

COMMENTS OF NORTHERN INDIANA PUBLIC SERVICE COMPANY
ON
PETITIONS WITH RESPECT TO PILE FOUNDATION
(JANUARY 8, 1979)



INTRODUCTION

Petitioners^{1/} have requested that the Nuclear Regulatory Commission^{2/} (1) order an evidentiary hearing to review the installation methodology of the foundation piles beneath Category I structures of the Bailly Generating Station, Nuclear 1, (Bailly Facility) so that Petitioners may have the opportunity to review the proposed procedures, (2) withhold or stay authorization for installation of the piles until the hearing is completed, and (3) seek permission of the United States Court of Appeals for the District of Columbia for leave to reopen administrative proceedings before commencing the requested hearing on pile installation.

1/ Two petitions have been filed. The first "Petition with Respect to Short Pilings Proposal," dated November 1, 1978, was filed by petitioners People of the State of Illinois; Porter County Chapter of the Izaak Walton League of America, Inc.; Concerned Citizens Against Bailly Nuclear Site; Business and Professional People for the Public Interest; James E. Newman; Mildred Warner, and George Hanks; the City of Gary, Indiana; and the Lake Michigan Federation. The second, identically titled petition dated November 20, 1978, involves as petitioners the members of United Steelworkers of America, Local 1010. The petitions are essentially identical; within these Comments, citations will be made to the November 1 Petition.

2/ The term "commission" will be used herein to refer to both the Nuclear Regulatory Commission and its predecessor, the Atomic Energy Commission. Similarly, the term "Staff" will be used throughout to refer to the Commission's Staff.

It is alleged that the pile design to be utilized by Northern Indiana Public Service Company (NIPSCO or Licensee) and presently under review by the Staff constitutes a substantial departure from the design submitted in NIPSCO's application for a construction permit which was previously approved by the Staff and the Licensing Board and thus requires an amendment to the construction permit. Petitioners further claim that they are entitled to a hearing before installation of piles because the alleged design change involves a significant hazards consideration. Justification for these conclusions is based upon Petitioners' unsupported allegations and upon implications drawn from the extensive documentation submitted by NIPSCO and the length of the Staff review of the matter.

Even if NIPSCO's proposed pile foundation is not deemed to require a construction permit amendment, Petitioners assert that "elemental fairness," the Atomic Energy Act, and the Administrative Procedure Act, as well as "due process and the public interest" require the holding of public hearings.

Of course, the Petitioners demand that pile installation be delayed or stayed until completion of the hearing to which they are said to be entitled. No claim is made that the proposed pile design is defective or inadequate in any respect. The request is simply for further delay of construction so

that Petitioners may have the opportunity to review the proposal. Petitioners erroneously assert that an additional delay in construction will cause "little, if any, harm to NIPSCO" because no construction is currently underway.

Petitioners also claim that the petitions should be acted on by the Commission itself or an Atomic Safety and Licensing Board because, they allege, the Staff, which is currently reviewing the pile foundation, is biased.

The defects in Petitioners' reasoning are demonstrated below.

Our response will provide a brief history of the licensing of the Bailly Facility, illustrating that the instant petitions are but another unwarranted attempt by determined and persistent opponents to delay or block construction of the Bailly Facility. Section I, infra.

We will then take up procedural aspects of handling the petitions and set forth the bases for our view that, although such petitions should normally be decided by the Staff, under the current circumstances the Commission should itself consider and deny the petitions. Section II, infra.

On the basis of a review of the Atomic Energy Act, the Commission's regulations, the construction permit, and the record upon which it was issued, we will demonstrate that the pile foundation to be used at the Bailly Facility is in

full conformance with the requirements of the construction permit and that no amendment is required. Section III, infra. Although the question of whether an amendment authorizing such pile foundation would involve a "significant hazards consideration" is therefore only hypothetical, we will indicate why no such consideration would be entailed. Section IV, infra. We will also discuss why a hearing should not be ordered as a matter of "Commission discretion." Section V, infra.^{3/}

Finally, we will explain the importance of proceeding promptly with the installation of pile foundations at the Bailly Facility and why any further delays would be intolerable. Section VI, infra.

I. HISTORY AND STATUS OF THE LICENSING OF THE BAILLY GENERATING STATION, NUCLEAR 1.

NIPSCO filed an application for a permit to construct the Bailly Facility on the southern shores of Lake Michigan in August 1970. After extensive review by the Staff and months

^{3/} We shall not address at length Petitioners' suggestion that the Commission must seek permission of the U.S. Court of Appeals for the District of Columbia to resolve the issues presented in the Petition because we believe the appropriate action for the Commission is denial of the Petition. In fact, however, it is unnecessary to seek permission of the court in any event. In our view, the pendency of Porter County Chapter of the Izaak Walton League of America, Inc. v. NRC, No. 78-1556 and Consolidated Cases (D.C. Cir., filed June 16, 1978) does not deprive the Commission of its ability to consider any matters pertaining to the construction of the Bailly Facility. The authorities cited by the Petitioners are irrelevant.

of proceedings before the Commission's Licensing Board, a construction permit was issued in May 1974. Shortly thereafter, construction of the Bailly Facility was commenced and almost immediately halted under an injunction issued by the United States Court of Appeals for the Seventh Circuit at the request of some of the instant Petitioners. Issues raised by those Petitioners as to the validity of the Bailly construction permit have twice been before that Court of Appeals and twice before the Supreme Court of the United States.

Since the issuance of the construction permit more than 4 1/2 years ago, construction progress has been limited^{4/} due in large part to judicial reviews, and attendant stays, sought by persons who now request additional hearings regarding pile placement for the Bailly Facility. Appeals and other requests for relief in connection with the Bailly Facility initiated by some of the Petitioners have been continuously ongoing either before the Commission or the courts since the issuance of the construction permit in 1974.

After completion of review of the application by the Staff and its issuance of the Safety Evaluation Report (SER), evidentiary hearings on the Bailly application commenced in

^{4/} To date an excavation has been partially completed, a slurry wall installed and foundation piles have been placed for the turbine building. Construction is less than 1% completed.

October 1972 with some of the instant Petitioners as intervenors.^{5/} The hearings lasted until November 1973, consuming more than 60 hearing days and resulting in the Licensing Board's April 5, 1974 decision authorizing the issuance of the requested construction permit. 7 AEC 557.

The issuance of the permit was temporarily stayed by order of the Appeal Board upon request of the intervenors and thereafter their two requests to the Appeal Board for stays resulted in limiting construction activities until September 1, 1974. On August 29, 1974, the Appeal Board issued its decision which vacated the partial stay of construction activities, found all of the exceptions to be without merit, and affirmed the Licensing Board's decision authorizing the issuance of the construction permit. 8 AEC 244.

This decision was immediately appealed to the United States Court of Appeals for the Seventh Circuit, where some of the present Petitioners filed their fourth request for a stay of the construction of the Bailly Facility.^{6/} The court of appeals

^{5/} Parties in the construction permit proceeding included the following present Petitioners: Porter County Chapter of the Izaak Walton League of America, Inc.; Concerned Citizens Against Bailly Nuclear Site; Business and Professional People for the Public Interest, formerly Businessmen for the Public Interest, Inc.; James E. Newman, Mildred Warner, and George Hanks.

