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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION



IN THE MATTER OF

NORTHERN INDIANA PUBLIC SERVICE COMPANY  
(Bailly Generating Station; Nuclear-1)

DOCKET NO.  
50-367 G

PETITION WITH RESPECT TO SHORT PILING PROPOSAL

Petitioners\* hereby petition the Nuclear Regulatory Commission (the "Commission")\*\* to grant the following relief:

I. Institute a proceeding before an unbiased decision-maker, including holding hearings and affording full and fair administrative procedures to petitioners and to all other interested persons, pursuant to the notice and hearing provisions of the Atomic Energy Act, 42 U.S.C. §2239, and the Administrative Procedure Act, 5 U.S.C. §§554-558, 701-706, on the subject of a proposal by Northern Indiana Public Service Company ("NIPSCO"), holder of Construction Permit No. CPPR-104 (the "construction permit") for the Bailly Generating Station Nuclear-1

\* The Petitioners are the 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, each of whom appears by their respective below signed attorneys.

\*\* This Petition should be decided by the Commission itself, or by an Atomic Safety and Licensing Board designated for that purpose. The Commission's Staff which has served in conflicting and partisan roles in connection with Bailly and on the subject matter of this Petition should not participate in any way as a decision-maker.

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("Bailly"), to install the pile foundation for Class I - Safety Structures in accordance with the design proposed and described in a document submitted by NIPSCO to the Commission's Regulatory Staff ("Staff") entitled "Design Analysis and Installation of Driven H-Pile Foundations Bailly Generating Station-Nuclear 1, Report SL-3629", dated March 8, 1978, and various other communications and information related thereto also submitted to the Staff by NIPSCO (hereinafter jointly referred to as the "short pilings proposal");

II. Withhold or stay permission from NIPSCO to install the pile foundation, or any part thereof, in accordance with the short pilings proposal until the completion of full and fair administrative proceedings, and judicial review thereof, in connection with the short pilings proposal; and,

III. Seek the permission of United States Court of Appeals for the District of Columbia Circuit for leave to reopen administrative proceedings prior to the commencement of administrative proceedings concerning the short pilings proposal and prior to permission to install the short piles foundation.

In support of this Petition, Petitioners state as follows:

1. As shown by documents in the Commission's docket in this matter, each of the Petitioners previously has parti-

cipated in proceedings concerning Bailly and the construction permit, in which the interest of each Petitioner has been shown and established. The interests of each Petitioner are be affected by NIPSCO's short pilings proposal.

2. The Atomic Energy Act specifies that the Commission must provide interested citizens an opportunity for a hearing on all construction permit amendments, except those involving no significant hazards consideration. 42 U.S.C. §2239. Because the legislative history of the Act makes clear that public hearings are strongly favored, and thus the federal courts have ruled that the single exception should be applied sparingly. Brooks v. AEC, 476 F.2d 924, 927, citing U.S. Code and Administrative News, 1962 at pp. 2207-8 (D.C. Cir. 1973). Commission Boards also have recognized that the Act and its history favor limiting application of the no significant hazards consideration exception. E.g., Consumers Power Company (Big Rock Nuclear Plant), 7 AEC 297, LBP-74-15, March 29, 1974.

3. The short pilings proposal requests, in fact and in law, an amendment to the construction permit which involves significant hazards consideration. The construction permit authorizes NIPSCO to construct Bailly as "described in the application and the hearing record." All of the foregoing documentation, the entire record of the construction permit proceeding, and other documentation in the Commission's docket, including but not limited to, the Preliminary Safety Analysis Report, the Staff Safety Evaluation, and the testimony of NIPSCO witnesses at the evidentiary hearing before the Atomic Safety and Licensing

Board, makes it clear beyond doubt that the design proposed by NIPSCO, approved by the Commission, and authorized by the construction permit is for construction of a plant to be built on a foundation of piles driven to bedrock, or to the layer of glacial till immediately above bedrock ("long piles"). For example, the description of the pile design to bedrock appears in the text of the PSAR and in a graphic figure which unmistakably shows the piles driven close to bedrock (PSAR at pp. 2.5-49, 2.5-51 and Figure 2.5-30). Furthermore, the Commission's Regulatory Staff in its Safety Evaluation Report incorporated the report of the U.S. Geological Survey which noted that because a shallow mat foundation would be subject to unacceptable settlement, "...Class I structures and some other units will be supported by piles driven into the compact glacial till encountered at about 160 to 175 feet below plant grade [just above bedrock], or driven to the bedrock surface." (SER, App.F). At the construction permit hearing before the Licensing Board, NIPSCO's witness Glenn Chauvin, a foundation engineer with NIPSCO's architect-engineer, Sargent & Lundy, testified that the foundation would consist of piles driven to or immediately above bedrock (Tr. at 2141).

Moreover, documentation submitted by NIPSCO to the Commission subsequent to the issuance of the construction permit confirms that Bailly was authorized to be built only on long piles. For example, by letter dated December 27, 1976, NIPSCO advised the Commission that "the piles under Class I structures will be

driven into the glacial till or underlying bedrock surface." That letter, and all of the above-referred to documentation, is part of the Commission docket in this proceeding.

