, Maryland, this 19th day of April 1982.

For the Atomic Safety and Licensing Board.

Marshall E. Miller,

Chairman, Administrative Judge.

[FR Doc. 82-11238 Filed 4-23-82; 8:45 am]

BILLING CODE 7590-01-M

[1] Please note that the time for commencement of this hearing has now been advanced to 9:00 a.m., although the Revised Schedule entered March 25, 1982, set the time for 1:00 p.m. on June 7.

Advisory Committee on Reactor Safeguards; Meeting

In accordance with the purposes of sections 29 and 182b. of the Atomic Energy Act (42 U.S.C. 2039, 2232 b.), the Advisory Committee on Reactor Safeguards will hold a meeting on May 6-8, 1982, in Room 1046, 1717 H Street, NW, Washington, DC. Notice of this meeting was published in the Federal Register on April 13, 1982.

The agenda for the subject meeting will be as follows:

Thursday, May 6, 1982

8:30 A.M.-8:45 A.M.: Opening Session (Open)—The Committee will hear and discuss the report of the ACRS Chairman regarding miscellaneous matters relating to ACRS activities.

8:45 A.M.-12:45 P.M.: Proposed NRC Quantitative Safety Goals (Open)—The Committee members will discuss a proposed ACRS report to the NRC regarding proposed quantitative safety goals to be used in the design, siting, construction, and operation of nuclear power plants.

1:45 P.M.-2:45 P.M.: Robert E. Ginna Nuclear Plant (Open)—The members will hear a briefing from the NRC Staff regarding steam generator tube repairs and restart of the Robert E. Ginna Nuclear Plant.

Portions of this session will be closed as necessary to discuss information the premature release of which would be likely to significantly frustrate the performance of the Committee's statutory function.

2:45 P.M.-6:30 P.M.: Wolf Creek Generating Station Unit 1 (Open)—The Committee members will hear and discuss the reports of its Subcommittee and consultants who may be present regarding the request of the Kansas Gas & Electric Company, et al. for a license to operate the Wolf Creek Generating Station Unit No. 1.

Portions of this session will be closed as necessary to discuss Proprietary Information applicable to this matter.

Friday, May 7, 1982

8:30 A.M.-9:30 A.M.: Proposed NRC Quantitative Safety Goals (Open)—The members will continue discussion of a proposed ACRS report to the NRC regarding quantitative safety goals.

9:30 A.M.-12:00 Noon: Emergency Response Capability in Nuclear Power Plants (Open)—The Committee will hear the report of its Subcommittee and consultants who may be present regarding proposed requirements for emergency facilities and response capability in nuclear power plants

(SECY 82-111, "Requirements for Emergency Response Capability," dated March 11, 1982).

Representatives of the NRC Staff will make presentations regarding this matter and respond to questions as appropriate.

1:00 P.M.–1:30 P.M.: ACRS Future Activities (Open)—The members will discuss the scope and scheduling of anticipated and proposed Subcommittee and full Committee activities.

1:30 P.M.–5:00 P.M.: Palisades Plant (Open)—The members will hear and discuss the report of its Subcommittee and consultants who may be present regarding the Systematic Evaluation and Integrated Plant Safety Assessment for this plant. Representatives of the NRC Staff, the licensee, and the nuclear industry as appropriate will make presentations and respond to questions.

Portions of this session will be closed as necessary to discuss Proprietary Information applicable to this matter.

5:00 P.M.–6:30 P.M.: Qualification Program for Safety Related Equipment (Open)—The members will hear and discuss the report of its subcommittee and consultants who may be present regarding the proposed NRC rule 10 CFR 50.49, Environmental Qualification of Electrical Equipment for Nuclear Power Plants.

Representatives of the NRC Staff and the nuclear industry will make presentations and respond to questions as appropriate.

Saturday, May 8, 1982

8:30 A.M.–12:30 P.M.: Preparation of ACRS Reports (Open)—The members will discuss proposed ACRS reports to the NRC regarding matters discussed during this meeting.

Portions of this session will be closed as necessary to discuss Proprietary Information, information which will be involved in an adjudicatory proceeding, and information the premature release of which would be likely to significantly frustrate the performance of the Committee's statutory function.

1:30 P.M.–2:15 P.M.: ACRS Subcommittee Reports (Open)—The members will hear and discuss the reports of designated subcommittees regarding the status of assigned activities including safeguards and security provisions at nuclear power plants and the methodology related to flooding potential at nuclear facilities.

2:15 P.M.–4:00 P.M.: Preparation of ACRS Reports (Open)—The members will complete discussion of proposed ACRS reports to the NRC regarding matters discussed during this meeting.

Procedures for the conduct of and participation in ACRS meetings were published in the Federal Register on September 30, 1981 (46 FR 47903). In accordance with these procedures, oral or written statements may be presented by members of the public, recordings will be permitted only during those portions of the meeting when a transcript is being kept, and questions may be asked only by members of the Committee, its consultants, and Staff. Persons desiring to make oral statements should notify the ACRS Executive Director as far in advance as practicable so that appropriate arrangements can be made to allow the necessary time during the meeting for such statements. Use of still, motion picture and television cameras during this meeting may be limited to selected portions of the meeting as determined by the Chairman. Information regarding the time to be set aside for this purpose may be obtained by a telephone call to the ACRS Executive Director (R. F. Fraley) prior to the meeting. In view of the possibility that the schedule for ACRS meetings may be adjusted by the Chairman as necessary to facilitate the conduct of the meeting, persons planning to attend should check with the ACRS Executive Director if such rescheduling would result in major inconvenience.

I have determined in accordance with subsection 10(d) Pub. L. 92-463 that it is necessary to close portions of this meeting as noted above to discuss Proprietary Information (5 U.S.C. 552b(c)(4)) applicable to the matters being discussed, information which will be involved in an adjudicatory proceeding (5 U.S.C. 552b(c)(10)), and preliminary information the release of which would be likely to significantly frustrate performance of the Committee's statutory function (5 U.S.C. 552b(c)(9)(B)).

Further information regarding topics to be discussed, whether the meeting has been cancelled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements and the time allotted can be obtained by a prepaid telephone call to the ACRS Executive Director, Mr. Raymond F. Fraley (telephone 202/634-3265), between 8:15 A.M. and 5:00 P.M. EST.

Dated: April 19, 1982.

John C. Hoyle,

Advisory Committee Management.

[FR Doc. 82-11232 Filed 4-23-82; 8:45 am]

BILLING CODE 7590-01-M

Advisory Committee on Reactor Safeguards, Subcommittee on Qualification Program for Safety Related Equipment; Meeting

The ACRS Subcommittee on Qualification Program for Safety Related Equipment will hold a meeting on May 5, 1982, Room 762, 1717 H Street, NW, Washington, DC. The Subcommittee will discuss the proposed final version of the rule 10 CFR 50.49, "Environmental Qualification of Electrical Equipment for Nuclear Power Plants", and time permitting proposed rulemaking for the accreditation of qualification testing organizations.

In accordance with the procedures outlined in the Federal Register on September 30, 1981 (46 FR 47903), oral or written statements may be presented by members of the public, recordings will be permitted only during those portions of the meeting when a transcript is being kept, and questions may be asked only by members of the Subcommittee, its consultants, and Staff. Persons desiring to make oral statements should notify the Designated Federal Employee as far in advance as practicable so that appropriate arrangements can be made to allow the necessary time during the meeting for such statements.

The entire meeting will be open to public attendance except for those sessions which will be closed to protect proprietary information (Sunshine Act Exemption 4). One or more closed sessions may be necessary to discuss such information. To the extent practicable, these closed sessions will be held so as to minimize inconvenience to members of the public in attendance.

The agenda for subject meeting shall be as follows: Wednesday, May 5, 1982—8:30 a.m. until the conclusion of business.

During the initial portion of the meeting, the Subcommittee, along with any of its consultants who may be present, may exchange preliminary views regarding matters to be considered during the balance of the meeting.

The Subcommittee will then hear presentations by and hold discussions with representatives of the NRC Staff, their consultants, and other interested persons regarding this review.

Further information regarding topics to be discussed, whether the meeting has been cancelled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements and the time allotted therefor can be obtained by a prepaid telephone call to the cognizant Designated Federal Employee, Dr. Richard Savio or Staff

Engineer, Mr. Anthony Cappucci (telephone 202–634–3267) between 8:15 a.m. and 5:00 p.m., EST.

