

7/31/81

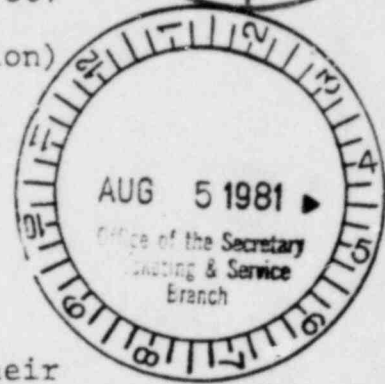
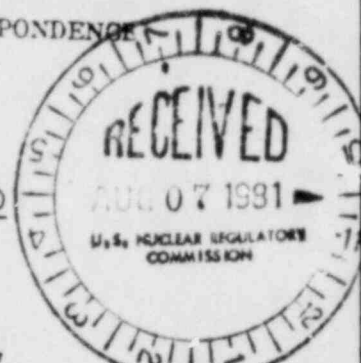
UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSIONBEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of )

NORTHERN INDIANA PUBLIC )  
SERVICE COMPANY )  
(Bailly Generating Station, )  
Nuclear-1) )Docket No. 50-367  
(Construction  
Permit Extension)PORTER COUNTY CHAPTER INTERVENORS'  
FOURTH SET OF INTERROGATORIES TO NIPSCO

Porter County Chapter Intervenor (PCCI), by their attorneys, pursuant to 10 CFR §2.740b, hereby serve upon Northern Indiana Public Service Company (NIPSCO) the following interrogatories to be answered separately and fully in writing under oath by its officer or agent, within 14 days of the date of service.

The term "document" means any writing or recording of any kind, however produced or reproduced, including but not limited to letters, telegrams, memoranda, reports, studies, tape recordings, computer printouts, photographs, calendar and diary entries, minutes, pamphlets, notes, charts, tabulations, and records of meetings, conferences and telephone or other conversations or meetings, which are in the actual or constructive possession, custody or control of NIPSCO or its agents. The term "you" and "NIPSCO" include Northern Indiana Public Service Company, its agents, employees, representatives, subsidiaries, and those consultants, attorneys, contractors or subcontractors over whom NIPSCO retains control.

DS03  
50/1

1. (a) What extended period of construction does NIPSCO request?
  - (b) For what period of time and at what rate will the Bailly site be dewatered if the extended period of construction time requested by NIPSCO is granted?
  - (c) For what period of time and at what rate was the Bailly site dewatered between May 1, 1974, and September 1, 1979?
  - (d) What period of dewatering and what rate of dewatering of the Bailly site were analyzed critically by the Atomic Energy Commission in connection with issuance of Construction Permit No. CPPR-104?
  - (e) By what period and what rates do the sums of your answers to 1(b) and 1(c) exceed your answers to 1(d)?
  - (f) Please provide the bases for your answers to 1(b), 1(c) and 1(d).
- 
2. (a) What total volume of water will be removed from the Bailly site as a result of dewatering during the extended period of construction time sought by NIPSCO if such an extension is granted?
  - (b) What total volume of water was removed from the Bailly site as a result of dewatering between May 1, 1974, and September 1, 1979?
  - (c) What was the total volume of water removal from the Bailly site which was analyzed critically by the Atomic Energy Commission in connection with issuance of Construction Permit No. CPPR-104?

- (d) By what volume does the sum of your answers to 2(a) and 2(b) exceed your answer to 2(c)?
  - (e) Please provide the bases for your answers to 2(a), 2(b) and 2(c).
3. (a) To what elevation was dewatering critically analyzed by the Atomic Energy Commission at the construction permit stage?
- (b) For what period of time is dewatering to the elevation specified in your answer to 3(a) contemplated?
  - (c) Please provide the bases for your answer to 3(a) and 3(b).
  - (d) What is the lowest elevation to which the Bailly excavation will be dewatered if an extension to the Bailly construction permit is granted?
4. (a) If the Bailly site is continuously dewatered to the elevation specified in your answer to 3(a), how long after the onset of such dewatering will the groundwater levels in the Bailly site area reach equilibrium as a result of dewatering (discounting variations in the groundwater levels from factors other than dewatering)?
- (b) Please specify the depth of drawdown of the groundwater levels in the area around the Bailly site which would result from continuous dewatering to the elevation specified in your answer to Interrogatory 3(a) at distances of 700 feet, 1/2 mile, and 1 mile from the center point of the excavation.

