U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-440/86019(DRSS); 50-441/86004(DRSS)

Docket Nos. 50-440; 50-441 Licenses No. NPF-45; CPPR-149

Licensee: Cleveland Electric Illuminating
Company
Post Office Box 5000
Cleveland, OH 44101

Facility Name: Perry Nuclear Power Plant, Units 1 and 2

Inspection At: Perry Site, Perry, OH

Inspection Conducted: July 7- 11, 1986

Inspectors: W.G. Snell for
J. Foster
Team Leader
7/25/86
Date

W.G. Snell for
M. Smith
7/25/86
Date

Approved By: W.G. Snell
W. Snell, Chief
Emergency Preparedness Section
7/25/86
Date

Inspection Summary

Inspection on July 7-11, 1986 (Reports No. 50-440/86019(DRSS); 50-441/86004(DRSS))
Areas Inspected: Routine, unannounced inspection of the following areas of the Perry Nuclear Power Plant emergency preparedness program: action on previously identified Open Items, activations of the licensee's emergency plan; emergency detection and classification; dose projection; protective action decisionmaking; notifications and communications; changes to the emergency program; shift staffing and augmentation; knowledge and performance of duties (training); licensee audits; and emergency response coordination with Canada. This inspection involved two NRC inspectors, and one consultant.
Results: No violations, deficiencies or deviations were identified.

DETAILS

1. Persons Contacted

M. Edelman, Vice President, Nuclear Group
*E. Riley, Manager, NQAD
*M. Lyster, Manager, Perry Plant Operations Department (PPOD)
*F. Stead, Manager, PPTD
*W. Coleman, Community Relations, PPSD
*P. Russ, Compliance Engineer, PPTD
*T. Heatherly, Operations Engineer, PPTD
*T. Corbett, E-Plan Training, PPTD
*J. Anderson, Onsite Emergency Planner
D. Hulbert, Emergency Preparedness Coordinator
R. Fobell, Nuclear Electrical Engineer
R. Stratman, General Supervising Engineer, Operations Section, PPOD
W. Kanda, General Supervisor, Technical Section
P. Klann, Senior Project Manager
T. Jameson, Nuclear Engineer, Mechanical Section
S. Kensicki, Technical Superintendent
K. Novak, Security Training Coordinator
L. VanDerHorst, Plant Health Physics
P. Moskourty, Health Physics Supervisor
D. Kaopiki, Supervisory Operator
W. Berg, Supervisory Operator
R. Smith, Government Liasion
C. Haslett, Governmental Affairs Representative
J. Koski, Emergency Planning Clerk
K. Cole, Director, Ohio Disaster Services Agency
E. Robinson, FEMA Region V
M. Brown, Lead QA Engineer
J. Bahleda, Lead Auditor
J. Pelcic, QA Engineer
L. Pennell, Training Analyst
W. King, Public Information Officer
L. Shaw, Public Information Officer

*Denotes those persons attending the exit meeting held on July 11, 1986.

2. Licensee Actions on Previously-Identified Open Items

a. (Open) Open Item 440/85060-01: Technical Support Center (TSC) ventilation system and radiation monitor readiness. The licensee has completed installation and testing of the TSC ventilation systems, and the Resident Inspector has reviewed testing records. This item will remain open pending completion of testing of the radiation monitoring system.

b. (Open) Open Item 440/85060-02: Emergency Operations Facility (EOF) ventilation system and radiation monitor readiness. The licensee has completed installation and testing of the EOF ventilation system,

and the Resident Inspector has reviewed testing records. This item will remain open pending completion of testing of the radiation monitoring system.

c. (Open) Open Item (440/86009-01(DRSS); 50-441/86003-01(DRSS): Late notification of the U.S. Coast Guard during 1986 exercise. The licensee has incorporated this finding into training for emergency preparedness personnel, emphasizing the need to accomplish notification time goals. This item will remain open pending demonstration of notifications during the next exercise.

d. (Open) Open Item (440/86009-02(DRSS); 50-441/86003-02(DRSS): Communication deficiencies between inplant teams and the control room during the 1986 exercise. The licensee has included this finding in emergency preparedness training. This item will remain open pending demonstration of control room to inplant team communication during the next exercise.

e. (Open) Open Item (440/86009-03(DRSS); 50-441/86003-03(DRSS): Procedures for downgrading from an Emergency Action Level were not properly utilized in 1986 exercise. Additional instructions on downgrading an EAL have been provided, and an unapproved form is currently in the review and approval process. This item will remain open pending demonstration of downgrading an EAL during an exercise.

