

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of

DAIRYLAND POWER COOPERATIVE
(La Crosse Boiling Water Reactor)

)
)
)
)

Docket No. 50-409-SC
(Order to Show Cause)

NRC STAFF'S BRIEF ON THE CERTIFIED QUESTION

October 24, 1980

Stephen G. Burns
Karen D. Cyr
Counsel for NRC Staff

8010280590 G

TABLE OF CONTENTS

Table of Citations

NRC STAFF'S BRIEF ON THE CERTIFIED QUESTION.....	1
I. PROCEDURAL SETTING.....	1
II. CONSIDERATION OF SEISMIC HAZARD AT THE LA CROSSE SITE IS WITHIN THE BOARD'S AUTHORITY AS PART OF ITS DETERMINATION AS TO WHETHER A SITE DEMATERING SYSTEM IS NECESSARY.....	4
III. IF CONSIDERATION OF SEISMIC HAZARD IS BEYOND THE BOARD'S AUTHORITY, THEN THE MATTER SHOULD BE CERTIFIED TO THE COMMISSION WITH A RECOMMENDA- TION THAT THE BOARD'S AUTHORITY BE EXPANDED.....	11
IV. CONCLUSION.....	13
Enclosure: Letter from D. Eisenhut (NRR) to F. Linder (DPC) (Aug. 4, 1980).....	follows p. 13

TABLE OF CITATIONS

<u>Record in the La Crosse "Show Cause" Proceeding</u>	<u>Page</u>
Order to Show Cause, 45 Fed. Reg. 13,850 (March 3, 1980).....	1, 6-7
Commission Order, 45 Fed. Reg. 52,290 (Aug. 6, 1980).....	2, 6
Licensing Board's Memorandum and Order (Aug. 5, 1980).....	2
Letter from H. Denton (NRR) to F. Linder (DPC enclosing <u>Safety Evaluation by the Office of Nuclear Reactor Regulation Relating to Liquefaction Potential at the La Crosse Site</u> (Aug. 29, 1980).....	2, 8
Transcript of Prehearing Conference (Sept. 11, 1980).....	3, 9
Licensing Board's Prehearing Conference Order Granting Requests for a Hearing and Certifying Question to Appeal Board, LBP-80-26 (Sept. 30, 1980).....	3, 4, 7, 12
 <u>Administrative Decisions</u>	
<u>Cleveland Electric Illuminating Co.</u> (Perry Nuclear Power Plant, Units 1 & 2), ALAB-298, 2 NRC 730 (1975).....	8
<u>Detroit Edison Co. (Enrico Fermi Atomic Power Plant, Unit 2)</u> , LBP-78-11, 7 NRC 381 (1978).....	5
<u>Public Service Co. of Indiana (Marble Hill Nuclear Generating Station, Units 1 & 2)</u> , CLI-80-10, 11 NRC 438 (1980).....	5, 8-9
<u>Public Service Co. of Indiana (Marble Hill Nuclear Generating Station, Units 1 & 2)</u> , ALAB-316, 3 NRC 167 (1976).....	5
<u>Union Electric Co. (Callaway Plant, Units 1 & 2)</u> , LBP-78-31, 8 NRC 366 (1978), <u>aff'd</u> , ALAB-527, 9 NRC 126 (1979).....	6

<u>Regulations</u>	<u>Page</u>
10 CFR 2.202.....	1, 5
10 CFR 2.204.....	5
10 CFR 2.206.....	9
10 CFR Part 50.....	9
10 CFR 50.54(f).....	2
10 CFR Part 100 and related <u>Federal Register</u> notices..	9