^{6/} Judicial review was requested by the intervenors listed in the preceding footnote, People of the State of Illinois, and the City of Gary, Indiana.

granted the request for a stay on October 16, 1974, which effectively halted all construction. On April 1, 1975, the court of appeals rendered its decision invalidating the construction permit on grounds not related to the instant Petitions, and permanently enjoined the construction of the Bailly Facility. Porter County Chapter of the Izaak Walton League of America, Inc. v. AEC, 515 F.2d 513 (7th Cir. 1975). The Supreme Court of the United States summarily reversed the decision and remanded the cause to the Court of Appeals for the Seventh Circuit for consideration of issues not dealt with in that court's prior decision. NIPSCO v. Porter County Chapter of the Izaak Walton League of America, Inc., 423 U.S. 12, 96 S.Ct. 172 (1975).

In its ultimate decision, the court of appeals found all of Petitioners' claims to be without merit and affirmed the Commission action authorizing construction of the Bailly Facility. 533 F.2d 1011 (7th Cir. 1976). The Supreme Court denied certiorari in November 1976, thereby removing the last legal obstacle to construction of the Bailly Facility. Porter County Chapter of the Izaak Walton League of America, Inc. v. NRC, 429 U.S. 945, 97 S.Ct. 366 (1976).

On October 3, 1974, while the Bailly proceeding was pending before the court of appeals, the Commission ordered additional hearings before the Licensing Board to review the environmental

effects, if any, of use of a slurry wall around the Bailly excavation to prevent the entry of groundwater into the excavation. 8 AEC 631. Evidentiary hearings were conducted before the Licensing Board between October 31, 1974, and January 21, 1975.^{7/} The Licensing Board found all of the Petitioners' objections to be without merit and authorized installation of the slurry wall (1 NRC 61); its decision was affirmed by the Appeal Board on December 17, 1975. 2 NRC 858.

During the course of these proceedings, while the original challenge to the construction permit was pending before the courts and the slurry wall issue was pending before the Appeal Board, some of the Petitioners herein were successful in persuading the Appeal Board to hold yet another hearing. That Board conducted an emergency hearing on November 11, 1974, to review the effect on groundwater levels occasioned by water seeping into the existing excavation at the Bailly site. At the conclusion of the evidence, the Appeal Board found the Petitioners' claims to be without merit and determined that the existence of the excavation at the Bailly site did not threaten the groundwater table level in any areas outside of the Bailly site. 8 AEC 841 (1974).

In the same month as the Supreme Court's final denial of certiorari, many of the same parties sponsoring the instant

^{7/} Parties in the slurry wall proceeding included the present Petitioners listed in the footnote on page 6 and the People of the State of Illinois. See footnote 5.

Petitioners filed petitions with the Commission requesting the suspension and revocation of the Bailly construction permit and requesting a hearing to review alleged changes in factual circumstances since the original issuance of the permit. The Commission treated these petitions as requests for show cause proceedings under 10 C.F.R. § 2.206 and referred the matter to the Staff. After detailed review, the Staff found these requests to be without merit and denied them on April 15, 1977. The Commission granted the request that it review the Staff's action and upheld the denial of the petition. 7 NRC 429 (1978). That decision has been appealed to the United States Court of Appeals for the District of Columbia and is currently pending before the court.

The foregoing brief summary illustrates that Petitioners' instant request for a hearing on pile placement at the Bailly site is but another in a never-ending series of pleadings filed by some of these same Petitioners in various forums. All of these contentions, exceptions, claims, allegations, and requests have uniformly been found to be without merit.

The Commission should not permit these persistent tactics to succeed and should not allow Petitioners to add still another delay to the lengthy construction delays for which they are already responsible.

II. ALTHOUGH THERE IS NO LEGAL IMPEDIMENT TO REFERRING THE PETITIONS TO THE STAFF, THE COMMISSION SHOULD DENY THE PETITIONS ITSELF.

Petitioners request that their Petitions be decided by the Commission itself or by an Atomic Safety and Licensing Board appointed for that purpose. They allege that the Staff has served in "conflicting and partisan roles in connection with Bailly and on the subject matter of this Petition" and, therefore, should not participate as a decision maker. Petition, p. 1, footnote. These allegations have no legal basis; there is no reason why the Staff cannot decide the issues presented by the instant Petitions.

Petitioners' claim of Staff bias is the same issue which some Petitioners have raised in the current appeal from denial of another request for show cause proceedings involving the Bailly Facility. Porter County Chapter of the Izaak Walton League of America, Inc. v. NRC, No. 78-1556 and Consolidated Cases (D.C. Cir., filed June 16, 1978). For the persuasive reasons set forth in the brief of the Nuclear Regulatory Commission and the United States and endorsed in the Memorandum of Northern Indiana Public Service Company, Petitioners' assertions are wholly without merit.

The fact that the Staff has been involved with Bailly proceedings in the past does not disqualify it from participation

in the decision-making process.^{8/} Hortonville Joint School District No. 1 v. Hortonville Education Association, 426 U.S. 482, 493, 96 S.Ct. 2308 (1976).

The Supreme Court has specifically recognized that, in the process of licensing nuclear power plants, the issuance of a construction permit does not prejudice the later decision as to whether an operating license should be issued for the completed facility. Power Reactor Development Co. v. International Union of Electrical Workers, 367 U.S. 396, 81A S.Ct. 1529 (1961) (hereinafter "PRDC"). Courts have also recognized that this agency's Staff is sufficiently expert and impartial to decide whether operating power plants should be shut down or derated despite its earlier involvement in authorizing operation of the plants. Nader v. NRC, 513 F.2d 1045 (D.C. Cir. 1975); Friends of the Earth v. AEC, 485 F.2d 1031 (D.C. Cir. 1973).

Petitioners have made no specific allegation or showing of any prejudice on the part of the Staff. Instead, they rely upon the simple, unsupported allegation that, because the Staff has "served in conflicting and partisan roles," it should not

^{8/} The Staff's current review of the pile installation at Bailly is but a part of the function entrusted to it by the Commission, i.e., to review facilities under construction to assure that such construction is performed in accordance with the requirements of the construction permit. Moreover, in this particular instance, review of the pile installation is being performed in accordance with an explicit responsibility undertaken by the Staff at the time of its construction permit review to "follow this item during construction." Staff Safety Evaluation Report, p. 62.

participate in decision making. Unsupported allegations of lack of integrity on the part of those serving as adjudicators will not suffice to disqualify them from the decision-making process. Withrow v. Larkin, 421 U.S. 35, 47, 95 S.Ct. 1456 (1975).

Thus, it is clear that the Staff's involvement with the Bailly proceeding creates no legal impediment to its participation in the decision-making process and Petitioners have wholly failed to demonstrate that a contrary result is required in the present circumstances.

Referring the instant Petitions to the Staff would, of course, be fully consistent with the amendments to Part 2 adopted by the Commission in 1974 that include the specific provision under which members of the public can request the institution of proceedings to modify, suspend, or revoke a license or take other appropriate action. 10 C.F.R. § 2.206. Until this provision was adopted, the regulations had been silent with regard to such requests--i.e., they were neither permitted nor precluded expressly.

The procedure adopted by the Commission in 1974 authorized the filing of requests with the Director of Regulation. Under § 2.206, the Director may institute the requested proceeding or, specifying the reasons therefor, determine that no proceeding will be instituted.

