U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-440/92008(DRSS)

Docket No. 50-440 License No. NPF-58

Licensee: Cleveland Electric Illuminating Co.
10 Center Road
Perry, OH 44081

Facility Name: Perry Nuclear Power Plant, Unit 1

Inspection At: Perry Site, Perry, Ohio

Inspection Conducted: April 20 - 24, 1992

Inspectors: S. K. Orth 5/8/92
Date

Approved By: for J. W. McCormick-Barger, Chief 5/8/92
Emergency Preparedness Section Date

Inspection Summary

Inspection on April 20 - 24, 1992 (Report No. 50-440/92008(DRSS))
Areas Inspected: Routine, announced inspection of the Perry Nuclear Power Plant's Emergency Preparedness (EP) program, including the following: review of actual emergency plan activation (IP 82701); operational status of the EP program (IP 82701); and licensee actions on previously identified items (IP 82301). The inspection involved one inspector.
Results: No violations or deviations were identified.

Proper classifications were made on the two actual emergency plan activations conducted since October 1991. All initial and subsequent notifications were made within regulatory guidelines. However, the time to activate the Technical Support Center (TSC) during the December 1991 Alert was excessive (Section 3). In response to the event, the licensee had revised procedures and training to expedite the activation of emergency response facilities. The licensee also expanded the training of communicators, in response to difficulties in responding to NRC information requests over the Emergency Notification System.

The licensee had a well maintained Emergency Preparedness (EP) program. The staffing of the emergency response organization remained very good. The EP training program had been enhanced for Operational Support Center maintenance personnel. Several modifications were made in the emergency response facilities to enhance their operations.

Inadequacies were identified in gaining access to the Emergency Operations Facility (EOF) and access to EOF system diagrams. These inadequacies were identified and were being addressed by the licensee (Section 4.b).

Testing procedures for the ventilation systems in the EOF and TSC did not appear to have been performed at the required frequency and followed with the appropriate corrective actions. This Unresolved Item will require additional information to determine if the licensee's actions were acceptable (Section 4.b).

DETAILS

1. Persons Contacted

R. Stratman, General Manager
B. Beyer, Director, Perry Administrative Services Department
E. Riley, Director, Perry Nuclear Assurance Department
M. Roseum, Supervisor, Emergency Planning Unit
J. Anderson, Onsite Emergency Planning Coordinator
M. Gmyrek, Operations Manager
T. Boss, Supervisor, Operations Quality Unit
H. Hegrat, Supervisor, Compliance
K. Donovan, Manager, Licensing Compliance Section
T. Reeves, Radiation Analyst, Ohio Emergency Management Agency
D. Perko, Emergency Planning Unit
D. Traverso, Emergency Planning Unit

The above licensee representatives attended the April 24, 1992 exit interview.

The inspector also contacted other licensee personnel during the inspection.

2. Licensee Action on Previously Identified Items (IP 82301)

(Closed) Open Item No. 440/91007-1: During the 1991 annual exercise, the area radiation monitors (ARM) in the TSC did not alarm at three times normal background when a controller placed a source on the detector in accordance with the scenario. This unit is identical to the one installed in the Emergency Operations Facility (EOF). In both of these facilities, the maintenance and calibration of this equipment was in question.

Procedures were in place for functional testing of the continuous air monitors (CAMs) and ARMs in both the TSC and EOF. These procedures implemented the plant s normal requirements for frequency of testing of inplant radiation monitors. The inspector discussed and reviewed procedures for the calibration of CAMs with the licensee's staff. The licensee indicated that implementation of these procedures will be complete by May 29, 1992. The procedures appear adequate to provide the appropriate maintenance of the equipment. This item is closed.

3. Actual Emergency Plan Activations (IP 82701)

The licensee has had two activations of the emergency plan since October of 1991.

The licensee declared an Alert on December 22, 1991, at 0259 hours (EST) as a result of flooding from a rupture of an auxiliary circulating water pipe. The licensee's classification was conservative based on the available indications of water level in the various plant buildings. Direct indication in the control room (CR) of the water level was not attainable. The licensee based the classification on the reports of rising water levels

in the plant, receipt of the alarm for annunciator OH13-P970 ("UNDERDRN MANHOLE BKUP PMP START WTER LEVEL HI"), and the need to activate emergency response facilities. This was an appropriate classification.