Miscellaneous

Letter from D. Eisenhut (NRR) to F. Linder (DPC) (Aug. 4, 1930).....	10
Memorandum for L. V. Gossick (EDO) from S. J. Chilk (Secretary) <u>re</u> : SECY-76-545 (Jan. 27, 1977).....	10
NUREG/CR-1582, Vol. 2 & 3, Seismic Hazard Analysis (Aug. 1980).....	10
SECY-76-545, "The Systematic Evaluation of Operating Nuclear Power Plants" (Nov. 12, 1976).....	10
SECY-77-561, "Systematic Evaluation of Operating Reactors - Phases I and II (Oct. 26, 1977).....	10

be required to design and install a dewatering system. The licensee's answer contained a contingent request for a hearing in the event that the Director of NRR did not find that the licensee had shown good cause. The Coulee Region Energy Coalition (CREC) and Frederick M. Olsen III filed requests for a hearing within the time prescribed by the Order to Show Cause.

On July 29, 1980, the Commission designated an Atomic Safety and Licensing Board to consider and rule on the requests for a hearing and, if a hearing was required, to conduct such hearing solely on the issues identified in the Order to Show Cause. 45 Fed. Reg. 52,290 (August 6, 1980). In its Memorandum and Order of August 5, 1980, the Licensing Board asked for the views of the Staff and the licensee on the requests for a hearing filed by CREC and Mr. Olsen. The Staff indicated in its response to the requests for a hearing that the Staff's position had changed with respect to imposition of an order requiring the licensee to design and install a dewatering system. Based on the Staff's evaluation of the licensee's answer and further evaluations and information, the Director of NRR determined that the licensee had shown good cause why it should not be required to design and install a site dewatering system.^{1/}

At the prehearing conference held in La Crosse, Wisconsin, on September 11, 1980, the Licensing Board ruled that both CREC and Mr. Olsen had

^{1/} The Director's finding is contained in a letter of August 29, 1980, to F. Linder of DPC, which encloses a safety evaluation prepared by NRR. The Director's letter and the accompanying safety evaluation are attached to the "NRC Staff's Response to Requests for Hearing" (Aug. 29, 1980). The Director's finding is based on the Staff's evaluation of the licensee's answer to the Order to Show Cause and the licensee's responses to the Staff's additional request for information pursuant to 10 CFR 50.54(f).

established a right to a hearing on the Order.^{2/} After it granted CREC's and Mr. Olsen's requests for a hearing, the Board opened the conference to a discussion of the matters which CREC and Mr. Olsen wished to litigate in this proceeding. During the discussion, the Board raised the magnitude of the safe shutdown earthquake as an issue which it thought should be litigated in the proceeding on the Order to Show Cause.^{3/} The licensee expressed its view that consideration of the magnitude of the ground acceleration value for the La Crosse site was not within the scope of the Order to Show Cause.^{4/} The Staff expressed its preliminary view that the size of the safe shutdown earthquake was not within the scope of the proceeding.^{5/}

In its Prehearing Conference Order, the Licensing Board certified to the Appeal Board the question of the Licensing Board's authority to consider the magnitude of the safe shutdown earthquake (SSE) in the show cause proceeding. The Licensing Board found that it was appropriate to examine the magnitude of the earthquake, because "the adequacy of the protection against liquefaction depends in large part on the accuracy of the selection of the SSE".^{6/} The Licensing Board noted that an SSE has not been conclusively established for the La Crosse site and that a 0.2g value had been applied to the Tyrone site, which is within 100 miles of La Crosse. These facts gave

^{2/} See Transcript at 33; Prehearing Conference Order Granting Requests for a Hearing and Certifying Question to Appeal Board, LBP-80-26, at 3, 12 (Sept. 30, 1980) (hereinafter Prehearing Conference Order).

^{3/} Transcript at 42-45.

^{4/} Transcript at 43, 43-47, 49-50, 52-53.

^{5/} Transcript at 51-53.

