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MURRAY R. EDELMAN
VICE PRESIDENT
NUCLEAR

January 31, 1985
PY-CEI/OIE-0025 L

Mr. C. J. Paperiello, Chief
Emergency Preparedness and
Radiological Protection Branch
Division of Radiation Safety & Safeguards
U. S. Nuclear Regulatory Commission, Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Perry Nuclear Power Plant
Docket Nos. 50-440; 50-441
Response to Inspection Report
50-440/84-24;50-441/84-22

Dear Mr. Paperiello:

This letter and its attachment provide the Cleveland Electric Illuminating Company response to the Appendix of Inspection Report 50-440/84-24; 50-441/84-22, dated December 19, 1984. This report details the results of the NRC review of the November 28, 1984 emergency preparedness exercise at the Perry Nuclear Power Plant (PNPP).

The Cleveland Electric Illuminating Company appreciates the efforts expended by the inspection teams, and will address each of the areas highlighted in the report. Application of improvements based on lessons learned during the exercise assure that the effectiveness of emergency response at PNPP is maintained at the highest possible level.

Preparations for emergency planning at PNPP, and in the surrounding communities, have been extensive. NRC comments on the onsite Emergency Plan have guided the development of a comprehensive, workable plan. Interactions with the County and State officials have provided the necessary links between the onsite and the offsite plans. These planning efforts were amply demonstrated during the recent exercise, at which 13 NRC representatives observed key functions at the site emergency response facilities and the Joint Public Information Center.

As was requested, this response has been submitted within 45 days of the date of your letter. If there are any questions concerning our responses to the open items, please feel free to call.

Very truly yours,

Murray R. Edelman
Vice President
Nuclear Group

MRE:njc

Attachment

cc: Jay Silberg, Esq.
John Stefano (2)
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James G. Keppler
Harold W. Kohn, Ohio EPA
James W. Harris, State of Ohio
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U.S. Nuclear Regulatory Commission
c/o Document Management Branch
Washington, D. C. 20555

ATTACHMENT
January 31, 1985
PY-CEI/OIE-0025L

Responses to NRC Open Items in
Region III Inspection Report SO-440/84-24; 50-441/84-22
on the November 28, 1984 Emergency Preparedness Exercise
at the Perry Nuclear Power Plant, Units 1 and 2

The following identifies the seven open items noted by the NRC representatives during the course of the initial full-scale emergency preparedness exercise at PNPP, and The Cleveland Electric Illuminating Company response to each item. Please note that the NRC report summary of each open item was more fully documented in the body of their report.

1. Procedure deviations were not documented, nor were they reviewed and approved when time permitted. (Open Item Nos. 440/84-24-01; 441/84-22-01) (Section 4.b)

   Response:

   PNPP procedures PAP-0201 "Conduct of Operations" and PAP-1703 "Shift Reports, Logs and Records" state that appropriate log entries should be made whenever deviations from procedures or instructions are deemed necessary, and that if time permits, appropriate approvals should be obtained prior to implementation of the logged deviations from the procedures/instructions. These procedures will be re-emphasized during annual Emergency Plan Training. This training is scheduled to begin again in April 1985.

2. Technical Support Center (TSC) staff did not monitor the radiation levels in the Annulus Exhaust nor the Unit 2 vent stack, even though these areas would indicate containment integrity breach. (Open Item Nos. 440/84-24-02; 441/84-22-02) (Section 4.b)

   Response:

   The TSC activities during this period from 1230 to 1315 have been reviewed, and The Cleveland Electric Illuminating Company believes that while the TSC Staff did monitor radiation levels in the annulus exhauset and the Unit 2 vent stack, these levels were not closely monitored. We therefore, agree with the characterization of this item as given in the inspection report on page 6. During a TSC activity review, the great importance of closely monitoring and trending any increase in radiation levels and investigating the implications of such increases was stressed to the appropriate TSC staff. This point will also be factored into the annual retraining program. The increased awareness on the part of the TSC staff should avoid any recurrence of such an event in the future.

