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RELATED CORRESPONDENCE

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

Before the Atomic Safety and Licensing Board

In the Matter of)	
)	
THE CLEVELAND ELECTRIC)	Docket Nos. 50-440
ILLUMINATING COMPANY, <u>ET AL.</u>)	50-441
)	
(Perry Nuclear Power Plant,)	
Units 1 and 2))	

APPLICANTS' AMENDED AND SUPPLEMENTAL ANSWERS TO
SUNFLOWER'S FIRST ROUND DISCOVERY REQUESTS AND SECOND
SET OF INTERROGATORIES TO APPLICANTS CONCERNING ISSUE NO. 1

Pursuant to 10 C.F.R. § 2.740(e)(2)(ii), Applicants hereby submit the following amended and supplemental answers to First Round Discovery Requests of Sunflower Alliance, Inc., et al. ("Sunflower"), dated December 2, 1981, and Sunflower Alliance Inc., et al. Second Set of Interrogatories to Applicants, dated April 30, 1982, concerning Issue No. 1 (emergency planning). These answers amend and/or supplement Applicants' answers as stated in the following: Applicants' Answers to Sunflower Alliance, Inc. First Round Discovery Requests, dated February 5, 1982; Applicants' Additional Answers to Sunflower Alliance, Inc. First Round Discovery Requests, dated July 27, 1982; Applicants' Answer to Sunflower Alliance, Inc. et al. Second Set of Interrogatories to Applicants, dated August 11, 1982;

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Applicants' Supplemental Answer to Sunflower Alliance, Inc. et al. Second Set of Interrogatories to Applicants, dated September 3, 1982; Applicants' Supplemental Answers Pursuant to Order of August 18, 1982 (Concerning a Motion to Compel), dated September 17, 1982; Applicants' Supplemental Answers to Sunflower Alliance, Inc. et al. Second Set of Interrogatories to Applicants, dated October 20, 1982; Letter from Michael A. Swiger to Daniel D. Wilt (May 19, 1983).

All documents supplied to Sunflower for inspection will be produced at Perry Nuclear Power Plant ("PNPP"). Arrangements to examine the documents at PNPP can be made by contacting Mr. Bradley S. Ferrell of the Cleveland Electric Illuminating Company ("CEI") at (216) 259-3737, extension 5520. Applicants, at Applicants' cost of duplication, will provide copies of any of the produced documents or portions thereof which Sunflower requests. Arrangements for obtaining copies can be made with Mr. Ferrell.

AMENDED RESPONSES

First Round

1. Demonstrate (pursuant to 10 C.F.R. § 50.33(g) and 10 C.F.R. § 50.47(c)(2) that the plume exposure pathway EPZ and the ingestion exposure EPZ for the Perry Nuclear Power Plant have been established with appropriate consideration of local demography, topography, land characteristics, and jurisdictional boundaries. In addition, identify who established these EPZ's for Perry, and provide a legible map of each of the EPZ's.

Response:

Former Appendix 13A of the Final Safety Analysis Report for the Perry Nuclear Power Plant ("FSAR") is now the Emergency Plan for Perry Nuclear Power Plant Units 1 & 2, CEI Report No. OM-15A, Rev. 3 (April 23, 1984) ("PNPP Plan"). HMM Associates has prepared a new draft evacuation time estimate study for PNPP, "Evacuation Time Estimates for Areas Near the Perry Nuclear Power Plant" (March 1984) ("Evacuation Time Estimate Study"), which supersedes former FSAR Appendix 13A, Appendix D and is included as Appendix D to the PNPP Plan.

The plume exposure pathway Emergency Planning Zone ("EPZ") for PNPP was established with appropriate consideration of local emergency response needs and capabilities as affected by such conditions as demography, topography, land characteristics, access routes and jurisdictional boundaries. See Evacuation Time Estimate Study § 1.2. A map of the EPZ is provided in Figure 1.2 of the Evacuation Time Estimate Study.

2. NUREG-0654, Rev. 1, concludes at page 13 that the duration of a release from a reactor accident could range from 30 minutes to several days. Explain in detail how plant operators are expected to determine the time duration of a radiological release and how this time duration affects the choice of offsite public protective actions. In addition, fully explain how offsite radiological emergency response plans for Perry take into account the parameters of the duration of release.

Response:

The time duration of a radiological release or potential release is estimated taking into account a number of factors, such as, the location of the release or potential release point, the pressure and temperature of the release or potential release, the integrity of the barriers between the source and the environment, and the status of corrective actions. Emergency Planning Instruction ("EPI") B8 shows how the time duration of a release or potential release affects recommendations for offsite protective actions. Protective actions ordered by the responsible county officials are based in part upon such information, data and recommendations received from Applicants. See Lake County Emergency Response Plan for the Perry Nuclear Power Plant (January 1983) (revised version) ("Lake Plan") § J-01; Ashtabula County Radiological Emergency Preparedness Plan (undated) (revised version) ("Ashtabula Plan") § J.3; Geauga County Radiological Emergency Response Plan (December 1983) (revised version) ("Gauga Plan") § J-3. EPI B8 is available for examination at PNPP. The Lake, Ashtabula and Geauga Plans are available in public libraries in their respective counties.

3. NUREG-0654, Rev. 1, concludes at page 19:

"The concept of Emergency Planning Zones (EPZ's) necessarily implies mutually supportive emergency planning and preparedness arrangements by several levels of government: Federal, State and Local governments, including counties, townships and even villages."

Pursuant to this conclusion, demonstrate that, for the Perry Nuclear Power Plant EPZ's, "mutually supportive planning and preparedness arrangements" have been made. Provide full documentation to support the response to this interrogatory.

