

RELATED CORRESPONDENCE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)

Docket No. 50-367

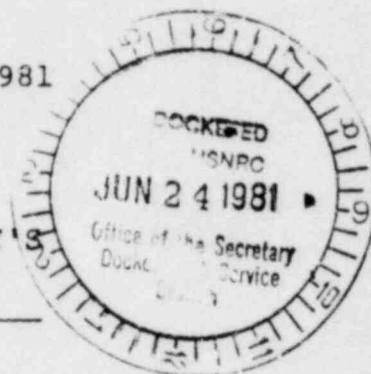
NORTHERN INDIANA PUBLIC SERVICE
COMPANY)

(Construction Permit
Extension)

(Bailly Generating Station,
Nuclear-1))

June 22, 1981

NORTHERN INDIANA PUBLIC SERVICE COMPANY
THIRD SET OF INTERROGATORIES TO
THE STATE OF ILLINOIS



Northern Indiana Public Service Company (NIPSCO) hereby serves its Third Set of Interrogatories to the State of Illinois (hereinafter "Illinois"), pursuant to 10 C.F.R. § 2.740b. Each interrogatory is to be answered fully in writing, under oath or affirmation, and include all pertinent information known to Illinois. Each answer should clearly indicate the interrogatory to which it is intended to be responsive.

Under NRC regulations (10 C.F.R. § 2.740(e)) parties are required to supplement responses to interrogatories under certain circumstances when new and/or different information becomes available.

"Illinois" shall include all agents, employees, attorneys, investigators, and all other persons directly or indirectly subject to its control in any way.

"Documents" means all written or recorded material of any kind or character known to Illinois or in its possession, custody, or control, including, without limitation, letters, correspondence,

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telegrams, memoranda, notes, records, minutes, contracts, agreements, records or notations of telephone or personal conversations or conferences, inter-office communications, microfilm, bulletins, circulars, pamphlets, studies, notices, summaries, reports, books, articles, treatises, teletype messages, invoices, tape recordings, and work-sheets.

When used with respect to a document, "identify" means, without limitation, to state its date, the type of document (e.g., letter, memorandum, telegram, chart, photograph, sound reproduction, etc.), the author and addressees, the present location and the custodian, and a description of its contents.

When used with respect to a person, "identify" means, without limitation, to state his or her name, address, occupation, and professional qualifications.

If Illinois cannot answer any portion of any of the Interrogatories in full, after exercising due diligence to do so, so state, and answer to the extent possible, specifying the inability to answer the remainder and stating when Illinois expects to be able to answer the unanswered portions.

NIPSCO'S INTERROGATORIES^{*/}

30. You allege that "it is now estimated that extended construction at the Bailly site will necessitate dewatering during the entire period of construction, and for several

^{*/} Numbering of the following Interrogatories continues from NIPSCO's Second Set of Interrogatories to Illinois (April 23, 1981).

months afterward. (Experience at River Bend and at Caorso, Italy, substantiates this fact.)^{*}/

- (a) Please describe the "[e]xperience at River Bend and at Caorso, Italy . . ." to which you refer and identify the source(s) of your information regarding that "experience."
- (b) Please provide the bases (other than the cited "experience at River Bend and at Caorso, Italy") for concluding that dewatering will be needed "during the entire period of construction and for several months afterward."
- (c) To what depth do you contend dewatering will be required after completion of the foundation?
- (d) What will be the rate of dewatering (gal/min) after completion of the foundation?

31. You allege that the "point (or points) of introduction" of replacement water [as proposed in NIPSCO's remedial program] have not been "shown to be capable of maintaining natural water levels within all areas of the Indiana Dunes National Lakeshore while maintaining dry excavation to the depth needed for the additional period of construction time."^{**}/

^{*}/ Supplemental Petition of the State of Illinois, Contention 3, pp. 7-8 (February 26, 1980).

^{**}/ Supplemental Petition of the State of Illinois, Contention 3.B.1., p. 9 (February 26, 1980).

- (a) Please identify the "point (or points) of introduction" to which you refer.
- (b) Please define the phrase "natural water levels" as used above.
- (c) Please define the term "dry excavation" as used above.
- (d) Please state your understanding of the "depth needed" in station datum assuming as the bases for your answer that grade is EL +40'.
- (e) Please specify the length of "the additional period of construction time" to which you refer.
- (f)
 - (1) Please identify and locate "all areas of the Indiana Dunes National Lakeshore" which you allege will be potentially affected by dewatering of the Bailly excavation during "the additional period of construction time."
 - (2) Please provide the bases for concluding that the "areas" identified in your answer to Interrogatory 31(f)(1) may be affected by dewatering.
 - (3) Please specify the "natural water levels" for "all areas of the Indiana Dunes National Lakeshore" which you allege will be potentially affected by dewatering of the Bailly excavation during "the additional period of construction time." If the "levels" are different at different "areas," please specify the level for each pertinent area.