I have determined, in accordance with subsection 10(d) of the Federal Advisory Committee Act, that it may be necessary to close portions of this meeting to public attendance to protect proprietary information. The authority for such closure is Exemption (4) to the Sunshine Act, 5 U.S.C. 552b(c)(4).

Dated: April 19, 1982.

John C. Hoyle,

Advisory Committee Management Officer.

[FR Doc. 82-11233 Filed 4-23-82; 8:45 am]

BILLING CODE 7590-01-M

Advisory Committee on Reactor Safeguards, Subcommittee on Reactor Radiological Effects; Meeting

The ACRS Subcommittee on the Reactor Radiological Effects will hold a meeting on May 14, 1982 in Room 1046, 1717 H Street, NW., Washington, DC. The Subcommittee and its consultants will hear and discuss with the NRC Staff and various industrial organizations, the topic of control room habitability. Notice of this meeting was published April 13.

In accordance with the procedures outlined in the **Federal Register** on September 30, 1981 (46 FR 47903), oral or written statements may be presented by members of the public, recordings will be permitted only during those portions of the meeting when a transcript is being kept, and questions may be asked only by members of the Subcommittee, its consultants, and Staff. Persons desiring to make oral statements should notify the Designated Federal Employee as far in advance as practicable so that appropriate arrangements can be made to allow the necessary time during the meeting for such statements.

The entire meeting will be open to public attendance.

The agenda for subject meeting shall be as follows: Friday, May 14, 1982—8:30 a.m. until the conclusion of business.

During the initial portion of the meeting, the Subcommittee, along with any of its consultants who may be present, will exchange preliminary views regarding matters to be considered during the balance of the meeting.

The Subcommittee will then hear presentations by and hold discussions with representatives of the NRC Staff, their consultants, and other interested persons regarding this review.

Further information regarding topics to be discussed, whether the meeting has been cancelled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements, and the time allotted therefor can be obtained by a prepaid telephone call to the cognizant Designated Federal Employee, Mr. Herman Alderman (telephone 202/634–1414) between 8:15 a.m. and 5:00 p.m., EST.

Dated: April 20, 1982.

John C. Hoyle,

Advisory Committee Management Officer.

[FR Doc. 82-11231 Filed 4-23-82; 8:45 am]

BILLING CODE 7590-01-M

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–18664; File No. SR–MSTC–82–6]

Effectiveness of a Proposed Rule Change by the Midwest Securities Trust Co.

April 19, 1982.

Midwest Securities Trust Company ("MSTC") submitted a proposed rule change on April 9, 1982, pursuant to Rule 19b–4 under the Securities Exchange Act of 1934, that enables MSTC to disburse to its participants cash dividends and bond interest payments on payment date rather than on the day after payment date, which was the previous practice.

The foregoing rule change has become effective pursuant to section 19(b)(3) (A) of the Securities Exchange Act of 1934 and Rule 19b–4 thereunder. At any time within sixty days of the filing of such proposed rule change, the Commission may summarily abrogate the rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Securities Exchange Act of 1934.

Publication of the submission is expected to be made in the **Federal Register** during the week of April 19, 1982. Interested persons are invited to submit written data, views and arguments concerning the submission on or before May 14, 1982. Persons desiring to make written submissions should file six copies thereof with the Secretary of the Commission, Securities and Exchange Commission, 500 North Capitol Street, Washington, D.C. 20549. Reference should be made to File No. SR–MSTC–82–6.

Copies of the submission, with accompanying exhibits, and of all written comments will be available for public inspection at the Securities and Exchange Commission's Public Reference Room, 1100 L Street, N.W., Washington, D.C. Copies of the filing will also be available at the principal office of the above-mentioned self-regulatory organization.

For the Commission by the Division of Market Regulation, pursuant to delegated authority.

George A. Fitzsimmons,

Secretary.

[FR Doc. 82-11230 Filed 4-23-82; 8:45 am]

BILLING CODE 8010-01-M

[Release No. 18663; File No. SR–MSTC–82–4]

Filing and Immediate Effectiveness of Proposed Rule Change by Midwest Securities Trust Co.

April 19, 1982.

Pursuant to section 19(b)(1) of the Securities Exchange Act of 1934 (the "Act"), 15 U.S.C. 78s(b)(1), notice is hereby given that on April 2, 1982, the Midwest Securities Trust Company ("MSTC") filed with the Securities and Exchange Commission the proposed rule change as described herein. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

The proposed rule change would allow MSTC, pursuant to MSTC Rule 6 section 7, to amend its Dividend Reinvestment Program and procedures (collectively, "DRP"). The proposed rule change restricts the number of shares eligible to participate in MSTC's DRP and prorates the number of shares credited to a participant's account as a result of dividend reinvestment only to those shares held in MSTC's nominee name, Kray & Co. This enables MSTC to offer dividend reinvestment services to its participants in the event that dividends of the issue involved are not similarly treated by other depositories. Absent this rule change, if MSTC's participants elect to reinvest the dividends on more shares of a particular securities issue than are being held by MSTC in its nominee name (*i.e.*, a portion of the participants shares are held in MSTC's interface account at another depository), MSTC, according to its DRP, would be compelled either to purchase shares on the open market (without the advantage of the issuer's discount generally provided upon reinvestment) or to suspend the DRP with respect to all participants so as to obviate the loss MSTC could incur by purchasing the shares on the open market. MSTC believes that the proposed rule change is consistent with

[7590-01]

ENCLOSURE 1

NUCLEAR REGULATORY COMMISSION

10 CFR Part 50

Environmental Qualification of Electric Equipment
for Nuclear Power Plants

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed Final Rule.

SUMMARY: The Nuclear Regulatory Commission is proposing to amending its regulations applicable to nuclear power plants to clarify and strengthen the criteria for environmental qualification of electric equipment. Specific qualification methods currently contained in national standards, regulatory guides, and certain NRC publications for equipment qualification have been given different interpretations and have not had the legal force of an agency regulation. This amendment will ~~The proposed rule would~~ codify these environmental qualification methods and clarify the Commission's requirements in this area.

EFFECTIVE DATE: [UPON publication in the Federal Register]

~~DATES: Comment period expires (60 days after publication in the FederalRegister); Comments received after ---------- will be considered if it is practical to do so; but assurance of consideration cannot be given except as to comments received on or before this date:~~

~~ADDRESSES: Written comments and suggestions may be mailed to the Secretary of the Commission; Attention: Docketing and Service Branch;~~

U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, or hand-delivered to the Commission's Public Document Room at 1717 H Street NW., Washington, D.C., between the hours of 8:30 a.m. and 4:45 p.m. on normal work days.

FOR FURTHER INFORMATION CONTACT: Satish K. Aggarwal, Office of Nuclear Regulatory Research, Electrical Engineering Branch, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Telephone (301)443-5946.

SUPPLEMENTARY INFORMATION: On January 20, 1982, NRC published in the Federal Register (47FR2876) for public comment a proposed rule on environmental qualification of electric equipment for nuclear power plants. This effective rule incorporates the resolution of public comments, which were received in response to the proposed rule. Nuclear power plant equipment important to safety must be able to perform the safety functions throughout its installed life. This requirement is embodied in General Design Criteria 1, 2, 4, and 23 of Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities"; in Criterion III, "Design Control," and Criterion XI, "Test Control," of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50; and in 10 CFR 50.55a(h), which incorporates by reference IEEE 279-1971,[1,2] "Criteria for Protection Systems for Nuclear Power Generating Stations." This requirement is applicable to equipment located inside as well as outside the containment.

[1]Incorporation by reference approved by the Director of the Office of Federal Register on January 1, 1981.

[2]Copies may be obtained from the Institute of Electrical and Electronics Engineers, Inc., 345 East 47th Street, New York, N.Y. 10017.

The NRC has used a variety of methods to ensure that these general requirements are met for electric equipment important to safety. Prior to 1971, qualification was based on the fact that the electric components were of high industrial quality. For nuclear plants licensed to operate after 1971, qualification was judged on the basis of IEEE 323-1971. For plants whose Safety Evaluation Reports were issued since July 1, 1974, the Commission has used Regulatory Guide 1.89, "Qualification of Class IE Equipment for Light-Water-Cooled Nuclear Power Plants," which endorses IEEE 323-1974,[2] "IEEE Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations," subject to supplementary provisions.

