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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

'89 MAY 15 P4:16

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Administrative Judges:

Alan S. Rosenthal, Chairman
Thomas S. Moore
Howard A. Wilber

May 15, 1989
(ALAB-915)

SERVED MAY 15 1989

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

Elizabeth Dolly Weinhold, Hampton, New Hampshire, appellant pro se.

Thomas G. Dignan, Jr., George H. Lewald, Kathryn A. Selleck, Jeffrey P. Trout, Jay Bradford Smith, and Geoffrey C. Cook, Boston, Massachusetts, for the applicants Public Service Company of New Hampshire, et al.

Gregory Alan Berry for the Nuclear Regulatory Commission staff.

DECISION

On November 25, 1988, an earthquake occurred in the Province of Quebec in Canada. This event prompted Elizabeth Dolly Weinhold to endeavor to enter the operating license proceeding for the Seabrook nuclear facility on the New Hampshire seacoast -- a proceeding that has been in progress

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for more than seven years.[1] Specifically, in a petition filed on December 5, Ms. Weinhold called upon the Licensing Board to inquire into the significance of the earthquake from the standpoints of Seabrook's seismic design basis and emergency response plan. The petition asserted that it was filed pursuant to the Rule of Practice authorizing the grant of a motion to reopen a closed record provided that the following criteria are satisfied:

> (1) The motion must be timely, except that an exceptionally grave issue may be considered in the discretion of the presiding officer even if untimely presented.
>
> (2) The motion must address a significant safety or environmental issue.
>
> (3) The motion must demonstrate that a materially different result would be or would have been likely had the newly proffered evidence been considered initially.[2]

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[1] Ms. Weinhold was a party to the construction permit proceeding for the Seabrook facility.

[2] 10 CFR 2.734(a). As will be discussed in greater detail below, subsection (b) requires that the motion be supported by one or more affidavits.

The petition also cited 10 CFR 2.714 and 2.805. The former section of the Rules of Practice is concerned with intervention in adjudicatory proceedings; the latter deals with participation in rulemaking proceedings by interested persons and, as such, has no apparent relevance here.

In a January 30, 1989 decision, the Licensing Board denied the petition.[3] Ms. Weinhold appeals. The applicants and the NRC staff oppose the appeal. We affirm.

A. Under Commission regulations, a nuclear power plant must be designed to comply with certain seismic and geologic siting criteria contained in Appendix A to 10 CFR Part 100. As we explained several years ago in a decision in the construction permit proceeding for this facility, the "Safe Shutdown Earthquake" (SSE) concept is at the root of those criteria:

> The SSE for a particular site is that earthquake "which is based upon an evaluation of the maximum earthquake potential considering the regional and local geology and seismology and specific characteristics of local sub-surface material" and "which could cause the maximum vibratory ground motion at the site. . . ." 10 CFR Part 100, Appendix A,III(c), V(a). The nuclear power plant must be designed so that, should the SSE occur, "certain [specified safety] structures, systems, and components will remain functional." Id., VI(a). . . .
>
> In short, the SSE is the earthquake postulated for the purpose of determining the adequacy of the seismic design of the facility. The plant has to be capable of being safely shutdown despite the effects of whatever vibratory ground motion might be experienced at the site as a result of the SSE. (One of the elements of the SSE determination is, of course, an ascertainment of the amount of such motion (Id., V(a)).)[4]

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[3] LBP-89-3, 29 NRC 51 (1989).

[4] ALAB-623, 12 NRC 670, 672 (1980) (quoting Dairyland Power Cooperative (La Crosse Boiling Water Reactor), ALAB-618, 12 NRC 551, 552 (1980)).

As discussed in some detail in a later decision in the construction permit proceeding, the size of an earthquake is generally measured in terms of either "magnitude" or "intensity."[5] Suffice it to say for present purposes that magnitude, expressed in terms of arabic numerals on the so-called Richter scale, is determined with the aid of various types of seismographs. In sharp contrast, earthquake intensity, which is reflected in roman numerals on the so-called Modified Mercalli scale, is not instrumentally measured. Put into use to estimate the size of earthquakes occurring before instruments had been devised for the measurement of earth movement, the intensity concept has at its root the subjective assessment of that size on the basis of the observed effect of the earthquake on persons and structures (the greater that effect, the higher the assigned numerical value to its intensity).[6]

In the case of the Seabrook site, the SSE was expressed in terms of maximum intensity.[7] For this purpose, the

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[5] See ALAB-667, 15 NRC 421, 436-37 (1982).

[6] See id. at 437 n.39 for the effects attributed by Charles F. Richter, a preeminent seismologist, to each intensity level from I to XII. For its part, the Richter scale theoretically has no lower or upper limit. See B. Bolt, Earthquakes - A Primer (1978) at 106.

