

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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COMMISSIONERS:

Nunzio J. Palladino, Chairman
Victor Gilinsky
John F. Ahearne
Thomas M. Roberts
James K. Asselstine

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In the Matter of
OFFSHORE POWER SYSTEMS
(Manufacturing License for
Floating Nuclear Power
Plants)

Docket No. STN 50-437 ML

MEMORANDUM AND ORDER

(CLI-82-37)

In ALAB-686 and ALAB-689, the Atomic Safety and Licensing Appeal Board for this proceeding held that the Commission's effectiveness provisions in 10 CFR 2.764 do not apply to decisions on manufacturing licenses and that such decisions can become effective before the conclusion of the Appeal Board's sua sponte review even though they do not become final until the conclusion of such review. For the reasons discussed below, we find that immediate effectiveness review does not apply to manufacturing licenses but not for the reasons advanced by the Appeal Board.

First, we note that 10 CFR 2.764(a) applies to manufacturing licenses. Thus, it is unnecessary to discuss the Appeal Board's erroneous belief that an agency decision can become effective but not final in the absence of a provision separating these concepts.

10 CFR 2.504 provides in pertinent part:

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The provisions of subparts A and G [of Section 2] relating to construction permits apply to manufacturing licenses subject to this subpart, with respect to matters of radiological health and safety, environmental protection, and the common defense and security... 1/

10 CFR 2.764(a) of Subpart G had long been part of the Commission's regulations when 10 CFR 2.504 was promulgated. Moreover, the subjects identified in 10 CFR 2.504 clearly relate to the spectrum of potential issues that would be relevant in any proceeding on whether an initial decision authorizing issuance of a manufacturing license should be effective pending review. Under these conditions, there can be no doubt that 10 CFR 2.764(a) was intended to apply to an initial decision authorizing issuance of a license for a manufacturing license. It is for this reason alone that a Licensing Board decision on a manufacturing license can become effective before it becomes final.

Second, we find that 10 CFR 2.764(e) does not apply to manufacturing licenses. That provision was promulgated after 10 CFR 2.504 and addressed some concerns not presented by manufacturing licenses. In particular, as the Appeal Board noted, a manufacturing license authorizes only the manufacture of standardized facilities at industrial locations; permanent sites at which to place the plants for operation are not designated until the successful completion of the construction permit proceeding. Accordingly, because the issuance of a manufacturing license does not conclude the construction permit process, such a license does not present health and safety issues requiring immediate review. Cf. 46 Fed. Reg. 47764, 47765 (September 30, 1981)

1/ See also 10 CFR Part 50, Appendix M, paragraph 1.

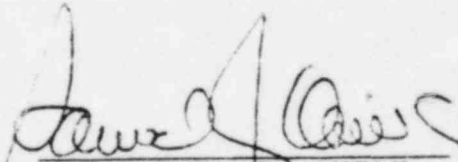
(deletion of Commission review of decisions authorizing fuel loading and low-power testing).

For these reasons we find that a manufacturing license can become effective before it becomes final and that neither the Appeal Board nor the Commission need undertake an immediate effectiveness review of a Licensing Board decision authorizing the issuance of a manufacturing license. Commissioners Gilinsky and Ahearne dissent from this decision. The separate views of Commissioners Gilinsky and Ahearne are attached.

It is so ordered.

For the Commission*




SAMUEL J. CHILK
Secretary of the Commission

Dated at Washington, D.C.
this 6th day of December, 1982.

*Commissioner Gilinsky was not present when this Order was approved, but had previously indicated his disapproval.

SEPARATE VIEWS OF COMMISSIONER GILINSKY

The Licensing Board decision before us authorizes the construction of eight barge-mounted nuclear power plants, between now and the end of the century, at a manufacturing facility in Florida. These plants would have small, relatively weak containments. The chief safety issue is whether these containments are strong enough to withstand the consequences of an accident.

By declining to consider this Board decision now, and thereby allowing it to go into effect without Commission review, the Commission is evading its responsibilities. Moreover, today's action is inconsistent with the Commission's policy of reviewing Licensing Board approvals of construction permits before construction is, in fact, permitted to begin.

The rationale offered by the Commission is that "because issuance of a manufacturing license does not conclude the construction permit process, such a license does not present health and safety issues requiring immediate review." What the Commission is saying is that after building the eight complete nuclear power plants, the manufacturer cannot tow them to their ultimate destinations, offshore or upriver along the Atlantic coast, without further review by the Commission. But, as a purely legal matter, the applicant

could complete all eight plants prior to obtaining further Commission approval.

The Commission knows perfectly well that, once a large investment has been made, it is very difficult to require design changes even for important safety reasons. If the Commission finds it difficult to alter the floating power plant design now, it will find it well nigh impossible after the plants are built. It is precisely to avoid being locked into the wrong decision by subsequent investments that the Commission reviews Licensing Board construction permit approvals before they are made effective.

I am perfectly well aware that Offshore Power Systems is, in fact, unlikely to build such plants in the present circumstances and that this reduces the immediate practical significance of today's decision. But that is hardly a reason for the Commission to take the easy way out.