   It should be noted here that the EOF was closely monitoring the minor 1230 release for the potential impact on public protective action recommendations. Further clarification of the events leading up to the postulated release is provided in response to this item. Due to increasing pressures and temperatures in the containment, and a series of equipment failures, a General Emergency was declared at 12:23 by CEI

officials commanding the response from the Emergency Operations Facility (EOF). County officials were notified of the declaration and were provided with the automatic precautionary protective action recommendations associated with the declaration of a General Emergency, in accordance with the PNPP Emergency Plan. Although the Unit 2 low range vent stack monitor reading began indicating slightly elevated readings from 12:30 p.m. (1230) through 1:00 p.m. (1300), monitored levels did not reach a level of concern until 1:15 p.m. (1315), at which time it increased significantly as shown in the table below.

Time	Unit 2 Vent Monitor Reading (counts/min.)	Site Boundary Dose Rate(R/hour) Whole Body		Thyroid
1215	75 (low range monitor)	1.9 E-8		1.6 E-6
1230	200 (low range monitor)	2.0 E-7		2.3 E-5
1245	400 (low range monitor)	3.6 E-7		4.1 E-5
1300	* 600 (low range monitor)	2.5 E-7		2.2 E-5
1315	10,000 (high range monitor)	1.1 E-1	**	1.3 E+1
1330	15,000 (high range monitor)	1.6 E-1		1.8 E+1

* Note that at 1300 the Pasquill Stability Class changed from C to D.
** Technical Specification Limits: Whole Body = .5 R/year = 5.7 E-5 R/hr
Thyroid = 1.5 R/year = 1.7 E-4 R/hr

As is apparent from the above table, the levels being read by the low range monitors indicated site boundary doses well below even the Technical Specifications (on the order of one to two orders of magnitude) until 1:15 p.m. (1315). As noted in the inspection report, the EOF and TSC were in contact within three minutes (1318) of the beginning of the 1315 release. What should be stressed is that precautionary protective action recommendations were made in the early stage, and that prompt action was immediately initiated by both the EOF and TSC upon the beginning of a significant release.

3. No provisions were made for recording in the Emergency Operations Facility (EOF) actual radiation monitoring team field readings and the times they were taken on a map of the Perry site and surrounding areas. (Open Item Nos. 440/84-24-03; 441/84-22-03) (Section 4.3)

Response

A status board in the EOF showing the map of the Emergency Planning Zone was utilized to illustrate the extent and duration of the plume. The Radiological Monitoring Team (RMT) Communicator was receiving reports from the field monitoring teams and recording the data in his log book. This information was used to define the boundaries of the plume, which were being illustrated on the status board. The field data was available to the dose assessment team from the log book, but were not individually plotted on the board. In the future, this status board will be utilized to plot and display appropriate field monitoring data and times. This additional activity will be addressed in the training program to ensure that personnel are aware of the information necessary for posting. Annual retraining is scheduled to begin again in April.

4. The coordination and integration of plant operations information into the dose assessment calculations was weak in that all assessments considered only default release durations, and no calculations were performed based on potential containment venting while this decision was being promulgated. (Open Item Nos. 440/84-24-04; 441/84-22-04) (Section 4.e)

Response:

In the first instance noted in the inspection report, use of the 6 hour default value for calculations of projected release duration provided estimated doses greater than were realistic. This resulted in conservative protective action recommendations being made to the County officials. This situation is preferable to one in which non-conservative recommendations could be made early in the response when realistic durations may be difficult to project with any reasonable degree of certainty. Conservative recommendations are less desirable once plant information provides positive indications that the release duration is limited. The inspection report notes that a calculation completed at 1404 following initiation of Standby Liquid Control (SLC) injection and containment depressurization still utilized a conservative release duration of six hours. The report concludes that this duration estimate was not reasonable due to these positive indications. However, this point is open to discussion due to the problems with the SLC system which were encountered throughout the postulated accident sequence. It should be noted that even though the six hour default value was utilized for the release duration as late as 1404, the resultant protective action recommendations did not exceed the protective actions which had already been implemented by the counties.

In the second instance noted in the report, (dose calculations based on containment venting) calculations again provided a conservative estimate. However, as noted in the report, this estimate was not realistic based on the mitigative efforts under consideration to prevent such a release.