- (c) Please specify that rate of dewatering (vol/min.) which would occur as a result of continuous dewatering to the elevation specified in your answer to Interrogatory 3(a).
  - (d) If the Bailly site is continuously dewatered to the elevation specified in your answer to 3(d), how long after the onset of such dewatering would the groundwater levels in the Bailly site area reach equilibrium as a result of dewatering (discounting variations in the groundwater levels from factors other than dewatering)?
  - (e) Please specify the depth of drawdown of the groundwater levels in the area around the Bailly site which would result from continuous dewatering to the elevation specified in your answer to Interrogatory 3(d) at distances of 700 feet, 1/2 mile, and 1 mile from the center point of the Bailly excavation.
  - (f) Please specify the rate of dewatering (vol/min.) which would occur as a result of continuous dewatering to the elevation specified in your answer to Interrogatory 3(d).
5. (a) If the Bailly site is continuously dewatered to the elevation specified in your answer to Interrogatory 3(a), how long after the onset of such dewatering will the environmental impacts as a result of such dewatering reach an equilibrium (discounting variations in environmental impacts from factors other than dewatering)?
- (b) If the Bailly site is continuously dewatered to the elevation specified in your answer to Interrogatory 3(d),

how long after the onset of such dewatering will the environmental impacts as a result of such dewatering reach an equilibrium (discounting variations in environmental impacts from factors other than dewatering)?

6. Do your answers to Interrogatory 4(a), 4(b), 4(c), and 5(a) bound the results which would be obtained if the Bailly site is dewatered to an elevation higher than that specified in your answer to Interrogatory 3(a)?
7. (a) If the extension sought by NIPSCO is granted, will any environmental impact during the extended period of construction time result from:
  - (i) Dewatering during the extended period of construction time sought by NIPSCO?
  - (ii) Dewatering during the period specified in your answer to Interrogatory 1(d)?
  - (iii) Dewatering of the volume of water specified in your answer to Interrogatory 2(d)?
  - (iv) Other causes? If yes, please specify the cause(s).
- (b) Please describe in detail the environmental impact which will result from each of the causes specified in your answer to Interrogatory 7(a).
- (c) If your answer to Interrogatory 7(a)(i) through (iv) is no, please state the basis for your answer.
8. Are the environmental impacts described in your answer to Interrogatory 7(b) irreversible in whole or part once dewatering during the extended period of construction time sought by NIPSCO is completed?

9. If your answer to Interrogatory 8 is yes, please specify which impacts are irreversible.
10. If the environmental impacts described in your answer to Interrogatory 7(b) are reversible in whole or part once dewatering during the extended period of construction time sought by NIPSCO is completed:
  - (a) Please specify which impacts are reversible in whole or part;
  - (b) Please specify the degree to which the impacts are reversible;
  - (c) Please specify the time required to complete the reversal process for each impact.
11. If the extension sought by NIPSCO is granted,
  - (a) Will dewatering of Bailly during the extended period of construction cause different groundwater levels at distances of 700 feet, 1/2 mile, and 1 mile from the center of the Bailly excavation than occurred as a result of dewatering prior to September 1, 1979?
  - (b) Will dewatering of Bailly during the extended period of construction sought by NIPSCO cause different direction or rates of groundwater flow at distances of 700 feet, 1/2 mile, and 1 mile from the center of the Bailly excavation than occurred as a result of dewatering prior to September 1, 1979?
  - (c) Will dewatering of Bailly during the extended period of construction sought by NIPSCO cause the groundwater



at distances of 700 feet, 1/2 mile, and 1 mile from the center of the Bailly excavation to exhibit different chemical characteristics than occurred as a result of dewatering prior to September 1, 1979?