Taking the easy way out is precisely what got the Commission into a lot of trouble in the past. Until the Three Mile Island accident, the Nuclear Regulatory Commission continued the practice of its predecessor, the Atomic Energy Commission, of not reviewing decisions granting construction permits and operating licenses for large power plants before they went into effect. This meant that steel was put in place and concrete poured or that a power plant was started

up and taken to full power without the basic decision ever having been passed on by the Commissioners. This was a convenient policy for the development-minded AEC since it denied both outsiders and individual Commissioners an opportunity to raise questions in a forum where they might get more public attention than they would otherwise get in a Licensing Board hearing. It also had the attraction of allowing Commissioners to avoid direct responsibility for decisions which might prove awkward if they had to be confronted head-on. It was not, however, a policy that was fitting for the newly-created, independent NRC whose chief responsibility was nuclear safety.

Nevertheless, during the early years of the NRC's history, the argument prevailed that the Commission should only take up Licensing Board decisions after they had passed through the hands of the Appeal Board. Only then would they be ready for the Commission. To step in earlier would be to muddy the legal waters. In fact, the Commission took very few appeals. And when it did, the review most often focused on obscure issues and came years after it could have made any real difference. So, for example, the Commission took up the question of the operation of the TMI-2 power plant after the plant was already operating, and busied itself examining the nearness of the plant to an airport, to the neglect of other questions which proved more important.

(Although overtaken by events, the airport issue is still before the Commission.)

After the Three Mile Island accident, the Commission came under severe pressure to take direct responsibility for the agency's principal safety decisions. It did so reluctantly, first agreeing to review the decision of the Hearing Board in the Three Mile Island-1 restart case before that decision became effective and, later, agreeing to pass on other operating license and construction permit decisions before they went into effect. Some Commissioners, and certainly the industry affected by these decisions, hoped that this would be a temporary departure from the longstanding practice of letting lower board decisions become effective immediately. Ending the Commission's "effectiveness review" was high on the list of the demands made by industry groups after the initial shock of the Three Mile Island accident had worn off, when they were anxious to get back to the old way of doing business.¹

¹ More recently, the NRC's Regulatory Reform Task Force proposed that the Commission abandon its "immediate effectiveness" reviews, in effect that the Commission revert to the AEC practice of insulating itself from the agency's major decisions, a step which the Task Force stated "would enhance the predictability and orderliness of the licensing process and would avoid producing a needless sense of uncertainty."

But the Commissioners' review has proven difficult to drop as it has become a regular and expected feature of the Commission's process, fixed in regulation.

Unfortunately, because of an oversight, manufacturing licenses for nuclear power plants were not explicitly enumerated in the rule as being subject to immediate effectiveness review by the Commission. This is why the Commission must decide whether it will review the Licensing Board's decision. The natural common-sense choice is, of course, to review, since the manufacturing license is one of the three main types of licenses granted by the Commission. As indicated previously, the license before us today would permit the construction of no less than eight complete barge-mounted nuclear power plants at a manufacturing facility, between now and the end of the century, conceivably involving the expenditure of over \$10 billion before further Commission review. Not, I would say, an everyday sort of decision.

Beyond that, there are serious safety questions about this design. The chief concern is the adequacy of the protection against burns or explosions of hydrogen gas which may be generated during an accident.² The ability of a containment

² This problem is discussed in greater detail in my separate views relating to the McGuire Unit 1 operating license, In the Matter of Duke Power Company (William B. McGuire Nuclear Station, Units 1 and 2), CLI-81-15, 14 NRC 1, 5 (1981).

to resist a hydrogen burn is proportional to PV , the containment design pressure (P) times the containment volume (V). On this basis, the ice condenser containments used in the floating nuclear power plant design are about six times less capable of withstanding hydrogen fires than the ordinary large pressurized water reactor containments.

The same ice condenser containment design is used in a number of plants in operation or nearing completion. In these cases, an accommodation had to be made between the demands of safety and the realities of the plants' construction -- the containments were largely completed even in the case of the plants that were under construction. The resulting compromise was to require installation of a system of ignition points to facilitate the controlled burning of the hydrogen which might be generated during an accident -- fighting fire with fire, so to speak. But no such compromise needs to be made in the case of plants whose construction has not yet begun. The right way to deal with this problem is to require a larger and stronger containment in the first place.

The time to decide whether or not to impose this requirement is now, before the start of construction, and not later, during the course of the construction permit review. By that time, the containment may well have been built, or

several may have been built, and strengthening them will not be possible as a practical matter.

From what I can tell, these issues received scant attention in the hearing. They are barely touched upon in the Board decision which makes only a passing reference to the Commission's most recent rule establishing hydrogen control requirements for several named plants, including the manufacturing license design then under review. The significant fact about this rule, in the context of today's decision, is that the Commission made clear that the hydrogen control provisions of the rule "are to be considered necessary but not necessarily sufficient." The Commission went on to say:

"...the issue of the sufficiency of the hydrogen control measures required by these provisions may be considered in the manufacturing license proceeding, and the Commission may decide to impose additional requirements. Further studies in the area of hydrogen control, containment loading, and mitigation may, at some later date, resolve this issue sufficiently so that it may be addressed by further rulemaking and removed from the pending manufacturing license proceedings."

No such rulemaking has taken place and thus the Commission has not found that these requirements are sufficient.

SEPARATE VIEWS OF COMMISSIONER AHEARNE

I did not intend to do an immediate effectiveness review of OPS because we already spent a lot of time considering OPS requirements in connection with issuing TMI requirements for construction permits and manufacturing licenses. As written, OPS is the only manufacturing license covered by 50.34(f). The TMI issues will have to be reconsidered for any further manufacturing license. We clearly were considering OPS when we considered the manufacturing license requirements in 50.34(f). I see no reason to duplicate that effort now.