Despite the above clarifications, the NRC's underlying concern is a correct one. Therefore, training will emphasize to the Plant Operations Advisor, the Offsite Radiation Advisor and the Emergency Coordinator, the need for performing realistic dose projections based on projected plant conditions, projected release durations and projected magnitudes of releases. Annual retraining is scheduled to begin in April.

5. Procedures used to determine protective action recommendations did not correspond to the subareas the State of Ohio and counties surrounding the Perry site used to implement the protective actions. (Open Item Nos. 440/84-24-05; 441/84-22-05) (Section 4.e)

Response:

As noted in the inspection report, this issue did not cause problems or confusion between the plant and the County officials. Both PNPP and County procedures were developed using the NRC/FEMA guidance provided in NUREG 0654 dealing with emergency planning. The techniques for making and implementing protective action recommendations were developed in

conjunction with the County and State representatives responsible for the emergency planning efforts in their jurisdiction. These methods were agreed to and were incorporated into the plans used for an emergency situation at PNPP. Training was conducted to familiarize those persons responsible for making protective action recommendations and implementing those recommendations. It is felt that this is a practical, workable approach, and that with the continued training performed with both onsite and offsite personnel, it will continue to be so.

The method of determining protective action recommendations projections at PNPP results in recommendations in terms of mile increments away from the plant, and 22 1/2° sectors of the compass around the plant. These increments and sectors have been chosen in accordance with the guidance of NUREG 0654 Table J-1. These increments and sectors are the most technically correct, realistic method of making protective action recommendations to the county officials. The county officials then use these realistic recommendations to make decisions on public protective actions by utilizing subareas which are chosen to be easily identifiable and understandable by the public. The use of subareas is in accordance with the guidance of NUREG 0654 Appendix 4. The translation of the PNPP recommendations into the decisions on public protective actions made by each county is simple, since both schemes are overlayed on a single map of the EPZ, which is prominently displayed and used in all the County EOC's and the EOF.

This proved to be an effective process for making protective action recommendations. It enables PNPP to provide technically correct information to the county officials who then utilize this information, as well as additional information available to them from the county and state response teams, to make the protective action decisions which they believe are necessary. Therefore, no changes to this method of providing and implementing protective action recommendations are planned.

6. The comparision and utilization of field monitoring data obtained by the State of Ohio with data obtained by the applicant was not adequately conducted. (Open Item Nos. 440/84-24-06; 441/84-22-06) (Section 4.e).

Response:

Discussions will be held with the State of Ohio representatives who were located at the EOF during the exercise to determine how the flow of information between the PNPP field monitoring teams and those of the state may be improved. This meeting is scheduled for February 20, 1985. The improvements which result from these discussions will be factored into our training program. Training will highlight the need for comparison and utilization of such data, including the need for updating the counties on the follow-up notification form.

7. Although a release began at the plant, this information was not relayed to the press at the Joint Public Information Center (JPIC) for over two hours. (Open Item Nos. 440/84-24-07; 441/84-22-07) (Section 4.g).

Response:

As stated in the response to Item 2 above, a minor release began at 12:30 (1230) and slowly increased until 1:15 (1315) Prior to 1:15 (1315), this release was below plant technical specification limits. A significant increase in monitored levels occured at 1:15 (1315). The JPIC was informed of both releases at 1:50 (1350). When this information was received at the JPIC, a news statement was prepared and provided to the media at a 1428 news briefing. A second statement was also provided to the media during this briefing, at 14:35. This second statement identified the release as beginning at 12:30.

The 1315 release was communicated to the media in a timely fashion, once the JPIC was informed. The delay in notifying the media of the minor release which began at 12:30 was the result of a breakdown in the flow of communication between the EOF and the JPIC. This breakdown involved a misunderstanding on the time the release began. The conservative 12:30 time was chosen even though the significant release did not begin until 13:15. All information needs to be communicated to the JPIC in a timely fashion. This communication process will be strongly addressed in future training sessions.

It should be noted that there is a parallel process for notification of the general public. Immediate actions to inform the county officials were taken upon the recognition of the 1315 release. The EOF simultaneously notified the State of Ohio and the Ashtabula, Lake and Geauga County Emergency Operations Centers of the change in plant status, beginning at 1:29 (1329). The Emergency Broadcast System (EBS) was activated (simulated) by Lake County at 1:42 (1342) in order to insure public notification of required protective actions.