Currently, the Commission has underway a program to reevaluate the qualification of electric equipment important to safety in all operating nuclear power plants. As a part of this program, more definitive criteria for environmental qualification of electric equipment have been developed by the NRC. A document entitled "Guidelines for Evaluating Environmental Qualification of Class 1E Electrical Equipment in Operating Reactors" (DOR Guidelines) was issued in November 1979. In addition, the NRC has issued NUREG-0588, "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment," which contains two sets of criteria: the first for plants originally reviewed in accordance with IEEE 323-1971 and the second for plants reviewed in accordance with IEEE 323-1974.

By its Memorandum and Order CLI-80-21 dated May 23, 1980, the Commission directed the staff to proceed with a rulemaking on environmental qualification of safety-grade equipment and to address the question of backfit. The Commission also directed that the DOR Guidelines

and NUREG-0588 form the basis for the requirements licensees and applicants must meet until the rulemaking has been completed. This proposed rule is generally based on the requirements of the Division of Operating Reactors (DOR) Guidelines and NUREG-0588. Requalification of electric equipment in accordance with this rule will not be required for equipment qualified or being qualified in accordance with DOR Guidelines and IE Bulletin 79-01B or NUREG-0588, provided the qualification program has commenced prior to 90 days after the effective date of the rule.

~~The Commission's Memorandum and Order CLI-80-21 directed that the environmental qualification of electric equipment in operating nuclear power plants be completed by June 30, 1982. However, on September 23, 1981, the Commission considered the petition (SECY-81-486) to extend this deadline. The proposed rule covers the same electric equipment as CLI-80-21 and implements SECY-81-486 by incorporating the extension dates recommended by the Chairman in his memorandum dated September 30, 1981. Included in the proposed rule is a requirement that each holder of or each applicant for a license to operate a nuclear power plant identify and qualify the electric equipment needed to complete one path of achieving and maintaining a cold shutdown condition. The Commission specifically requests comment on this proposed additional requirement.~~

The scope of the proposed final rule does not include all electric equipment important to safety in its various gradations of importance. It includes that portion of equipment important to safety commonly referred to as "Class 1E" equipment in IEEE national standards and some additional

non-Class 1E equipment and systems whose failure under extreme environmental conditions could prevent the satisfactory accomplishment of safety functions by accident-mitigating equipment.

Included in the proposed final rule are specific technical requirements pertaining to (a) qualification parameters, (b) qualification methods, and (c) documentation. Qualification parameters include temperature, pressure, humidity, radiation, chemicals, and submergence. Qualification methods include (a) testing as the principal means of qualification and (b) analysis and operating experience in lieu of testing. The proposed rule would require that the qualification program include synergistic effects, aging, margins, radiation, and environmental conditions. Also, a record of qualification must be maintained. Revision 1 to Regulatory Guide 1.89 ~~is being revised to~~ will describe methods acceptable to the NRC for meeting the provisions of this proposed rule and to include a list of typical equipment covered by it; ~~a draft of the proposed revision is being published for public comment concurrently with the proposed rule.~~ to the Regulatory Guide will be issued after resolution of public comments.

~~Also included in the proposed rule is a requirement, which is consistent with Commission Memorandum and Order, CLI-80-21, for submission of an analysis by licensees to ensure that the plant can be safely operated pending completion of the environmental qualification of electric equipment. The Commission expects that, for each of the currently operating power plants, this analysis and its evaluation by the NRC staff will be completed well in advance of the effective date of this rule. If the licensees of operating power plants fail to provide these analyses in a timely manner, the Commission expects the NRC staff to take the appropriate steps to require that the information be provided and to enforce~~

compliance with this requirement. This requirement has been included in this proposed rule to provide a regulatory basis for enforcement.

NRC will generally not accept analysis alone in lieu of testing. Experience has shown that qualification of equipment without test data may not be adequate to demonstrate functional operability during design basis event conditions. Analysis may be acceptable if testing of the equipment is impractical because of size, or limitation due to the state of the art. The proposed rule takes into consideration the prior qualifion history of the operating power plants. For example, the proposed rule recognizes that for those plants which are not committed to either IEEE 323-1971 or IEEE 323-1974 for equipment qualification, and have been tested only for high temperature pressure, and steam, some equipment may not need to be tested again to include other service conditions such as radiation and chemical sprays. The qualification of equipment for these service conditions may be established by analysis.

The proposed rule would require that each holder of an operating license provide a list of electric equipment previously qualified based on testing or analysis, or a combination thereof, and a list of equipment that has not been qualified. These lists and the schedule for completion of equipment, qualification would have to be submitted written 90 days after the effective date of this rule. However, this time period will be adjusted during the final rule making process to allow reasonable time for licensees to evaluate NRC's safety reviews that are currently underway.

The proposed rule will codify the Commission's current requirements for the environmental qualification of electric equipment. Upon publication of a final rule, the DOR guidelines and NUREG-0588 will be withdrawn.

The general requirements for seismic and dynamic qualification for electric equipment are contained in the General Design Criteria. Pending development of specific requirements in this area, the general requirements will continue to apply. NRC is considering expansion of the scope of this rule to include additional electric equipment important to safety. This matter will be the subject of a future rulemaking.

Additional views of Commissioner Bradford: Commissioner Bradford believes that the proposed deadline (second refueling outage after March 31, 1982) for qualification is much too relaxed, given the fact that licensees and the NRC have been aware of the problems in this area since 1978. The proposed deadline extends as much as two and one-half years beyond the June 30, 1983 date by which the Atomic Industrial Forum concluded that nearly all electrical equipment could be qualified. Given the more generous deadline, he also believes that the rule should have contained requirements for seismic and dynamic qualification. While the general design criteria contain requirements in this area, clarification now would ensure that equipment to be replaced in the near term will not have to be ripped out in a few years because it was not properly seismically qualified.

Commissioner Gilinsky has agreed with these views.

COMMENTS ON THE PROPOSED RULE

The Commission received 69 letters from the public commenting on the proposed rule. Copies of those letters and an analysis of the public comments are available for public inspection and copying for a fee at the Commission's Public Document Room at 1717 H Street, NW, Washington, DC. Single copies of the analysis of the comments may be obtained, while

the limited supply is available, on written request to the Office of Administration, Document Management Branch, Washington, DC 20555

Multiple comments were received pertaining to the following technical issues:

(1) Inclusion of cold shutdown requirements

(2) Equipment operating in a mild environment

(3) Qualification efforts already undertaken and based on NRC/IE Bulletin 79-01B/DOR Guidelines and NUREG-0588

(4) Requirement of maintaining a central qualification file.

(5) Consideration of time-dependent variation of relative humidity

(6) Aging - "qualified life"

(7) Margins - Conservatism applied during the derivation of environmental parameters

(8) Acceptance of analysis in combination with partial test data restricted to equipment purchased prior to May 1980.

(9) Resubmittal of justification of continued operation for operating plants

(10) Exclusion of seismic and dynamic requirements - sequence testing on a single prototype

Based on the comments received, the following substantive changes have been incorporated into the final rule:

(1) The requirement to qualify equipment needed to complete one path of achieving and maintaining a cold shutdown condition, has been deleted.

(2) A new Section (f)(5) has been added, covering the qualification of equipment located in mild environments

(3) The statement of considerations has been expanded to recognize qualification efforts already undertaken by the industry, as follows: Requalification of electric equipment in accordance with this rule will not be required for equipment qualified or being qualified in accordance with DOR Guidelines and IE Bulletin 79-01B or NUREG-0588, provided the qualification program has commenced prior to 90 days after the effective date of the rule.

(4) The requirement to maintain a central qualification file has been deleted. A qualification file in an "auditable form" shall be maintained.

(5) The requirement on time-dependent variation of relative humidity has been deleted.

(6) The specific requirement in the area of aging, that ongoing qualification be exclusively done using "prototype equipment naturally aged", has been deleted.

(7) The section on margin has been clarified. [See Section (e)(8)]

(8) Reference to a date (May 23, 1980) for acceptance of analysis in combination with partial test data has been deleted.

(9) The requirement to submit justification for the continued operation of operating plants has been deleted, since this has already been satisfactorily accomplished.

Paperwork Reduction Act

The proposed final rule contains recordkeeping requirements that are subject to review by the Office of Management and Budget (OMB). As required by P.L. 96-511, this proposed rule ~~will be~~ was submitted to OMB for clearance of the recordkeeping requirements.