4. In March, 1978, almost four years after the construction permit was issued and at a time when, according to Commission documents, construction of Bailly was only about 1% completed, NIPSCO proposed a significant change in this major safety feature of the Bailly plant, the foundation design of all Class I structures. Under NIPSCO's short pilings proposal, the short piles foundation would only go to a depth of about 100 feet above bedrock in the middle of one of several glacial sand/clay layers underlying the site. In contrast the long foundation piles would rest on or close to bedrock.

5. The design of the foundation and the length of the foundation piles for Class I structures are major safety features of Bailly, which directly affect the public health and safety. The change proposed by NIPSCO from the long piles decision, upon which the construction permit was issued, to the short pilings proposal is significant, involves unresolved safety questions and significant hazards consideration, and affects the public health and safety. Therefore, it must be considered at public hearings before the Commission can allow its implementation. The short pilings proposal has not been considered in public hearings, nor could it have been because it was not proposed by NIPSCO until after public hearings were concluded.

6. The short pilings proposal clearly involves significant hazards considerations because it seeks to change the very foundation of the crucial Class I structures. The adequacy of the foundation design affects the amount of settlement of and the differential settlement among Class I structures, which could endanger the safe operation of the plant, and could result in unacceptable reductions in the important seismic safety margins. The important hazards considerations involved in foundation design are recognized in the Bailly PSAR (e.g., 2.5-51).

7. The lengthy consideration of the safety problems of the short pilings proposal in which the Staff is and has been engaged also demonstrates that significant hazards considerations are involved. The volume of the documentation submitted by NIPSCO in support of its short pilings proposal, all of which is part of the Commission's docket, and the length of time of the review of that documentation, the numerous staff members and outside consultants to the Commission involved in the review and the requests for further information by the Staff, indicate the significance of the proposed change in the foundation design. As the Board in Consumers Power, supra, recognized, such a situation "...calls forth in the prudent man a desire for a multilateral opinion and hence for a notice inviting participation by persons of contrasting viewpoint." (7 AEC at 298). Cf. EDF v. Ruchelshaus, 439 F.2d 584, 594-95 (D.C. Cir. 1971).

8. As of the date of this Petition, neither NIPSCO nor the Staff have described the short pilings proposal as a request for an amendment to the construction permit. Nonetheless, if NIPSCO is permitted to install the pile foundation in accordance with the short pilings proposal, it would constitute in fact and in law an amendment to the construction permit.

9. Commission regulations require that the Preliminary Safety Analysis Report include descriptions of major structures relating to seismic safety, unusual or novel design features, the general arrangement and approximate dimensions of the facility, and the major engineering and architectural features designed to protect public safety. 10 CFR §§50.34(a)(1), (a)(2), and (a)(3)(iii) and 50.35(a). The pile foundation is a principal architectural and engineering feature of the plant relating to seismic safety and other public safety problems such as settlement of the plant. The foundation also is an important dimension of the facility. Since most nuclear plants have mat foundations on bedrock, a pile foundation is a novel design feature. A short pile foundation is even more novel. Indeed, to the best of Petitioners' knowledge only one other nuclear power plant has ever received a construction permit to be built on a pile foundation, and there the Commission required that the piles be driven to solid bedrock. See Omaha Municipal Power (Fort Calhoun Nuclear Station) Docket No. 50-285, 4 AEC 113 (1968). The Commission's own Standard Review Plan illustrates the novelty of a pile foundation by requiring



that any plant sought to be built on such a foundation be reviewed on a case by case basis. NRC Regulatory Standard Review Plan, Section 3.8.5 (I.1.).

Neither the construction permit, nor the Atomic Safety and Licensing Board decision which authorized it, allow the length of the foundation piles to be determined by NIPSCO and the Staff at a later date. For example, the decision of the Atomic Safety and Licensing Board specifies certain "technical or design information" ... "which can be left for such later consideration." (LBP-74-19, RAI-74-4, p.557 at p.566). The design of the pile foundation or the length of the piles is not included among that information specified.

10. Even assuming, arguendo, that the short pilings proposal is not deemed to be a request for an amendment to the construction permit, nonetheless an administrative proceeding and public hearings concerning it must be held before NIPSCO is permitted to implement it. The short pilings proposal involves significant hazards consideration, is a matter of great concern to the public health and safety, and has never been the subject of a public hearing, nor could it have been since it was never proposed by NIPSCO until long after the public hearings were concluded. Under all the circumstances, elemental fairness, the Atomic Energy Act, the Administrative Procedure Act, due process of law and the public interest require that public hearings be held to determine whether NIPSCO should be given permission to install a pile foundation in accordance with its short pilings proposal.



11. As of the date of this Petition, Petitioners have not been informed that the Staff has formally approved the short pilings proposal. The most recent written communication from the Staff which Petitioners are aware of on the subject is a letter dated August 4, 1978, from Roger S. Boyd, Director, Division of Project Management, Office of Nuclear Reactor Regulation, to NIPSCO. In a letter dated September 26, 1978, NIPSCO represented to the Staff that it had complied with the requirements of the Staff's August 4 letter and urged the Staff's early concurrence in NIPSCO's proceeding with the installation of production piles. Petitioners are aware that should the NRC Regulatory Staff not approve the short pilings proposal and should NIPSCO not persist in its efforts to implement it, the relief requested in this Petition will be unnecessary.