- (4) Please state the bases for determining the "natural water levels" identified in your answer to Interrogatory 31(f)(3).
- (g) Is it your position that NIPSCO's proposed remedial program will not be "capable of maintaining natural water levels within all areas of the Indiana Dunes National Lakeshore while maintaining dry excavation to the depth needed for the additional period of construction time"?
32. You allege that "replacement water levels are not keyed to the natural water table levels, or the natural interdunal pond and wet land levels, including measures to maintain the natural seasonal variations and yearly variations, within all areas of the Indiana Dunes National Lakeshore."*/
- (a) (1) Please define the phrase "natural interdunal pond . . . levels" as used above.
- (2) Please specify the "natural interdunal pond . . . levels" for "all areas of the Indiana Dunes National Lakeshore" which you allege will be potentially affected by dewatering of the Bailly excavation during "the additional period of construction time." If the "levels" are different at different "areas," please specify the level for each pertinent area.
- (3) Please state the bases for determining the "natural interdunal pond . . . levels" identified in your answer to Interrogatory 32(a)(2).

*/ Supplemental Petition of the State of Illinois, Contention 3.B.2., p. 9 (February 26, 1980).

- (b) (1) Please define the phrase "natural . . . wet land levels" as used above.
- (2) Please specify the "natural . . . wet land levels" for "all areas of the Indiana Dunes National Lakeshore" which you allege will be potentially affected by dewatering of the Bailly excavation during "the additional period of construction time." If the "levels" are different at different "areas," please specify the level for each pertinent area.
- (3) Please state the bases for determining the "natural . . . wet land levels" identified in your answer to Interrogatory 32(b)(2).
- (c) (1) Please define the phrase "natural water table levels" as used above.
- (2) Please specify the "natural water table levels" for "all areas of the Indiana Dunes National Lakeshore" which you allege will be potentially affected by dewatering of the Bailly excavation during "the additional period of construction time." If the "levels" are different at different "areas," please specify the level for each pertinent area.
- (3) Please state the bases for determining the "natural water table levels" identified in your answer to Interrogatory 32(c)(2).
- (d) Please enumerate the historical and projected ranges of "natural seasonal variations" within the Lakeshore of:

- (1) "natural water table levels";
 - (2) "natural interdunal pond . . . levels";
 - (3) "natural . . . wet land levels."
- (e) Please enumerate the historical and projected ranges of "natural . . . yearly variations" within the Lakeshore of:
- (1) "natural water table levels";
 - (2) "natural interdunal pond . . . levels";
 - (3) "natural . . . wet land levels."
- (f) What do you contend will be the probable environmental consequences of a failure to "key" replacement water levels during "the additional period of construction time" to:
- (1) "natural water table levels";
 - (2) "natural interdunal pond . . . levels";
 - (3) "natural . . . wet land levels"?
- (g) What do you contend will be the probable environmental consequences of a failure to maintain "the natural seasonal variations" in ground water levels in the Lakeshore during "the additional period of construction time"?
- (h) What do you contend will be the probable environmental consequences of a failure to maintain the "yearly variations" in ground water levels in the Lakeshore during "the additional period of construction time"?
- (i) Please state the bases for your answers to Interrogatories 32(d), (e), (f), (g) and (h).

32. You allege that "[v]ariations of water levels must also be timed to coincide with the timing of natural seasonal cycles"*/

(a) Please define the term "natural seasonal cycles" as used above.

(b) To which "water levels" do you refer in the above quotation?

(c) Please provide the bases for the above quoted allegation.

34. You allege that "replacement water will not have the same characteristics as the water removed."**/

(a) Please describe those characteristics that distinguish replacement water from "the water removed."

(b) For each characteristic described in your answer to Interrogatory 34(a), please identify the function or quality which contributes to the unsuitability of replacement water as a means of mitigating effects of dewatering.

35. You allege that "[t]he natural water has a low flow rate and a long term turnover, during which time the water is conditioned by natural processes, such as organic decay."***/

*/ Supplemental Petition of the State of Illinois, Contention 3.B.2., pp. 9-10 (February 26, 1980).

