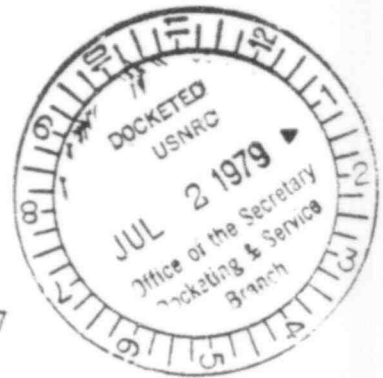


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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION



IN THE MATTER OF: )

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

DOCKET NO. 50-367

JOINT SUPPLEMENT TO REQUESTS FOR HEARING

By letter dated February 7, 1979, Northern Indiana Public Service Company ("NIPSCO") requested issuance of an amendment to Construction Permit No. CPPR-104 (the "construction permit") for the Bailly Generating Station, Nuclear-1 ("Bailly"). The requested amendment would extend the latest construction completion date for Bailly for 6 years - from September 1, 1979 to September 1, 1985.

On February 27, 1979, the Porter County Chapter of the Izaak Walton League of America, Inc., Concerned Citizens Against Bailly Nuclear Site, Inc., Businessmen for the Public Interest, Inc., James E. Newman, Mildred Warner, George Hanks, submitted their Request for Hearing with respect to NIPSCO's requested amendment. On March 5, 1979, the People for the State of Illinois submitted their Request for Hearing with respect to NIPSCO's requested amendment. (The parties submitting those two requests are hereinafter referred to jointly as "Requestors".)

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This Joint Supplement is submitted by the Requestors for the purpose of identifying some of the matters which must be addressed by the Nuclear Regulatory Commission in connection with its consideration of whether to issue the requested amendment and at the hearing required to be held thereon.

Before the requested amendment can be issued, NIPSCO is required to meet its burden of showing good cause for the extension of the completion date. (42 U.S.C. §2235.) Requestors contend that NIPSCO has not met its burden either by the February 7, 1979 request or otherwise. Moreover, when all of the relevant issues, facts and circumstances are disclosed and considered, NIPSCO will not be able to meet its burden. Accordingly, the Commission should deny NIPSCO's request for the amendment.

#### INTRODUCTION

Since the construction permit was issued on May 1, 1974 NIPSCO has completed approximately 1% of construction. The status of construction will not be substantially different when the construction permit expires on September 1, 1979. Thus, the amendment which NIPSCO seeks is not a mere technicality which is necessary to enable it to finish up the details of construction. To the contrary, the amendment which NIPSCO seeks is the Commission's authorization to build 99% of the Bailly plant.

The question of whether the Commission should issue an amendment of that character is every bit as significant, under both the Atomic Energy Act of 1954 and the National Environmental Policy Act of 1969, as was the question of whether the Commission should issue the original construction permit, which it did in 1974. The significance of the issue posed by NIPSCO's requested amendment is found in the passage of time (over 5 years since the permit was issued), in the absence of any substantial portion of the plant having been constructed (only 1%); in the fact that it seeks an extension for a period of 6 years, even longer than the period covered by the original construction permit (5 years, 4 months from May 1, 1974 to September 1, 1979); and, in the substantial number of developments which have occurred since the construction permit was issued (some of which are identified below), none of which were or could have been considered in connection with the Atomic Energy Commission's decision to issue the construction permit. These developments must be considered in connection with the Nuclear Regulatory Commission's decision as to whether or not to issue NIPSCO's requested amendment to the construction permit - to build 99% of the Bailly plant.

This Joint Supplement is intended to identify some of the things which must be done and matters which must be considered by the NRC in connection with NIPSCO's requested construction permit amendment. Each of the matters identified here was not and could not have been considered in a public hearing concerning Bailly, and each is of such significance that it is required to

be considered, and each is not capable of resolution during construction. The identification here is preliminary and not all inclusive. Other matters which are required to be considered are known to the Commission and still others may become known to Requestors following discovery and other appropriate administrative procedures. Each of these matters is relevant to the issue of whether good cause has been shown for the issuance of the construction permit.

#### PUBLIC HEALTH AND SAFETY MATTERS

1. On March 28, 1979 the most serious nuclear power plant accident ever occurred at the Three Mile Island plant. In response, a large number of studies of the causes, effects, consequences and preventability of such accidents, including one by a Commission appointed by President Carter and a "special independent study" for the NRC announced by Chairman Hendrie on June 14, 1979. Chairman Hendrie was quoted as saying "the purpose of [the] evaluation is to permit the Commission to take whatever future steps may be necessary to prevent any similar accident in the future and to improve the NRC's ability to respond to accidents." (Chicago Sun-Times, June 15, 1979, p. 24).