^{6/} Prehearing Conference Order at 15.

rise to sufficient reasons in the Licensing Board's view "to warrant exploration of the magnitude of the SSE as part of our determination with respect to whether there is a need to design and install a site dewatering system."^{7/} In the Licensing Board's view, the size of the SSE might well be within the Board's authority since the size of the SSE "is a necessary ingredient of a liquefaction analysis" and, therefore, the question whether a dewatering system should be designed and installed to preclude liquefaction cannot be determined without reference to a particular SSE.^{8/}

Upon accepting the Licensing Board's certification the Appeal Board has asked for the parties' views on the certified question. The Appeal Board has also asked for views on the following question:

If the Appeal Board concludes that the authority to consider the size of the SSE is lacking, should the matter be further certified to the Commission with a recommendation that the Commission expand the Board's delegated authority to the extent necessary to include the SSE issue?

II. CONSIDERATION OF SEISMIC HAZARD AT THE LA CROSSE SITE IS WITHIN THE BOARD'S AUTHORITY AS PART OF ITS DETERMINATION AS TO WHETHER A SITE DEWATERING SYSTEM IS NECESSARY

Although the Staff indicated at the prehearing conference that it believed that any inquiry into the appropriateness of the 0.12g value for the La Crosse site was not within the Board's authority, the Staff has

^{7/} Id. at 20.

^{8/} Id. at 19.

re-examined its position and has concluded that seismic hazard of La Crosse is within the scope of the issues in this proceeding.

It is a basic principle of practice before this agency that a Licensing Board has only the jurisdiction and power which has been delegated to it.^{9/} The Board's authority is limited by the scope of the proceeding over which the Board presides.^{10/} Enforcement proceedings, which include orders to show cause under 10 CFR 2.202, are generally more narrowly focused than initial licensing proceedings in which a broad range of issues is considered in determining whether a license should be issued for a facility. Orders under 10 CFR 2.202 and 2.204 typically pose a particular enforcement remedy in response to alleged violations of regulatory requirements or to perceived hazards to public health and safety.

Hearings on an enforcement order are not, of course, mandatory, but when hearings are held, such hearings may be limited to an inquiry on the specific remedy posed in the order.^{11/} Although a person may show he is adversely affected by the order such that he is entitled to a hearing on the order as a matter of right, a person may not enlarge any hearing on the order to include consideration of additional or different enforcement remedies, at least in the absence of specific provision for a broader inquiry.^{12/} The

^{9/} Public Service Co. of Indiana (Marble Hill Nuclear Generating Station, Units 1 & 2), ALAB-316, 3 NRC 167 (1976).

^{10/} Detroit Edison Co. (Enrico Fermi Atomic Power Plant, Unit 2), LBP-78-11, 7 NRC 381, 386 (1978).

^{11/} Public Service Co. of Indiana (Marble Hill Nuclear Generating Station, Units 1 & 2), CLI-80-10, 11 NRC 438, 440-42 (1980).

^{12/} Id. at 442.

matters which may be litigated in an enforcement proceeding must be fairly within the scope of the issues posed to the Board by the Commission in the context of the order which bears on the proceeding.^{13/}

The Commission's Order delegated the Licensing Board authority to conduct an adjudicatory hearing, if a hearing was required, on contentions within the scope of the issues identified in the Order to Show Cause:

1. Whether the licensee should submit a detailed design proposal for a site dewatering system; and
2. Whether the licensee should make operational such a dewatering system as soon as possible after NRC approval of the system, but no later than February 25, 1981, or place the LACBWR in a safe cold shutdown condition.^{14/}

The magnitude of the appropriate ground acceleration value for the La Crosse site is not of course specifically included in the issues set for hearing in this proceeding, but then, the value is not specifically excluded from consideration by this statement of issues. The critical question is whether consideration of the ground acceleration value is fairly within the scope of the two issues identified in the Order to Show Cause and the Commission's delegation to the Licensing Board.

Although the Licensing Board must ultimately determine whether or not a dewatering system should be designed and then installed at the La Crosse site, the Board's determination cannot be made without reference to the

^{13/} See Union Electric Co. (Callaway Plant, Units 1 & 2), LBP-78-31, 8 NRC 366, 370-71 (1978), aff'd, ALAB-527, 9 NRC 126 (1979).

