

RELATED CORRESPONDENCE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE 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'
SECOND SET OF INTERROGATORIES
TO THE NRC STAFF



Porter County Chapter Intervenor, by their attorney,
pursuant to 10 CFR §2.720(h)(2)(ii) and §2.740b, hereby serve
upon the NRC staff ("staff") the following interrogatories to
be answered separately and fully in writing under oath, within
14 days of the date of the Board's finding under 10 CFR §2.720
(h)(2)(ii).

The terms "you", "staff" and "NRC" include the United
States Nuclear Regulatory Commission, its staff, members, attorneys,
employees, consultants, divisions or subdivisions, contractors and
subcontractors. The term "NIPSCO" includes Northern Indiana Public
Service Company, its agents, employees, representatives, subsidiaries,
consultants, contractors and subcontractors.

1. What is your position as to:

a. For what period of time and at what rate the
Bailly site will be dewatered, if the extended period of
construction time requested by NIPSCO is granted?

b. For what period of time and at what rate the
Bailly site was dewatered between May 1, 1974 and September

1. 1979?

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c. What period of dewatering and what rate of dewatering of the Bailly site were critically analyzed by the Atomic Energy Commission in connection with issuance of Construction Permit No. CPPR-104?

d. By what period and what rate do the sums of your answers to 1a and 1b exceed your answers to 1c?

e. Please provide the bases for your answers to 1a, 1b and 1c.

2. What is your position as to:

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 total volume of water removal from the Bailly site was critically analyzed 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 2a and 2b exceed your answer to 2c?

e. Please provide the bases for your answers to 2a, 2b and 2c.

3. What is your position as to:

- a. The elevation to which a critical analysis was made by the Atomic Energy Commission of dewatering at the construction permit stage?
- b. For what period of time dewatering to the elevation specified in your answer to 3a is contemplated?
- c. The lowest elevation to which the Bailly excavation will be dewatered?
- d. Please provide the bases for your answer to 3a, 3b and 3c.

4. a. If the Bailly site is continuously dewatered to the elevation specified in your answer to 3a, what is your position as to how long after the onset of such dewatering the groundwater levels in the Bailly site will reach equilibrium as a result of dewatering (discounting variations in the groundwater levels from factors other than dewatering)?

b. Please specify your position as to the depth of drawdown of the groundwater levels in the area around the Bailly site which results from continuous dewatering to the elevation specified in your answer to Interrogatory 3a at distances of 700 feet, 1/2 mile, and 1 mile from the center point of the excavation.

c. Please state your position as to the rate of dewatering (vol/min.) which would occur as a result of continuous dewatering to the elevation specified in your answer to Interrogatory 3a.

d. If the Bailly site is continuously dewatered to the elevation specified in your answer to 3c, what is your position as to how long after the onset of such dewatering the groundwater levels in the Bailly site area would reach equilibrium as a result of dewatering (discounting variations in the groundwater levels from factors other than dewatering)?

e. Please state your position as to 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 3c at distances of 700 feet, 1/2 mile, and 1 mile from the center point of the Bailly excavation.

f. Please state your position as to the rate of dewatering (vol/min.) which would occur as a result of continuous dewatering to the elevation specified in your answer to Interrogatory 3c.

5. a. If the Bailly site is continuously dewatered to the elevation specified in your answer to Interrogatory 3a, what is your position as to how long after the onset of such dewatering the environmental impacts as a result of such dewatering would 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 3c, what is your position as to how long after the onset of such dewatering the environmental impacts as a result of such dewatering

would reach an equilibrium (discounting variations in environmental impacts from factors other than dewatering)?

6. Do your answers to Interrogatory 4a, 4b, 4c and 5a 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 3a?

7. a. If the extended period of construction sought by NIPSCO is granted, is it your position that any environmental impact during the extended period of construction time would result from:

- (i) dewatering during the extended period of construction time;
- (ii) dewatering during the period specified in your answer to Interrogatory 1d;
- (iii) dewatering of the volume of water specified in your answer to Interrogatory 2d;
- (iv) other causes? If yes, please specify the cause(s).

b. Please describe in detail the environmental impact which you contend would result from each of the causes specified in your answer to Interrogatory 7a.

c. If your answer to Interrogatories 7a(i) through (iv), if no, please state the bases for your answer.

8. Assuming the extension sought by NIPSCO is granted, is it your position that the environmental impacts described in your answer to Interrogatory 7b are 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 you contend are irreversible.