**/ Supplemental Petition of the State of Illinois, Contention 3.B.3., p. 10 (February 26, 1980).

***/ Id.

- (a) Please define the term "natural water:" as used above.
 - (b) What do you contend is the rate of flow of ground water in the Lakeshore adjacent to the Bailly site? If the rate is different at different locations which you contend are likely to be affected by dewatering, please specify the rate at each pertinent location.
 - (c) What do you contend will be the rate of flow of replacement water during "the additional period of construction time" at each point of introduction and at each location identified in your answer to Interrogatory 35(b)?
 - (d) Is it your position that the flow rate of replacement water during "the additional period of construction time" will be too rapid to permit conditioning through organic decay?
 - (e) If your answer to Interrogatory 35(d) is yes, please identify the bases for your conclusion.
 - (f) If your answer to Interrogatory 35(d) is no, what is the significance of flow rate to the suitability of the proposed water replacement plan?
 - (g) Please identify any other "natural processes" which "condition" the water and describe the effect of each such process on the characteristics of the water.
36. You allege that "water characteristics vary considerably from one location to another, and from strata to strata, or from r surface to greater depths."*/

*/ Supplemental Petition of the State of Illinois, Contention 3.B.3., p. 10 (February 26, 1980).

- (a) Please describe those water characteristics which differ "from one location to another" within the Lakeshore.
- (b) Please specify which of the characteristics listed in your answer to Interrogatory 36(a) you allege will be potentially affected by dewatering of the Bailly excavation and/or ground water replacement during "the additional period of construction time."
- (c) Please describe those water characteristics which differ "from strata to strata" within the Lakeshore.
- (d) Please specify which of the characteristics listed in your answer to Interrogatory 36(c) you allege will be potentially affected by dewatering of the Bailly excavation and/or ground water replacement during "the additional period of construction time."
- (e) Please describe those water characteristics which differ "from near surface to greater depths" within the Lakeshore.
- (f) Please specify which of the characteristics listed in your answer to Interrogatory 36(e) you allege will be potentially affected by dewatering of the Bailly excavation and/or ground water replacement during "the additional period of construction time."
- (g) Please enumerate the historical and projected ranges of variations within the Lakeshore for each characteristic described in your answer to:

- (1) Interrogatory 36(a);
- (2) Interrogatory 36(c);
- (3) Interrogatory 36(e).

37. You allege that "removal and replacement of ground water . . . will result in an increased rate of ground water movement, which will dilute and replace the existing water without permitting the normal, slow, natural conditioning from organic process. The additional period of time will permit a greater dilution and/or replacement of the natural water."^{*/}

- (a) What do you contend will be the "rate of ground water movement" resulting from "removal and replacement of ground water"?
- (b) Please define the term "the existing water" as used above.
- (c) Please specify the dilution of "existing water" which you contend will occur--i.e., specify in quantitative terms the characteristics of "the existing water" before dilution and the characteristics of the water after the alleged dilution.

38. (a) You have referred to "[r]ecent studies by the U.S.G.S."^{**/} Please list every such study upon which you relied or to which you referred in drafting Contention 3.D.

^{*/} Supplemental Petition of the State of Illinois, Contention 3.C., p. 10 (February 26, 1980).

^{**/} Supplemental Petition of the State of Illinois, Contention 3.D., p. 10 (February 26, 1980).

(b) Please list all sections or subsections of the U.S.G.S. studies listed in your answer to Interrogatory 38(a) which indicate that "an underlying strata . . . diminishes in thickness to the point of disappearance, or at least to the point of being ineffectual."*/

39. You allege that "construction site dewatering will drain an aquifer not previously considered by the ASLB and which has direct connection with the wet lands of the Indiana Dunes National Lakeshore considerably farther to the east than previously assumed including the waters of Cowles Bog."**/

(a) Please identify the aquifer to which you refer and describe the location, depth (to the top of the aquifer) and physical dimensions (length, width and height) of the aquifer to which you refer.

(b) Please describe and locate the "direct connection with the wet lands of the Indiana Dunes National Lakeshore" which you allege the aquifer identified in your answer to Interrogatory 39(a) has.

(c) Please describe how dewatering during "the additional period of construction time" will affect the aquifer identified in your answer to Interrogatory 39(a), including the length of time required for the effects to be manifested.

*/ Supplemental Petition of the State of Illinois, Contention 3.D., pp. 10-11 (February 26, 1980).