Response:

Based on the Federal Emergency Management Agency ("FEMA") Region V informal reviews of the initial draft county plans, and its formal review of the State of Ohio Nuclear Power Plant Emergency Response Plan (December 1980) ("State Plan") (all of which include provisions for mutually supportive planning and preparedness arrangements among the three counties, the State of Ohio and federal agencies), FEMA on February 6, 1984 issued an interim report concluding that there is reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency at PNPP. See Letter from B. J. Youngblood to Murray R. Edelman (April 20, 1984), and attachments.

There were a number of FEMA comments generated by the informal reviews. These comments concerned, among other things, mutually supportive planning and preparedness arrangements. The FEMA comments were addressed in revisions to the draft plans, which were submitted to the Ohio Disaster Services Agency ("ODSA") in December 1983. Subsequent revisions also have been incorporated into the draft plans.

Examples of provisions for intercounty coordination contained in the current draft county plans are:

<u>Activity</u>	<u>Lake Plan</u>	<u>Ashtabula Plan</u>	<u>Geauga Plan</u>
Emergency Broadcast System	§§ E-02, G-01, G-03	§ E.4.2	§ E-6
Communications (3-Way Dedicated Telephone System)	§ F-05	§ F.2.1	§ F-2
Information to News Media (Joint Public Information Center)	§ G-03	§ G.3	§ G-4
Communications Drills	§ N-02	§ N.3	§ N-3
Reviewing and Updating Plans and Standard Operating Procedures	§ P-01	§ P.2	§ P-2

Other provisions for intercounty coordination, as well as for coordination with the State of Ohio and federal agencies, are found throughout the draft county plans.

4. Fully describe and document the Applicants' arrangements with RAP and IRAP. For each capability of these programs relied upon by the Applicant in responding to a radiological emergency, describe each capability in detail and provide the best estimate of the time required for the capability to be implemented at the Perry Nuclear Power Plant site or environs, including normal weather and abnormal weather conditions (adverse weather, such as heavy snowfall, fog, freezing rain, etc., as appropriate for the Perry Nuclear Power Plant region).

Response:

RAP/IRAP assistance, including estimated times of arrival, is documented in § 5.4.4 and Appendix B of the PNPP Plan.

5. For each of the planning and evaluation criteria in NUREG-0654, Rev. 1 (not the standards but the criteria), demonstrate that each emergency plan for the Perry Nuclear Power Plant site and EPZ's meets the appropriate criteria or provides an equivalent level of protection to the public health and safety.

Response:

For the county plans, cross-references to applicable NUREG-0654 criteria are contained in the Lake Plan, Appendix 5, the Ashtabula Plan, Appendix 1 and the Geauga Plan, Appendix 38. The State Plan has now been tested and favorably evaluated five times by FEMA within the requirements of NUREG-0654.

6. Provide copies of all letters of agreement with agencies and/or organizations and individuals with an emergency response role in the EPZ's or onsite for the Perry Nuclear Power Plant. For each such letter of agreement, demonstrate that the letter specifies the emergency measures to be provided and that the letter includes mutually acceptable criteria for the implementation of such measures (as required by Criterion II.A.3, page 32, NUREG-0654, Rev. 1). For any such agency, organization, or individual, with an emergency response role that does not now have a letter of agreement, discuss whether letters are needed (and why or why not) and discuss when such letters will be obtained. As to those letters of Agreement which require Applicant to bear the costs of emergency planning of enabling the agency, organization or individual to participate in emergency planning then state: A) the cost involved; B) the legal reasons which support Applicants' assumption of these costs; C) the current status of any improvements to be assumed by Applicant for any such agency, organization or individual so that such agency, organization or individual may participate in such emergency plan; specifically state each item which such agency, organization or individual required Applicant to assume prior to such agency, organization or individual's agreement to participate in the emergency plan.

Response:

The following letters of agreement are available for inspection and copying at PNPP:

(1) a new letter of agreement between Applicants and Lake County, dated July 25, 1983;

(2) a letter of agreement between Applicants and Geauga County, dated May 5, 1984; and

(3) a letter of agreement between Applicants and Lakeland Community College District concerning the Joint Public Information Center, dated May 1, 1984.

7. A FEMA-sponsored report, Evacuation Planning in the TMI Accident. (January 1980, RS 2-8-34, prepared for FEMA by Human Sciences Research, Inc.), concluded on page 173:

"Volunteers can be highly effective as supporting members of professional emergency management staffs, but they cannot be relied upon over extended periods of threat. . . They cannot. . . be regarded as a substitute for regular staff or as a mainstay of a crucial operating area like communications. Furthermore, they should not be expected to perform on the same basis as professionals over a prolonged, standby period."

Regarding this conclusion, respond to the following:

A. Do you agree with this conclusion: If not, fully explain why and discuss the basis for your alternative conclusion. Provide copies of all documents relied upon in reaching your conclusion.

B. If you agree, discuss fully how this conclusion affects the ability of offsite emergency response organizations and agencies to respond to radiological emergencies at Perry and to drills.

C. Regardless of your position on the above conclusion, for each offsite/onsite emergency response agency or organization, identify by

position and by numbers of personnel how many such personnel are volunteers (non-paid personnel who may or may not hold regular jobs).

D. Fully discuss the impact of reliance of each organization or agency with emergency response responsibilities on volunteers in terms of how such reliance may impact on the ability to maintain a 24-hour a day operation over a protracted period of time (as required by Criterion II.A.4, page 33, NUREG-0654, Rev. 1).

Response:

C. The following offsite emergency response agencies and organizations are staffed in whole or in part by non-paid personnel. The number and positions of non-paid personnel specified for each agency or organization are current as of approximately January 1, 1984, the most recent date for which Applicants have information.