If, as a result of a request, a proceeding were initiated, it would be conducted before a Licensing Board or Administrative

Law Judge and would eventually be subject to review by the Appeal Board and the Commission. Although originally no mention was made of the possibility of review of the Director's denial of a request, in several cases, the Commission did in fact review such denials.^{9/} However, in 1977, the Commission decided that "[n]o petition or other request for Commission review of a Director's decision under this section [§ 2.206] will be entertained by the Commission." 10 C.F.R. § 2.206(c)(2). The Commission noted that it would continue to receive copies of any decisions by the Director and would have power to initiate a sua sponte review. It established a 20-day period for the accomplishment of that review.

It is therefore clear that the Commission has considered and rejected precisely the kind of "direct" approach to the Commission which Petitioners seek to make here. Although the Commission has not articulated the reasoning behind its choice of the procedure embodied in 10 C.F.R. § 2.206, we assume that it reflects a number of factors, such as recognition that the expertise and factual knowledge required to consider requests filed under § 2.206 rest with the Staff, that the finite resources of the Commissioners should not be spent in making ab initio

^{9/} Northern Indiana Public Service Company (Bailly Generating Station, Nuclear-1), 7 NRC 429 (1978); Licensees Authorized to Possess or Transport Strategic Quantities of Special Nuclear Materials, 5 NRC 16 (1977); Consolidated Edison Co. of New York, Inc. (Indian Point, Units 1, 2, and 3), 2 NRC 173 (1975); Consumers Power Co. (Midland Plant, Units 1 and 2), 6 AEC 1082 (1973).

technical determinations or even in reviewing Staff denials of requests, and that to remove these determinations from the "mainstream" of the continuing regulatory process by which the Staff monitors the performance of licensees would be unnecessarily and unproductively disruptive of that regulatory process.

Therefore, as a general rule, petitions such as those in question here should be referred to the Director of Nuclear Reactor Regulation for handling in accordance with 10 C.F.R. § 2.206.

However, in this particular case at this time, we must conclude that the preferred course is for the Commission to dispose of the petitions by denying them in their entirety, rather than referring them to the Director. This conclusion is dictated by the following considerations.

The Commission is presently seized with the problem of these two petitions, the first of which was filed two months ago. It has requested the views of the Staff and the Licensee on the petitions and has posed certain questions. Upon receipt of these responses, the Commission will presumably be in possession of all of the information needed to rule on the substance of the request; in the interest of administrative efficiency and in view of the urgent nature of this matter, the Commission should make the decision promptly. Such action by the Commission would save the time required to make separate, piecemeal decisions

(first, as to procedure; then, as to substance) and would provide to both the Petitioners and the Licensee a prompt final decision of the agency as to the requests for a hearing.

III. THE PILE FOUNDATION TO BE USED AT THE BAILLY FACILITY CONFORMS TO THE REQUIREMENTS OF THE CONSTRUCTION PERMIT; NO AMENDMENT OF THE PERMIT IS REQUIRED.

The Regulatory Framework.

A person who wishes to construct a "utilization facility" such as a nuclear power plant must first seek a "construction permit" and must later obtain an "operating license."

All applicants for licenses to construct . . . production or utilization facilities shall, if the application is otherwise acceptable to the Commission, be initially granted a construction permit. . . . Upon the completion of the construction . . . of the facility, upon the filing of any additional information needed to bring the original application up to date, and upon finding that the facility authorized has been constructed and will operate in conformity with the application as amended and in conformity with the provisions of this chapter and of the rules and regulations of the Commission, and in the absence of any good cause being shown to the Commission why the granting of a license would not be in accordance with the provisions of this chapter, the Commission shall thereupon issue a license to the applicant. For all other purposes of this chapter, a construction permit is deemed to be a "license." Atomic Energy Act of 1954, as amended, Section 185, 42 U.S.C. § 2235 (1976).

As the Supreme Court has stated,

It is clear from the face of the statute . . . that Congress contemplated a step-by-step procedure. First an applicant would have to get a construction permit, then he would have to construct his facility, and then he would have to ask the Commission to grant him a license to operate the facility. PRDC, 367 U.S. at 405, 81A S.Ct. at 1534.

Before a facility may be operated, the Commission must conclude that the utilization of special nuclear material "will be in accord with the common defense and security and will provide adequate protection to the health and safety of the public." Atomic Energy Act of 1954, as amended, Section 182(a), 42 U.S.C. § 2232(a) (1976). The PRDC case examined the question of what finding must be made before a construction permit can be issued. The Court examined the implementing regulations then in effect. Those regulations recognized that an applicant for a construction permit might be unable to furnish all of the detailed information concerning the facility. The regulation stated that a construction permit could nevertheless be issued "[i]f the Commission is satisfied that it has information sufficient to provide reasonable assurance that a facility of the general type proposed can be constructed and operated at the proposed location without undue risk to the health and safety of the public" 10 C.F.R. § 50.35, 21 Fed. Reg. 355 (1956). A construction permit so issued would be subject to a later "evaluation by the Commission that the final design provides reasonable assurance that the health and safety of the public will not be endangered." Id.

The question then before the Court was whether § 50.35 permitted the Commission "to defer a definitive safety finding until operation is actually licensed." PRDC, 367 U.S. at 407,

81A S.Ct. at 1535. The Court concluded that the regulation did so provide -- and that good reason existed for making the distinction between the findings at the construction permit and the operating license stages. Furthermore, the Court found that the statute permitted the adoption of different standards at different stages. Id.

The language of the Commission's regulations has been revised since PRDC was decided, but the principle there found by the Court to be sound has been retained. An applicant for a construction permit is not required to furnish an application which incorporates a final facility design; the regulation permits issuance of a construction permit which does not approve "all proposed design features."

. . . the Commission may issue a construction permit if the Commission finds that (1) the applicant has described the proposed design of the facility, including, but not limited to, the principal architectural and engineering criteria for the design, and has identified the major features or components incorporated therein for the protection of the health and safety of the public; (2) such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report 10 C.F.R. § 50.35(a).

The regulation makes clear that a construction permit does not constitute Commission approval of any specific design features unless the applicant requests such explicit approval and it is given. It also records that such approvals can be sought later as construction permit amendments:

(b) A construction permit will constitute an authorization to the applicant to proceed with construction but will not constitute Commission approval of the safety of any design feature or specification unless the applicant specifically requests such approval and such approval is incorporated in the permit. The applicant, at his option, may request such approvals in the construction permit or, from time to time, by amendment of his construction permit. The Commission may, in its discretion, incorporate in any construction permit provisions requiring the applicant to furnish periodic reports of the progress and results of research and development program designed to resolve safety questions. 10 C.F.R. § 50.35(b) (emphasis added).

Its Application to Bailly

In the Bailly proceeding, as in all other construction permit proceedings of which we are aware, the Commission did not attempt to review and approve specific design features since no such approval was required or requested. In fact, the present Petitioners who participated in the construction permit proceeding^{10/} argued before the Licensing Board that the application for a permit to construct the Bailly Facility must be rejected because the design of the Facility had not been completed. The Licensing Board was not persuaded:

During the proceeding, the Joint Intervenors have asserted that the construction permit cannot issue unless the complete designs for the various systems and components have been prepared and submitted. The Appeal Board decision in the Consumers Power Company

^{10/} See footnote, p. 6, supra. (Footnote 5).

proceeding, ALAB-123, RAI-73-5 331 at p. 355 (May 18, 1973), deals with this issue and rules otherwise. See Power Reactor Development Co. v. International Union of Electrical Radio and Machine Workers, AFL-CIO, et al., 367 U.S. 396, 6 L. Ed. 2d 924 (1961), where the Supreme Court held that Section 50.35 of the Commission's Regulations permits the Commission to defer a definite safety finding until operation is actually licensed, and clearly suggests that the final design can be left to that stage of the licensing process (at pp. 400-408). Northern Indiana Public Service Co. (Bailly Generating Station, Nuclear 1), Initial Decision 7 AEC 557, 564, aff'd ALAB-224, 8 AEC 244 (1974).