[7] This was because the major earthquakes in the northeast sections of the United States and Canada that were

(Footnote Continued)

applicants selected a value of VIII, with an associated maximum vibratory ground motion (i.e., acceleration) at the site of 0.25g. This choice was challenged and extensively litigated in the construction permit proceeding.[8] Ultimately, it was upheld.[9]

Despite this consideration, Ms. Weinhold's petition rests essentially on the assertion that a 6.0 magnitude has been assigned to the Seabrook SSE, whereas the recent Quebec earthquake had a magnitude of 6.4. Ms. Weinhold has not informed us of the basis for the first prong of that thesis.[10] As to the second prong, the petition points to "reports in local newspapers" to the effect that Mary Cajka, said to be associated with the Geophysics Division of the Geological Survey of Ottawa, Canada, had "issued a statement

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(Footnote Continued)
considered in determining the SSE occurred in the eighteenth century, long before the development of seismographs. See ALAB-422, 6 NRC 33, 57, 60-61 (1977).

[8] See id. at 54-65; ALAB-561, 10 NRC 410 (1979); CLI-80-33, 12 NRC 295 (1980); ALAB-667, 15 NRC 421.

[9] ALAB-667, 15 NRC at 449.

[10] Although the petition does not refer to ALAB-667, in a footnote in that decision we noted parenthetically that a magnitude of 6.0 represents "an intensity of approximately VIII." Id. at 442 n.45 [emphasis added]. We did not mean to suggest, however, the existence of a precise correlation between specific intensity and magnitude levels. To the contrary, we earlier observed in the same decision that there is expert opinion to the effect that such a correlation does not exist. Id. at 429 n.19.

that the epicenter magnitude of the [Quebec] earthquake was measured as 6.4 and was felt as far west as Cincinnati, Ohio and as far south as Washington, D.C. and parts of Virginia."[11] The petition goes on, however, to acknowledge that the National Oceanic and Atmospheric Administration's Earthquake Center in Golden, Colorado, had measured the earthquake as magnitude 6.0 and to express the hope that the variation will be resolved by the agencies in question and a "correct magnitude" supplied to this Commission.[12]

On the assumption that the Quebec earthquake had a 6.4 magnitude, the petition maintains that the Seabrook SSE requires reevaluation with the possible consequence that the facility will require modification to ensure its ability to withstand the effects of a larger earthquake than that now postulated.[13] In addition, Ms. Weinhold advances five contentions that collectively assert that the Seabrook emergency response plan might prove inadequate in the event

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[11] Petition (December 5, 1988) at 2.

[12] Ibid. The petition also refers to "taped televised news reports and newspapers throughout the nation" that assertedly reported effects of the earthquake that buttress the claim that the event was severe. Id. at 8.

[13] Id. at 1-2.

of an earthquake exceeding a magnitude of 6.0 in eastern United States regions.[14]

B. The Licensing Board based its denial of the Weinhold petition on several alternative grounds. We need not explore each of those grounds. As previously noted, Ms. Weinhold's petition seeks to reopen a closed record.[15] It is plain that, as they have been spelled out in both section 2.734 of the Rules of Practice[16] and Commission decisions concerned with record reopenings, the conditions precedent to the grant of such relief have not been satisfied.

Section 2.734(a) mandates that a reopening motion address a significant safety or environmental issue. To enable an informed judgment on whether this requirement has been met, subsection (b) of that section directs that the motion be accompanied "by one or more affidavits which set forth the factual and/or technical bases" for the movant's claim that such an issue is involved. Further, the

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[14] Id. at 9-10.

[15] Ms. Weinhold apparently recognized that such relief was necessary because, at the time of the filing of the petition, there was no open record in this proceeding regarding any seismic issue. See 10 CFR 2.734(d). As previously noted, all questions pertaining to the seismicity of the Seabrook site were litigated in the construction permit proceeding and none of the parties to the operating license proceeding sought to reopen the subject.

[16] 10 CFR 2.734.

affidavit(s) "must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raised."

The petition at bar is not accompanied by any affidavit, let alone one that complies with the dictates of section 2.734(b). To the contrary, all that the petition provided to the Licensing Board was Ms. Weinhold's opinion that the Quebec earthquake has possible safety significance for Seabrook. Even had it been supplied in affidavit form, that opinion scarcely would have fulfilled the obligation imposed by section 2.734(b).

For one thing, the petition is devoid of anything to suggest that Ms. Weinhold has any formal education or professional experience in the highly technical and complex disciplines of geology, seismology and earthquake engineering. In her appellate brief, she concedes as much but maintains that she "has researched the issue of Earthquakes - Seabrook Nuclear Facility since 1971" and was an active participant in the litigation of the seismic issues presented in the construction permit proceeding for the facility.[17] Apart from the fact that not all of these representations are to be found in the petition put before the Licensing Board, however, the bare assertion of

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[17] Weinhold Brief (February 27, 1989) at 5-6.

self-education presented to us falls far short of demonstrating that Ms. Weinhold is an expert in any of "the disciplines appropriate to the issues raised."