- (d) Will dewatering of Bailly during the extended period of construction sought by NIPSCO cause the groundwater to be different in any other respects than occurred as a result of dewatering prior to September 1, 1979?
  - (e) If your answers to Interrogatories 11(a), 11(b), 11(c) or 11(d) are yes,
    - (i) Please describe each difference, specifying, e.g., its magnitude, geographic extent, and duration;
    - (ii) Please describe the bases for contending that each difference will occur;
    - (iii) Please describe the environmental impact which will be caused by each difference.
  - (f) If your answers to Interrogatories 11(a), 11(b), 11(c), and 11(d) are no, please state the bases for your answer, including but not limited to the data concerning groundwater flow rates, characteristics and levels on which you rely.
12. (a) Has dewatering of the Bailly site caused any differences in groundwater levels at distances of 700 feet, 1/2 mile, and 1 mile from the center of the Bailly excavation than occurred prior to May 1, 1974?

- (b) Has dewatering of the Bailly site caused any differences in direction or rates of groundwater flow at distances of 700 feet, 1/2 mile, and 1 mile from the center of the Bailly excavation than occurred prior to May 1, 1974?
  - (c) Has dewatering of the Bailly site caused the groundwater at distances of 700 feet, 1/2 mile, and 1 mile from the center of the Bailly excavation to exhibit any different chemical characteristics than occurred prior to May 1, 1974?
  - (d) Has dewatering of the Bailly site caused the groundwater to be different in any other respects than it was prior to May 1, 1974?
  - (e) If your answer to Interrogatories 12(a), 12(b), 12(c) or 12(d) is yes,
    - (i) Please describe each difference, specifying, e.g., its magnitude, geographic extent, and duration;
    - (ii) Please describe the bases for your positions that each difference has occurred;
    - (iii) Please describe the environmental impact caused by each difference.
  - (f) If your answers to Interrogatories 12(a), 12(b), 12(c) and 12(d) are no, please state the bases for your answer including but not limited to the data concerning groundwater flow rates, characteristics and levels occurring prior to May 1, 1974 on which you rely.
13. (a) If the extension sought by NIPSCO is granted, will dewatering during the extra period of dewatering (as distinct from any changes in the parameters of the



groundwater which will occur after September 1, 1979, as a result of dewatering during the extended period of construction) cause any environmental impact?

- (b) If your answer to Interrogatory 13(a) is yes,
  - (i) Please describe the impact;
  - (ii) Please provide the bases for your contention.
- (c) If your answer to Interrogatory 13(a) is no, please state the bases for your answer.

14. Is it your position that construction and dewatering during the additional period of construction and/or the additional period of dewatering sought by NIPSCO is not sufficient to cause any impact on any species of plant in the Indiana Dunes National Lakeshore?

- (a) If your answer is that such period is not sufficient to cause any impact, please provide the bases for your contention.
- (b) If your answer is that such period is sufficient to cause any impact;
  - (i) Describe in detail the impact;
  - (ii) State whether you contend the impact is reversible or irreversible;
  - (iii) If you contend the impact is reversible, state what period of time after all dewatering has ceased will be necessary for complete reversal of such impact; and
  - (iv) State the bases for your responses to 14(b)(i) through (iii).

15. (a) Is it your position that the Indiana Dunes National Lakeshore would not be adversely affected by

- (i) A deficiency of water;
- (ii) A surplus of water;
- (iii) A change in water characteristics;
- (iv) A change in the rate of water flow;
- (v) A change in the direction of water flow;
- (vi) Dilution of the existing water in the  
Indiana Dunes National Lakeshore?

(b) Please specify the numerical values for the parameters of the water which you are using as a reference in order to determine whether a deficiency, surplus, or a change in the water occurs.

(c) Using the values specified in your answer to Interrogatory 15(b) as a reference, please specify the magnitude of change in the following parameters of the groundwater of the Indiana Dunes National Lakeshore which can occur before any adverse impact will result in the Indiana Dunes National Lakeshore:

- (i) Groundwater level;
- (ii) Groundwater flow rate;
- (iii) Groundwater flow direction;
- (iv) Groundwater characteristics.