The activations of the TSC and the Operational Support Center (OSC) were not timely. The TSC and OSC were operational in 1 hour 25 minutes and 1 hour 15 minutes, respectively. Communications were not transferred to the TSC for an additional 1 hour and 15 minutes, based on the unavailability of communicators in the TSC. These times are not acceptable, as the licensee's goal for activation of these facilities is 45 minutes.

The inspector reviewed notifications made during the Alert. The initial and subsequent notifications were made in a very timely manner. However, there were difficulties encountered with information transferred over the Emergency Notification System (ENS) by the licensee's communicator. Instead of relaying answers to NRC questions, the communicator forwarded NRC inquiries to the Shift Supervisor (SS) for his direct attention and response. Additionally, communications were not transferred to the TSC until 2 hours 40 minutes after the Alert declaration. These actions distracted the SS during the event.

The inspector and licensee discussed the licensee's proposed changes in the Emergency Action Levels (EALs) directed to expedite classification of flooding. The EALs which existed required the removal of various manhole covers which were too heavy to be accessed by a single person. During the December 1991 Alert, this lack of accessibility led to CR delays in receiving indications of flooding. The licensee had chosen in its EAL revision, water level indications which were more easily determined. The licensee expected this revision to help expedite flooding event classifications.

The inspector and the licensee discussed changes to the system utilized for the activation of the emergency response organization (ERO) and revisions to the procedures for activation of facilities. The licensee's ERO callout system (Dialogic System) malfunctioned during the event. A security personnel errored by entering an "Unusual Event (UE) without activation of facilities" as the initial message into the system. This mistake was corrected in mid-cycle of activation of the system with the insertion of the appropriate Alert message. However, the initial message was only "suspended". Upon the completion of the Alert message, the Unusual Event message resumed and completed its announcement cycle. This led to confusion and a delay in the response of the ERO. The licensee had since made changes to the system's software to allow for termination of messages. The licensee had also made changes to the computer's message to allow greater time for awareness of the responder and to allow the responder to verify his/her responses. The inspector discussed with the licensee changes to the TSC activation procedure, EPI-A6 "Technical Support Center Activation". These changes had delineated those persons who were minimally necessary to activate the facility. The changes also provided for transfer of communicators from the CR to the TSC if they were needed for activation, and assigned an engineer to monitor the ENS line. These changes were made to expedite the activation of the TSC and the transfer of communications.

The licensee had also revised the training of the CR/TSC communicators in response to the December Alert. The communicators' lesson plans were amended to include lessons learned from the event. The lesson plans included instructions in the use of question forms which were to be used to obtain answers to NRC questions from the SS. Training also included a "training practical" on a simulated ENS line to familiarize communicators with expected NRC lines of questioning. Further, the followup notification forms in EPI-B1, "Emergency Notification System", were being revised to be more complete, offer more information to the State and counties, and for the communicators use in responding to the NRC's questions. These changes had been made to improve the quality of communications with the NRC, the State and counties.

On March 15, 1992, at 0143 hours (EST), the licensee declared an Unusual Event based on indications that a seismic event had occurred. The event was appropriately classified in a timely manner. The initial notifications to the State, counties, and NRC were adequate in detail and made well within regulatory time limits. The followup notifications were also very good. However, the inspector found that the termination notification form was improperly completed. Instead of indicating that the notification was for termination of an event and entering the time of termination, the preparer listed the Unusual Event and the time that declaration was made. The proper message was communicated, but the written error may have led to confusion. The licensee had created a followup item to review the use of these forms with the communicators.

No violations or deviations were identified.

4. Operational Status of the Emergency Preparedness Program (IP 82701)

a. Emergency Plan and Implementing Procedures

Current copies of the emergency plan and Emergency Plan Implementing Procedures (EPIPs) were maintained and readily available in the emergency response facilities (ERFs) and the control room (CR).