Rather, the Board concluded that there was "an adequate description of the principal criteria and design bases of the various safety systems and components." Id. at 566.

The construction permit issued for the Bailly Facility explicitly:

. . . authorizes the applicant to construct the facility described in the application and the hearing record, in accordance with the principal architectural and engineering criteria and environmental protection commitments set forth therein. Construction Permit No. CPPR-104, p. 3 (May 1, 1974) (emphasis added).

Petitioners are simply wrong--as well as inconsistent with the position taken previously in the construction permit proceeding--in alleging that there has been a change in a "design proposed by NIPSCO, approved by the Commission, and authorized

by the construction permit." Petition, p. 4.^{11/} The construction permit did not approve a design; it authorized construction in accordance with principal architectural and engineering criteria.

Thus, the precise question that must be answered in determining whether the proposed installation at Bailly of H-piles driven into the very dense/hard interbedded glacial lacustrine sand/clay deposits requires a construction permit amendment is

^{11/} Petitioners also mistakenly allege that the proposal to use "short pilings" was not mentioned until March 1978. Petition, pp. 4-5. Actually the feasibility of such piles was discussed in the 1972 Dames and Moore Report discussed at p. 26, *infra*. In 1974, NIPSCO undertook a sequence of pile tests to determine among other things the actual ability of the interbedded glacial-lacustrine deposits to support the required loads; and a report on the results of these tests was submitted to the Staff. Letter, H. P. Lyle to E. G. Case with enclosures (September 13, 1974). Shortly after this report was filed, dewatering activities were stayed by court injunction thereby effectively halting all construction activities. While faced with a delay of undetermined length in 1974-75, NIPSCO undertook a program to evaluate various techniques of economically installing piles. Since this program revealed that jetted piles were feasible, when engineering was restarted in late 1976, the Staff was informed of NIPSCO's intent to install piles to the till using the jetting technique. Letter, F. G. Hipple to B. C. Rusche (December 29, 1976). In light of questions subsequently raised by the Staff, however, on December 7, 1977, NIPSCO informed the Staff that jetting techniques would not be used, and that a complete report on the piles proposed in 1974 (*i.e.*, piles driven to the glacial-lacustrine deposits, Petitioners' so-called "short pilings") would be filed. Letter, E. M. Shorb to E. G. Case. This was accomplished in March 1978. Letter, E. M. Shorb to E. G. Case with enclosure (March 8, 1978).

whether such installation is consistent with the "principal architectural and engineering criteria for the design" of the Bailly Facility which were approved by the Commission in issuing the construction permit. On the basis of the entire record as described below, it is clear that the pile installation is fully consistent with these criteria.

Since the construction permit does not expressly recite the "principal architectural and engineering criteria for the design," it is necessary to review the record upon which the permit is based.

Upon completion of its review of the application to construct the Bailly Facility, the Staff concluded:

The plant is to be sited on the south shore of Lake Michigan, over a deposit of glacial locustine (sic) clay. The design of the foundation for the containment and major plant structures will be based on the use of high capacity non-displacement piles which will be reevaluated when final building locations and elevations are selected. We will follow this item during construction. Staff Safety Evaluation Report, § 5.5.1., p. 62.

The Preliminary Safety Analysis Report (PSAR) had been based upon preliminary information as to the location of principal structures.^{12/} When the PSAR was submitted, the installation of high capacity nondisplacement piles driven to the glacial till

12/ See discussion of Applicant's Exhibit 6 at page 26, infra.

or underlying bedrock was preliminarily identified as one type of foundation installation. The foundation design and installation were to be re-evaluated when the building locations and elevations were finalized, a comprehensive foundation investigation was completed, and a final design selected.

PSAR Section 1.3 is entitled "Principal Design Criteria." These criteria for the design, construction, and operation of the Bailly Facility are summarized in PSAR Tables 1.3-1.1, 1.3-1.2, 1.3-2, 1.3-3 and 1.3-4. They do not specify a particular foundation design for the Bailly Facility. Paragraph 1.3.4, "Station Design Criteria," refers to the station structures criteria in Chapter 12, "Station Structures and Shielding," which set forth as a design criterion applicable to the pile foundation that the piles "will resist downward, uplift and lateral load for all conditions of static and dynamic loading." "Concrete Structures," paragraph 12.2.3.5 at p. 12.2-10. In addition, the PSAR specifies that "Class I structures will be supported on pile foundations bearing on competent material" "Design Basis Earthquakes," paragraph 2.5.3.5.2 at p. 2.5-41. The selected pile foundation design now proposed for the Bailly Facility continues to satisfy all such applicable requirements.

In addition to the absence of any reference to the installation of piles to the glacial till or underlying bedrock within

the principal architectural and design criteria specified in the PSAR, the preliminary nature of any consideration of such piles is apparent from the discussion in the PSAR. For example, although paragraph 2.5.4, "Foundations," of the PSAR mentions in several subparagraphs the installation of piles to glacial till or bedrock, paragraph 12.2.3.5, "Concrete Structures," in referring to the information in paragraph 2.5.4 specifies that:

A comprehensive foundation investigation will be performed to develop detailed information pertaining to the selection and design of building foundations. The preliminary foundation considerations are included in paragraph 2.5.4.

* * * *

The type of pile and method of driving will be determined by a test program. This information will be provided later. "Concrete Structures," paragraph 12.2.3.5 at p. 12.2-10, emphasis added.

Similarly, "Summary," paragraph 2.5.4.1 specifies that:

Foundation design and installation criteria presented in this report will be re-evaluated when building locations and elevations are finalized. Any specific foundation problems requiring further study will be examined and reported upon in future submittals. Paragraph 2.5.4.1 at p. 2.5-49, emphasis added.

Another clear indication that the use of piles to the glacial till or underlying bedrock was not relied upon as an essential element of foundation design and did not constitute a principal architectural or engineering criterion is, of course, that it was not set forth as a basis for any portion of the Staff's analysis in the Safety Evaluation Report and that, as quoted above, the

Staff acknowledged that the foundation design would be subsequently re-evaluated.^{13/}

Petitioners mischaracterize the testimony of Glenn Chauvin in the construction permit hearings. Petition, p. 4. Mr. Chauvin, Structural Project Manager on the Bailly Facility for Sargent and Lundy Engineers, testified jointly with two other witnesses to refute the contentions of the Joint Intervenors (who included some present Petitioners) that the design basis earthquake was improperly selected and the seismic design of the Facility was inadequate. He stated that the major buildings would be pile supported. Petitioners appear to suggest that his answer to one question in the course of a lengthy proceeding mislead the Licensing Board and/or the Staff into relying on an assumption that the piles would be "driven to or immediately above bedrock."