Regulatory Flexibility Statement

In accordance with the Regulatory Flexibility Act of 1980, 5 U.S.C. 605(b), the Commission hereby certifies that this rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. This proposed final rule affects the method of qualification of electric equipment by utilities. Utilities do not fall within the definition of a small business found in Section 3 of the Small Business Act, 15 U.S.C. 632. In addition, utilities are required by Commission's Memorandum and Order CLI-80-21, dated May 23, 1980, to meet the requirements contained in the DOR "Guidelines for Evaluating Environmental Qualification of Class 1E Electric Equipment in Operating Reactors," (November 1979) and NUREG-0588, "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment," which form the basis of this proposed rule. Consequently, this rule codifies existing requirements and imposes no new costs or obligations on utilities.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and section 553 of title 5 of the United States Code, notice is hereby given that adoption of the following amendment to 10 CFR Part 50 is contemplated.

10 CFR Part 50

1. The authority citation for 10 CFR Part 50 reads as follows: AUTHORITY: Secs. 103, 104, 161, 182, 183, 189, 68 Stat. 936, 937, 948, 953, 954, 955, 956, as amended (42 U.S.C. 2133, 2134, 2201, 2232, 2233, 2239); secs. 201, 202, 206, 88 Stat. 1243, 1244, 1246 (42 U.S.C., 5841, 5842, 5846), unless otherwise noted. Section 50.78 also issued under

Sec. 122, 68 Stat. 939 (42 U.S.C. 2152) Sections 50.80-50.81 also issued under Sec. 184, 68 Stat. 954, as amended; (42 U.S.C 2234). Sections 50.100-50.102 issued uder Sec. 186, 68 Stat. 955; (42 U.S.C. 2236). For Purposes of Sec. 223, 68 Stat. 958, as amended; (42 U.S.C. 2273), § 50.54 (i) issued under Sec. 161i, 68 Stat. 949; (42 U.S.C 2201(i)), §§ 50.70, 50.71 and 50.78 issued under Sec. 161o, 68 Stat. 950, as amended; (42 U.S.C. 2201(o)) and the Laws referred to in Appendices.

2. A new § 50.49 is added to read as follows:

§ 50.49 Environmental qualification of electric equipment for nuclear power plants.

(a) Requirements for seismic and dynamic qualification of electric equipment are not included in this section.

(b) Each holder of or each applicant for a license to operate a nuclear power plant shall establish a program for qualifying the electric equipment as defined in paragraph (c) of this section.

(c) Electric equipment and systems covered by this section include electric equipment and systems that are essential to emergency reactor shutdown, containment isolation, reactor core cooling, and containment and reactor heat removal or that are otherwise essential in preventing significant release of radioactive material to the environment. Included is equipment (1) that performs the above functions automatically, (2) that is used by the operator to perform these functions manually, and (3) whose failure can prevent the satisfactory accomplishment of one or more of the above safety functions. ~~Also-included-is-equipment-needed-to-complete one-path-of-achieving-and-maintaining-a-cold-shutdown-condition.~~

(d) The applicant or licensee shall prepare a list of all electric equipment covered by this section. ~~and-maintain-it-in-an-auditable-forms. This-list-of-equipment-must,-as-a-minimum,-include:~~ In addition, the following information for electric equipment except equipment located in a mild environment, i.e., an environment that would at no time be more severe than the environment that would occur during normal plant operation or during anticipated operational occurrences, shall be included in a qualification file:

(1) The performance specifications ~~and-structural-integrity-requirements~~ under conditions existing during normal and abnormal operation and during design basis events and afterwards. ~~and-the-lengths-of-the-periods during-which-the-integrity-must-be-maintained.~~

(2) ~~The-range-of~~ Voltage, frequency, load, and other electrical characteristics for which the performance specified in accordance with paragraph (d)(1) of this section can be ensured.

(3) The environmental conditions, including temperature, pressure, humidity, radiation, chemicals, and submergence, ~~and-the-predicted-variations-of-these-environmental-conditions-with-time~~ at the location where the equipment must perform as specified in accordance with paragraphs (d)(1) and (2) of this section.

(e) The electrical equipment qualification program must include the following:

(1) Temperature and Pressure. The time-dependent temperature and pressure at the location of the equipment must be established for the most ~~limiting~~ severe of the applicable ~~postulated-accidents~~ design basis events and must be used as the basis for the environmental qualification of electric equipment.

(2) Humidity. ~~Time-dependent variations of relative~~ Humidity during normal operation and design basis events must be considered.

(3) Chemical Effects. The composition of chemicals used must be at least as severe as that resulting from the most limiting mode of plant operation (e.g., containment spray, emergency core cooling, or recirculation from containment sump). If the composition of the chemical spray can be affected by equipment malfunctions, the most severe chemical spray environment that results from a single failure in the spray system must be assumed.

(4) Radiation. The radiation environment must be based on the type of radiation, the total dose ~~and dose rate of the radiation environment~~ expected during normal operation over the installed life of the equipment ~~plus~~ and the radiation environment, including dose-rate effects, associated with the most severe design basis event during or following which the equipment is required to remain functional, including the radiation resulting from recirculating fluids for equipment located near the recirculating lines.

(5) Aging. Equipment qualified by test must, practicable be preconditioned by natural or artificial (accelerated) aging to its installed end-of-life condition. ~~Electromechanical equipment must be operated to the mechanical wear and electrical degradation expected during its installed life.~~ Where preconditioning to a qualified life equal to the installed life is not possible, the equipment may be preconditioned to a shorter qualified life. The equipment must be replaced at the end of its qualified life unless ongoing qualification demonstrates of ~~prototype equipment naturally aged in plant service shows, by artificial aging and type testing~~ that the item has additional qualified life.

(6) Submergence (if subject to being submerged).

(7) Synergistic Effects. ~~The preconditioning and testing of equipment must consider known~~ Synergistic effects must be considered when these effects are known to have a significant effect on equipment performance.

(8) Margins. Margins must be applied to account for production variations and inaccuracies in test instruments. These margins are in addition to ~~margins applied during the derivation of the environmental conditions;~~ any conservatisms applied during the derivation of environmental condition unless these conservatisms can be quantified and shown to contain appropriate margin.

(f) Each item of electric equipment must be qualified by one of the following methods:

(1) Testing an identical item of equipment under identical conditions, or under similar conditions with a supporting analysis to show that the equipment to be qualified is acceptable.

(2) Testing a similar item of equipment with a supporting analysis to show that the equipment to be qualified is acceptable.

(3) Experience with identical or similar equipment under similar conditions with a supporting analysis to show that the equipment to be qualified is acceptable.

~~(4) Analysis in lieu of testing in the following cases:~~

~~(i) if type testing is precluded by the physical size of the equipment or by the state of the art.~~

(4) By Analysis in combination with partial type test data which supports the analytical assumptions and conclusions. ~~; if the equipment purchase order was executed prior to May 23, 1980;~~

(5) Design or purchase specifications, if the equipment is in a mild environment. The specification must contain a description of the functional requirements and the specific environments during normal and abnormal conditions and must be supported by a certificate of compliance based on test data and analysis.

OR

Or For equipment, purchased prior to the effective date of this rule, which is located in a mild environment, the qualification can be demonstrated by (a) a periodic maintenance, inspection, and/or replacement program, (b) a periodic testing programs, and (c) an equipment surveillance program.

(g) If an item of electric equipment is to be qualified by test -

(1) The acceptance criteria must be established prior to testing.

(2) The tests must be designed and conducted to demonstrate that the equipment can perform its required function as specified in accordance with paragraph (d)(1) of this section for all conditions as specified in accordance with paragraphs (d)(2) and (3) of this section. The test profile (e.g., pressure, temperature, radiation vs. time) must include margins as set forth in paragraph (e)(8) of this section.

(3) The test profile must be either (i) a single profile that envelops the environmental conditions resulting from any design basis event during any mode of plant operation where the equipment must perform its safety functions (e.g., a profile that envelops the conditions

produced by the postulated spectrum of main steamline break (MSLB) and loss-of-coolant accidents (LOCA)) or (ii) separate profiles for each type of event (e.g., separate profiles for the MSLB accidents and for LOCAs).

(4) The same piece of equipment must be used throughout the complete test sequence under any given profile.