3. Activations of the Emergency Plan

The licensee has had two activations since the last inspection, both Unusual Events (UEs), and both involving combustion of the charcoal beds associated with the Offgas System.

a. On June 18, 1986, a test of the temperature pull-down capability of the Off-Gas Vault refrigeration system was begun. As initial conditions for this test required an ambient temperature of 150 degrees F, electrical space heaters were utilized to raise vault temperature. As the vaults are of limited area, the heaters were in close proximity to the charcoal bed vessels. From a review of licensee documents and discussion with licensee personnel and NRC fire protection personnel, the following (limited) chronology was developed:

Date	Time	Action
6/18/86	1100	Initial heatup commenced
6/19/86	0600	Instrument airflow started
6/19/86	1200	Instrument airflow increased
6/19/86	1815	Temperature @ point 17 = 230 degrees , "A" heaters off
6/19/86	1915	Temperature @ point 17 = 206 degrees
6/19/86	2041	Temperature @ point 16 is off-scale high, all heaters off

6/20/86	0020	Visual inspections of vault
6/20/86	0100	Refrigeration system started
6/20/86	0930	Discussion of fire possibility
6/20/86	1000	Instrument airflow stopped
6/20/86	1145	Unusual Event declared
6/20/86	1219	Nitrogen purge initiated
6/22/86	0900	All but one temperature sensor below 250 degrees F
6/23/86	1100	All temperatures below 250 degrees
6/23/86	1125	Unusual Event terminated

The inspector reviewed the relevant EAL for fires, contained in EPI-A1, Attachment 2, F.I, which is as follows:

(1) Unusual Event: Fire within the protected area lasting greater than ten minutes. As indicated by: (a) Fire within the protected area lasting more than ten minutes after: (b) Initial use of fire extinguishing equipment activated by the fire suppression system. OR (c) Manual fire fighting efforts have begun.

This EAL is consistent with the guidance in NUREG-0654, and is appropriate to the vast majority of fires likely to be encountered at a nuclear plant. Such a typical fire would be expected to produce smoke, flames, and high temperatures in the immediate area of the fire. The EAL is, however, not conducive to classification of a fire within a contained vessel where smoke and flame are not visible, and fire fighting efforts do not include standard fire suppression equipment.

As such, the licensee's action in classifying the incident as an Unusual Event at approximately 1145 hours on June 20, 1986 was considered timely and acceptable.

The inspector reviewed documentation for the Unusual Event, including the licensee fire report, Unusual Event Checklist, initial and followup notification forms, OSC activation checklist, OSC logbook, OSC team briefing/debriefing sheets, and initial press release, and found it to be acceptable. Documentation indicated that notifications, following classification, had been well within notification timeframe goals, and follow-up notifications had been made as required.

b. On July 6, 1986, the licensee again attempted to perform the test of the Off-Gas refrigeration system, this time, beginning from ambient temperature (to preclude the need for space heaters). From a review of licensee documentation, and discussion with licensee personnel and NRC fire protection personnel, the following (limited) chronology was developed:

Date	Time	Action
7/6/86	1100	System Walkdown
7/6/86	1700	Second System Walkdown
7/6/86	1800	Instrument airflow started
7/6/86	1910	Temperatures @ 250 degrees, preparations to stop airflow
7/6/86	1942	Instrument airflow stopped
7/6/86	2032	Temperatures @ 14A = 656 degrees, @ 14B = 578 degrees
7/6/86	2037	Unusual Event declared, nitrogen purge started
7/8/86	1645	Unusual Event terminated

The inspector reviewed documentation from this event, including Unusual Event Checklist, initial and follow-up notification forms, and Control Room Communication Forms, and found it to be acceptable. Documentation indicated that all notifications were well within notification timeframes.