LAKE COUNTY

<u>Agency or Organization</u>	<u>Non-Paid Personnel</u>
Mentor Police	20
Lake County Crippled Children	4

ASHTABULA COUNTY

NONE

GEAUGA COUNTY

<u>Agency or Organization</u>	<u>Non-Paid Personnel</u>
Auburn Fire	48
Burton Fire	36
Chardon Fire	29
Chesterland Fire	38
Hambden Fire	29
Huntsburg Fire	8
Middlefield Fire	26
Montville Fire	28
Munson Fire	30

GEAUGA COUNTY (Continued)

<u>Agency or Organization</u>	<u>Non-Paid Personnel</u>
Newbury Fire	31
Parkman Fire	30
Thompson Fire	30
Troy Fire	35
Claridon Police	5
Huntsburg Township Police	3
Newbury Police	4
Parkman Police	9*
Red Cross	29
Cares	82*
Nora	30*

* Includes agency or organization head.

8. For any example initiating condition in Appendix 1 to NUREG-0654, Rev. 1, which is not included within the Applicants' emergency plan, discuss why each such example initiating condition should not be included within the Applicants' emergency plan. Further, for accidents and emergencies involving initiation conditions other than those specified in Appendix 1 to NUREG-0654, demonstrate that there is adequate assurance that the Applicants' operating staff will promptly recognize such initiating conditions and promptly and correctly declare the appropriate emergency class (i.e., Unusual Event, Alert, Site Emergency, or General Emergency).

Response:

Applicants have now developed EPIs establishing operator actions with regard to emergency action levels (EPI A1), emergency classification (EPIs A2-A5) and notification (EPI B1). Training to these EPIs will assure that Applicants' operators promptly recognize initiating conditions and promptly and correctly declare the appropriate emergency class.

9. Provide copies of the Applicants' Operating Procedures and/or Emergency Procedures (as appropriate) which contain instructions to plant operators regarding the declaration of an emergency (i.e., Unusual Event, Alert, Site Emergency, or General Emergency) pursuant to Appendix 1 of NUREG-0654, Rev. 1.

Response:

EPIs A1 through A5 and B1 establish procedures for classifying and declaring onsite and offsite emergencies. See response to Interrogatory #8, supra. These documents are available for inspection and copying at PNPP.

10. Pursuant to Criterion II.E.5 of NUREG-0654, Rev. 1, page 45, provide a full and complete description of the system(s) intended to be utilized by State and local governments for disseminating information on plant emergencies to the general public within the EPZ's. Include in your response all applicable procedures, manuals, letters, orders, memoranda, and other applicable documentation; also include the content of messages if such messages are established.

Response:

Notification procedures to be used by affected counties in accordance with Criterion II.E.5 of NUREG-0654 are set forth in § E-07 of the Lake Plan, § E.4 of the Ashtabula Plan and §§ E-5 and E-6 of the Geauga Plan. Sample EBS messages are contained in Attachments E-7 through E-12 of the Lake Plan, Appendix 19 of the Ashtabula Plan and Appendix 16 of the Geauga Plan.

11. Pursuant to Criterion II.E.6 of NUREG-0654, Rev. 1, page 45, and 10 C.F.R. Part 50, Appendix E, Section IV.D.3, demonstrate that the administrative and physical means to be utilized to notify the public within the plume exposure pathway EPZ within 15 minutes. [sic] In your response, provide any and all documents discussing the Perry prompt alert and notification system, including bid specifications, sound surveys, engineering studies, evaluations of alternative hardware and

systems, hardware location studies, and theoretical or actual field tests of system coverage. Describe who has the authority to activate the system and under what conditions. In addition, demonstrate that the system can successfully operate under the following conditions: loss of power, rain, icing, lightning, severe snowstorm. Further, demonstrate that the financial and administrative means exist to assure the operability of the system throughout the operating lifetime of the Perry Nuclear Power Plant, and discuss who has responsibility for testing and maintenance of the system once it is installed.

Response:

Authority to activate the PAS and the conditions under which it will be activated are addressed in the Lake Plan § E-07, the Ashtabula Plan § E.4.1 and the Geauga Plan § E-5.

12. Pursuant to Planning Standard G of NUREG-0654, Rev. 1, page 49 and the associated Criteria on pages 49-51, provide a full and complete description of the public education and information programs for the Plume Exposure Pathway EPZ and the Ingestion Exposure Pathway EPZ. Include in your response all written materials prepared for public distribution and for distribution to local and State emergency management personnel which describe the public education and information program. Identify any and all consultants utilized in the preparation of such materials, including the name of the company, name of the principal contact person, business address and business telephone number of the principal contact person.

Response:

The public education and information program for PNPP is described in § 8.4 of the PNPP Plan. Drafts of emergency public information material, including versions of the Emergency Information Handbook for Eastern Lake County, Western Lake County, Ashtabula County and Geauga County, a special needs acknowledgement form, a poster, a sticker, and Lake, Ashtabula and Geauga County telephone book ads, are available at PNPP for inspection and copying. NUS Corporation, 910 Clopper Road,

Gaithersburg, Maryland 20878 (Project Manager: Gregg Beatty), was hired to assist in developing the above material.

15. Fully describe any dose projection system intended to be used by the Applicant and/or offsite authorities. Include in your response full design details of the system, including specifications, physical and conceptual limitations of the system, and the accuracy of the system. Fully describe the ability of the system to accurately predict offsite doses under the following conditions: a heated release, releases involving large quantities of radioiodines and/or particulates, and drifting wind patterns, and any combination of these factors.

Response:

The offsite dose projection system still is under development. The offsite dose projection model discussed in NUS document 4512, "Presentation to the NRC of a Draft Plan for PNPP: Meteorological Support to Emergency Preparedness" (August 1982), is not being used by Applicants.

17. State the expected number of employees to be on-site during normal operations at each shift if and when Perry Nuclear Power Plant Unit I and II go into operation.

Response:

The number of employees onsite once Units 1 and 2 go into operation will be approximately 1000 during normal daytime working hours.