(h) Each holder of an operating license issued prior to (insert the effective date of this amendment) must, by (insert a date 90 days after the effective date of this amendment), identify the electric equipment already qualified to the provisions of this rule and submit a schedule for the testing or replacement of the remaining electric equipment. This schedule must establish a goal of final environmental qualification by the end of the second refueling outage after March 31, 1982. The Director of Nuclear Reactor Regulation may grant requests for extensions of this deadline to a date no later than November 30, 1985, for specific pieces of equipment if such requests are filed on a timely basis and demonstrate good cause for the extension, such as procurement lead time, test complications, and installation problems. In exceptional cases, the Commission itself may consider and grant extensions beyond November 30, 1985 for completion of environmental qualification.

(i) Each licensee shall notify the Commission of any significant equipment qualification problem that may require extension of the completion date within 30 days of its discovery.

~~(j)--For-the-continued-operation-of-a-nuclear-plant,-each-holder-of an-operating-license-issued-prior-to-the-effective-date-of-this-rule-shall perform-an-analysis-to-ensure-that-the-plant-can-be-safely-operated-pending completion-of-the-environmental-qualification.--The-detailed-analysis-for each-equipment-type-with-appropriate-justification-must-be-submitted-to~~

~~Director of Nuclear Reactor Regulatory by (insert the effective date of the rule) and must include, where appropriate, consideration of:~~

~~(1) Accomplishing the safety function by some designated alternative equipment that has been adequately qualified and satisfies the single failure criterion if the principal equipment has not been demonstrated to be fully qualified;~~

~~(2) The validity of partial test data in support of the original qualification;~~

~~(3) Limited use of administrative controls over equipment that has not been demonstrated to be fully qualified;~~

~~(4) Completion of the safety function prior to exposure to the ensuing accident environment and the subsequent failure of the equipment does not degrade any safety function or mislead the operator;~~

~~(5) No significant degradation of any safety function or misleading of the operator as a result of failure of equipment under the accident environment;~~

~~(k)~~ (j) The applicant for an operating license that is granted on or after the effective date of this amendment, but prior to November 30, 1985, must perform an analysis to ensure that the plant can be safely operated pending completion of the environmental qualification. ~~in accordance with paragraph (j) of this section except that this analysis~~ This analysis must be submitted to the Director of Nuclear Reactor Regulation for consideration prior to the granting of an operating license and must include, where appropriate, consideration of:

(1) Accomplishing the safety function by some designated alternate equipment if the principal equipment has not been demonstrated to be fully qualified.

(2) The validity of partial test data in support of the original qualification.

(3) Limited use of administrative controls over equipment that has not been demonstrated to be fully qualified.

(4) Completion of the safety function prior to exposure to the ensuing accident environment and the subsequent failure of the equipment does not degrade any safety function or mislead the operator.

(5) No significant degradation of any safety function or misleading of the operator as a result of failure of equipment under the accident environment.

~~(f)~~ (k) A record of the qualification including documentation in paragraph (d) of this section must be maintained in ~~a central file~~ an auditable form to permit verification that each item of electric equipment covered by this section (1) is qualified for its application and

(2) meets its specified performance requirements when it is subjected to the conditions predicted to be present when it must perform its safety function up to the end of its qualified life.

Dated at _____ this _____ day of _____, 1982.

For the Nuclear Regulatory Commission.

_____
Samuel J. Chilk
Secretary of the Commission

ENCLOSURE 2

ANALYSES OF PUBLIC COMMENTS
ON 10 CFR 50.49 (47FR2876, Jan. 20, 1982)

1. Seismic Requirements:

A. Comment: Seismic and dynamic qualifications are an integral part of environmental qualification, it is therefore inappropriate to codify environmental qualification first and then to codify seismic qualification separately at a later date.

Response: Electric equipment at operating nuclear power plants was generally qualified for environmental and seismic stresses separately; i.e., by using separate prototypes for environmental and seismic qualification tests.

The proposed Regulatory Guide 1.89 (Feb. 1982) specifies "single prototype" testing (sequence testing) as an acceptable method for qualifying electric equipment. The implementation section of this guide will include NTOL's and future plants, and will not extend to operating plants. Thus, any seismic qualification testing of equipment in operating plants that may be required by future rulemaking will not require retesting for environmental stresses.

Also refer to resolution of comment 1C.

B. Comment: The proposed rule has introduced a new term, "dynamic qualification" without definition.

Response: "Dynamic Qualification" is outside the scope of this rulemaking. Therefore, no specific definition is required at this time. The term will be specifically defined as part of the future rulemaking.

C. Comment: In the absence of seismic requirements in Section 50.49, equipment which may be replaced in the near term may have to be ripped out if it fails to meet the backfitting requirements, if any.

Response: Replacement parts are not specifically covered by this rule. However, the guidance on replacement parts currently in the proposed Regulatory Guide 1.89 will be revised in response to the above comment. The revision will be to the effect that for plants operating prior to the effective date of the final rule, replacement parts which have been environmentally and seismically qualified by the use of separate prototypes prior to the effective date of this rule will not require "ripping out" simply because a single prototype was not used.

D. Comment: It is appropriate that seismic and dynamic qualification requirements should not be included in Section 50.49. It must, however, be stated that qualification to IEEE 344-1975 is one acceptable method for seismic qualification.

Response: Regulatory Guide 1.100 already endorses IEEE 344-1975 in this area.

2. Establish Qualification Programs

A. Comment: The rule should recognize previous submittals pursuant to the DOR Guidelines and NUREG-0588.

Response: The statement of consideration in the final rule has been expanded to recognize the abovementioned concern as follows: For equipment qualified in accordance with DOR Guidelines and IE Bulletin 79-01B or NUREG-0588 prior to 90 days after the effective date of the rule, requalification in accordance with this rule will not be required.

3. Scope of the Rule

A. Comment: This section seems to be much greater in scope as compared to NRC interim requirements.

Response: This statement is not correct. The rule covers the Class 1E systems and equipment and some additional non-Class 1E equipment, for example, certain post-accident monitoring equipment. The very nature of this equipment requires qualification.

B. Comment: The scope of the proposed rule should be limited to Class 1E or safety related equipment.

Response: By using terms "Class 1E" or "safety related," the scope of Section 50.49 will exclude certain post-accident monitoring equipment and other equipment (e.g., associated circuits) which are of sufficient importance to be included in the scope.

C. Comment: The scope should be reworded (47FR2878, Col. 2, Line 3) as: "... shutdown, maintain the integrity of the reactor coolant pressure boundary, containment isolation..."

Response: The language for the scope of the rule has been extracted in part from "Class 1E" definition in IEEE 323-1974. The meaning of this terminology has been in place for past eight years and is well understood. The staff believes that the safety functions included in the final rule provide adequate protection to public safety.

D. Comment: The proposed rule introduces a new requirement to qualify "equipment needed to complete one path of achieving and maintaining a cold shutdown condition" and this modifies the licensing basis for the majority of operating nuclear power plants. A change of this magnitude, at this advanced stage of industry's qualification effort, most certainly introduces significant new costs and obligations with no demonstrated improvement in safety.

Response: This requirement has been delected. The staff requires qualification of all safe shutdown equipment consistent with the power plants' licensing bases. Consistent with draft Regulatory Guide 1.139,

the requlatory position is that, for power plants where the applications for construction permits were docketed on or after January 1, 1978, the design should be such that the reactor can be taken from normal operating conditions to cold shutdown using only safety grade systems that satisfy General Design Criteria 1 to 5.

As long as the equipment and systems needed for cold shutdown are designed to safety grade criteria, the qualification of such systems is covered by the Section 50.49.

E. Comment: The scope includes, "... systems that should be qualified, those systems that could fail in such a way that would make a safety system unable to perform its function." The wording could also imply that qualification encompass systems that could mislead the operator to the extent that the required safety functions would not be accomplished. Qualification of non-safety instrumentation should not be required where such instrumentation is not the primary source of data used by the operator in controlling events.

Response: The interpretation is correct.

4. List of Equipment Covered by Rule

A. Comment: There is no distinction made between equipment located in a harsh or mild environment.

Response: The proposed rule will be modified to include the requirements for equipment located in a mild environment. Further guidance

for demonstration of qualification of equipment in mild environment will be included in Regulatory Guide 1.89.

B. Comment: Lists of equipment which have been compiled in response to NRC bulletins and letters should be used instead of requiring generation of a new list in another data format. An alternative could be to identify on existing lists the equipment covered by this rule, and to reference other licensing documents, such as FSARs, design calculations, and equipment specifications, where additional information is available.

Response: It has been the experience of the staff that simply referencing other licensing documents as referenced in the above-mentioned comment can result in uncoordinated and incomplete reviews of the qualification status of equipment. For this reason, a separate list of equipment covered by this rule is required.