No violations of regulatory requirements or deviations from commitments were identified.

4. Emergency Detection and Classification (82201)

The Perry Nuclear Power Plant Emergency Plan (PNPPEP), Section 4.0, "Emergency Conditions," was reviewed. Four levels of emergency conditions are defined in this section: Unusual Event (UE), Alert (AL), Site Area Emergency (SAE), and General Emergency (GE). The GE condition includes instructions that the Emergency Coordinator will issue Protective Action Recommendations (PARs) to shelter the general public within a two mile radius of the plant and out to five miles in the three downwind sectors.

Section 4.0, Table 4.1 of the PNPPEP details the Emergency Action Levels (EALs). Differences in the format and content were noted between the EALs in the PNPPEP and the implementing instruction (EPI-1a). The content of the EAL in the implementing instruction includes specific indication by point number identification. The EAL in the PNPPEP does not include such point number identification. The layout and format of the EALs in the implementing instructions is considerably different than those in the PNPPEP. A spot check between the EP and the implementing instruction indicated good correspondence for each EAL.

The conditions listed in the PNPPEP corresponds to the guidance contained in NUREG-0654, Appendix 1. However, some of the distinctly observable events that guide the user to the emergency condition level are suspect or ambiguous. Several examples are listed in the appendix to the report. The licensee has committed to perform a detailed review of the EALs. This will be tracked as Open Item No. (440/86019-01; 441/86004-01).

Walkthroughs were conducted with ten personnel assigned to the Perry emergency program. Nine individuals were assigned to the Technical Support Center (TSC), and one was assigned to the Emergency Operations Facility (EOF). Walkthroughs consisted of questions relating to each individuals responsibilities, and where appropriate, a demonstration of the use of procedures and equipment. Two Radiation Protection Coordinators adequately demonstrated the use of the backup dose projection computer system. The primary dose calculation system was down for routine maintenance during the demonstrations. All personnel were knowledgeable of their responsibilities and adequately demonstrated (as appropriate) the use of Perry Emergency Procedures.

Preparation for the walkthroughs included a review of selected Perry emergency procedures including the following: Unusual Event (EPI-2a), Alert (EPI-3a), Site Area Emergency (EPI-4a) and General Emergency (EPI-5a). It was noted that in these procedures the responsibility for classifying an action level was not listed as a non-delegable responsibility for the Emergency Coordinator. It is recommended that the procedure specify that classification of events is a non-delegable responsibility assigned to the Emergency Coordinator. In practice, each Emergency Coordinator fully understood that it was the Emergency Coordinator's sole responsibility to approve the classification level prior to release to offsite authorities.

5. Protective Action Decisionmaking (82202)

Protective Actions and Guides EPI-B8, (Revision 3) was reviewed. This instruction provides that the Emergency Coordinator is responsible for approval of all protective action recommendations. Protective Action Recommendations are developed by the Offsite Radiation Advisor and the Radiation Protection Assistant, based on Offsite Dose Calculations Procedure EPI-B7 and Radiation Monitoring Team reports. The procedure includes a benefit analysis of sheltering vs. evacuation.

Interviews/walkthroughs with two Emergency Coordinators indicated that they were fully aware of their responsibility to make protective action recommendations to offsite agencies. Each Emergency Coordinator demonstrated the capability to use the Perry emergency procedures.

It is recommended that in the definition Section (Section 3.1), "protective actions," be changed to include those emergency measures taken before or after an uncontrolled release of radioactive material has occurred. Currently, the definition does not include measures taken before such a release.

No violations of regulatory requirements or deviations from commitments were identified.

6. Communications (82203)

Procedure EPI-B1, "Emergency Notification System" (Revision 4), which details guidance and responsibilities for notifications of County, State, federal agencies and licensee Emergency Response Organization Personnel

and offsite emergency facilities was reviewed. The procedure describes in adequate detail the methods and equipment to use for notifications of the above organizations and personnel. A dedicated phone (blue) is used to contact the local counties and the State of Ohio. Back up phone systems are available in the event the dedicated phone system fails.