19. Attached to the May, 1981, revision of Applicants' Emergency Plan are copies of letter agreements with several institutions and local government units. Does this represent all of the letter agreements which Applicant has to date? Set forth Applicants' plans to future letter agreements including the name and address of the organization, be it governmental or not, involved. Set forth the names of all organizations with whom Applicant will have letter agreements on the date, if it

occurs, that Perry Power Plant Units I and II will go into operation.

Response:

See response to Interrogatory #6, supra.

22. The emergency plan revision of May, 1981, discusses Emergency Action Levels (EAL). Discuss the following as it specifically relates to each EAL. State the specific parameters, boundaries and criteria of each EAL; state the guidelines issued by Applicant to assist the Emergency Duty Officer or other proper official to assist that official in determining which EAL to implement.

Response:

The Emergency Duty Officer is now designated as the Emergency Coordinator. The procedures to be used by the Emergency Coordinator in determining emergency action levels are contained in EPI A1. See response to Interrogatory #8, supra. EPI A1 is available for inspection and copying at PNPP.

23. State the procedures and criteria adopted by Applicant to assure the ability and effectiveness of Applicants' Emergency Plan. What procedures are to be adopted to update the Emergency Plan?

Response:

Procedures for updating the PNPP Plan are established in PAP-0103, "Plant Operations Review Committee," Rev. 1 (January 28, 1983), which is available for inspection and copying at PNPP.

24. Who are the offsite measuring groups established in section 4.1.4 of the Emergency Plan? What criteria and standards have been adopted to measure the effectiveness and expertise of the offsite measuring groups? What agreements exist

between Applicant and the offsite measuring groups and attach copies of each agreement with each offsite measuring group.

Response:

Lake County is the only county that plans to have the capability to deploy a radiological monitoring team. The Lake County radiological monitoring team is described in the Lake Plan § I-04.

25. Describe in specific detail the specialized training and experience requirements of all persons who will hold the positions set forth on pages 5-2 and 5-3 of the Emergency Plan; further, set forth in specific detail the specialized training, experience and qualifications of shift supervisors; set forth in detail the procedures to be employed by Applicant to verify and to continue to verify that subject employees do have and will continue to have the specialized training, experience and qualifications required.

Response:

The notification EPI is EPI A1. See response to Interrogatory #8, supra. EPI A1 is available for inspection and copying at PNPP. Relevant resumes are found in the PNPP FSAR, Table 13.1-3, at pages 13.1-24 through 13.1-80.

26. Set forth in detail the reasoning behind Applicants' decision not to have an emergency duty officer onsite 24 hours per day, seven days per week. What assurance does Applicant have that substitutes for the emergency duty officer will have the time, experience and ability to perform in an emergency situation in the absence of the emergency duty officer?

Response:

The Emergency Duty Officer is now designated as the Emergency Coordinator. See response to Interrogatory #22, supra.

27. Set forth in specific detail the training, if any, any offsite organization will receive to respond to any emergency at Perry Nuclear Power Plant. Set forth whether training manuals exist for such training; whether instructors exist for such training; the background, training and expertise of such instructors; the frequency of such instruction and all other details concerning such instruction.

Response:

ODSA provides a 16 hour radiological monitoring and decontamination training course to county emergency response personnel. See State Plan § II, Part N. As of June 13, 1984, ODSA has certified the following number of emergency response persons in the 16 hour course:

Lake County	472
Geauga County	268
Ashtabula County	211

The training course is conducted according to an established syllabus. ODSA provides for the training and certification of instructors for the radiological training course. Training of instructors includes FEMA-sponsored courses in Radiological Emergency Response, Radiological Defense Officer, Radiological Instructor, Radiological Emergency Planning, and Offsite Dose Assessment. Following these training courses and prior to final certification, the instructor must be observed teaching three course sessions by a representative from ODSA Nuclear Section.

County emergency response personnel also receive training on their responsibilities under their county plan. When requested by a county, instructors with a detailed working

knowledge of the county plans are provided by Applicants.
Training is conducted according to an established syllabus.

Training for county emergency response personnel is addressed in Part O of the Lake, Ashtabula and Geauga Plans.

32. Sections 5.6.2.1 to 5.6.2.8 of Perry Nuclear Power Plant Emergency Plan set forth Applicants' expectations of certain civil agencies. Set forth in specific detail the agreements between each of these civil agencies and Applicant which provide Applicant with assurance that the Civil Agencies will perform in the event of an emergency at Perry Nuclear Power Plant. Set forth in detail any training which these Civil Agencies will receive so that the Civil Agencies can respond to an emergency at Perry Nuclear Power Plant. Finally, what assurance does Applicant have that the communication links, and responsibilities by these offsite Civil Agencies will in fact, not theory, be performed?

Response:

Training of county emergency response personnel is addressed in response to Interrogatory #27, supra.

36. When will the Emergency Operations Facility be planned and implemental [sic]? Where will it be located? How will it have access to data displays and information readouts from the control room?

Response:

EPI A8 is the procedure to be used in the Emergency Operations Facility ("EOF") for collecting the information to be communicated to offsite agencies. Plant personnel will use an Initial Emergency Notification Form and a Follow-up Emergency Notification Form to collect the information. These forms are included in EPI B1, and are also found in Attachment E-5 of the Lake Plan, Appendices 13 and 14 of the Ashtabula Plan and

Appendices 12 and 13 of the Geauga Plan. EPIs A8 and B1 are available for inspection and copying at PNPP.

37. To what extent will Applicant assist the affected counties with the development of County Emergency Operation Centers?

Response:

With respect to Lake and Geauga Counties, see response to Interrogatory #6, supra. With respect to Ashtabula County, Applicants have incurred the total cost of remodeling and equipping the Emergency Operations Center ("EOC"). The Ashtabula EOC is complete and operable.