10. If the environmental impacts described in your answer to Interrogatory 7b are reversible in whole or part once dewatering during the extended period of construction time sought by NIPSCO is completed, assuming such an extension is granted:

a. Please specify which impacts you contend are reversible in whole or part;

b. Please specify the degree to which you contend the impacts are reversible;

c. Please specify the time you contend is required to complete the reversal process for each impact.

11. a. Is it your position that dewatering of Bailly during the extended period of construction time sought by NIPSCO, if such an extension is granted, would not 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. Is it your position that dewatering of Bailly during the extended period of construction time sought by NIPSCO, if such an extension is granted, would not 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. Is it your position that dewatering of Bailly during the extended period of construction time sought by NIPSCO, if such an extension is granted, would not 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. Is it your position that dewatering of Bailly during the extended period of construction time sought by NIPSCO, if such an extension is granted, would not 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 answer to Interrogatories 11a, 11b, 11c, or 11d is no:

(i) Please describe each difference, specifying, 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 11a, 11b, 11c and 11d are yes, 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. Is it your position that dewatering of the Bailly site has caused no 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. Is it your position that dewatering of the Bailly site has caused no differences in the 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. Is it your position that dewatering of the Bailly site has not caused 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 prior to May 1, 1974?

d. Is it your position that dewatering of the Bailly site has not caused the groundwater to be different in any other respects than it was prior to May 1, 1974?

e. If your answers to Interrogatories 12a, 12b, 12c or 12d are no:

(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 12a, 12b, 12c, and 12d are yes, 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. Is it your position that dewatering during the extra period of dewatering time sought for Bailly (as distinct from any changes in the parameters of the groundwater which will allegedly occur after September 1, 1979) as a result of dewatering during the extended period of construction, if an extension of NIPSCO's construction permit is granted, would cause no environmental impact?

b. If your answer to Interrogatory 13a is no:

(i) Please describe the impact;

(ii) Please provide the bases for your position.

c. If your answer to Interrogatory 13a is yes, please provide the bases for your position.

14. Is it your position that the additional period of construction time, and/or the additional period of dewatering, assuming that the additional period of construction sought by NIPSCO is granted, 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 position.

b. If your answer is that such period is that such period is sufficient to cause any impact:

- (i) Describe in detail the impact;
- (ii) State whether your position is that the impact is reversible or irreversible;
- (iii) If your position is that 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 basis for your responses to 14b(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 15b 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 15b as a reference, please specify the magnitude of change in the following parameters of the groundwater in the Indiana Dunes National Lakeshore which it is your position will occur as a result of dewatering during the extended period of construction:

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

e. Please describe any environmental impact which it is your position will result from the change in items specified in Interrogatory 15d.

f. Please identify all documents upon which you relied and persons whom you consulted in answering Interrogatories 15a through 15e.

g. Please provide calculations upon which your answers to Interrogatories 15b through 15g 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 16a is yes, state the bases for your answer.

c. If your answer to Interrogatory 16a is no, state:

- (i) What actions were performed in an incompetent manner;
- (ii) By whom the actions were performed; and
- (iii) In what manner the actions were incompetently performed.

17. a. Is it your position that NIPSCO's proposed water mitigation program will prevent any impact upon the Indiana Dunes National Lakeshore resulting from NIPSCO's proposed extended period of construction dewatering?

b. If your answer to Interrogatory 17a 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 17a, 17b(i) and 17b(ii).

c. If your answer is no, please identify all impacts which NIPSCO's proposed mitigation program will not prevent.

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

a. Is it your position that NIPSCO's proposed program is 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 and during the additional period of construction time sought by NIPSCO?

b. Is it your position that the replacement water levels are keyed to the natural water table levels?

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

(ii) If your answer to Interrogatory 18b 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 18b.

(iv) Is it your position that the replacement water levels should be so keyed?

(v) Please state the bases for your answer to Interrogatory 18b(iv).

c. Is it your position that the replacement water levels are keyed to the natural interdunal pond levels?

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

(ii) If your answer to Interrogatory 18c 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 18c.

(iv) Is it your position that the replacement water levels should be so keyed?

(v) Please state the bases for your answer to Interrogatory 18c(iv).

d. Is it your position that the replacement water levels are keyed to the natural wetland water levels?

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

(ii) If your answer to Interrogatory 18d 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 18d.

(iv) Is it your position that the replacement water levels should be so keyed?

(v) Please state the bases for your answer to Interrogatory 18d(iv).

e. Is it your position that NIPSCO's proposed program includes measures to maintain the natural seasonal variations within all areas of the Indiana Dunes National Lakeshore?