See also resolution of comment 2A.

C. Comment: Equipment located in a mild environment should be excluded from the proposed rule since the NRC has indicated that qualification requirements for this equipment would be less stringent than for those in harsh environments.

Response: See resolution of comment 4A.

5. Performance Characteristics

A. Comment: Environmental qualification should not be limited to design basis events, but should consider Class IX accidents. Also, the rule omits the serious risk of internal missiles from pumps, valves, and burst pipes to electrical wiring and equipment.

Resolution: Severe accidents (Class IX accidents) are being considered in other rulemakings. Environmental qualification does not include consideration of missiles. Protection against missiles must be provided in order to satisfy the requirements of GDC 4.

B. Comment: Structural integrity requirements should be deleted from the rule.

Resolution: Staff agrees.

C. Comment: The terms "performance characteristics" and "structural integrity" are open to diverse interpretations. Suggestions have been made to use the terms "safety functional requirement," performance "specifications" or "the safety related functions" in place of "performance characteristics."

Resolution: With regard to structural integrity, see resolution of comment 4.B. The term "performance characteristic" has been changed to "performance specifications".

D. Comment: The proposed requirement of paragraph (d)(1) is redundant, unnecessary, and arbitary since equipment technical specifications contain design criteria and requirements for safety equipment which is sufficient.

Resolution: See resolution of comment 4.B.

E. Comment: The required list of equipment should not include performance characteristics. This will lead to recording of extraneous information, diluting the importance of safety related parameters information.

Resolution: Performance characteristics are not extraneous information.

6. Electrical Characteristics

A. Comment: Change "can" to "must" on last line of paragraph (d)(2).

Response: The use of word "can" is appropriate; since the requirement in Section (d)(1) only pertains to listing of performance characteristics of the equipment.

B. Comment: Requiring the "range" to be qualified is overly restrictive, unnecessary, and will have a large cost impact on testing.

Response: Staff agrees.

C. Comment: Delete paragraph (d)(2).

Response: See resolution of the comment 6.8.

D. Comment: Testing conducted in the past typically did not consider all possible electrical conditions. Therefore, the requirements of paragraph (d)(2) should be removed from the proposed rule at least for equipment previously evaluated to the DOR Guidelines or NUREG-0588, Category II.

Response: See resolution of comment 2.A.

7. Environmental Conditions

A. Comment: The term "where applicable" needs to be added after the list of environmental parameters in paragraph (d)(3).

Response: Paragraph (d)(3) states that the environmental conditions apply to the location where the equipment must perform. The staff recognizes that all the environmental parameters listed are not applicable at all equipment locations.

B. Comment: The term "chemical" is too broad and should either be defined or specific chemicals named.

Response: Clarification regarding qualification for chemical spray environments is given in paragraph (e)(3) of this section. Additional guidance is provided by Regulatory Guide 1.89.

C. Comment: Predicted variations in environmental conditions are not necessary if extreme conditions are identified and used in the qualification program.

Response: Extreme environmental conditions cannot be identified for some parameters, e.g., temperature and pressure, until their time-dependent variations have been predicted.

The proposed rule does not state that the use of identified extreme conditions, with appropriate margin, are unacceptable.

Also see staff response to comment 7.E.

D. Comment: It is suggested that paragraph (d)(3) be supplemented with the following: "These environmental conditions may be determined using realistic inputs."

Response: The bases for determination of environmental conditions must be justifiable. Guidance concerning the determination of environmental conditions is provided in Regulatory Guide 1.89.

E. Comment: It is recommended that paragraph (d)(3) be deleted because of the phrase "the predicted variations of..."

Response: The requirement of paragraph (d)(1) concerning the predicted variations of environmental conditions with time has been deleted. Requirements in this area are specified for the individual environmental parameters elsewhere in this section.

8. Temperature and Pressure

A. Comment: The phrase "most limiting" needs clarification.

Response: For clarity, the phrase "most limiting" is changed to "most severe."

B. Comment: For consisting, "design basis events" should be used in paragraph (e)(1) rather than "postulated accidents."

Response: Staff agrees.

9. Humidity

A. Comment: The effects of time dependent variations of relative humidity during normal operation cannot be considered for all equipment. There are no detailed standards for how this type of testing should be performed.

Response: Staff agrees. The rule has been modified accordingly.

10. Chemical Effects

A. Comment: Since corrosion effects of various chemical components are generally well known, this paragraph should provide latitude to allow analysis that justifies using different chemical spray constituents or less severe concentrations than specified by plant environmental requirements.

Response: Analysis is acceptable if adequately justified.

11. Radiation

A. Comment: In general, the aging and accident radiation cannot be combined, i.e., the word "plus" is misleading or incorrect since it implies integrated effects.

Response: Staff agrees. The word "plus" has been changed to "and."

B. Comment: The requirement that the dose rate be as in the power plant is totally impractical. The normal operation dose occurs over a 35 to 40 year period. Obviously dose rate acceleration must be permitted.

Response: The rule states that the radiation environment must be based on the dose rate, and not that the actual dose rate be used during testing. The intent is that any non-conservatisms used resulting from using a higher than normal dose rate during testing must be taken into account.

12. Aging

A. Comment: The requirement that on-going qualifications be done using "prototype equipment naturally aged" is overly restrictive and is not in harmony with (f). There are other, equally acceptable methods of extending qualified life and it is not appropriate to single out just one of them.

Response: Staff agrees. The rule has been modified.

B. Comment: The specific inclusion of aging requirents for electro-mechanical equipment is inappropriate in the rulemaking. Such details should be included in the revision to R.G. 1.89.

Response: Staff agrees. Reference to "electromechanical equipment" has been deleted from the rule.

Comment: Use of accelerated aging to define a qualified life is not technically feasible.

Response: Based upon research, the staff believes that precondition-ing by accelerated aging is technically feasible for both simple and complex electric equipment for shorter specified qualified life and that it is technically feasible for simple systems for full lifetime testing. Staff recognizes that state-of-the-art technology will be utilized in any aging program. R.G. 1.89 will be revised from time to time to reflect the state-of-the-art.

13. Synergistic Effects

A. Comment: "known synergistic effects...." must be considered. NRC should be more specific.

Response: The word "known" has been deleted from the rule.

14. Margins

A. Comment: The proposed rule states that margins are used to account for inaccuracies in test instruments. Test instrument inaccuracies are a QA problem associated with required calibration programs and should not be encompassed under margins.

Response: The staff disagrees. The test instruments errors must be accounted for.

B. Comment: The margins applied in addition to known conservatisms lead to excessive stress which could lead to failures of equipment in unrealistic qualification tests.

Response: Staff agrees. Paragraph on margin has been accordingly modified.

15. Methods of Qualification

A. Comment: Qualification by analysis should not be allowed.

Response: Analysis alone is generally inadequate to demonstrate qualification and type testing is the preferred qualification method. Although some analysis may be used, as identified in the rule, that analysis should be limited to extrapolations of data or to analyzing similarities in equipment or materials. In any case, analytical assumptions should be verifiable or supported by test data.

16. Testing of Similar Items and Analysis

A. Comment: Paragraph (f)(2) should state that it is acceptable to test a similar item of equipment under similar conditions with a supporting analysis that shows the equipment to be qualified is acceptable.

Response: The staff disagrees. The intent of paragraph (f)(2) is to cover both "similar" and "identical" environments.

17. Experience and Analysis

A. Comment: Experience has proven to be of very limited use in qualification because of the lack of supporting documentation. It is suggested, therefore, that the words "Adequately documented" be inserted at the beginning of paragraph (f)(3).

Response: All information used to demonstrate the qualification of equipment, including test results, analytical assumptions, and

experience with identical or similar equipment, must be adequately documented.

18. Analysis

A. Comment: Are subparagraphs (f)(4)(i) and (f)(4)(ii) independent?

Response: No. The rule has been modified.

19. Analysis and Partial Test Data

A. Comment: If partial type test data is available which adequately supports the analytical assumptions and conclusions, then analysis should be allowed to extrapolate or interpolate these results for equipment, regardless of purchase date.

Response: Staff agrees. The rule has been modified.

20. Prerequisites for Testing

A. Comment: This paragraph is written specifically for equipment employed for hostile environment applications and does not recognize alleviations appropriate for equipment located in mild environments.

Response: Environmental testing is not required for equipment located in mild environments.