^{13/} Petitioners note (Petition, p. 4) that the report of the U.S. Geological Survey on the geology of the Bailly site stated that ". . . the applicant has indicated that Class I structures . . . will be supported by piles driven into the compact glacial till . . . or driven to the bedrock surface." SER, Appendix F, p. 157. Similarly, we note that the report of National Oceanic and Atmospheric Administration on site seismicity states: "The applicant has indicated that Class I structures will be supported by piles driven into hard glacial till or to the rock surface." SER, Appendix E, p. 152. Clearly, neither recital is an indication of reliance upon a "design proposed by NIPSCO" for there was no such design. Since the two reports refer to what "the applicant indicated," they necessarily reflect that the applicant's indications were explicitly said to be based upon preliminary information and subject to re-evaluation. Moreover, the two agencies were reporting on geology and seismicity, respectively, not on specific aspects of the design of the Bailly Facility and its foundation and it is obvious that reliance on a specific pile design would not be required for purposes of their reports.

This is incorrect for several reasons. In the first place, there was no such assumption since pile design was not in issue and there was no occasion for either the Board or the Staff to reach an explicit decision or make any assumption as to the depth to which the piles would reach. Secondly, it is clear from the testimony that the thrust of the witness' remarks was that the specifics of the foundation design were to be developed later, not that any particular aspect (such as the depth of the pile installation) had already been determined.

Mr. Chauvin was asked how deep the pilings under the Bailly Facility would go. He replied:

Well, that would be predicated on a pile test. We anticipate -- Dames & Moore [consultant to Sargent and Lundy on geology and seismology] might have a little more input on this than I do -- that will either be founded in the till directly above the rock or in the bedrock, depending upon the pile test that is run and whether you could actually physically drive piles into the rock. Tr. 2141.

He stated that the piles to be used has not been determined but would be pipe piles or H-piles.

And this would depend upon the pile test that has not been decided yet.

Q So that the design for the piling has not been determined at this point?

A Yes, sir, that's correct.

Id.

Mr. Chauvin's incidental reference to "the till directly above the rock or in the bedrock" was not pursued further; nor was there any need to do so since the matter was not in issue. Anyone interested in the point needed only to look at Applicant's Exhibit 6, a Dames & Moore Report entitled "Supplementary Foundation Investigation - Proposed Nuclear Power Plant and Cooling Tower, Bailly Generating Station, Baileytown, Indiana" (March 31, 1972).^{14/} That document stated explicitly:

Our supplementary foundation investigation confirmed the conclusions reached during the performance of the site environmental studies which indicated that all structures should be supported on pile foundations. However, since the location of the proposed nuclear unit has been moved approximately 180 feet south, it will not be necessary to drive the piles into the glacial till as anticipated during the site environmental studies. It is our opinion that the piles can develop an adequate capacity within the very dense/very stiff to hard glacial lacustrine deposits. Report, p. 6, emphasis added.

^{14/} The Report was received in evidence for a limited purpose (see Tr. 2364-68); however, it had been furnished to the intervenors in discovery and its contents were generally available (see Tr. 2307). It was resubmitted to the Staff in connection with the piles proposal in September 1974.

IV. USE OF THE SELECTED PILE FOUNDATION AT THE BAILLY FACILITY DOES NOT INVOLVE A "SIGNIFICANT HAZARDS CONSIDERATION."

Standard for Determining Whether Such Exists.

As we demonstrate in Section III, supra, the use of the selected pile foundation at the Bailly Facility is in full conformance with the requirements of the construction permit and no amendment is required. Thus, in our view, the question of whether an amendment authorizing that pile foundation would involve a "significant hazards consideration" is hypothetical but, in response to the Commission's inquiry, we will discuss briefly below why no such consideration would be involved.

Section 189(a) of the Atomic Energy Act of 1954, as amended in 1962 (P.L. 87-615), provides in relevant part^{15/} that

In cases where . . . a construction permit has been issued following the holding of [the mandatory] hearing, the Commission may, in the absence of a request therefor by any person whose interest may be affected, issue . . . an amendment to a construction permit or an amendment to an operating license without a hearing, but upon thirty days' notice and publication once in the Federal Register of its intent to do so. The Commission may dispense with such thirty days' notice and publication with respect to any application for

^{15/} The first sentence of Section 189(a) not quoted in the text above, provides in part that, in any "proceeding" for the "amending of any license or construction permit" the Commission shall grant a hearing upon the request of any person whose interest may be affected. Since, as we discuss above, no amendment to the construction permit is here involved, this provision does not apply. If an amendment to the construction permit were required, the timing of any hearing thereon would be governed by the Commission's actions. If it dispensed with the thirty days' notice upon its determination that the amendment involves "no significant hazards consideration," a hearing, if requested, would be held after issuance of the amendment. If it published a thirty days' notice and a hearing were requested, the hearing would be held prior to issuance of the amendment.

an amendment to a construction permit or an amendment to an operating license upon a determination by the Commission that the amendment involves no significant hazards consideration. 42 U.S.C. § 2239(a) (1976).

That amendment to Section 189(a) reflects Congressional recognition that the public interest does not require that a public hearing be held in advance of issuance of every amendment to a construction permit or operating license.

The prior version of Section 189(a) had been interpreted by the Commission to require a hearing prior to any issuance of an amendment to construction permits and operating license.^{16/} However, as early as 1960, the Commission had concluded that the Director, Division of Licensing and Regulation, could authorize a change, test, or experiment proposed by the holder of an operating license without a hearing upon a finding that it presented no significant hazards consideration. General Electric Company (Vallecitos Boiling Water Reactor), 1 AEC 541 (1960). This concept was incorporated into 10 C.F.R. § 50.59 of the Commission's regulations in 1962. 27 Fed. Reg. 5492 (1962).^{17/} When Congress amended Section 189(a) later that year, the Congressional report, in referring to the criterion of "no significant hazards considera-

^{16/} See, e.g., AEC Regulatory Problems, Hearing Before the Comm. on Legislation, Joint Comm. on Atomic Energy, 87th Cong., 2d Sess. 6 (1962).

^{17/} That section was not made applicable to construction permits because, the Commission said, unlike operating licenses, construction permits do not incorporate technical specifications. 27 Fed. Reg. 8825 (1962).

tion," specifically stated that it was "presently being applied by the Commission under the terms of AEC Regulations 50.59."^{18/}
1962 U.S. Code Cong. & Ad. News 2207, 2214-15.

The pertinent portions of the regulations implementing Section 189(a) with respect to construction permit amendments are now found in 10 C.F.R. § 50.58(b) and 10 C.F.R. § 50.91.^{19/} Neither the Act nor these regulations defines the term "significant hazards consideration" nor provides criteria for use in determining whether an amendment involves such consideration. Thus, there are no readily identifiable standards which can be used

^{18/} The Petitioners state that, because of the legislative history of Section 189, "the single exception should be applied sparingly." Petition, p. 3. In our view, the legislative history simply reinforces the precise terms of the statute, i.e., that opportunity for a hearing should be afforded unless upon review of the specific circumstances the Commission determines that the amendment involves "no significant hazards consideration." The review must be made with care, but there is no presumption against such a determination.

^{19/} "If the Commission finds that no significant hazards consideration is presented by an application for an amendment to a construction permit or operating license, it may dispense with [30 days'] notice and publication [in the Federal Register] and may issue the amendment." 10 C.F.R. § 50.58(b).