^{14/} 45 Fed. Reg. 52,290 (Aug. 6, 1980); see also Order to Show Cause, 45 Fed. Reg. 13,850 (Mar. 3, 1980).

underlying reasons in the Order to Show Cause for even considering installation of a dewatering system at La Crosse. A dewatering system was proposed in the Order to Show Cause, because it was viewed as a possible solution to the perceived potential liquefaction problem at La Crosse.^{15/} Whether there is a liquefaction problem at the site will, in turn, depend upon the nature of the seismic hazard at the site. A determination of the need for a site dewatering system rests in part, therefore, on an assessment of liquefaction potential in light of seismic conditions at the site. The Staff believes that the Licensing Board is correct in saying that a reasoned determination of the need for a dewatering system depends partly on its confidence in the ground acceleration value used as a basis for its determination.^{16/}

If a particular safe shutdown earthquake with a corresponding ground acceleration value had been established in a prior licensing proceeding, the effect of the 0.12g ground acceleration value might be different and indeed conclusive for purposes of the inquiry on the Order to Show Cause. However, as the Board points out, a particular safe shutdown earthquake has never been conclusively determined for the La Crosse reactor.^{17/} Despite this fact, both the licensee and the Staff have relied on a .12g value as an appropriate estimate of the seismic hazard at the La Crosse site. The .12g value was one of the premises for the Staff's issuance of the Order to Show Cause in the first instance, as well as in its later determination that the

^{15/} See Order to Show Cause, 45 Fed. Reg. at 13,851.

^{16/} See Prehearing Conference Order at 19-20.

^{17/} Id. at 15

licensee need not install a dewatering system at the site.^{18/} Since both the Staff's and the licensee's judgment that a dewatering system need not be installed at the site is premised, in part, on the belief that .12g is a realistic estimate of the seismic hazard at the La Crosse site, it appears unreasonable to restrict the Board's inquiry into this premise, particularly when the seismic hazard has not been conclusively established. In view of the basic policy that the boards examine "thoroughly and carefully" the critical safety issues before them,^{19/} inquiry into the appropriateness of the use of the .12g value by the Staff and the licensee for purposes of evaluating liquefaction potential should be considered within the scope of the permissible inquiry in this "show cause" proceeding.

The view that consideration of the appropriate seismic parameters is within the scope of inquiry in this proceeding is not inconsistent with the Commission's 1980 Marble Hill decision.^{20/} Marble Hill stands for the propositions that enforcement proceedings may be lawfully limited to consideration of the remedy proposed by the enforcement order and that persons may not obtain hearings on enforcement orders on the ground that the order

^{18/} The safety evaluation accompanying the Director's finding of good cause states that the seismic parameters applied in the Staff's analysis "are adequate and conservative for evaluation of the liquefaction potential at the La Crosse site." Safety Evaluation by the Office of Nuclear Reactor Regulation Relating to Liquefaction Potential at the La Crosse Site, § 3, at 2-3, attached to letter from H. Denton (NRR) to F. Linder (DPC) (Aug. 29, 1980). The letter and safety evaluation were included with the "NRC Staff's Response to Requests for Hearing" (Aug. 29, 1980).

^{19/} See Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Units 1 & 2), ALAB-298, 2 NRC 730, 737 (1975).

^{20/} Public Service Co. of Indiana, supra, note 11.

does not consider alternative remedies.^{21/} The Licensing Board in this case only seeks consideration of the seismic parameters for La Crosse as part of its determination of the need for the remedy proposed in the Order to Show Cause.^{22/} Its inquiry is limited to the remedy contemplated in the Order to Show Cause and is therefore consistent with the decision in Marble Hill.

In reviewing the reasonableness of the use of the .12g value by the licensee and the Staff, the Board should be mindful that the requirements and the criteria set forth in Appendix A to 10 CFR Part 100, of course, do not apply to the La Crosse facility.^{23/} The seismic hazard at the La Crosse

21/ 11 NRC at 440-42.