Nonetheless, Petitioners believe it appropriate that this Petition be submitted at this time to assure that the relief is sought in a timely manner and to reduce the likelihood of the need for seeking emergency relief. The Staff has not responded to a number of requests from Petitioners that the Staff determine that a notice of opportunity for hearing is required on the subject of the short pilings proposal. It is possible that Staff approval to implement the short pilings proposal will be given and NIPSCO will seek to commence implementation within a very short time span. Accordingly, to assure that Petitioners are timely in their request for hearings, and to reduce the likelihood of relief having to be sought on an emergency basis, Petitioners are filing this Petition in advance of their being informed of formal Staff approval.

12. Permission to NIPSCO to install the pile foundation, or any part thereof, in accordance with the short pilings proposal, should be withheld or stayed until completion of all proceedings sought by this petition. The installation or commencement of installation of the pile foundation in accordance with the short pilings proposal, prior to the completion of full and fair administrative proceedings hearings to consider that proposal, would deprive the hearings of meaning and thus would violate the mandatory requirements of 42 U.S.C. §2239. Thus the required hearings must be held before the short pilings proposal is implemented, not during or after its implementation. Public Service Company of New Hampshire (Seabrook Station), NRC I, June 30, 1978, CCH Nucl. Reg. Rptr. par. 30, 310.05. See also Portland General Electric Company, (Trojan Nuclear Plant), NRC I, July 7, 1978, CCH Nucl. Reg. Rptr. par. 30, 311.01. Decision makers would be unable to ignore the growing presence of advancing construction activities, and increased expenditures by NIPSCO, and thus the decision would be affected by improper factors.

Since September, 1977 installation of piles and thus construction of Baily has been halted, by action of and at the direction of the Commission. Permission to NIPSCO to install the pile foundation prior to the completion of the required proceedings would cause irreparable injury to petitioners and to the public interest. There is a great likelihood that petitioners will prevail on the merits of their arguments concerning the re-

quired procedures and proceedings. The withholding or stay of permission to implement the short pilings proposal requested here is required by the public interest and if granted will cause little, if any, harm to NIPSCO, in view of the facts that only the status quo is sought to be maintained and that it would avoid the possibility of NIPSCO having to undo any installation that is done.

13. In view of the pendency of Porter County Chapter of the Izaak Walton League of America, Inc. et al., v. The Nuclear Regulatory Commission, et al., No. 78-1556, and consolidated cases Nos. 78-1559, 78-1560 and 78-1561, in the United States Court of Appeals for the District of Columbia Circuit, the Commission must seek leave of the Court of Appeals to reopen the administrative proceedings for further hearings. 28 U.S.C. §2347(c); Northeast Airlines v. CAB, 345 F.2d 488 (D.C. Cir. 1965); Commission Memorandum and Order, dated October 3, 1974, in Bailly, Docket No. 50-367.

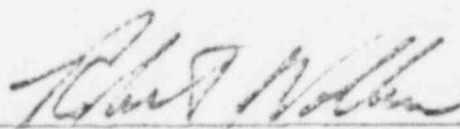
#### CONCLUSION

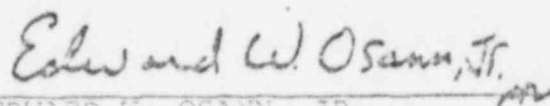
NIPSCO has proposed a substantial design change from the foundation explicitly applied for and approved in the construction permit proceedings which involves significant hazards considerations. Therefore, the Commission is bound by law to afford an opportunity for public hearings on the design change before it can approve and allow to become effective a construction permit amendment embodying that change.

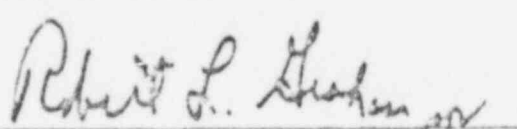
The relief requested in this Petition should be granted.

DATED: November 1, 1978

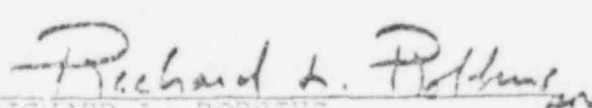
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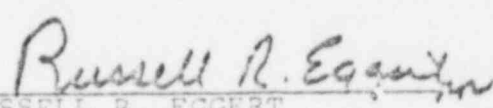
  
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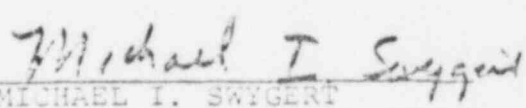
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CERTIFICATE OF SERVICE

I hereby certify that I have served copies of the foregoing Petition with respect to Short Filings Proposal upon each of the following persons by deposit in the United States mail, first class postage prepaid, this 1st day of November, 1978:

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