The Three Mile Island accident is so significant that it, its consequences, and the studies of and about it must be considered in connection with NIPSCO's requested construction permit extension.

2. In addition to the Three Mile accident, there are a number of other recent and highly significant developments concerning nuclear power which must be considered in connection with the requested extension of the Bailly construction permit. These developments, the details of which are known to the Commission, include the required shut-down in 1979 of 5 nuclear power plants because of potentially inadequate design to withstand earthquakes; the 1979 Interagency Review Group on Nuclear Waste Management Report to the President that significant uncertainties remain in the ability to safely dispose of radioactive waste and spent fuel from nuclear plants; and the 1978 Risk Assessment Review Group Report To the U.S. Nuclear Regulatory Commission (NUREG/CR-0400).

3. In 1975 and thereafter questions, acknowledged by the Commission to be both serious and unresolved, about the safety of the Mark II containment system became known. (See, e.g., NUREG 0410, NRC Program for Resolution of Generic Issues Related to Nuclear Power Plants, Report to Congress, January 1, 1978; Task Action Plan, Task Number A-8 at pages 1-2; Task Number A-39 at page 2; "Summary of Meeting held on February 16, 17, 1977, to discuss the Mark II Containment Pool Dynamic Load Program" dated April 18, 1977 at page 4; NUREG 0510, Identification of Unresolved Safety Issues Relating To Nuclear Power Plants, January 1, 1979.) The Mark II containment design questions are significant safety issues and may not be capable of resolution during construction.

4. In 1978, NIPSCO proposed to install short pilings foundations for Class I safety structures at the Bailly plant, as opposed

to building the plant on a foundation of piles driven to bed rock or the layer of glacial till immediately above bed rock. 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 and the original construction permit was granted. The design of the foundation and the length of foundation piles for Class I structures are major safety features of Bailly which directly affect the public health and safety and are issues which are not capable of resolution during construction.

5. Nuclear Regulatory Guide 1-97 which was issued after the Bailly construction permit was issued and which governs post-accident monitoring has not been taken into account by NIPSCO in the design of the Bailly plant. The Bailly plant design is inadequate because it lacks sufficient post-accident monitoring capabilities in order to inform plant operators of what has happened following a nuclear accident. The inadequacies in post-accident monitoring were amply demonstrated at Three Mile Island when the operator of the plant did not know what was taking place in the core of the containment and did not know accident conditions outside of the plant. This is a significant issue which may not be capable of resolution during construction and is one which has not been considered before in Bailly proceedings. The Advisory Committee on Reactor Safeguards, as recently as May 16, 1979, has acknowledged the importance of post-accident monitoring. Further, the requirements of TAP A-34 regarding post-accident monitoring

are still unknown and there is a substantial question whether Bailly will be able to adequately retrofit to fit such requirements.

6. The NRC in NUREG 0410, NUREG 0471, Gulf State Utilities Company (River Bend Station, Units 1 and 2) 6 NRC 760 (1977), and NUREG 0510 lists numerous generic safety issues which have not yet been resolved. In addition, General Electric, the reactor vendor for Bailly has prepared a report (the Reed Report) identifying, inter alia, 27 safety related items which need improvement in General Electric boiling water reactors. The Report's existence was not made known to the public until after the issuance of the Bailly construction permit and it was not even until 1976 that NRC employees were allowed to see the report. The Report is particularly relevant to Bailly because the BWR-5 Mark II reactors were under active design evolution at the time that the Reed Report was being prepared.

7. 10 C.F.R. Part 50 Appendix A criterion 20 requires that the emergency protection systems in a reactor be designed to automatically initiate the operation of certain safety systems to assure that field design limits are never exceeded due to certain anticipated occurrences during operation. Several times a year in the U.S. a reactor will fail to scram when the field design limit is exceeded. ATWS has been shown by WASH 1400 (the Rasmussen Report) to be a major cause of accidents in boiling water reactors and that boiling water reactors are more susceptible to ATWS incidents than pressurized water reactors. The BWR-5 in the Mark II containment will not survive many of the proposed ATWS scenarios thus potentially

resulting in a core melt or a containment failure. NUREG 0460 calls for several possible solutions to the problem of ATWS. It is critical that the design and construction of the Bailly plant be capable of accommodating any of the possible solutions proposed to meet the ATWS requirement. Further, NUREG 0510 considers ATWS to be an unresolved safety issue.