22/ At the prehearing conference, CREC proposed an immediate shutdown of the La Crosse reactor. Chairman Bechhoefer correctly observed in response to this proposal that

"we do not have jurisdiction to consider plant shutdown in this proceeding here. Again, you would have to file another show cause request [under 10 CFR 2.206] to do that. All we can consider here is whether a dewatering system should be designed and installed, and basically where there is a liquefaction problem. That is all we have authority to consider as the show cause board". Transcript at 47.

The Board's Prehearing Conference Order further indicates that the Board is interested in the appropriate seismic parameters only as they bear on the need for a site dewatering system.

23/ Dairyland Power Cooperative received a provisional operating license for the La Crosse reactor in July 1967, some four years before the Atomic Energy Commission published proposed amendments to 10 CFR Part 100 which would have added an Appendix A on "Seismic and Geologic Siting Criteria for Nuclear Power Plants." 36 Fed. Reg. 22,601 (Nov. 25, 1971). Appendix A to 10 CFR Part 100 was published as a final rule in 1973. 38 Fed. Reg. 31,279 (1973). The rule itself is cast in terms of guidance to be applied in the evaluation of the suitability of proposed sites and the suitability of plant designs submitted by applicants under 10 CFR Part 50. See 10 CFR 100.2 and App. A, Pt. I. The statements of consideration do not purport to apply the requirements of Appendix A retroactively to plants operating under operating licenses issued prior to Appendix A's promulgation. See 38 Fed. Reg. 31,279 (1973).

site is currently being re-evaluated by the Staff as part of the Systematic Evaluation Program (SEP). ^{24/} The purpose of the SEP, which was initiated in 1977, is to systematically compare important features of the eleven oldest nuclear power plants in the United States, including the La Crosse reactor, with current NRC design criteria for plants. ^{25/} The SEP program is designed to determine the overall safety significance of deviations by operating plants from current licensing requirements with a view toward developing a framework for making backfitting decisions taking into consideration the actual status of all plant features related to safety. ^{26/} An evaluation of the adequacy of the seismic designs of SEP plants is part of the overall safety determination being made. A methodology using site specific spectra to realistically assess the seismic hazard at reactor sites has been developed and is being used in the SEP program. ^{27/} The estimate of seismic hazard developed using this method will

^{24/} Based on the Staff's preliminary review, a 0.1g value may be an appropriate peak acceleration value for the La Crosse site. See Letter from D. Eisenhut (NRR) to F. Linder (DPC), Attachments 1 and 2 (Aug. 4, 1960) (copy enclosed).

^{25/} See SECY-77-561, "Systematic Evaluation of Operating Reactors--Phases I and II" (Oct. 26, 1977); SECY-76-545, "The Systematic Evaluation of Operating Nuclear Power Plants" (Nov. 12, 1976). The Commission has been briefed periodically on the progress of the SEP. The most recent briefing took place on May 6, 1980.

^{26/} The Commission approved the objectives and general approach of the proposed SEP, Memorandum for Lee V. Gossick, EDO, from Samuel J. Chilk, Secretary to the Commission re: SECY-76-545 (January 27, 1977). (The Memorandum is an attachment to SECY-77-561, which is cited in the previous footnote.)

^{27/} See NUREG/CR-1582, Vol. 2 & 3, Seismic Hazard Analysis (Aug. 1980) prepared by TERA Corporation and Lawrence Livermore Laboratory for the Office of Nuclear Reactor Regulation.

be considered together with all plant safety features in reaching a conclusion on the safety significance of any deviations from current NRC standards as applied to these older plants. The validity of the results developed by the Staff using this methodology constitutes the appropriate focus of any Board inquiry into seismic hazard in this proceeding. However, the Appeal Board and Licensing Board should be apprised that the Staff does not anticipate being prepared to present definitive testimony and further analyses of seismic hazard at the La Crosse site in accordance with its SEP program until June 1981. The Staff is already committed to seismic reviews in several other ongoing proceedings.^{28/}

III. IF CONSIDERATION OF SEISMIC HAZARD IS BEYOND THE BOARD'S AUTHORITY, THEN THE MATTER SHOULD BE CERTIFIED TO THE COMMISSION WITH A RECOMMENDATION THAT THE BOARD'S AUTHORITY BE EXPANDED.