(i) If your answer to Interrogatory 18e is yes, state what measures are included in the program.

(ii) If your answer to Interrogatory 18e 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 18e.

(iv) Is it your position that such measures should be included in NIPSCO's program?

(v) Please state the bases for your answer to Interrogatory 18e(iv).

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 18f is yes, state what measures are included in the program.

(ii) If your answer to Interrogatory 18f 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 18f.

(iv) Is it your position that such measures should be included in NIPSCO's program?

(v) Please state the bases for your answer to Interrogatory 18f(iv).

19. Please specify what levels you intend 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 20a and 20b.

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 you contend are the same as the characteristics of the water removed.

c. Please describe each characteristic of the replacement water which you contend 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 21c will have no impact on the Indiana Dunes National Lakeshore?

e. State the bases for your responses to Interrogatories 21a through 21d.

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 is your position as to the rate of flow of groundwater in the Lakeshore adjacent to the Bailly site? If your position is that the rate is different at different locations, please specify the rate at each location?

c. What is your position as to the rate of flow of the groundwater on the Bailly site? If your position is that the rate is different at different locations, please specify the rate at each location.

d. What is your position as to 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 22b and 22c?

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 22e is yes, please state the bases for your conclusion.

g. If your answer to Interrogatory 22e is no, what is your position as to 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 it is your position that the replacement water will be conditioned by those processes. -

i. State the bases for your response to Interrogatory 23h.

23. a. Is it your position that 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. If your responses to Interrogatories 27a(i) through 27a(iii) are yes, state those characteristics, both in the Indiana Dunes National Lakeshore and on the Bailly site, which you contend vary:

- (i) From one location to another,
- (ii) From strata to strata, or
- (iii) From near surface to greater depths.

c. State the bases for your answers to Interrogatories 23a and 23b.

24. a. Is it your position that any of the characteristics specified in your answers to Interrogatory 23 potentially will 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 24a.

c. Please specify how you contend that NIPSCO's proposed mitigation plan mitigates the effects described in your answer to Interrogatory 24a(ii), if at all.

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 23b(i) through 23b(iii) and.

(ii) Interrogatory 24b.

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 basis for your answer.

26. a. Is it your position that removal of groundwater through dewatering and replacement of groundwater through NIPSCO's proposed mitigation program will not dilute the existing groundwater?

b. State the bases for your answer.

27. a. What is your position as to what is the present rate of groundwater movement at the Bailly site?

b. What is your position as to what will be the rate of movement of the water injected through NIPSCO's proposed mitigation program at the Bailly site?

c. Do you contend that the difference in the rate of movement of the groundwater described in your answers to 27a and 27b will have any impact on the Indiana Dunes National Lakeshore?

d. State the bases for your answer to 27a, 27b and 27c.

28. a. What is your position as to what is the present rate of groundwater movement in the Indiana Dunes National Lakeshore?

b. What is your position as to what will be the rate of movement of the water from NIPSCO's proposed mitigation program?

c. Do you contend that the difference in the rate of movement described in your answers to 28a and 28b will have any impact on the Indiana Dunes National Lakeshore?

d. State the basis for your answers to Interrogatories 28a, 28b and 28c.

29. With reference to aquifer described as "Unit 1" and "Unit 3" in USGS Report 78-138 and 80-1105:

a. Please describe what you contend are the location, depth, and physical dimensions of the aquifer.

b. Is it your position that there are 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 29b.

d. What is your position as to whether NIPSCO intends to remove any water from Unit 3?

e. If your answer to 29d is that NIPSCO intends to remove water from Unit 3, state how much water you contend will be removed, and over what period of time.

f. If your answer to 29d is that NIPSCO intends to remove water from Unit 3, state whether NIPSCO's proposed mitigation program includes mitigation of effects of removing water from Unit 3.

g. If your answer to 29f is yes, state in what respect the mitigation program proposes to mitigate these 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:

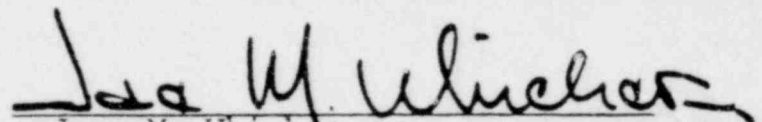
- a. Name
- b. Address
- c. Title
- d. Number (including subpart) of each Interrogatory with respect to which that person consulted, aided or provided or furnished information; and
- e. The nature of the information or aid furnished.

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

By:


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Attorneys for Porter County Chapter
Intervenors

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