40. How is the emergency communications system powered?

Response:

Emergency offsite communications between PNPP and the county and State EOCs will be powered by the telephone company central offices. These central offices have both diesel and battery power backup. The PBX and OPX systems will provide a backup means of communication. Power sources for these systems are described in the PNPP Plan § 7.2.1.

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43. Produce any and all documents, correspondence, or memoranda between CEI and the NRC, FEMA, local or state governments or any other entity relating to the use of thyroid blocking agents by CEI employees, emergency workers, or the general public.

Response:

Such documents are available for examination at PNPP.

44. Demonstrate and discuss how emergency response facilities meet each and every criterion listed in NUREG-0314; answer all questions therein. (Emergency response facilities include the control room, Technical Support Center, Operational Support Center and Emergency Operations Facility.)

Response:

The comparison of Applicants' commitments on the EOF with the criteria of §§ 5.1 and 5.2 of NUREG-0814 should be revised as follows:

NUREG-0814 Criteria

Responses to NUREG-0814 Criteria

5.1.1.d

Coordination with offsite agencies will take place from the CEI Office and the Display Room in the EOF.

5.1.2, 5.1.4,
5.2.1.a

Section 5.2.4 of CEI Report No. OM-15A, Rev. 0 (September 22, 1982) is § 5.2.2.4 of the PNPP Plan.

5.1.4

Prior to activation of the Joint Public Information Center ("JPIC") or the EOF the Training and Education Center portion of the Training and Education Center Building may be used during an Unusual Event or Alert as the location for information dissemination to the public via the news media.

47. For both the main and backup EOFs, describe any normal, non-emergency activities occurring there. Do these activities enhance or detract from emergency preparedness? Are unauthorized persons excluded from the EOF during normal conditions? Define the term "unauthorized person."

Response:

The Training Facility is now called the Training and Education Center.

50. Will any special provisions or considerations be made for those evacuees who have pets, e.g., special mass care centers, kennel facilities, pet food supplies, etc.? Will people be allowed to take pets with them? If not, what are people to do with the animals?

Response:

The Emergency Information Handbooks contain instructions established by the counties for pet owners. The Emergency Information Handbooks are available for inspection and copying at PNPP. See response to Interrogatory #12, supra. See also Lake Plan, Attachments A-1 and A-4.

51. What provisions will be made for the notification of deaf people within the 10-mile EPZ in the event of a radiation emergency? Has any study been made as to how many deaf people are in the area?

Response:

The Emergency Information Handbooks contain a Special Needs Information Sheet to be mailed to the appropriate county Disaster Services Agency ("DSA") by anyone, including a hearing impaired person, who anticipates needing special assistance in a radiological emergency. As stated in the Handbooks, the DSA will acknowledge receipt of each Special Needs Information Sheet. Acknowledgment will be by means of a special needs acknowledgement form. See response to Interrogatory #12,

supra. Based on the Special Needs Information Sheets and other information, fire departments in each county will be provided with lists of individuals with hearing disabilities and will notify such individuals in person in situations where public notification has been ordered. See, e.g., Geauga Plan §§ E-5 and E-6.

52. What provisions will be made for the notification of people who do not speak English within the 10-mile EPZ in the event of a radiation emergency? Has any study been made on the number of non-English speaking people in the area (e.g., Hispanics in the Geneva area, Finnish and Hungarian people in the Fairport area)?

Response:

The Emergency Information Handbooks and notification posters for Eastern Lake County and Ashtabula County will be printed in Spanish. The number of non-English speaking persons living within the EPZ was determined from foreign language and educational census data provided by the Northern Ohio Data & Information Service. This census data is available for examination at PNPP.

54. What provisions will be made for the evacuation of non-institutionalized handicapped people or people dependent upon life-support systems?

Response:

As explained in response to Interrogatory #51, supra, the Emergency Information Handbooks contain a Special Needs Information Sheet to be mailed to the appropriate county DSA by

anyone needing special assistance in a radiological emergency; and lists of such individuals will be provided to local fire departments. Evacuation of non-institutionalized handicapped persons who need special transportation, including those dependent on life-support systems, will be provided under the direction of the local fire departments. See Lake Plan § J-06; Ashtabula Plan § J.4.1; Geauga Plan § J-4.a.

55. Is there any priority system for evacuation? E.g., who will be evacuated first, school children, pre-school children, pregnant women, or the elderly/infirm?

Response:

School buses will be used to evacuate school children before the buses will be available to evacuate persons in institutions and others who will be evacuating by bus. See, e.g., Lake Plan § J-06.

57. Explain how the plume exposure pathway EPZ depicted in Figure II-2 of Appendix D of Appendix 13A of FSAR was derived. Explain precisely how each and every one of the following factors was considered in the determination of the extent of the plume exposure EPZ: demography, including permanent and seasonal residents and transients; meteorology; topography; land use characteristics; access routes; local jurisdictional boundaries [sic]; release time and energy characteristics; release height; radionuclide content of release, including release fractions; plume dispersion, including plume rise; deposition velocity; dose-effects; sheltering and shielding; radiation treatment; breathing rates; time of year of release.

Response:

See response to Interrogatory #1, supra.

58. Describe in detail the methods and standards by which the evacuation time estimates contained in Tables V-4 and V-5 in Appendix D of Appendix 13A of FSAR were determined.

Response:

The methodology for the HMM Evacuation Time Estimate Study is explained in § 5 of the study and is summarized in § 2.3.

65. Has any consideration been made of the possibility of the voluntary and spontaneous evacuation of persons within the plume exposure pathway EPZ in the event of an accident at PNPP and how this might affect the ordered evacuation? If so, describe in detail any such study.