As discussed in the foregoing portion of this brief, consideration of seismic hazard as part of a determination of the need for a dewatering system is within the scope of the issues set for hearing in this proceeding. If the Appeal Board should find, however, such consideration beyond the scope of the proceeding, the Staff believes that the matter should be certified to the Commission with a recommendation that the proceeding be expanded to include consideration of seismic hazard insofar as it may bear on the need for a site dewatering system.

The seismic hazard at the La Crosse site does bear on the question of the need for a dewatering system, because the dewatering system was posed as a method to preclude liquefaction which might be triggered by a seismic

^{28/} These proceedings concern Diablo Canyon, Seabrook, San Onofre, Summer, Midland, and the General Electric Test Reactor.

event. Although the Staff does not believe such a system is necessary, the fact remains that seismic conditions applicable to the site bear directly on the ultimate question of the need for a system. In view of this direct relationship, it is appropriate to expand the scope of this proceeding to include consideration of seismic hazards if such consideration is not now strictly within the present scope of the proceeding.

Some weight should also be attached to the importance with which the Board views consideration of the seismic issue to the proper performance of its duties in this proceeding.^{29/} If the public is to have any confidence in the conduct and decisions in NRC proceedings, such confidence can be nurtured only if there is a full exploration of relevant safety issues in NRC proceedings. As the Licensing Board notes and the Staff acknowledges, a particular safe shutdown earthquake with a corresponding ground acceleration value has never been determined for the La Crosse reactor. In light of both the Staff's and the licensee's use of the 0.12g value in reaching the conclusion that no site dewatering system is necessary, some inquiry is appropriate into the reasonableness of that value for purposes of resolution of this proceeding.

Consideration of the seismic issue does not unduly expand of this proceeding. As noted above, there is a fairly direct relationship between the seismic issues and the ultimate determination of the need for the dewatering system. Moreover, the Board intends to limit its inquiry into seismic issues only insofar as the inquiry is necessary to a determination of the need for the dewatering system.^{30/} The Licensing Board is not asking, then,

^{29/} See Prehearing Conference Order at 19-20.

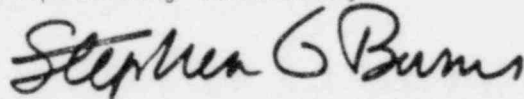
^{30/} See generally note 22 *supra* and Prehearing Conference Order at 15-22.

for a broad-based expansion of its authority to consider additional remedies or tangential issues to the matters directly in controversy. The Board should be permitted to undertake a limited inquiry into seismic issues related to the need for a dewatering system. The Staff would support a recommendation to the Commission to expand the Licensing Board's authority if an additional delegation is necessary.

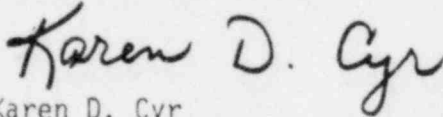
IV. CONCLUSION

A fair reading of the issues set forth for hearing in the Order to Show Cause leads one to conclude that the Licensing Board is already empowered to consider seismic issues bearing on the need for a site dewatering system. If the Licensing Board does not have such authority, the Appeal Board should further certify this matter to the Commission with a recommendation that the Licensing Board's authority be expanded to permit the Board to consider the reasonableness of the seismic parameters applied under the Order to Show Cause.

Respectfully submitted,



Stephen G. Burns
Counsel to NRC Staff



Karen D. Cyr
Counsel to NRC Staff

Enclosure: As stated

Dated at Bethesda, Maryland
this 24th day of October, 1980.