"In determining whether an amendment to a license or construction permit will be issued . . . the Commission will be guided by the considerations which govern the issuance of initial licenses or construction permits to the extent applicable and appropriate. . . . If the amendment involves a significant hazards consideration, the Commission will give notice of its proposed action . . . before acting thereon." 10 C.F.R. § 50.91.

in making a determination as to the existence of a "significant hazards consideration."^{20/}

In the case of an operating license, where bases for margins of safety have been incorporated into the technical specifications of the license, an interpretation of the statute and regulations giving meaning to both the terms "significant" and "hazards considerations" suggests that an amendment involves a significant hazards consideration if the Commission determines that it (1) substantially increases either the probability or consequences of a major credible accident, or (2) reduces the facility's safety margins substantially below those defined in the bases for the technical specifications of the operating license. This is

^{20/} Petitioners suggest that the mere length of time devoted to review of the selected pile foundation by the Staff per se demonstrates that a "significant hazards consideration" is involved. Petition, p. 6. They rely on a statement by a Licensing Board in a prior AEC proceeding, Consumers Power Company (Big Rock Point Nuclear Plant), 7 AEC 297, 298 (1974). Petition, p. 6. The language which Petitioners quote as authority is mere dicta on the part of a Licensing Board speaking in passing on a point which it held to be moot. Furthermore, nothing in Big Rock Point compels the conclusion which Petitioners here urge. Such a simplistic approach cannot substitute for the statutorily required determination as to whether the circumstances in a specific case involve a "significant hazards consideration." That a construction permittee has provided extensive information on a particular aspect of construction and that the Staff is reviewing the subject during construction (as promised in the SER) cannot be bootstrapped either into an automatic assumption that an amendment is required or an automatic assumption that a "significant hazards consideration" is involved.

consistent with the approach taken by the Staff. Operating Procedure 219, Issuance of Operating License Amendments, pp. 2-3 (March 21, 1977).^{21/}

In the case of a construction permit amendment, the construction itself does not endanger the public^{22/} and there

21/ That document states:

It is neither possible nor desirable to provide a rigid formula which can be used to determine whether a proposed license amendment involves a significant hazards consideration. In some cases the collective judgment of senior staff members will be required before a decision can be made. For purposes of guidance, however, a proposed amendment can generally be categorized as involving a significant hazards consideration if: (1) it involves a significant increase in the probability or consequences of an accident, (2) it involves a significant decrease in a safety margin. These criteria must be applied using as a base what has been considered by the Commission in previous licensing actions in that specific case. (Emphasis added.)

22/ As pointed out in another context in the brief filed for the NRC and the United States of America before the Court of Appeals for the District of Columbia Circuit in Porter County Chapter of the Izaak Walton League of America, Inc. v. NRC, supra, the appeal from the Commission's earlier denial of another request to institute show cause proceedings with respect to the Baily Facility:

The different standards at the construction permit and operating license stage reflect the length and intensity of administrative review and the fact that the public health and safety is not put at direct risk until fuel is loaded and operations begin. Brief, p. 27, n. 14.

are no technical specifications incorporating safety margins.^{23/}
It is therefore difficult to hypothesize a construction permit amendment which would involve a "significant hazards consideration." However, in assessing a proposed amendment, the same standard applicable to operating license amendments may be used. That is, a construction permit amendment would not be deemed to involve a significant hazards consideration unless the Commission determines that it (1) substantially increases either the probabilities or consequences of a major credible accident, or (2) reduces the facility's safety margins substantially below those relied upon in the issuance of the construction permit.

Application of the Standard to Bailly

Assuming that a construction permit amendment were required here--presumably because it is concluded that installing piles to the interbedded glacial-lacustrine layer represents a "change" from allegedly "authorized" piles to glacial till or underlying bedrock^{24/}--such an amendment would not involve a "significant hazards consideration" because it would not substantially increase the probabilities or consequences of a major credible accident or substantially decrease the Facility's safety margins.

^{23/} See footnote 17 on p. 28, supra.

^{24/} For the reasons set forth in Section III, supra, we, of course, do not agree that any such "change" is here involved or that an amendment is required.

In examining whether the alleged "change" in piles involves a "significant hazards consideration," the function of a foundation system and its relationship to the probability and consequences of an accident must first be clearly understood. The purpose of the foundation system is to support the buildings and the requirement imposed upon the foundation system is simply that it must be capable of withstanding the loads generated during routine operation, plant transients, earthquakes, LOCA conditions, etc., and various combinations thereof. Those loads are defined without regard to the type of foundation system which is to be installed. That is to say, the potential events which may generate loads are independently analyzed and the anticipated loads are determined and combined as appropriate. See Standard Review Plan 3.8.4 "Other Seismic Category I Structures," p. 3.8.4-5. When the anticipated loads have been defined, the foundation (of whatever type) must be designed to withstand them.

Thus, insofar as is relevant here, the probabilities and consequences of a major credible accident at a nuclear plant are taken into account in evaluating the foregoing events and designing the facility itself to withstand such event. The foundation system does not affect the probability of such events and, since the system is designed to withstand the loads resulting from all postulated events and combinations thereof, it does not affect the consequences of the events. Whether a foundation

system is in fact capable of withstanding such loads depends upon its final design and the execution thereof. These are not usually reviewed and evaluated by the Commission until the FSAR is submitted and the operating license is under consideration. For present purposes, it is only necessary to recognize that, since assuring that the system performs its required purposes is a function of final design, selection of piles to the interbedded glacial-lacustrine deposits (as opposed to piles extending to some other depth, such as the glacial till or underlying bedrock) does not affect the probabilities or consequences of an accident but simply dictates the design and installation methods that must be used.

With respect to safety margins, it must be recognized that these cannot be calculated precisely until the later stages of construction. The design of a nuclear plant is a complex process, requiring many iterations before the design is final. As equipment is selected and purchased, lay-out finalized, piping design completed, thickness and reinforcement of walls specified, etc., the loads expected to be generated by various events can be more precisely defined. When the plant design is finalized, the foundation system must be proven capable of withstanding any and all loads generated during routine, transient, or accident conditions with an acceptable safety margin. But whether this

is in fact accomplished depends upon the final design of both the plant and its foundation system. Nothing relating to the selected pile foundation (as opposed to piles extending to glacial till or underlying bedrock) changes any factors of safety relied upon in the PSAR or will affect the safety margins required to be demonstrated when the FSAR is submitted. The design will simply be finalized in a fashion that achieves those objectives.

When the PSAR for the Bailly Facility was submitted, it was recognized that soil conditions required the installation of a pile foundation. Although use of a pile foundation for a nuclear plant is not common, it is not unique to the Bailly Facility. At least four other nuclear power plants in the United States utilize pile foundations for the containment: Omaha Public Power District, Fort Calhoun Station, Unit 1 (Docket No. 50-285), FSAR, Section 5.7; Carolina Power & Light Co., H. B. Robinson, Unit 2 (Docket No. 50-261), FSAR, Section 5.1.2.6; Wisconsin Electric Power Co. et al., Point Beach Nuclear Plant, Units 1 and 2 (Docket Nos. 50-266, 50-301), FSAR, Section 5.1. In the case of the Robinson plant, pipe piles seated in a very dense, very stiff sand/clay layer (not to bedrock) are utilized.