Response:

A spontaneous evacuation of persons in the EPZ would reduce the number of vehicles on the evacuation roadway network during a subsequent ordered evacuation. The resulting evacuation time for the ordered evacuation would be reduced by an amount dependent on the number of vehicles which had been driven out of the EPZ prior to the ordered evacuation.

66. Has any consideration been made of the possibility of the voluntary and spontaneous evacuation of persons outside of the plume exposure pathway EPZ in the event of an accident at PNPP and how this might affect the ordered evacuation, especially the support organizations and facilities outside the EPZ? If so, describe in detail any such study.

Response:

Spontaneous evacuation of persons outside the EPZ is addressed in Appendix 9 of the HMM Evacuation Time Estimate Study.

67. In the Applicant's opinion, are there adequate facilities available to shelter simultaneously the total permanent and peak seasonal and transient populations in each of the following areas?

- (a) The area designated by the Applicant in the FSAR as the plume exposure pathway EPZ.
- (b) The area which the Applicant believes should comprise the plume exposure pathway EPZ.
- (c) The circular zone surrounding PNPP having a 20-mile radius.

With respect to each of these areas, describe the types of shelter available, indicate the numbers of each type of shelter available and the shielding factors associated with each type, describe the nature and location of the shelter to be used by transient populations, and disclose any assumptions made as to an acceptable level of risk to the public.

Response:

Sheltering as a protective response is addressed in the Lake Plan §§ J-03 and J-05, the Ashtabula Plan § J.2.1, and the Geauga Plan § J-2.

71. In the Applicant's opinion, if an accident occurs on a weekday during working hours what percentage of the permanent population within the plume exposure pathway EPZ proposed by the Applicant will be working at locations outside the EPZ, leaving other family members at home without automobiles? Also, what percentage of the automobiles said to be available in the Applicant's Evacuation Study are operable?

Response:

In Applicants' opinion, only a small percentage of the permanent population within the EPZ works outside the EPZ and leaves other family members at home without transportation. Evacuation of such persons is provided for in the county plans.

See Lake Plan § J-06; Ashtabula Plan § J.4.1; Geauga Plan § J-4.a.

The Evacuation Time Estimate Study does not address the operability of vehicles assumed to be available for the purposes of the study. However, Applicants are aware of no information in the pertinent literature documenting evacuations of varying types and magnitudes indicating that inoperable vehicles have any noteworthy effects on evacuations.

72. Why has the Applicant not submitted separate evacuation times estimates for evacuating special facilities, as required by NUREG-0654, Appendix 4?

Response:

Appendix 4, § II.C of NUREG-0654 recommends that population and vehicle demand estimates for the special facility population be done on an institution by institution basis. The HMM Evacuation Time Estimate Study follows this recommendation. Appendix 3 of the study contains a list of all special facilities within the EPZ along with their populations, vehicle demand levels and other pertinent information.

73. NUREG-0654, Appendix 4 provides that (at p. 4-2), in preparing evacuation time estimates, "The number of permanent residents shall be estimated using the U.S. Census data or other reliable data, adjusted as necessary, for growth." (Emphasis added) In the Applicant's opinion, what is the appropriate target date of initial criticality, or the expected date for the termination of plant operations? Why have unadjusted population data been used to prepare evacuation time estimates? Provide evacuation time estimates using properly adjusted populations.

Response:

The HMM Evacuation Time Estimate Study, at § 3.1, concludes that the difference between the 1980 permanent resident population and the 1985 projected population is insignificant for time estimate purposes, and that 1980 census data provide the most accurate and detailed information available.

An evacuation time estimate using projected 2025 population data is described in Appendix 6 of the Evacuation Time Estimate Study.

74. The Applicant's FSAR, Appendix 13A, Section 4.2 states that the Ohio DSA has adopted the EPA manual of protective action guidelines, EPA-520/1-75-001, and that recommendations to the State and local government will be based on these PAGs.

- (a) Is the Applicant aware that this includes the administration of radioprotective drugs, such as potassium iodide?
- (b) If so, describe in detail any and all provisions for the purchase, storage, stockpiling, distribution (including public education on proper use of the drug), and effectiveness/side effects monitoring of such drugs.
- (c) In the Applicant's opinion, would the administration of radioprotective drugs to individuals offsite ever be necessary or desirable in the event of an accident at PNPP? If not, why not? If so, to what radial distance from the site could dissemination of the drugs be necessary? What is the maximum quantity of potassium iodide or other radioprotective drug that could be needed? What repositories in the vicinity of the PNPP site currently stock such drugs and what quantities are maintained?

Response:

The State of Ohio does not recommend the use of KI. See Letter from John H. Ackerman, M.D., Director of Health, to MG James C. Clem, Adjutant General (September 2, 1980), Letter 14 of § III of the State Plan. All three counties are following the State's guidance. See Lake Plan § K-04 and Attachment K-6; Ashtabula Plan § J.5 and Appendix 31; Geauga Plan § J-7 and Appendix 33.

75. Will emergencies of various classifications be declared whenever the Emergency Action Levels indicate that such declarations are in order? Or does the Shift Supervisor/Emergency Duty Officer have the discretion not to declare an emergency even though it is indicated by the applicable EAL? What other criteria will be used by the Shift Supervisor/EDO to classify or declare an emergency?

Response:

EPI A1 on emergency classification is available for inspection and copying at PNPP.

76. Explain precisely how each of the following possibilities was accounted for in the preparation of evacuation time estimates for PNPP:

- (a) Vehicles breaking down or running out of fuel during the evacuation.
- (b) Abandoned vehicles.
- (c) Vehicles having insufficient fuel at the commencement of the evacuation, to the knowledge of their owners.
- (d) Disregard of traffic control devices.
- (e) Evacuees using inbould [sic] traffic lanes for outbould [sic] travel.

(f) Blocking of cross-streets at intersections.