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

AUG 04 1980

Docket No. 50-409

POOR ORIGINAL

M. Frank Linder
General Manager
Dairyland Power Cooperative
2615 East Avenue South
LaCrosse, Wisconsin 54601

Gentlemen:

RE: LACROSSE

Our letter to you dated January 15, 1979 requested that you initiate as part of the Systematic Evaluation Program (SEP) a program to demonstrate the seismic design adequacy of your facility. In relation to this request, we are aware of your efforts to develop a site specific ground response spectrum for your site; however, active structural/mechanical evaluations have not specifically been initiated. You are requested to submit, by September 15, 1980, details of your plans for proceeding with a seismic evaluation program and provide justification for why you conclude that continued operation is justified in the interim until the program is complete.

Your submittal should address the scope of review and evaluation criteria and provide a schedule for completion. The analytical portion of your program should be completed no later than January 1, 1982. Any modifications to the facility that may be necessary as a result of your evaluations should be installed by the following refueling outage, but no later than January 1, 1983. Any proposed changes to the facility as described in the safety analysis report shall be made in accordance with 10 CFR 50.59 of the Commission Regulations.

As a minimum, your program should provide for an evaluation of:

1. The integrity of the reactor coolant pressure boundary,
2. The integrity of fluid and electrical distribution systems related to safe shutdown and engineered safety features,
3. The integrity and functionability of mechanical and electrical equipment and engineered safety feature systems (including containment).

Although we have delayed until the end of 1980 a final decision relative to the potential benefits to be derived from use of site specific ground response spectra, we expect you to proceed with your seismic evaluation program. The information that we have received from the Lawrence Livermore Site Specific Spectra Project, the work of NRC consultants and other sources, we have used in the response spectra shown in the Attachment 1 is an interim basis for your evaluations. Between now and the end of 1980, we will continue our analytical work that will allow us to finalize our decision. We are confident that the ground response spectra shown

DUPLICATE DOCUMENT

Entire document previously entered into system under:

ANO 8008110043

No. of pages: 4

Handwritten: *Handwritten*

POOR ORIGINAL



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

JUN 23 1980

MEMORANDUM FOR: D. Crutchfield, Acting Chief
Systematic Evaluation Program Branch

THRU: *[Signature]* James P. Knight, Assistant Director for
Components and Structures Engineering, DE

FROM: Robert E. Jackson, Chief
Geosciences Branch, DE

SUBJECT: INITIAL REVIEW AND RECOMMENDATIONS FOR SITE
SPECIFIC SPECTRA AT SEP SITES

We have been working for the past two years with the SEP Branch and their consultants in order to provide preliminary recommendations regarding site specific spectra to be used in the SEP for evaluation of the seismic design adequacy of the selected plants.

The Branch recommendations are attached, however, it should be noted that they are subject to the limitations described in the sections entitled "Purpose and Scope" and "Recommendations." These recommendations were prepared by Dr. Leon Reiter based primarily on documents submitted in the Site Specific Spectra Program. We expect that our evaluation of items still forthcoming in the Site Specific Spectra Program may result in the following:

1. It is likely that there will be further changes in the return periods associated with the recommended spectra for the various sites. These return periods will still be able to be described as "of the order of 1000 or 10,000 years", which is the present description of the spectra and the level implicitly accepted by NRC in recent licensing decisions.
2. There will be no major change in the relative levels of seismic hazard between sites.
3. There will be little or no change in the "deterministic" comparisons for the various site used to evaluate the acceptability of the spectra recommended in the attached review.
4. There is a preliminary indication that a reduction in spectra at intermediate and low frequencies may be called for at rock sites (Dresden, Ginna, Haddam Neck and Millstone). Probabilistic predictions of peak velocities at these sites

DUPLICATE DOCUMENT

Entire document previously
entered into system under:

AND 8448474546

No. of pages: 37