At the time the PSAR was submitted, specific details of the pile design and installation including pile type, number and spacing of piles, load-carrying capability, length of pile, specific competent material in which piles would be seated, and

driving criteria could not be and did not need to be determined precisely. Field load tests at the building locations had not yet been performed; these are part of the post-construction-permit design and construction of the facility and not part of the site suitability investigations authorized prior to issuance of the construction permit.^{25/} Although the information concerning site geology was fully adequate for construction permit purposes, the Staff was well aware of and documented the preliminary nature of the information with respect to the development of specific pile design and quite logically concluded that it would follow this matter during construction.

Since the only "hazards consideration" referred to by Petitioners is the "amount of settlement of and the differential settlement among Class I structures" (Petition, p. 6), it is useful to discuss that subject briefly. Petitioners simply misunderstand the information necessary for construction permit

^{25/} It may be of interest to the Commission to note that six load tests have since been performed on piles founded in the interbedded glacial lacustrine deposit. See "Design, Analysis, and Installation of Driven H-Pile Foundation" submitted to the Staff by letter from E. M. Shorb to E. G. Case (March 8, 1978); "Supplementary Information on Driven H-Pile Foundations" submitted to the Staff by letter from E. M. Shorb to R. S. Boyd (December 4, 1978). One of these tests indicated pile failure at 490 tons, a second test failed at 590 tons, the other four piles were tested to a load of 600 tons (the limit of the testing equipment) and the piles did not fail. Although estimated pile loadings are preliminary at this point, the estimated maximum loading for a single pile is 428 KIPS (or 214 tons), Answers to Staff questions submitted by letter, E. M. Shorb to R. S. Boyd, Fig. 130.4-1 (July 14, 1978). Obviously, there is ample margin for safety.

purposes. The information contained in the PSAR demonstrates that the pile foundation was selected to limit settlements to values that are acceptable and can be designed for in the Bailly Facility. Paragraphs 2.5.4.3.2, "Evaluation of Mat Foundation," and 2.5.4.3.3, "Pile Foundation." To select the specific pile design and demonstrate that the foregoing objectives are in fact being achieved, it was necessary to perform the post-construction-permit comprehensive foundation investigation specified in the PSAR. Paragraph 12.2.3.5, "Concrete Structures." However, this is part of the design and construction phase, not the ^{26/}pre-construction-permit site suitability investigation.

Since the selected pile foundation does not substantially increase either the probability or consequences of a major credible accident nor reduce the Bailly Facility's safety margins substantially below any relied upon in the issuance of the construction permit, even if a construction permit amendment were required, it would not involve a "significant hazards consideration." Therefore, no hearing would be required prior to issuance of such an amendment.

26/ For the information of the Commission, this investigation has since been completed and showed that the pile driving criteria are satisfied when the piles bear in the interbedded glacial-lacustrine layer. Analyses of settlements and ultimate bearing capacity, submitted to the Staff on March 8, July 14, and July 20, 1978, for purposes of the ongoing Staff review, demonstrated that settlements are acceptable and can be designed for in the structures of the Facility and that ultimate bearing capacity is greater than all conditions of loading.

V. NO HEARING SHOULD BE ORDERED AS A MATTER OF "COMMISSION DISCRETION."

The Atomic Energy Act established a two-step system for the licensing of nuclear power plants, requiring, first, a review which includes a public hearing prior to issuance of a construction permit to evaluate the principal architectural and engineering criteria for the design of such facilities and, later, a further review prior to issuance of the operating license in order to assure that such criteria have been met. This two-step procedure has been approved by the Supreme Court of the United States.

Power Reactor Development Co. v. International Union of Electrical Workers, 367 U.S. 396, 81A S.Ct. 1529 (1961). Up to this point in the Bailly licensing process, the statutory scheme has been followed; however, a hearing on a specific aspect of the facility after issuance of the construction permit and before the filing of the application for an operating license would totally disrupt the Congressionally-mandated licensing procedure.

The Commission regulations clearly implement the two-step licensing procedure. 10 C.F.R. § 50.35 provides in part:

(b) A construction permit will constitute an authorization to the applicant to proceed with construction but will not constitute Commission approval of the safety of any design feature or specifications unless the applicant specifically requests such approval and such approval is incorporated in the permit. . . .

(c) Any construction permit will be subject to the limitation that a license authorizing operation of the facility will not be issued by the Commission until (1) the applicant has submitted to the Commission, by amendment to the application, the complete final safety analysis report, portions of which may be submitted and evaluated from time to time, and (2) the Commission has found that the final design provides reasonable assurance that the health and safety of the public will not be endangered by operation of the facility in accordance with the requirements of the license and the regulations in this chapter.

That same Commission regulation further provides that "[t]he applicant, at his option, may request such approvals [of the safety of any design feature or specification] in the construction permit or, from time to time, by amendment of his construction permit." 10 C.F.R. § 50.35(b). Thus it is clear from the Congressional plan as implemented by Commission regulation that the option of requesting safety approval of any design feature prior to the operating license stage rests solely with the applicant. A hearing on the issue of pile installation at this stage of the overall licensing process without a pending request from the Licensee would violate the very intent and purpose of § 50.35(b). The Commission regulations clearly anticipate that such questions as whether the design of pilings for the Bailly Facility's foundation meets the Commission-approved criteria would be subject to an opportunity for hearing at the operating license stage unless earlier approval is requested by the Licensee.

While it may be true that the Commission has discretion to institute a hearing under unique circumstances, to do so at the

insistence of a group of persistent intervenors with respect to a facility that meets all requirements of its construction permit would make a mockery of the carefully conceived two-step licensing procedure. Pile installation at Bailly was an item which the Staff said it would follow during construction. SER, p. 62. This was part of the hearing record before the Licensing Board prior to issuance of the construction permit and a method of handling the matter which was implicitly found to be satisfactory by the Commission, acting through its Licensing and Appeal Boards at that time.

If, in the exercise of "discretion," the Commission orders a hearing upon an aspect of construction which is being pursued in full conformance with the requirements of a valid construction permit, the Commission will place in doubt the very meaning of a construction permit and the reliance which a permittee or prospective permit applicant can place thereon. On the basis of the Atomic Energy Act, the Commission's implementing regulations, the long-standing practice of the Commission, and the courts' affirmance thereof stretching back to the Supreme Court's decision in PRDC, the holder of a construction permit should rightfully be able to assume that, as long as he complies with the principal architectural and engineering criteria established for design of the facility, he can proceed with construction of the facility without the potential delay of additional hearings.

However, if the Commission grants a hearing not required by statute or regulations at the request of persistent intervenors ^{27/} during construction, the certainty and value of a construction permit will be greatly diminished and the ability of utilities, state regulatory commissions, and the public to plan on the basis of final Commission decisions will disappear.

As demonstrated in Sections and IV, supra, the Bailly pile design criteria have not been altered; there has been no change involving a significant hazards consideration. Accordingly, there is a need neither for a construction permit amendment nor a hearing to satisfy the "public interest." NIPSCO has made no application for early approval by the Commission of its pile installation design or methodology. The Staff long ago stated that it would follow the installation of the piles during construction of the facility and it has been doing so through its review of the NIPSCO pile foundation reports and on-site investigations. For the Commission to order a hearing under these circumstances would be tantamount to abandonment of the carefully-structured two-step licensing procedure in favor of a continuous hearing process not sanctioned by the statute, regulations, or precedent. Such action would also surrender direction of the regulatory process to any persistent intervenor who files a hearing request.