It was recommended that a note be incorporated into the procedure to remind communicators not to provide the Perry Plant Control Room telephone number to the local and State agencies when using the backup phone system, to prevent compromise of the authentication scheme. Licensee personnel indicated that the need for such guidance had been identified, and changes to add the note were in process.

7. Changes to the Program (82204)

Through discussions with licensee Emergency Planners and random reviews of selected procedures, facilities and equipment, the inspector verified that no major changes have been made to the licensee's program since the last inspection.

The General Supervisor, Community Relations Section, maintains overall authority and responsibility for the Emergency Preparedness Program. The Emergency Preparedness Coordinator is directly responsible for supervising four Emergency Planners in the maintenance and coordination of the program. The inspector reviewed the Operations Manual Procedure PAP-0507 and determined that changes to the Emergency Preparedness Program are reviewed and approved by appropriate management. The inspectors interview with licensee representatives verified that there had been no significant changes in the organization or assignment of responsibilities for the Emergency Plan Organization since the last inspection. The interviews also revealed no significant changes in the organization of offsite agencies since the last inspection.

The inspector reviewed the licensee's program for distribution of changes to the Emergency Plan and Implementing Procedures. Licensee representatives indicated that the Licensing Department had distributed controlled copies of the Plan and Implementing Procedures and the Administrative Department had also distributed controlled copies as part of the Operation Manual system. The Licensing Department is presently recalling all their distributed controlled copies and the Administration Department will assume control of distribution of changes to the Emergency Plan and Implementing Procedures through the Operation Manual distribution system.

At the time of this inspection the Emergency Preparedness Program was in the process of annual review. All Letters-of-Agreement were being reviewed by offsite authorities and will be returned to the licensee with signatures.

The inspector also reviewed the drill records of 1985 and 1986 and verified that all required drills were conducted at the frequency specified in the licensee's plan. The inspector reviewed inventory

procedures for Emergency Kits and ERF supplies, An independent inventory of EOF facilities, emergency kits and decontamination facilities, was also conducted. All inventories have been completed at the frequency specified in the Emergency Plan and Implementing Procedures.

The Prompt Notification System is tested biweekly with siren activation by the county authorities on the second Wednesday of the month at 11:00 AM. Licensee personnel check each siren to ensure proper activation. Any problems are immediately reported to the local Service Center for repair or replacement. The inspector reviewed licensee records and interviewed FEMA personnel and verified the Prompt Notification System was maintained and tested as required by NUREG-0654, Appendix 3, and FEMA REP-10.

8. Shift Staffing and Augmentation (82205)

The inspector reviewed minimum shift staffing and capabilities for all shifts and concluded the emergency response organization met the guidelines of Table B-1 of NUREG-0654, Revision 1. Table 5-1 of the Emergency Plan lists the position, reporting function, location and responsibilities for each position. An administrative system is in place to assure that offsite emergency response personnel are available as needed to meet the 30 and 60 minute response times. Licensee personnel meet functional requirements for staffing by having assigned emergency tasks related to their normal duties.

The call-out list of emergency personnel is updated and distributed quarterly. The notification system and call-out procedures are found in EPI-B1 and EPI-B2.

The licensee successfully activated the call-out procedures as part of their April 1986 exercise; however, shift staffing and augmentation drills are not part of the Emergency Preparedness Plan drill requirements. Semiannual activation of the call-out procedure is encouraged to maintain and demonstrate licensee response capabilities in this area. One of these semiannual activations of the call-out procedure should be conducted during off-hours to ensure adequate 24-hour staffing capabilities.

The licensee was encouraged to incorporate semiannual activation of emergency call-out procedures into their emergency preparedness plan and drill program. A commitment to this effect was received at the exit interview. This will be tracked as Open Item No. (440/86019-02; 441/86004-02).

9. Knowledge and Performance of Duties (Training) (82206)

The inspector reviewed the licensee's program for training personnel involved in the emergency program, and tracking the completion of training modules to ensure individuals assigned emergency responsibilities were qualified for their positions.