Further, it appears that Ms. Weinhold cannot even lay claim to having "knowledge of the facts alleged." As we have seen, the sole source of her insistence that the Quebec earthquake was of 6.4 magnitude are reports in unspecified "local newspapers" that an employee of the Geological Survey of Ottawa had issued a statement to that effect. Inasmuch as the employee was identified by name in the newspaper accounts, at the very least one might have expected Ms. Weinhold to have obtained that person's affidavit detailing the basis of her knowledge respecting the seismic measurement of the Quebec earthquake. Most significant, once having done that, it would then have been incumbent upon Ms. Weinhold to supply the sworn opinion of a qualified expert on the safety significance to Seabrook operation (including emergency planning) of an earthquake of the measured magnitude occurring at the particular Quebec location.[18]

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[18] That it is far from established that earthquakes in the Province of Quebec have such possible significance is reflected by the discussion in ALAB-422 of the relevance of the 1732 Montreal earthquake to the Seabrook seismic inquiry. See 6 NRC at 60-61.

Any possible doubt that the Commission expects its adjudicatory boards to enforce the section 2.734 requirements rigorously -- i.e., to reject out-of-hand reopening motions that do not meet those requirements within their four corners -- is dispelled by its 1986 decisions in the Waterford and Perry operating license proceedings.[19] In the former, the Commission addressed the question of our authority to seek additional information from the agency's Office of Investigations before ruling on a motion to reopen the record on new contentions. Answering that question in the negative, the Commission squarely held that it must appear from the movant's own submissions that the standards for reopening have been satisfied.[20] On the strength of that determination, the Commission rejected the portion of the reopening motion referred to it by us because of the

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[19] Louisiana Power & Light Co. (Waterford Steam Electric Station, Unit 3), CLI-86-1, 23 NRC 1; Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Units 1 and 2), CLI-86-7, 23 NRC 233, aff'd sub nom. Ohio v. NRC, 814 F.2d 258 (6th Cir. 1987).

[20] At the time of the Waterford decision, those standards were set forth in adjudicatory decisions such as Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-598, 11 NRC 876, 879 (1980) (cited with approval in Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), CLI-85-2, 21 NRC 282, 311 (1985)). Later in 1986, they were codified in section 2.734, which added the affidavit requirement. See 51 Fed. Reg. 19,535, 19,539, as corrected, 51 Fed. Reg. 23,523 (1986).

failure of that portion "on its face" to meet those standards.[21]

Shortly thereafter, in Perry, the Commission reiterated its Waterford ruling in circumstances closely akin to those presented here. In January 1986, a 5.0 magnitude earthquake occurred in the vicinity of the Perry nuclear facility in Ohio. Within a matter of days, an intervenor in the operating license proceeding filed a motion with us to reopen the record for the purpose of admitting a new contention challenging, in light of the earthquake, the adequacy of the facility's seismic design. The gravamen of the motion was that the earthquake exceeded the Perry SSE in a particular respect. Following the receipt of the responses of the utility and the NRC staff to the motion, we ordered an exploratory hearing for the purpose of aiding our determination respecting the significance of the earthquake to safe Perry operation.

Acting sua sponte, the Commission vacated our orders calling for the exploratory hearing and itself denied the motion to reopen. It said:

> Our Waterford decision holds that a Board is to decide the motion to reopen on the information before it and has no authority to engage in discovery in order to supplement the pleadings before it. Simply put, the burden of satisfying reopening requirements is on the movant, and

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[21] Waterford, 23 NRC at 8.

> Boards must base their decisions on what is before them. That the movant did not meet this burden in the view of the Appeal Board is evident from the Board's order of April 8, 1986, in which it states that it needs the exploratory hearing to aid its "determination respecting whether the new issue raised by the [intervenor's] motion has true safety significance." (Emphasis added.) Accordingly, the Board had no authority to pursue this matter as it did. See also Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), CLI-85-7, 21 NRC 1104, 1106 (1985).[22]

The short of the matter thus is that a grant of the Weinhold petition would fly in the teeth of both the explicit terms of the governing Rule of Practice and controlling Commission precedent. This being so, the outcome below was mandated.

For the foregoing reasons, the Licensing Board's January 30, 1989 denial of Ms. Weinhold's petition, LBP-89-3, 29 NRC 51, is affirmed.

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[22] Perry, 23 NRC at 235-36. The Commission went on to note the intervenor's concession that there was no engineering significance to the respect in which the earthquake exceeded the facility's seismic design. Id. at 236. That consideration does not, however, appear to have been crucial to its decision.

It is worthy of passing mention that the Perry intervenor was represented by an individual who, in common with Ms. Weinhold, was not a lawyer. The Commission obviously did not regard that consideration to affect the intervenor's affirmative obligation to meet the reopening standard. Similarly, Ms. Weinhold's pro se status here did not relieve her of that obligation. See Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), ALAB-772,

(Footnote Continued)

It is so ORDERED.

FOR THE APPEAL BOARD

Barbara A. Tompkins
Secretary to the
Appeal Board

(Footnote Continued)
19 NRC 1193, 1247 (1984), rev'd in part on other grounds, CLI-85-2, 21 NRC 282 (1985).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, ET AL. (Seabrook Station, Units 1 and 2)	Docket No.(s) 50-443/444-OL

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing AB DECISION (ALAB-915) 5/15/89 have been served upon the following persons by U.S. mail, first class, except as otherwise noted and in accordance with the requirements of 10 CFR Sec. 2.712.

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Dated at Rockville, Md. this
15 day of May 1989

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