The inspector reviewed EPI-B5, "Personnel Accountability/Site Evacuation", to determine its adequacy to account for all onsite personnel. The procedure called for accountability to be implemented for events classified at a Site Area Emergency or at the discretion of the Emergency Coordinator. An accountability message would be announced over the plant's public address system initiating an evacuation of all nonessential personnel from the protected area. Tone alert radios would be used to inform those personnel of the assembly in the owner controlled area, outside of the protected area. Accountability would be determined in the CR, TSC and OSC for those essential personnel remaining onsite. Plant security personnel were required to obtain the security badges of those evacuating the protected area to gain accountability of nonessential personnel. The procedure provided for health physics contamination control and decontamination support at the

evacuation centers and at the central access point. These provisions were appropriate to assure the safety of all personnel in the owner controlled property.

No violations or deviations were identified.

b. Emergency Response Facilities (ERFs), Equipment, Instrumentation and Supplies

A tour was conducted through the TSC, OSC, EOF, Offsite Monitoring Vehicles, Backup Emergency Operations Facility (BEOF), and the CR. The facilities were as described in the Emergency Plan, and in an adequate state of functional readiness.

Recent modifications had been made to the emergency response facilities to enhance their operation. New team status boards were added to the TSC to better track team progress. Name plates had been added above the status boards in all facilities to identify those persons responsible for their updating, and desk references were added in all facilities. The layout of the TSC had been rotated 180 degrees to move the Operations Director (OD) away from a highly congested area near the facility's entrance. The Maintenance Coordinator had also been moved to increase his accessibility to the OD. The layout of the OSC had also been changed to provide desk space for the OSC Coordinator and Health Physics Supervisor, which were co-located. A communications link had also been established between the Health Physics Supervisor and health physics support at the radiological access point. These changes were expected to expedite OSC team formation and deployment. These modifications were anticipated to enhance the functions of the facilities.

The ERFs had been maintained in an adequate state of operational readiness. Since the previous inspection, supply inventories and communications equipment tests were completed in accordance with procedural requirements. Corrective actions were taken as needed on any problems identified during these activities.

The inspector reviewed Condition Report CR-92-024 in which the licensee identified concerns in the EOF. On February 18, 1992, smoke was detected in the EOF. The initial responders did not have keys to access all of the areas in the EOF and the balance of the building. There were also no controlled diagrams for the electrical systems in the facility or equipment operating procedures available to the responders. This created confusion in the responders' ability to identify the source of the smoke and isolate the problem. Subsequently, the licensee had assigned responsible personnel to resolve the above problems. The licensee's actions to resolve the issues concerning access to the EOF, and maintenance of controlled drawings and operating procedures for EOF equipment will be tracked as an Inspection Follow-up Item (50-440/92008-01).

The inspector also identified concerns over the operability of the TSC and EOF Heating, Ventilation, and Air Conditioning (HVAC) systems. The testing procedure for operability of the EOF and TSC HVAC systems were defined in PTI-M52-P003 and PTI-M53-P002, respectively. The procedures indicated a frequency of performance of 366 days. However, records reviewed indicated that a period of 18 months and 16 months had elapsed prior to the latest tests of the EOF and TSC systems, respectively. In addition, documentation of the last two test performances in the EOF indicated partial system failures but did not indicate a successful re-performance of the PTI as required. The licensee indicated that there may have been a rationale for the excessive time between testing and that the proper work orders and testing may have been completed following the PTI failures. Further, the licensee indicated that they had begun a design change procedure to improve the operability of the systems. At the time of the inspection, documentation concerning justification for delaying testing and documentation for performing followup testing was not available. The licensee was requested to provide this documentation and documentation of any followup corrective actions. Pending a response by the licensee, this item will remain as an Unresolved Item (50-440/92008-02).

The inspector also reviewed the operational status and maintenance of the Alert and Notification System with the licensee. The licensee indicated that they had begun sound level testing on the system. Their results indicated that sirens selected for these tests were performing at the appropriate sound levels. They were planning to continue these tests to confirm levels at remaining siren sites. The licensee's records of siren test results indicated monthly operabilities of 90-95 percent. The licensee discussed plans to transfer responsibility for the system from engineering to the EP group, where they expect it to receive increased attention. The above data confirmed that the siren system continued to be well maintained.

No violations or deviations were identified; however, one Inspection Followup Item and one Unresolved Item were identified.

c. Organization and Management Control

The inspector reviewed the station's organizational structure with the Emergency Planning Coordinator. The overall organization and control of the EP function had not changed since the last report.