B. Comment: Strict application of these requirements will negate testing already completely for earlier plants. The relief in must be included in the Reg. Guide 1.89.

Response: Requalification is not required for the electric equipment qualified in accordance with IE Bulletin 79-01B (DOR Guidelines) or NUREG-0588 prior to 90 days after the effective date of this rule.

C. Comment: Paragraph 50.49g should be deleted as it limits the options available for qualification testing.

Response: The staff does not believe that this paragraph should be deleted, since this section specifies the minimum testing criteria.

D. Comment: As written, this requirement applies to all equipment which has or will undergo qualification testing. This paragraph should not be applied to equipment which predated the requirements of IEEE 323-1974.

Response: See response to comment no. 2.B.

E. Comment: This paragraph should also make provisions for acceptance of testing that does not totally envelop all plant environmental conditions by supporting analysis.

Response: Section (f)(2) covers the similar conditions.

F. Comment: The detailed requirements for qualification by testing should not be contained in a rule, but should instead be discussed in Reg. Guide 1.89.

Response: Since testing is the principal means for qualification of electric equipment, the specified requirements are appropriate.

G. Comment: The first sentence should be changed to "If an item of electric equipment is to be qualified by test or analysis..."

Response: Staff disagrees. All of the requirements listed are not appropriate for analysis as a qualification method.

21. Acceptance Criteria

A. Comment: The requirement for acceptance criteria does not clearly say that they must be relevant. Acceptance criteria are application dependent.

Response: The staff disagrees that the acceptance criteria are necessarily plant dependent.

B. Comment: The establishment of acceptance criteria before testing should be deleted. "Failure" is often a plant specific consideration.

Response: The staff disagrees. Acceptance criteria, whether generic or specific, should be established prior to testing.

C. Comment: If the documentation in paragraphs d(1), (2), and (3) are established, a clear record that the equipment provides the performance required will have been established. Therefore, this requirement for acceptance criteria should be eliminated.

Response: Staff disagrees. The referenced paragraphs (d)(1), (d)(2), and (d)(3) refer to performance. Performance and acceptable criteria are not necessarily identical.

D. Comment: This paragraph precludes reevaluating test criteria following the actual test. When equipment does not meet the acceptance criteria, system redesign, reconfiguration, and analysis should be allowed in order to verify that the initial acceptance criteria were in fact valid.

Response: The rule specifies the methods for demonstrating successful qualification. Failures during testing due to faulty test equipment or invalid acceptance criteria are outside the scope of the rule.

22. Demonstration by Test

A. Comment: Delete reference to paragraphs (d)(1), (d)(2), and (d)(3) concerning characteristics, electrical characteristics and environmental conditions, respectively.

Response: See resolution of comment No. 21C.

B. Comment: Paragraph g(2) requires that a radiation dose rate exposure profile vs. time be established and enveloped by the qualification testing. Testing at qualification dose rates exceeding accident dose rates, and total exposures exceeding the accident and normal exposure, is a conservative approach.

Response: Reference to "dose rate" has been deleted. Margin of +10% for total dose, in accordance with IEEE 323-1974 is acceptable.

C. Comment: The radiation vs. time simulation requirement should be deleted from paragraph g(2).

Response: See resolution of comment No. 22B.

D. Comment: The radiation dose rate should be simulated to the best extent possible within the limitations of the test facility and measuring instruments.

Response: See resolution of comment No. 22B.

E. Comment: The rule should state that the accident radiation dose exposure with appropriate margin may be performed as a part of the preconditioning procedure. Also, margin need not be applied if the methods in Appendix D of NUREG-0588 have been employed.

Response: See resolution of comment No. 2A and comment No. 22B.

F. Comment: Many utilities have undergone expensive qualification testing to service conditions unique to their plant in accordance with IEEE 323-1971 and demonstrated compliance with previous NRC regulations. New increased margins should not be applied to these existing tests.

Response: See resolution of comment No. 2A.

23. Test Profile

A. Comment: The option presented in this paragraph is excessive in its limitations. The envelope should not be that which results from any design basis event during any mode of operation but rather the envelope that results during any mode of operation during which the subject equipment must perform its function.

Response: Staff agrees. For clarity the rule is modified to read, "...any mode of plant operation where the equipment must perform its safety functions(...)."

24. Single Prototype

A. Comment: Does this section apply to aging also? For example, could parts of a component be aged separately, then assembled, then tested as per g(3)?

Response: This is acceptable. However, the intent of section (g)(4) is that the test stresses; e.g., aging and radiation, are not shared among two or more pieces of equipment.

B. Comment: Paragraph 50.49 g(4) requires qualification by sequential test. Without direction on seismic and dynamic requirements, sequential tests cannot be done.

Response: See resolution of comments 1A and 1C.

C. Comment: This section may be interpreted as requiring MSLB and LOCA qualification tests of the same device. Testing to either is sufficient, provided that the limiting accident is identified.

Response: Testing to the most limiting condition is acceptable.

D. Comment: Allowance for justifications for deviations from using the same piece of equipment throughout a test sequence should be allowed. The present 50.49 g(4) conflicts with the proposed Revision 1 of Regulatory Guide 1.89.

Response: See resolution to comment 2A. No change in 50.49 g(4) is necessary.

25. Extension Date and Schedule Submission

A. Comment: The proposed rule's extended deadline for compliance with environmental criteria is unjustified and too liberal....

Response: In developing the position on the extension of the deadline for qualification of electric equipment, the NRC has considered information supplied by equipment vendors, utilities, test laboratories, consultants, and other interested parties. The amount of work, the availability of qualified personnel and equipment, and the impact on overall plant safety were factored into the Commission's decision to extend the deadline. Licensees have submitted information to the NRC showing that the plant can be safely operated pending completion of the required environmental qualification.

B. Comment: Mild environment equipment should be excluded from the schedule for equipment testing or replacement to be submitted to the NRC 90 days after the effective date of the rule.

Response: Staff agrees. See resolution of comment 4A.

C. Comment: Within 90 days of the effective date of the rule, a schedule for "testing or replacement" of unqualified equipment is to be provided to the NRC. The word "testing" should be replaced by "qualification."

Response: The staff disagrees. Although the word qualification could be substituted for testing, in accordance with Section f of 10 CFR 50.49 some form of testing is required for qualification. The intent of the Commission is that qualification by analysis alone will no longer be acceptable.

D. Comment: We assume the goal of final environmental qualification is for the second refueling outage starting after March 31, 1982.

Response: Staff agrees.

E. Comment: The requirement for "testing' of equipment identified in the submittal due 90 days after the publication of the final rule is inconsistent with 50.49f concerning qualification methods and with the proposed revision to Regulatory Guide 1.89 (Section C.5.9) regarding qualification in mild environments.

Response: Staff agrees. See resolution of comment 4A and 20A.

F. Comment: The rule should recognize that previous submittals to the NRC containing equipment identification and schedules for qualification are adequate for fulfilling the requirements in 50.49h.

Response: Prior submittals have not satisfied the requirements of Section 50.49h. For example, the schedule for qualification had never before been required.

G. Comment: The words "but prior to November 30, 1985" in 50.49h and 50.49k should be deleted. As currently written, no recourse is provided for plants receiving operating licenses after November 30, 1985.

Response: Plants licensed after November 30, 1985 will be required to be in compliance with this rule.

H. Comment: The requirement to submit a schedule for the testing or replacement of equipment is not warranted. The date for submitting a schedule for testing and replacement has no safety significance whatsoever.

Response: The achievement of full qualification by the November 30, 1985 deadline depends on the early identification of deficiencies and a commitment to a firm plan for systematic, corrective action.

I. Comment: The requirement for submission of schedules for qualification within 90 days of the rule should be revised to allow more time for mild environment equipment.

Response: See resolution of comment 4A.

J. Comment: The proposed rule appears to require a new round of submittals (90 day letters) covering information that has already been submitted to the NRC. A statement should be included to indicate that this requirement applies only to plants that did not submit a 90 day response.

Response: The date for completion of environmental qualification would be extended by Section 50.49, new schedules for completion of qualification must be submitted. Duplicate submittals are not required.

26. Significant Problem Notification

A. Comment: The schedule for notification of the Commission of any significant qualification problem within 30 days of its discovery should be separated from the technical requirements of the rule.

Response: Staff disagrees. The purpose of this requirement is to provide advance notice and basis for possible extensions.

B. Comment: We believe the requirements to notify the Commission of potential problems within 30 days of discovery may be too stringent, particularly if a scheduled completion date is six months or longer from the date of discovery of a potential problem that may require extension.