(d) Using the values specified in your answer to Interrogatory 15(b) as a reference, please specify the magnitude of change in the following parameters of the groundwater

in the Indiana Dunes National Lakeshore which you allege will occur as a result of dewatering during the extended period of construction time sought by NIPSCO:

- (i) Groundwater level;
  - (ii) Groundwater flow rate;
  - (iii) Groundwater flow direction;
  - (iv) Groundwater characteristics.
- (e) Please describe any environmental impact which will result from the change in items specified in Interrogatory 15(d).
- (f) Please identify all documents upon which you relied and persons whom you consulted in answering Interrogatories 15(a) through 15(e).
- (g) Please provide calculations upon which your answers to Interrogatories 15(b) through 15(g) are based.
16. (a) Is it your position that NIPSCO or its contractors or subcontractors did not perform any action in an incompetent manner in connection with the application for and issuance of the Bailly construction permit, and in its attempt to build the Bailly plant?
- (b) If your answer to Interrogatory 16(a) is yes, state the bases for your answer.
- (c) If your answer to Interrogatory 16(a) is no, state:
- (i) What actions were performed in an incompetent manner;

- (ii) By whom the actions were performed;
- (iii) In what manner the actions were incompetently performed.

17. (a) Over what extended period of time does NIPSCO propose to engage in construction dewatering at the Bailly site?

(b) Do you contend that NIPSCO's proposed water mitigation program will prevent all impacts upon the Indiana Dunes National Lakeshore resulting from NIPSCO's proposed extended period of construction dewatering?

(c) If your answer to Interrogatory 17(b) is yes, please:

- (i) Identify all impacts on the Indiana Dunes National Lakeshore which you contend NIPSCO's proposed mitigation program will prevent;
- (ii) State the manner in which you contend NIPSCO's proposed mitigation program will prevent each impact; and
- (iii) State the bases for your answers to Interrogatories 17(b), (c)(i), and (c)(ii).

(d) If your answer to Interrogatory 17(b) is no, please identify all impacts which NIPSCO's proposed mitigation program will not prevent.

18. With reference to NIPSCO's proposed water mitigation program:

- (a) Will NIPSCO's proposed program be capable of maintaining natural water levels within all areas of the Indiana Dunes National Lakeshore while maintaining a dry excavation to the depth needed for construction during the additional period of construction time sought by NIPSCO?

(b) Are the replacement water levels keyed to the natural water table levels?

(i) If your answer to Interrogatory 18(b) is yes, please state in what respect the replacement water levels are so keyed.

(ii) If your answer to Interrogatory 18(b) is no, state why the replacement water levels are not keyed to the natural water table levels.

(iii) Describe the natural water table levels to which you referred in answering Interrogatory 18(b).

(c) Are the replacement water levels keyed to the natural interdunal pond levels?

(i) If your answer to Interrogatory 18(c) is yes, state in what respect the replacement water levels are so keyed.

(ii) If your answer to Interrogatory 18(c) is no, state why the replacement water levels are not keyed to the natural interdunal pond levels.

(iii) Describe the natural interdunal pond levels to which you referred in answering Interrogatory 18(c).

(d) Are the replacement water levels keyed to the natural wetland water levels?

(i) If your answer to Interrogatory 18(d) is yes, state in what respect the replacement water levels are so keyed.

- (ii) If your answer to Interrogatory 18(d) is no, state why the replacement water levels are not keyed to the natural wetland water levels.
  - (iii) Describe the natural wetland water levels to which you referred in answering Interrogatory 18(d).
- (e) Does NIPSCO's proposed program include measures to maintain the natural seasonal variations within all areas of the Indiana Dunes National Lakeshore?
- (i) If your answer to Interrogatory 18(e) is yes, state what measures are included in the program.
  - (ii) If your answer to Interrogatory 18(e) is no, state why such measures are not included in the program.
  - (iii) Describe the natural seasonal variations to which you referred in answering Interrogatory 18(e).
- (f) Does NIPSCO's proposed program include measures to maintain the natural yearly variations within all areas of the Indiana Dunes National Lakeshore?
- (i) If your answer to Interrogatory 18(f) is yes, state what measures are included in the program.
  - (ii) If your answer to Interrogatory 18(f) is no, state why such measures are not included in the program.
  - (iii) Describe the natural yearly variations to which you referred in answering Interrogatory 18(f).



