UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Administrative Judges:

Christine N. Kohl, Chairman
Dr. W. Reed Johnson
Howard A. Wilber

In the Matter of	)	
OFFSHORE POWER SYSTEMS	)	Docket No. STN 50-437 ML
(Manufacturing License for Floating Nuclear Power Plants)	)	

DECISION

March 10, 1983

(ALAB-718)

This proceeding involves the first application for a license to manufacture standardized nuclear power plants.[1] In its initial decision, the Licensing Board resolved all

[1] As we explained at an earlier stage of this case, the licensing of commercial reactors has traditionally been accomplished in two steps, through the issuance of first a construction permit and then an operating license. The procedure invoked by a request for a manufacturing license, however, contemplates three steps. First, pursuant to such license, standardized plants are produced at industrial locations. When a site for one of these plants is later selected, a construction permit is required before commencement of the necessary site preparatory work. Lastly, an operating license must be obtained before operating the facility. See ALAB-686, 16 NRC __ n.1 (Aug. 11, 1982) (slip opinion at 1 n.1).

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issues contested at the hearing and concluded that the issuance of a license to applicant Offshore Power Systems for the manufacture of eight standardized floating nuclear plants was warranted. Accordingly, the Board authorized the Director of Nuclear Reactor Regulation to issue such a license, subject to a condition concerning hydrogen control. LBP-82-49, 15 NRC 1658 (1982). No party has appealed that decision, but, as is our practice, we have reviewed it and portions of the underlying record sua sponte. We are in substantial agreement with the Board's opinion and have discovered no error requiring corrective action.

In reaching this judgment, we have noted several areas in which the record at first blush does not seem to be fully developed or the analysis appears to be limited.[2] But this must necessarily be the case with regard to an application for a manufacturing license, where particular sites have not yet been identified. In this type of proceeding, the focus must and should be on issues arising from the standardized plant itself. Consequently, analyses and evidence will be generic in character. Consideration

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[2] For example, applicant evaluated aircraft crash probability for only representative sites along the Atlantic and Gulf coasts more than five miles from airports. It is not improbable, however, for a floating plant to be located at an ocean or river site within five miles of an airport, where crash probability increases dramatically. See LBP-82-49, supra, 15 NRC at 1713.

of site-specific concerns is properly deferred, not wrongly ignored.[3]

One such matter in particular, however, does deserve some additional comment at this time. Amended Contention 3 of the City of Brigantine, New Jersey, questioned whether the high voltage electrical cables that will transmit electricity between the shore and the floating plant will provide a reliable source of emergency power. The Licensing Board found that "[t]ransmission circuits for emergency power are not within the scope of the FNP [floating nuclear plant] design; specific designs for emergency power transmission will depend upon the site chosen." Id. at 1693. Nonetheless, applicant and the NRC staff presented, and the Board discussed, general evidence concerning underground and underwater cables. Among the questions touched upon were the desirability of a spare circuit, the assurance of the integrity of the cables and their ability to withstand leaks, and the feasibility of flexible connections between the FNP platform and the underwater cables. Id. at 1694. These concerns highlight the special nature of the plants proposed here: moored offshore, they

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[3] See, for example, id. at 1708, where the Board indicates that sites ultimately selected for the standardized plants will have to be evaluated and must meet regulatory requirements relating to meteorological and geological conditions at those particular sites.

are tethered by a limited number of circuits to onshore power sources. The increased vulnerability of these plants to loss of offsite power, and thus the possibility of complete station blackout, is manifest.

In this respect, the FNPs are not unlike at least one land-based plant, the St. Lucie facility. Because of that plant's location on the Florida peninsula, its electrical transmission system can be connected with only the grids of other systems to the north. Consequently, the reliability of onsite emergency power and the consideration of station blackout assumed special significance during the licensing process. See Florida Power and Light Co. (St. Lucie Nuclear Power Plant, Unit No. 2), ALAB-603, 12 NRC 30 (1980). The same extra attention to the probability of loss of offsite power and the reliability of onsite sources is, in our view, justified with respect to floating nuclear plants, once sites for them are selected.[4] Thus, while this matter does not warrant further pursuit now, it appears to be fertile ground for greater exploration at the construction permit stage.

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[4] Specifically, the plants' ability to withstand station blackout should be evaluated in terms of how quickly some power (i.e., offsite or onsite) can be restored.

The Licensing Board's decision (LBP-82-49) is affirmed.

It is so ORDERED.

FOR THE APPEAL BOARD

C. Jean Shoemaker

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Secretary to the
Appeal Board