Discussion with licensee personnel indicated that initial emergency training was performed by contractors, who either wrote the training modules or assisted the licensee staff in their development. Presently, an overall revision of the training modules is in progress to make them position-specific. The goal for completion of the new position-specific modules is August, 1986.

The inspector reviewed the course objectives, course description, references, lesson plan, handouts, transparencies, exam and answer code for the training module "Emergency Response" (EP-0901-001-01), and found them to be acceptable.

Discussion with cognizant personnel indicated that the instructor provides an "instructor report" which contains the names and grades of attendees, which is sent to the attendees supervisor and to Support Services, where the information is placed on a computerized tracking system. The computer system provides a printout containing name, position, required training modules for the position, a waive/requalification date, and a control number. When an individual has passed the required requalification date, the tracking system no longer prints the requalification date, and an easily identifiable space is left in the printout. The system does not lose the retraining date, but does not print it out under the current program. This can be a problem in that the retraining date is not immediately available.

A "Routine Tasks" system alerts emergency preparedness personnel to request a training system printout on a routine basis. A problem was noted in that the Emergency Plan requires retraining in required modules on an annual basis, and the computer system uses a twelve month retraining schedule.

As noted above, training modules are under revision, which will require changes to the tracking system to match the new training program.

Based on the above findings, the licensee's program in this area is adequate, however, the following item is recommended for improvement:

- Modify the Emergency Plan to specify a twelve month (plus or minus twenty-five percent) retraining schedule, and revise the computerized tracking system so that the retraining date continues to be printed when the date has passed. Consider programming to have the tracking system issue a three-month warning when a retraining period is nearing the end.

10. Public Information Program (82209)

The licensee's emergency public information program meets the requirements of 10 CFR 50, Appendix E. The 1986 edition of the Emergency Information Handbook was in the annual review process and should be distributed to all residents in the ten mile EPZ by September, 1986. The inspector's

review of the handbook indicated that its contents met the guidance of NUREG-0654, Revision 1. The licensee also places brochures at offsite agencies and posters are distributed to the State for placement in game or park areas.

Emergency information has been printed in the three local telephone directories covering the ten mile EPZ. In addition to the distribution of the Emergency Information Handbook, the Community Relations Department participates in an annual media training day, public speaking for local groups (upon request), and tours of the plant facilities.

The inspector reviewed training records, schedules and lesson plans involved in offsite training sessions. An extensive training program has been developed by licensee, state and county personnel. All levels of offsite personnel receive specialized training coordinated to their particular function. Training records revealed approximately 4,000 state and local personnel have been qualified through this coordinated effort.

The inspector determined that public information and offsite coordination areas of the emergency preparedness program continue to maintain an excellent level of performance.

11. Licensee Audits (82210)

The inspector verified that the licensee had in place provisions for conducting an independent annual audit of the Emergency Program. In addition, the surveillance program, as applied to the Emergency Plan activities, was reviewed.

Perry Operations Procedures (0208, Revision 1, dated 10/18/85), indicates that the Manager, Perry Project Services Department, is responsible for obtaining an independent group to perform a detailed technical review of the Emergency Plan.

The Perry QA Plan, Appendix A (Revision 3, dated 6/5/86) provides for review of audits of the PNPP Emergency Plan and implementing procedures by the Nuclear Safety Review Committee, Audit Subcommittee.

Appendix E of the QA Plan (Revision 1, dated 10/30/85), provides a matrix indicating which sections of QA Plan requirements are applied to emergency planning activities. An annual audit of emergency planning activities is scheduled.

Audits at the Perry site follow the standard audit pattern for production of an Audit Plan, review and approval of the plan, development of an Audit Checklist, and notification of the pending audit. Audit findings are classified as Audit Findings Requests (ARs), or Corrective Action Requests. Audits may also contain Open Items and Recommendations.

The inspector reviewed the two audits which have been performed relative to Emergency Planning to date.

Audit PIO 85-02 was conducted by the QA Department during January 9-29, 1985. As the Emergency Program, facilities, equipment, and personnel were not in their "final configuration," no audit findings were issued. Rather, a list of sixteen open items (with some sub-items) was generated and presented to the Emergency Preparedness Coordinator.