Response:

(a), (b) and (c) Applicants are aware of no information in the pertinent literature documenting evacuations of varying types and magnitudes indicating that inoperable or abandoned vehicles have any noteworthy effects on evacuations. The county plans provide for removal of disabled vehicles. See Lake Plan § J-08; Ashtabula Plan § J.4.2; Geauga Plan § J-4.d.

(d), (e) and (f) As stated in § 2.2 of the Evacuation Time Estimate Study, it is assumed that existing lane patterns and traffic control would prevail during an evacuation. Documentation of previous evacuations indicates that evacuees are not panic stricken and are willing to cooperate with evacuation plans and directives. Furthermore, the county plans call for traffic control personnel to be stationed at key intersections in order to promote efficient outbound traffic flow. See Lake Plan § J-08; Ashtabula Plan § J.4.2; Geauga Plan § J-4.b.

78. Do the evacuation time estimates contained in Appendix D of Appendix 13A of the PNPP FSAR include any of the following times? Indicate, for each estimate listed in the FSAR, how much of that time can be attributed to each of the following:

- (a) notification time.
- (b) preparation time.
- (c) confirmation time.

Response:

Figure 5.1 of the HMM Evacuation Time Estimate Study shows notification, preparation and mobilization time distributions for the various population categories. Confirmation time estimates are addressed in § 7.2 of the study.

82. List every visit made by or for Alan M. Voorhees and Assoc. to the PNPP site or the surrounding area. Specify for each visit the individuals who participated and their titles and affiliations, the exact locations visited (including the names of all roadways traversed for purposes of evaluating the transportation network in the Perry vicinity), the length of the visit, the itinerary or agenda, and all findings and conclusions which resulted therefrom (including any inventories which were developed as to available roadways, road capacities, shelter facilities, or the like). Indicate how this information was incorporated into the Evacuation Study, Appendix D of Appendix 13A of the FSAR.

Response:

The following is a listing of all visits by PRC Voorhees staff to the PNPP site or surrounding area since July 21, 1982:

PRC Voorhees Visits to PNPP Project Area

<u>Name</u>	<u>Date of Visit</u>
James Watt	July 26, 1982
	August 16, 1982
	August 20, 1982
	August 30, 1982
	September 13, 1982
	September 17, 1982
	September 28, 1982
	October 4, 1982
	October 11, 1982
	October 15, 1982
	October 25, 1982
	November 2, 1982
	November 8, 1982
	November 16, 1982
	November 22, 1982
	December 7, 1982
	December 13, 1982
	February 10, 1983

<u>Name</u>	<u>Date of Visit</u>
Donna Stickley	October 26, 1982
	November 16, 1982
	December 6, 1982
Andrew Kanen	November 15, 1982
	December 27, 1982
	January 12, 1983
William Herald	August 18, 1982
	August 25, 1982
	September 14, 1982
	September 27, 1982
	October 13, 1982
	October 26, 1982
	November 9, 1982
	November 12, 1982
	November 16, 1982
	December 6, 1982
	Walt Kulash
August 3, 1982	
August 9, 1982	
August 16, 1982	
August 20, 1982	
September 1, 1982	
September 7, 1982	
September 13, 1982	
September 28, 1982	
October 11, 1982	
October 25, 1982	
October 28, 1982	
November 1, 1982	
November 8, 1982	
November 15, 1982	
November 29, 1982	
December 2, 1982	
December 10, 1982	
December 13, 1982	
December 22, 1982	
December 27, 1982	
January 3, 1983	
January 13, 1983	
January 25, 1983	
February 13, 1983	

84. What provisions have been made to ensure the cooperation of the public during a radiation emergency? Specifically, what authority do state and local governments have to

force people to evacuate from their homes, to prevent spontaneous evacuation outside the EPZ (and possible [sic] in the area of the reception/mass care centers), to compel the assistance of volunteers in the evacuation, and to control panic and subsequent uncooperative behavior in evacuees?

Response:

Legal authority for planning and execution of the state and county plans, respectively, is addressed in the State Plan at i, the Lake Plan §§ A-07 and A-08, the Ashtabula Plan § B.5 and the Geauga Plan § B-4.

87. Concerning the evacuation of schools:

- (a) What provisions will be made for the evacuation of nursery schools, pre-schools, day care centers, and other such facilities, both public and private?
- (b) What provisions will be made for the evacuation of private schools within the plume exposure pathway EPZ? Include in your answer the notification procedures for these schools and the availability of transportation, especially for those schools which do not have buses or other transportation programs.
- (c) For both private and public schools, what provisions will be made for the evacuation (possible selective evacuation) of those schools outside the plume exposure pathway EPZ but whose students may reside within the EPZ?
- (d) How will bus drivers be notified in the event of an emergency? Many of these people work part-time and therefore may not be available [sic] by phone during non-working hours.
- (e) Discuss the suitability of schools for sheltering students for long periods of time. Include sheltering factors for the buildings and the availability of sufficient food, medical supplies, blankets, etc.

Response:

(a) Lake County

Nursery schools, pre-schools and day care centers within the EPZ not having their own means of transportation will be evacuated in school buses with the rest of the school population. For evacuation of schools, see Lake Plan §§ J-06, J-07 and J-11.

Ashtabula County

Any nursery school, pre-school or day care center within the EPZ which is without its own means of transportation, and which is unable or chooses not to take its children to a predesignated pick-up location, may request special transportation to be provided under the direction of the local fire department. See Ashtabula Plan § J.4.1.

Geauga County

The Thompson Fire Department will contact the administrators of the group home and day care center within the EPZ and make arrangements for special transportation, if needed. See Geauga Plan § J-4.a.

(b) Lake County

Private schools within the EPZ will be notified by tone alert radio from the EOC. See Lake Plan, Attachment E-1. Private schools not having their own means of transportation will be evacuated in school buses with the rest of the school population. For evacuation of schools, see Lake Plan §§ J-06, J-07 and J-11.