^{27/} We respectfully remind the Commissioners here that since 1972 most of these Petitioners either have been intervenors in Bailly proceedings or have sought to start new proceedings involving the Bailly Facility, that their claims and allegations have uniformly been found to be without merit, and that the record demonstrates conclusively that their consistent goal has been to block or delay the project.

If, notwithstanding the foregoing arguments, the Commission should nevertheless decide to order the hearings requested by Petitioners, its order should explicitly state that pile installation can proceed while the hearings are conducted.^{28/} Any interruption of pile installation pending hearings would constitute a stay of construction. Petitioners however have made absolutely no demonstration of compliance with the standards for the granting of a stay. Virginia Petroleum Jobbers Association v. Federal Power Commission, 259 F.2d 921, 925 (D.C. Cir. 1958); Northern Indiana Public Service Co. (Bailly Generating Station, Nuclear-1), ALAB-192, 7 AEC 420 (1974); see 10 C.F.R. § 2.788(e). Those criteria are: 1) has the moving party made a strong showing that it is likely to prevail on the merits? 2) has the moving party shown that, without such relief, it will be irreparably injured? 3) would the issuance of a stay substantially harm other parties interested in the proceeding? 4) where does the public interest lie? Petitioners have provided no basis upon which these questions could be answered in their favor; they have merely, in a single paragraph, parroted conclusory allegations of compliance.

^{28/} Of course, if the Commission decided that a construction permit amendment is required and that a significant hazards consideration is involved, a public hearing would have to be held prior to issuance of the amendment. As is shown in Sections III and IV, supra, there is no basis for such a decision.

The Secretary's December 11 Memorandum does not indicate circumstances under which the Commission's discretion might theoretically come into play; however, we can identify two possibilities.

The first is that the Commission determines that a construction permit amendment is required (i.e., that the proposed pile installation would violate the construction permit, including any bases thereof), but that the amendment does not involve a "significant hazards consideration." Under these circumstances, the statute and regulations authorize the Commission to issue the amendment prior to a public hearing but do not require it to do so. If, notwithstanding our arguments, the Commission should decide that such an amendment is required, we would urge the Commission to issue the amendment and provide for a hearing thereafter. Obviously, the Licensee would be proceeding at its risk and its actions would be subject to the results of the subsequent hearing, but the public interest and "elemental fairness" to the Licensee dictate that it be authorized to proceed without further delay. No circumstance which would warrant a stay has been identified and the cost of delay to the Licensee and the public which it serves would be enormous, as discussed in Section VI, infra. It must be emphasized that there is no possibility of hazard to public health and safety until the plant becomes operational; continuing construction at most involves the possibility that certain work

would have to be adjusted or redone in the unlikely event that the hearing resulted in modification of the selected pile installation.

The other possibility is that the Commission determines that, although the requirements of the construction permit are fully satisfied and thus no amendment is required, it would be in the "public interest" to hold a hearing to consider an amendment to the construction permit approving specific features of the pile foundation. In our opinion, the present regulations do not admit of that possibility. Section 50.35(b) authorizes only the Licensee, "at his option," to request such approval of design features or specification and nowhere states that the Commission can impose such premature consideration of a design feature or specification on the Licensee, either at the Commission's own instance or because of the persistence of an opponent of the facility. There is broad language in the general provisions of the regulations such as 10 C.F.R. § 2.204 but it must be read within the framework of the two-step licensing process called for by the statute, regulations, consistent Commission practice, and judicial precedents.

If such discretion does exist, the policy reasons set forth above for not delaying construction while a hearing is held are even more overwhelming. Clearly, such an amendment would simply constitute advance Commission action on a matter which would

normally be considered at the operating license stage. There would be no more reason to delay construction on account thereof than exists for delaying construction while any other element of the final design is reviewed and approved by the Commission at the FSAR stage.

VI. RESUMPTION OF PILE INSTALLATION AT THE BAILLY FACILITY IS A MATTER OF URGENCY.

Petitioners argue that, since no construction is currently taking place at Bailly, further delay of the project to accommodate their request for a hearing would "cause little, if any, harm to NIPSCO, in view of the facts that only the status quo is sought to be maintained" Petition, p. 11. Nothing could be further from the truth. The obvious and extensive harm to NIPSCO and its customers occasioned by further delay demonstrates that resumption of pile installation is a matter of extreme urgency and dictates that construction be resumed at the earliest possible date.

Commencement of construction of the Bailly Facility was initially delayed due to the prolonged proceedings before the Licensing and Appeal Boards of the Commission. It took more than 3 1/2 years from the date the application was filed (August 1970) before the construction permit was issued (May 1974). Almost immediately after construction was commenced, it was

halted by a court injunction (October 1974) and not resumed until almost three years after issuance of the permit (February 1977). Construction was again halted in September 1977 pending Staff review of the pile installation and is still suspended awaiting the result of that review. Since no significant construction can proceed until the piles have been installed, delay in commencement of pile installation has a day-for-day impact upon completion of the Facility and initiation of commercial operation.

An extremely serious negative impact of delay of any construction project is the resulting impact on overall cost of the project because of the inevitable escalation of construction costs. Particularly with respect to a construction project as massive as a nuclear plant, with its attendant costs for material, equipment, and labor, current inflationary trends have had and continue to have tremendous effects on costs. Although it is not possible to estimate with precision the cost impacts of future delays in the construction of the Bailly Facility, it is instructive to review current increases in costs. Extension of the expected on-line date for the Bailly Facility from December 1982 to June 1984^{29/} has caused the estimated construction cost

^{29/} The on-line dates and increased estimated construction costs for the Bailly Facility are to a certain extent influenced by the fact that it now takes longer to construct a nuclear facility because additional engineering efforts are necessary to complete final design and corresponding construction work in light of, among other things, more numerous and more detailed regulatory guides.

to rise from \$705,000,000 (NIPSCO Quarterly Report to DOE, October 14, 1977) to \$850,000,000 (NIPSCO Quarterly Report to DOE, November 10, 1978). This amounts to \$145,000,000 in additional costs for an 18-month extension of the on-line date, or approximately \$8,000,000 for each month of delay. It is reasonable to expect that any additional delays in construction will result in escalation of similar magnitude. Obviously, for each month that construction of the Bailly Facility is not resumed, the date of its commercial operation is correspondingly delayed, causing the total costs of the project to increase.

Thus, the resumption of pile installation at the Bailly Facility is a matter of urgency even if viewed only in the light of increased construction costs occasioned by further delay.

However, it should also be recognized that additional costs will be incurred for the purchase of the replacement power required during the time period that the Facility is not on-line because of such delays, and that incalculable societal costs will also be incurred because of unemployment during periods of delayed construction, as well as loss of local tax revenue occasioned by the delay in completion of the facility.

Additionally, delay of construction creates internal difficulties for the Licensee, such as keeping contractors available to resume construction at the earliest permissible date and maintaining

an internal staff to oversee construction and quality assurance activities. The situation in this instance is particularly egregious since, in the more than 4 1/2 years from the issuance of the construction permit and the more than eight years from the filing of its application, NIPSCO has been able to complete only 1% of construction.

It would belabor the obvious to state that any further delay of the Bailly Facility is not only unwarranted but intolerable.

CONCLUSION

For the foregoing reasons, the requests set forth in Petitioners' "Petitions With Respect to Short Pilings Proposal" should be denied by the Commission in all respects.