Audit PIO 86-19 was conducted by personnel from the Operations QA Department and a consultant during April 14-16, and May 5-16, 1986. This audit included observation of the May 15, 1986 Emergency Exercise, and resulted in three Action Requests, seven open items, fifteen recommendations, and five strengths (areas where the program showed exceptional merit). The audit was comprehensive and detailed. As requested by the licensee, a separate section (Section 7.0) dealt with the adequacy of the interface with offsite authorities and provided a list of audit sections related to the offsite interface. Licensee personnel indicated that when the audit report is approved, it will be distributed to offsite authorities. This distribution will meet and exceed the requirements of 10 CFR 50.54(t).

The inspector reviewed the Action Requests generated by the audit and verified that corrective action was in progress or had been completed for the items.

Surveillances are performed by a surveillance group, according to a yearly surveillance schedule based on the QA Plan, Table 18-1. Surveillances had been scheduled for calendar year 1986.

12. Interface with Canada

The inspectors review of the Perry Emergency Plan indicated the licensee's awareness of the necessity to notify a small land area of Canada located within the 50 mile EPZ of the Perry Power Plant. According to licensee interviews, all notifications and updates are provided to the provincial government by State of Ohio authorities beginning at the Alert level. A review of the Ohio plan for Response to Radiological Emergencies at Licensed Nuclear Facilities verified this procedure. An interview with the Director, Ohio Disaster Services Agency (ODSA), indicated that the State of Ohio will provide desk space in the State EOC for two representatives who will maintain communications with provincial authorities. Coordination of information and response will occur between the State of Ohio and the Ontario Provincial Government.

Prior to the April, 1986 exercise, provincial authorities indicated their interest in exercise participation to both the licensee and state government. The licensee responded by arranging a one-on-one training session for the representative, plus arranging for observations in the EOF and local EOC. The State arranged for two representatives to observe State participation in the State EOC. Provincial authorities have indicated that they will participate in future exercises or activations at the State EOC.

13. Open Inspection Items

Open inspection items are matters which have been discussed with the applicant, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or applicant or both. Open inspection items disclosed during the inspection are discussed in Sections 4 and 8.

14. Exit Interviews

The inspectors met with the applicant representatives denoted in Paragraph 1 on July 11, 1986. The inspectors summarized the scope and results of the inspection and discussed the likely content of the inspection report. The applicant did not indicate that any of the information disclosed during the inspection could be considered proprietary in nature.

APPENDIX

EAL Review Comments

The following comments were developed during a brief review of the Perry Plant EALs. This was not considered as a detailed review, and was performed by personnel lacking plant-specific knowledge. For each EAL, the Emergency Classification, PNPPEP number and condition, relevant NUREG-0654 guidance (if applicable), and reviewer's comment will be listed.

a. Unusual Event

PNPPEP No. 8: Loss of containment integrity requiring shutdown by Technical Specifications (TS), and shutdown not achieved within the required time period.

NUREG-0654: Loss of containment integrity requiring shutdown by TS.

Comment: The Perry EAL is more limiting than that contained in NUREG-0654, in that the NUREG provides for an Unusual Event in each instance where shutdown is required by containment integrity Technical Specifications.

b. Unusual Event

PNPPEP No. 9: Loss of Engineered Safety Features (ESF) requiring shutdown by TS, and shutdown is not achieved within the required period.

NUREG-0654: Loss of ESF or fire protection system function requiring shutdown by Technical Specification.

Comment: The Perry EAL is more limiting than that contained in NUREG-0654, and the loss of fire protection system function is not addressed.

c. Unusual Event

PNPPEP No. 10: Fire in the protected area lasting more than ten minutes after; initial use of fire extinguishing equipment activated by the fire suppression system OR manual fire fighting equipment efforts have begun.

NUREG-0654: Fire within the plant lasting more than ten minutes.

Comment: The Perry EAL is more limiting than the NUREG guidance.

d. Unusual Event

PNPPEP No. 20: Any instance that, in the judgement of the Shift Supervisor, warrants declaration of an Unusual Event where increased awareness is required by plants staff and/or offsite authorities.