8. Events at Three Mile Island indicated great problems of worker exposure in attempting to mitigate the effects of the less-than-Class 9 accident. This was especially evident in such systems as the hydrogen recombiners, primary loop sampling system and liquid and gas waste storage in the auxiliary building. NIPSCO has not dealt with this factor in the construction permit proceeding and it is a problem which may be incapable for resolution during construction.

9. In view of the lack of alternative storage and disposal facilities for spent fuel it is important to allow sufficient size for the spent fuel pool without the artificial mechanism of dense storage. Reactors of the Bailly type require spent fuel storage in the containment vessel and therefore adequate space in the containment must be provided for spent fuel storage. This is a problem not dealt with in the construction permit proceedings and if the containment is improperly designed, will be incapable of resolution during construction.

10. Operating history of boiling water reactors since the issuance of the construction permit for Bailly indicate numerous



problems regarding the adequacy of boiling water reactor designs with reference to pipe cracks, vessel cracks, sparger cracks and control rod failure. 10 C.F.R. 50 Appendix A, criteria 14, 30, and 31 require an applicant to demonstrate the adequacy of material selection and control to avoid such problems. No such demonstration has been made by NIPSCO and because these are design problems they will be incapable of resolution during construction.

AN ENVIRONMENTAL IMPACT STATEMENT MUST BE PREPARED

The issuance of the amendment requested by NIPSCO - which would constitute permission to build 99% of the Bailly plant - would be a major federal action significantly affecting the quality of the human environment. Accordingly, a detailed environmental impact statement must be prepared and NEPA must otherwise be complied with, before the amendment may be issued. This is particularly so in view of the large number of factual developments, identified in this Joint Supplement or otherwise known to the NRC, which were not and could not have been considered in the AEC's Bailly Final Environmental Statement or in the cost-benefit analysis. These include, but are not limited to, the following:

- a. A large number of public health and safety factors which affect the probability of various types of accidents and their consequences, including, but not limited to, those identified in paragraphs numbered 1 through 10 of this Joint Supplement;

- b. Significant changes in the facts underlying a determination as to whether there is a need for the power to be generated by Bailly, and if so when, such as the rate of growth of demand on NIPSCO's system, additional generating sources built by NIPSCO and other utilities, and energy conservation techniques;
- c. The dramatic increase to over \$850 million in the proposed cost of building the Bailly plant;
- d. Changes in the population density surrounding the Bailly site;
- e. The impact upon the Indiana Dunes National Lakeshore of the construction activities thus far carried out, including the dewatering, pumping and the effect, if any, of the slurry wall.
- f. A recent NRC staff memo to the Commission recognizes that in areas of dense population Class 9 accidents are a proper subject for consideration in connection with construction of nuclear power plants. (Action Memorandum, SECY-78-137; Assessments of Relative Differences in Class 9 Accident Risks in Evaluation of Alternatives To Sites with High Population Densities, March 7, 1978.) Bailly's proximity to major urban areas, 20% of the nation's steel-making capacity, the Indiana Dunes National Lakeshore, and Lake Michigan make it particularly appropriate for Class 9 consideration. Consideration to a Class 9 accident at the Bailly nuclear plant has not been given.

In the alternative, even if the Commission rejects the conclusion that a new environmental impact statement is required, these significant new developments must be considered in a supplement to

the AEC's Bailly Final Environmental Statement and the impact of each upon the cost-benefit analysis of the Commission to be considered. In the further alternative, each of the above-identified factors is a significant factor in the cost-benefit analysis and the Commission is required to re-analyze its prior cost-benefit conclusion on the issuance of a construction permit for the Bailly plant. Each of these factors also requires that the Commission re-analyze its comparison of the costs and benefits of the permit issuance to the costs and benefits of alternative courses of action.

#### INCORPORATION AND RESERVATION

Requestors hereby include and incorporate by reference as matters to be considered in connection with the requested amendment those matters identified in the Requests to Institute a Proceeding, and Motion To Suspend and Revoke Construction Permit No. CPPR-104, previously filed with the NRC by Requestors on November 24, 1976 and December 15, 1976. Requestors reserve the right to amend, modify and add to or delete the matters identified to be considered.

DATED: June 29, 1979

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CERTIFICATE OF SERVICE

I hereby certify that I have served copies of the foregoing Joint Supplement to Requests for Hearing upon each of the following persons by deposit in the United States mail, first class postage prepaid, this 29th day of June, 1979:

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