Response: The staff agrees. See resolution of comment 26.C

C. Comment: The notification period of 30 days to allow industry to evaluate minor qualification problems should be extended to 90 days. This would minimize the number of insignificant problems to be addressed by the Commission and industry.

Response: The staff agrees. The rule has been modified to extend time from "30" to "60" days.

27. Justification for Continued Operation

A. Comment: The proposed rule requires "analyses" to justify continued operation with unqualified equipment. These analyses are vague and insubstantial and will allow licensees to rationalize the use of unsafe equipment based on its behavior during normal operating conditions.

Response: This paragraph has been deleted from the final rule.

The licensees of the operating plants have justified the continued operation of nuclear power plants based on the criteria as stated in paragraph (j) of the proposed rule.

17.7 Comment: The submittal of justification for continued operation should be required 90 or 180 days after the effective date of this amendment, not on the effective date, to be consistent with the Supplementary Information section.

Response: See resolution of comment 27A.

C. Comment: The provisions of the rule concerning justification for continued operation should be deleted as this information has been previously submitted in response to IEB 79-01B.

Response: Staff agrees. See resolution of comment 27A.

28. Designated Alternative Single Failure Criterion/Partial Test Date

A. Comment: If redundant, qualified, "alternative" equipment is available to perform a safety function in lieu of unqualified equipment, then compliance with the regulation has already been achieved and the unqualified equipment may be exempted from the program. This requirement should be deleted.

Response: The staff disagrees. Terms "alternative" (or alternate) and "principal equipment" are used in the context of section 4.7.4.1 of IEEE 279-1971. Specifically, the alternate and principal equipment is mutually diverse (to protect against common mode failures.) However, each set of equipment separately should meet the provisions of IEEE 279-1971. In this rule, the terms are not restricted to equipment in the protection systems.

B. Comment: The requirement for satisfaction of the single failure criterion for justification for continued operation is overly restrictive. If this requirement were met, no justification for interim operation would be needed.

Response: Staff agrees. The rule has been modified.

C. The phrase "and satisfies the single failure criterion" is unclear as used in this section. Also define the term "adequately qualified."

Response: The word "adequately" has been deleted. See resolution of comments 28A and 28B.

D. Comment: If there is designated alternative equipment which is qualified and satisfies the single failure criterion, the principal equipment need not be classified as safety related and hence need not be qualified.

Response: See resolution of comment 28A.

E. Comment: The new rule states that partial test data may be used as justification for continued operation. Both this rule and the current requirements recognize that analysis and partial test data, appropriately applied, constitute qualification.

Response: Partial type test data and analysis, appropriately applied to envelop the predicted environmental conditions, are sufficient for qualification. Where the test data are insufficient to demonstrate full qualification, partial test data may be utilized to justify continued operation.

29. Completion of Safety Function

A. Comment: The proposed rule states that justification for continued operation may be determined if equipment performs its safety function prior to exposure to the accident environment, and subsequent equip-

ment failures do not degrade the safety functions or mislead the operator. This should be sufficient for full qualification.

Response: A demonstration with appropriate margins that equipment fulfills the above requirements can constitute full qualification.

B. Comment: The evaluation of whether the failure of a single piece of equipment will, of itself, mislead the operator is subject to interpretation and engineering judgement. Because redundant equipment would be available, the justification for interim operation should not consider the aspect of unqualified instrumentation misleading the operator.

Response: Licensees should examine on a case-by-case basis the impact of equipment failures on operator actions.

The licensees should decide whether the erroneous information subsequent to accomplishment of protection systems can mislead the operator.

30. Significant Degradation

A. Comment: One of the considerations for justification for continued operation is the occurrence of no significant degradation of a safety function or misleading of the operator as a result of failure of equipment under the accident environment. Assurance of the above should comply with the Commission's intent in the rulemaking process.

Response: This section applies to relatively new power plants and assumes that the majority of the equipment already is fully qualified prior to issuance of an operating license. This provision is intended to justify operation where alternate qualified equipment can compensate for the potential malfunction of relatively items which may not be "fully" qualified.

31. JCO for NTOLs

A. Comment: The provision allowing applicants for new licenses (to be granted on or after the effective date of the amendment and prior to November 30, 1985) to submit "analyses" in lieu of test results to demonstrate environmental qualification should not be permitted. Licensees have been under directives to document the qualification of safety equipment since 1977.

Response: See resolution of comment 30A.

B. Comment: Previous submittals by NTOLs pursuant to NUREG-0588 which contain justification for operation should be acknowledged.

Response: This rule does not require duplicate submittals.

32. Requirement of a Central File

A. Comment: the requirement to maintain a record identifying that the equipment meets its specific performance requirement exceeds the

verification necessary to establish the performance of safety function.

Response: The qualification test by nature is limited to verifying the performance characteristics, and not the actual safety function performed by the equipment; e.g., cooldown of a core.

B. Comment: the requirement for a central file should be for equipment located and potentially subject to a harsh environment only.

Response: The extent of the documentation required for mild environment equipment will be addressed in Regulatory Guide 1.89.

C. Comment: The requirement for a central file should be deleted because some records may be kept in the utility general file.

Response: This paragraph has been revised to require that auditable files permitting verification of qualifications be available.

D. Comment: The terms "application" and "specific performance requirements" should be changed to state that safety functions will be performed when subjected to the conditions predicted.

Response: See resolution of comment 32A.

E. Comment: we suggest that it may be difficult, if not impossible, to obtain the record of qualification required, particularly for equip-

ment in older plants, and we suggest that for equipment that has significant successful operating experience this record should not be necessary.

Response: The requirements of section (f) (3) must be met.

F. Comment: The contents of the central file may vary considerably depending on whether the file is a record of qualification to the harsh or mild environment. Recognition of content requirements by reference to any proposed regulatory guide would be appropriate.

Response: See resolution of comment 32B.

G. Comment: Qualification central file information should include equipment in a harsh environment only and should only support the equipment's ability to perform its safety function.

Response: See resolution of comments 32A & 32B.

H. Comment: Please clarify as to exactly where the licensee shall maintain qualification records, particularly with respect to files which are proprietary to the NSSS vendor.

Response: Qualification files must be maintained in an auditable form, under the control of licensee.

33. Supplementary Information

A. Comment: The term "important to safety" should be replaced by Class IE throughout this rule.

Response: Staff disagrees. See resolution to comment 3B.

B. Comment: The term "safety-related" should be used in place of "important to safety."

Response: The applicable equipment covered by this rule is specified in 50.49c. Expansion of the scope of this rule to include additional equipment important to safety will be subject of a future rulemaking.

C. Comment: The scope of the proposed rule should include all electric equipment "important to safety" since that is the same as "safety-related" or "safety-grade" equipment.

Response: Equipment "important to safety" includes "safety-related" and other equipment. The scope of the rule includes equipment designated in "Class 1E" and some additional non-Class IE equipment. The staff believes that, for electric equipment, "Class 1E" is the same as "safety-related."

See also the staff resolution of comments 3C and 33B.

34. Qualification History

A. Comment: It should be noted that prior to 1971 qualification of electric and electronic equipment was based on [the] use of good engineering practices which included conservative application and design, high quality equipment, and some environmental testing.

Response: Staff agrees. Additional details are inappropriate in the final rule.

35. Rule Basis Current Requirements

A. Comment: The proposed rule is primarily based on NUREG 0588 Category I. Therefore, it is appropriate that this rule clarifies and recognizes the fact that equipment evaluated in accordance in accordance with [the] DOE guidelines and NUREG 0588 Category II are considered to satisfy the requirements of this rule.

Response: See resolution of comment 2A.

B. Comment: The Federal Register notice states that this rule codifies existing requirements and imposes no new costs or obligations on utilities. We take strong exception to this statement.

Response: The new rule will codify the current requirements in the DOR Guidelines, IE Bulletin 70-018 and NUREG 0588.

C. Comment: The rule does not recognize that operating plants have just completed qualification of equipment to the DOR Guidelines or NUREG 0588 Category II.

Response: See resolution of comment 2A.

D. Comment: The statement made in the Supplementary Information Section should also state that the requirements of IE Bulletin 70-01B are being codified.

Response: See resolution to comment 2A.

36. Replacment Parts

A. Comment: The rule does not address replacement parts.

Response: Guidance concerning replacement parts will be included in Regulatory Guide 1.89.