Ashtabula County

The only private school within the EPZ is the Assumption School. The Assumption School will be notified by telephone from the Geneva School District, which will be notified by tone alert radio from the EOC. See Ashtabula Plan, Appendix 15. The Assumption School will be evacuated in school buses with the rest of the school population. For evacuation of schools, see Ashtabula Plan § J.4.1.

Geauga County

There are no private schools within the EPZ in Geauga County.

(c) Lake County

There are no provisions for evacuating schools outside the EPZ.

Ashtabula County

There are no provisions for evacuating schools outside the EPZ.

Geauga County

Thompson Elementary School, which is outside the EPZ, will be evacuated along with Thompson High School, which is inside the EPZ. Students at St. Mary's School in Chardon who live in Thompson Township also will be evacuated.

(d) Lake County

Off-duty bus drivers will be notified by telephone. Buses will be equipped with two-way radios. In addition, the siren system and Emergency Broadcast System ("EBS") will provide back-up means of alerting bus drivers.

Ashtabula County

Off-duty bus drivers will be notified by telephone or in person. Buses will be equipped with two-way radios. In addition, the siren system and EBS will provide back-up means of alerting bus drivers.

Geauga County

Bus drivers will be notified by telephone or in person. In addition, the siren system and EBS will provide back-up means of alerting bus drivers.

(e) Sheltering is a short-term response to a radiological emergency. Schools are as suitable for sheltering as homes, since sheltering action would be taken for only a few hours. Sheltering as a potential protective response is discussed in the La'le Plan §§ J-03 and J-05, the Ashtabula Plan § J.2.1 and the Geauga Plan § J-2.

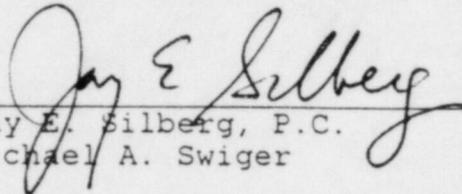
88. Describe in detail any independent monitoring for radiation around the PNPP site. (Independent monitoring here means monitoring by a governmental or private entity that is not an agent of the Applicant.) Include the types of monitors to be used, both mobile and stationary and detection/manufacturer types, manner and frequency of reading/analysis, availability of instantaneous data, type of data link with the responsible agency, name and affiliation of responsible agency, type of meteorological monitors/data input, if any, means of calculating projected doses, and the source of funding of the responsible agency.

Response:

See response to Interrogatory #24, supra, with respect to the Lake County offsite monitoring team.

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE

By: 
Jay E. Silberg, P.C.
Michael A. Swiger

Counsel for Applicants
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Washington, D.C. 20036
(202) 822-1000

DATED: June 15, 1984

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

CLEVELAND, OHIO

Janet E. Dugan, being duly sworn according to law, deposes that she is Associate Governmental Affairs Representative, Perry Project Services Department, of the Cleveland Electric Illuminating Company, and that the facts set forth in the foregoing "Applicant's Amended and Supplemental Answers to Sunflower's First Round Discovery Requests and Second Set of Interrogatories to Applicants Concerning Issue No. 1," numbers 1, 2, 3, 5, 6, 7, 10, 11, 12, 19, 24, 27, 32, 36, 37, 44, 50, 51, 52, 54, 55, 57, 58, 65, 66, 67, 71, 72, 73, 74, 76, 78, 82, 84, 87, and 88, dated June 15, 1984 are true and correct to the best of her knowledge, information and belief.

Janet E. Dugan

Sworn to and subscribed before me
this 14 day of
June 1984.

Patricia G. Dedek

PATRICIA G. DEDEK, Notary Public
STATE OF OHIO (Lake County)
My Commission Expires April 16, 1988

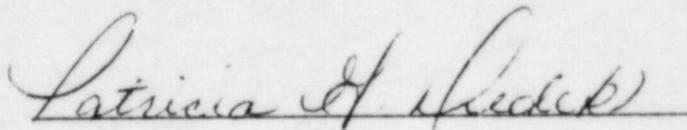
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

CLEVELAND, OHIO

Daniel D. Hulbert, being duly sworn according to law, deposes that he is Emergency Planning Coordinator, Perry Plant Department, of the Cleveland Electric Illuminating Company, and that the facts set forth in the foregoing "Applicant's Amended and Supplemental Answers to Sunflower's First Round Discovery Requests and Second Set of Interrogatories to Applicants Concerning Issue No. 1," numbers 1, 2, 4, 8, 9, 15, 17, 22, 23, 25, 26, 36, 40, 43, 44, 47, 57, and 75, dated June 15, 1984 are true and correct to the best of his knowledge, information and belief.



Sworn to and subscribed before me
this 14 day of
June 1984.



PATRICIA G. DEDEK, Notary Public
STATE OF OHIO (Lake County)
My Commission Expires April 16, 1985

June 15, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)	
)	
THE CLEVELAND ELECTRIC)	Docket Nos. 50-440
ILLUMINATING COMPANY, <u>ET AL.</u>)	50-441
)	
(Perry Nuclear Power Plant,)	
Units 1 and 2))	

CERTIFICATE OF SERVICE

This is to certify that copies of the foregoing "Applicants' Amended and Supplemental Answers to Sunflower's First Round Discovery Requests and Second Set of Interrogatories to Applicants Concerning Issue No. 1" were served by deposit in the United States Mail, First Class, postage prepaid, this 15th day of June, 1984, to all those on the attached Service List.

Michael A. Swiger
Michael A. Swiger

Dated: June 15, 1984

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)

THE CLEVELAND ELECTRIC)
ILLUMINATING COMPANY)

(Perry Nuclear Power Plant,)
Units 1 and 2)

Docket Nos. 50-440
50-441

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