The EP program remained very well staffed. The EP staff was exclusively a site staffed organization comprised of 16 individuals, one of which had recently been assigned to the program on a one year rotation. The coordinator of onsite EP was assigned exclusively EP duties. Since the last report, the position of coordinator of offsite EP had been vacated and the onsite training coordinator position had been removed. The responsibilities of the training coordinator had been re-assigned to a new position, EP Specialist, under the onsite EP organization.

The responsibility of the offsite EP coordinator had been distributed among the offsite planners. These changes did not lessen the effectiveness of the EP program.

The licensee performed critiques of industry events related to emergency preparedness. The licensee reviewed the events in detail and compared event findings to their EP program. The appropriate recommendations were noted and entered into the licensee's tracking system. These critiques continued to improve the EP program.

The licensee's emergency response organization (ERO) remained very well staffed in both supervisory and support positions. The ERO supervisory positions were staffed by four to six qualified individuals, and the support positions had numerous qualified personnel listed.

No violations or deviations were identified.

d. Training

The inspector reviewed the onsite ERO's annual training program, including records of individuals' EP training, a sampling of lesson plans, and controls in place to ensure lesson plans were updated.

The licensee had been utilizing the training matrix defined in Training Manual Procedure 2303. As a result of recommendations from the last inspection report, the licensee had revised the training matrix to be used in the next training period to include the training of OSC teams. The training provided by the current matrix did not adequately address training of all OSC maintenance teams, but the revision should provide the appropriate training and lesson plans for all OSC personnel.

The licensee had in place a training significance review system which ensured that lesson plans reflect procedural changes and current EP program concerns. The inspector reviewed selected training lesson plans. The lesson plans included references to current revisions of the emergency plan and EPIPS and included lessons learned from events and prior training exercises. Selected training lesson plans, including those for radiation monitoring teams, health physics personnel, TSC communicators, and dose assessors, were reviewed and found to be very good in detail and content.

Interviews were conducted with six members of the ERO, including both supervisory and support personnel. These persons understood their role in the ERO and demonstrated their responsibilities appropriately.

The inspector reviewed the training records of a selection of personnel filling both supervisory and support positions in the

ERO. The review indicated that all personnel were trained as required by Training Manual Procedure 2303. The licensee indicated that excellent support for the training program was given by management.

The inspector reviewed - of drills and exercises performed since October 1991. The licensee had performed all functional drills as required by the emergency plan including health physics drills, medical drills, post-accident sampling system drills, and augmentation drills. These drills were all appropriately critiqued.

No violations or deviations were identified.

e. Independent Reviews/Audits

The 1992 audit of the emergency preparedness audit was prepared by the Nuclear Quality Assurance (NQA) department. The audit was completed as required by 10 CFR 50.54(t). The audit included an evaluation of the emergency plan, emergency response facilities, and the adequacy of offsite interfaces. The auditors reported minor problems, including provisions for use of unqualified half-face respirators by offsite monitoring teams. These findings were appropriately tracked by the licensee for corrective action.

The inspector also reviewed the last two quarterly audits and selected surveillances performed by the NQA department. The quarterly audits were very detailed. They provided recommendations to the EP staff which were tracked by NQA. The surveillances focussed on various areas of the EP program, including the backup emergency operations facility, EP drills and exercises, and EP training. These were all appropriate in scope of activities and detail.

No violations or deviations were identified.

5. Unresolved Items

Unresolved items are matters which have been discussed with the licensee, and which require more information to ascertain whether it is an acceptable item, a deviation, or a violation. An unresolved item identified during the inspection is discussed in Section 4.b.

6. Exit Interview

On April 24, 1992, the inspector met with those licensee representatives identified in Paragraph 1 to present and discuss the preliminary inspection findings. The licensee indicated that none of the items discussed were proprietary in nature.

The inspector discussed the areas of the inspection with the licensee's management. The inspector noted the appropriate corrective actions resulting from the December 1991 Alert. The licensee revised procedures to expedite activation of facilities and expanded training to improve the quality of communications.

The inspector discussed enhancements in training and modifications to the emergency response facilities. The inspector noted the access problems in the EOF for which the licensee was taking appropriate actions to resolve.

The inspector discussed concerns with the frequency of testing of ventilation systems in the EOF and TSC and the corrective maintenance of the systems. Resolution of this item will be determined after further information is obtained.