19. Please specify what levels NIPSCO intends to use as a reference to determine whether there has been a change in the following:

- (a) Water levels in the interdunal ponds;
- (b) Groundwater levels at the NIPSCO/Indiana Dunes National Lakeshore boundary;
- (c) Any other water levels;
- (d) Natural seasonal variations of
  - (i) Water levels in the interdunal ponds;
  - (ii) Groundwater levels at the NIPSCO/Indiana Dunes National Lakeshore boundary;
  - (iii) Any other water levels.
- (e) Natural yearly variations of
  - (i) Water levels in the interdunal ponds;
  - (ii) Groundwater levels at the NIPSCO/Indiana Dunes National Lakeshore boundary;
  - (iii) Any other water levels.

20. (a) Please enumerate the historical and projected ranges of natural seasonal variations within the Indiana Dunes National Lakeshore of:

- (i) Natural water table levels;
  - (ii) Natural interdunal pond levels;
  - (iii) Natural wetland levels.
- (b) Please enumerate the historical and projected ranges of natural yearly variations within the Lakeshore of:

- (i) Natural water table levels;
  - (ii) Natural interdunal pond levels;
  - (iii) Natural wetland levels.
- (c) Please state the bases of your responses to Interrogatories 20(a) and 20(b).
21. With reference to NIPSCO's proposed water mitigation program:
- (a) Is it your position that replacement water will have the same characteristics as the water removed?
  - (b) Please describe those characteristics of the replacement water which are the same as the characteristics of the water removed.
  - (c) Please describe each characteristic of the replacement water which will differ from the water removed, and specify in what respect they differ.
  - (d) Is it your position that the characteristics described in your answer to Interrogatory 21(c) will have no impact on the Indiana Dunes National Lakeshore?
  - (e) State the bases for your responses to Interrogatories 21(a) through 21(d).
22. (a) Is it your position that the natural water, defined as that water in the Indiana Dunes National Lakeshore as it would be in the absence of all NIPSCO activities, does not have a low flow rate and a long term turnover during which time the water is conditioned by natural processes?
- (b) What do you contend is the rate of flow of the groundwater in the lakeshore adjacent to the Bailly site? If the

rate is different at different locations, please specify the rate at each location.

- (c) What do you contend is the rate of flow of the groundwater on the Bailly site? If the rate is different at different locations, please specify the rate at each location.
  - (d) What do you contend will be the rate of flow of replacement water of NIPSCO's proposed mitigation system at each point of introduction of replacement water, and at each location identified in your answer to Interrogatories 22(b) and 22(c)?
  - (e) Is it your position that the flow rate of replacement water from NIPSCO's proposed mitigation system will be slow enough to permit conditioning through organic decay?
  - (f) If your answer to Interrogatory 22(e) is yes, please state the bases for your conclusion.
  - (g) If your answer to Interrogatory 22(e) is no, what is the significance of flow rate to the suitability of the proposed water replacement plan?
  - (h) Please identify all natural processes which condition the water and state whether the replacement water will be conditioned by those processes.
  - (i) State the bases for your response to Interrogatory 22(h).
23. (a) Do water characteristics, both on the Bailly site and in the Indiana Dunes National Lakeshore, vary:

- (i) From one location to another;
    - (ii) From strata to strata, or
    - (iii) From near surface to greater depths?
  - (b) I. your responses to Interrogatory 23(a)(i) through (iii) are yes, state those characteristics, both in the Indiana Dunes National Lakeshore and on the Bailly site, which vary:
    - (i) From one location to another;
    - (ii) From strata to strata; and
    - (iii) From near surface to greater depths.
  - (c) State the bases for your answers to Interrogatories 23(a) and 23(b).
24. (a) Please state whether any of the characteristics specified in your answers to Interrogatory 23 will potentially be affected by:
- (i) NIPSCO's dewatering in the absence of its proposed mitigation plan, if NIPSCO's request for an extension of the Bailly construction permit is granted;
  - (ii) NIPSCO's proposed mitigation plan, if NIPSCO's request for an extension of the Bailly construction permit is granted.
- (b) Identify each characteristic referred to in your answer to Interrogatory 24(a).
  - (c) Please specify how, if at all, NIPSCO's proposed mitigation plan will mitigate the effects described in your answer to Interrogatory 24(a)(ii).