NUREG-0654: Other plant conditions exist that warrant increased awareness on the part of a plant operating staff or State and/or local offsite authorities or require plant shutdown under technical specification requirements or involve other than normal controlled shutdown (e.g., cooldown rate exceeding technical specification limits, pipe cracking found during operation).

Comment: That portion of the NUREG that requires shutdown by Technical Specification requirements or other than normal controlled shutdown is not addressed in the PNPPEP.

e. Alert

PNPPEP No. 3: Reactor coolant leak rate greater than 50 gpm with reactor at operating temperature and pressure: confirmed by one of the following; Drywell (DW) floor drain sump fill rate above 50 gpm AND DW floor drain pumps continuously running AND increase in floor drain tank level.

NUREG-0654: Selected parameters should be directly observable.

Comment: The DW unidentified sump fill rate meter pegs high at 30 gpm. To determine greater than 30 gpm rate, a calculation based on sump pump run time must be completed. Therefore, the indication is not directly observable.

f. Alert

PNPPEP No. 11: All alarm (annunciators) lost for more than 15 minutes.

NUREG-0654: Most or all alarms (annunciators) lost.

Comment: The Perry EAL is more limiting than the NUREG guidance, and does not address partial loss of alarms.

g. Site Area Emergency

PNPPEP No. 1: Known loss of coolant accident greater than makeup capacity, as indicated by water level below 18.25 inches AND drywell pressure greater than 1.68 psig.

NUREG-0654: Not applicable.

Comment: The indications selected are extreme. At the points selected, the reactor vessel level is 180.5 inches below the low level alarm (199 inches), and the following events would have occurred: Reactor Vessel Low Level alarm, Reactor Trip, RCIC initiation, HPCS initiation, containment isolation . . .etc.

h. Site Area Emergency

PNPPEP No. 2: Degraded core with possible loss of core geometry. Main steam monitors is listed as 3.6X full power background level. Under the General Emergency condition No. 1, "Loss of Fission Product Barriers," the MSL radiation hi alarm trip is listed as 3X normal.

NUREG-0654: Not applicable.

Comment: The 3.6 and 3.0 times normal listed parameters are inconsistent. It is unlikely that anything above 3.0 times normal would be a valid indication of actual flow as the main steam line isolation valves shut at three times normal radiation levels.

i. Site Area Emergency

PNPPEP No. 7: Complete loss of any function needed for plant hot shutdown, as indicated by: inability to scram AND inoperative standby liquid Control System OR all Safety Relief Valves (SRV) inoperative AND Suppression Pool inoperative AND Suppression Pool Cooling mode of RHR inoperative AND HPCS OR RCIC inoperative.

NUREG 0654: Not applicable.

Comment: The AND and OR logic statements need to be checked for correctness. Examples; discussions with plant personnel indicated that if either HPCS or RCIC is available, then hot shutdown capability is assured. Therefore, the OR statement should be an AND statement. Suppression Pool inoperative AND Suppression Pool Cooling mode of RHR inoperative. Loss of either system would be a loss of plant function for hot shutdown. Therefore, it appears that this should be an OR statement.

j. Site Area Emergency

PNPPEP No. 10: All alarms (annunciators) lost more than 15 minutes and reactor is not in cold shutdown or plant transient initiated while all alarms are lost; as indicated by loss of all alarms for more than 15 minutes AND Reactor Temperature greater than 200 degrees F AND Reactor Mode Switch is not in "Shutdown," OR Plant transient initiated as demonstrated by: Reactor water level less than 18.25 inches followed by ECCS initiation OR Reactor Temperature change greater than 100 degrees F per hour OR abnormal reactor pressure in excess of atmospheric pressure.

NUREG-0654: Most or all alarms (annunciators) lost and a plant transient initiated or in progress.

Comment: Loss of all alarms for greater than 15 minutes and greater than 200 degrees F and mode switch not in shutdown is the same (normal operations) as the Alert Classification. The transient selected are extreme, or, as in the case of temperature change, not directly observable.