**/ Supplemental Petition of the State of Illinois, Contention 3.D., p. 11 (February 26, 1980).

- (d) Please specify the environmental consequences of the postulated draining of the aquifer identified in your answer to Interrogatory 39(a).
40. Please identify each document to which you referred or upon which you relied in formulating Contentions 3.B., 3.C., and 3.D.^{*}/
41. Please identify each person whom you consulted in formulating Contentions 3.B., 3.C., and 3.D.^{**}/
42. Please identify each document to which you referred or upon which you relied in answering Interrogatories 30-39.
43. Please identify each person whom you consulted in answering Interrogatories 30-39 giving the following information for each such person:
- (a) Name;
 - (b) Address;
 - (c) Place of employment and job title;
 - (d) Number (including subpart) of each Interrogatory with respect to which that person consulted, aided or provided or furnished information; and

^{*}/ Supplemental Petition of the State of Illinois, pp. 9-11 (February 26, 1980).

^{**}/ Id.

(e) The nature of the information or aid furnished.

Respectfully submitted,

EICHHORN, EICHHORN & LINK
5243 Hohman Avenue
Hammond, Indiana 46320

By William H. Eichhorn
William H. Eichhorn

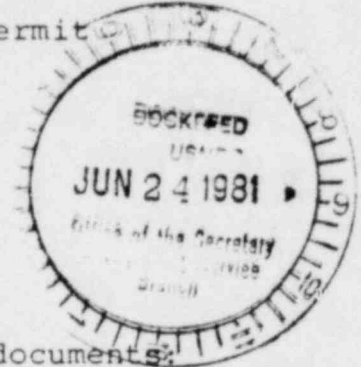
Attorneys for Northern Indiana
Public Service Company

LOWENSTEIN, NEWMAN, REIS
& AXELRAD
1025 Connecticut Avenue, N.W.
Washington, D.C. 20036

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	Docket No. 50-367
)	
NORTHERN INDIANA PUBLIC)	(Construction Permit
SERVICE COMPANY)	Extension)
)	
(Bailly Generating Station,)	June 22, 1981
Nuclear-1))	



CERTIFICATE OF SERVICE

I hereby certify that copies of the following documents:

Northern Indiana Public Service Company's Third
Set of Interrogatories to Porter County Chapter
of the Izaak Walton League of America, Inc.

Northern Indiana Public Service Company's Third
Set of Interrogatories to Concerned Citizens
Against Bailly Nuclear Site

Northern Indiana Public Service Company's Third
Set of Interrogatories to Businessmen for the
Public Interest, Inc.

Northern Indiana Public Service Company's Third
Set of Interrogatories to James E. Newman

Northern Indiana Public Service Company's Third
Set of Interrogatories to Mildred Warner

Northern Indiana Public Service Company's Third
Set of Interrogatories to the State of Illinois

were served on the following by deposit in the United States
mail, postage prepaid, on this 22nd day of June, 1981:

Herbert Grossman, Esquire, Chairman
Administrative Judge
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. Robert L. Holton
Administrative Judge
School of Oceanography
Oregon State University
Corvallis, Oregon 97331

Dr. J. Venn Leeds
Administrative Judge
10807 Atwell
Houston, Texas 77096

Docketing and Service Section
Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Howard K. Shapar, Esquire
Executive Legal Director
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Stephen H. Lewis, Esquire
Office of the Executive Legal Director
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Susan Sekuler, Esquire
Environmental Control Division
188 West Randolph Street
Suite 2315
Chicago, Illinois 60601

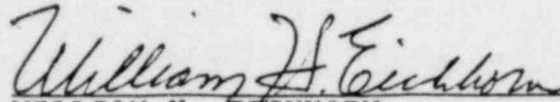
Robert J. Vollen, Esquire
c/o BPI
109 North Dearborn Street
Suite 1300
Chicago, Illinois 60602

Edward W. Osann, Jr., Esquire
One IBM Plaza
Suite 4600
Chicago, Illinois 60611

Robert L. Graham, Esquire
One IBM Plaza
44th Floor
Chicago, Illinois 60611

Mr. Mike Olszanski
Mr. Clifford Mezo
United Steelworkers of America
Local 1010
3703 Euclid Avenue
East Chicago, Indiana 46312

Mr. George Grabowski
Ms. Anna Grabowski
3820 Ridge Road
Highland, Indiana 46322


WILLIAM H. EICHHORN
Eichhorn, Eichhorn & Link
5243 Hohman Avenue
Hammond, Indiana 46320

Attorneys for Northern Indiana
Public Service Company