- (d) Please enumerate the historical and projected ranges of variations within the Lakeshore and on the Bailly site for each characteristic described in your answer to:
  - (i) Interrogatory 23(b)(i) through 23(b)(iii) and
  - (ii) Interrogatory 24(b).
- 25. (a) Is it your position that removal of groundwater through dewatering and replacement of water through NIPSCO's proposed mitigation program will not result in an increased rate of groundwater movement?
- (b) State the bases for your answer.
- 26. (a) Is it your position that removal of groundwater through dewatering and replacement of water through NIPSCO's proposed mitigation program will not dilute the existing groundwater?
- (b) State the bases for your answer.
- 27. (a) What do you contend is the present rate of groundwater movement at the Bailly site?
- (b) What do you contend will be the rate of movement of the water injected through NIPSCO's proposed mitigation program at the Bailly site?
- (c) Will the difference in the rate of movement of the groundwater described in your answers to 27(a) and 27(b) have any impact on the Indiana Dunes National Lakeshore?
- (d) State the bases for your answer to 27(a), 27(b) and 27(c).

28. (a) What do you contend is the present rate of groundwater movement in the Indiana Dunes National Lakeshore?
- (b) What do you contend will be the rate of movement of the water from NIPSCO's proposed mitigation program?
- (c) Will the difference in the rate of movement described in your answers to 28(a) and 28(b) have any impact on the Indiana Dunes National Lakeshore?
- (d) State the basis for your answers to Interrogatories 28(a), 28(b) and 28(c).
29. With reference to those aquifers described as "Unit 1" and "Unit 3" in USGS reports 78-138 and 80-1105,
- (a) Describe what you contend are the location, depth, and physical dimensions of "Unit 3."
- (b) Are there any direct or indirect connections between Unit 3 and "Unit 1"?
- (c) Please specify the precise locations of each direct or indirect connection referred to in your answer to Interrogatory 29(b).
- (d) Does NIPSCO intend to remove any water from "Unit 3"?
- (e) If your answer to 29(d) is yes, state how much water you contend will be removed, and over what period of time.
- (f) If your answer to 29(d) is yes, state whether NIPSCO's proposed mitigation program includes mitigation of effects of removing water from Unit 3.
- (g) If your answer to 29(f) is yes, state in what respect the mitigation program proposes to mitigate those effects.



30. Please give the following information for the person swearing to the answers to these Interrogatories:

- (a) Name
- (b) Address
- (c) Title
- (d) Capacity

31. Please give the following information of each person who has provided or furnished information to the person identified in Interrogatory 30, consulted with that person in the preparation of the responses to these Interrogatories, or otherwise aided in the preparation of the responses:

- (a) Name
- (b) Address
- (c) Title
- (d) Number (including subpart) of each Interrogatory with respect to which that person consulted, aided or provided or furnished information; and
- (e) The nature of the information or aid furnished.

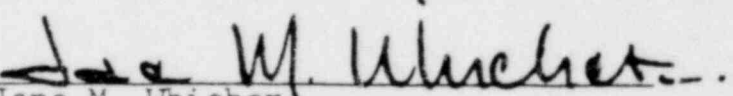
32. For each of the above Interrogatories, please describe each document referred to or relied on in formulating your responses

Dated: July 31, 1981

Robert J. Vollen  
Jane M. Whicher

Robert J. Vollen  
Jane M. Whicher  
109 North Dearborn  
Suite 1300  
Chicago, Illinois 60602  
(312) 641-5570

by:

  
Jane M. Whicher  
Attorneys for Porter County  
Chapter Intervenors