

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-255/84-29(DRSS)

Docket No. 50-255

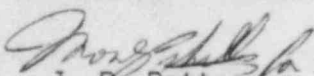
License No. DPR-20

Licensee: Consumers Power Company
212 West Michigan Avenue
Jackson, MI 49201

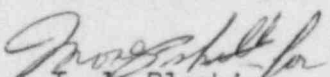
Facility Name: Palisades Nuclear Generating Plant

Inspection At: Palisades Site, Covert, Michigan

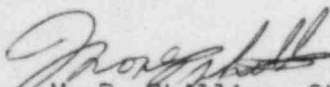
Inspection Conducted: December 18-21, 1984

Inspectors: 
J. P. Patterson

1/10/85
Date


T. J. Ploski

1/10/85
Date

Approved By: 
M. P. Phillips, Chief
Emergency Preparedness Section

1/10/85
Date

Inspection Summary

Inspection on December 18-21, 1984 [Report No. 50-255/84-29(DRSS)]

Areas Inspected: Routine, announced inspection of the following areas of the emergency preparedness program: licensee actions on previously-identified items related to emergency preparedness; implementation of the emergency plan; knowledge and performance of duties (training); changes to the emergency preparedness program; and licensee audits. The inspection involved 49 inspector-hours onsite by two NRC inspectors.

Results: No items of noncompliance or deviations were identified.

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DETAILS

1. Persons Contacted

- *J. Lewis, Technical Director
- *K. Osborne, Maintenance Superintendent
- *W. Beckman, Radiological Services Manager
- *R. DeLong, Senior Health Physicist
- *J. Brunet, Emergency Planning Coordinator
- *D. Anderson, Senior Quality Assurance Administrator
- *D. Malone, Senior Engineer, Licensing
- *D. Fitzgibbon, Licensing Engineer
- F. Duchesneau, Shift Engineer/Shift Technical Advisor
- B. Bauer, Shift Engineer/Shift Technical Advisor
- R. Massa, Shift Engineer/Shift Technical Advisor
- L. Kenaga, Health Physics Support Supervisor
- J. Fountaine, Supervisory Instructor, Training
- J. McElrath, General Quality Assurance Engineer

*Denotes those attending exit interview.

2. Licensee Actions on Previously-Identified Items

- a. (Open) Open Item No. 50-255/81-19-22: Audibility of the evacuation alarm. The inspectors determined that annual siren/alarm testing and Public Address (PA) audibility surveys are being conducted by the licensee. The current survey conducted December 17-18, 1984, involved the checking of over 100 PA speakers with 22 found to be inaudible. In addition, eight had low volume. These 30 areas were then checked for siren audibility. Three of these thirty areas were identified as locations where neither the PA nor the siren could be heard. These locations were the second floor of the Feedwater Purity Building; the Heating Boiler Room on the 590' level of the Turbine Building; and the Oil Room in the same general location as the Heating Boiler Room. A maintenance order was initiated on December 19, 1984, to repair the speakers in these three locations. When this testing and satisfactory results are obtained, which may include some substitute methods for siren audibility, the licensee will inform the NRC. This item remains open.
- b. (Closed) Open Item No. 255/81-19-29: Evacuation time estimate deficiencies. In a June 1984 revision the licensee provided revised evacuation time estimates. The revised report is entitled "Evacuation Time Estimate Update for the Palisades Nuclear Power Plant Plume Exposure Emergency Planning Zone." This improved study incorporates methodology covering initial notification, preparation and mobilization times, and travel time. Vehicle delays due to summer transient population and adverse weather were included in this report. The inspector concluded that the revised evacuation time estimates were adequate, and this item is considered closed.
- c. (Open) Open Item No. 255/83-11-01: Review of the procedural definition of the term "mandatory action" in Procedures EI-1 and EI-2.1 for

consistency with the initial notification requirements in 10 CFR Part 50, Appendix E, Section IV.D.3. The inspector reviewed the current revision of procedures EI-1 and EI-2.1 and the "Recommended Writing Practices" found in Administrative Procedure 10.41. Mandatory actions have been defined in both EI series procedures as actions that shall be performed within one hour. In the Emergency Action Levels (EALs) in EI-1, Attachment 1, initial notification of the State and the Van Buren County Sheriff's Office are listed as mandatory actions. The current revisions of EI-1 and EI-2.1 contain supplemental notes which state that initial notifications to State and local governments should be performed within 15 minutes. Administrative Procedure 10.41 indicates that the word "should" was not mandatory. This procedure indicates that "shall" is appropriate for actions that must be performed. This item remains open pending revision to EI-1 and EI-2.1 which clearly states that initial notifications to State and local governments "shall" be initiated within 15 minutes of all emergency classifications.

- d. (Closed) Open Item No. 255/84-XX-01: Review communication systems to determine whether back-up communication system and back-up power source still meet Appendix E requirements. Back-up communications capability has been re-established by the licensee. Power failure telephones have been circuited through a transformer on a preferred bus. Previously, these emergency phones were shifted to a non-preferred plant bus without a formal review process. Radio communications are available with the Michigan State Police, the Power Controller at the licensee's corporate office, and the Security Department onsite. Steps have also been taken so that both diesel generators will not be lost. The bus available should maintain operability for the NRC phones. The Site Emergency Plan is being revised to better define existing alternate power supplies for communications equipment. The licensee's corrective actions appear to assure back-up communications capability in the event of a power loss at the Palisades Plant. This item is considered closed.
- e. (Closed) Violations Severity Level IV Nos. 255/84-05-03 and 255/84-05-05: Licensee failed to classify emergency for complete loss of all onsite and offsite power at the time of the event, and when an emergency was finally declared, the licensee failed to notify the NRC of the classification for over 24 hours. Training sessions have been conducted for all Control Room operating personnel responsible for emergency classifications and initial notifications. These sessions included Simulator training which incorporated EAL identification and subsequent emergency classification. These training sessions were held in June, July, and August of 1984; during which time a similar violation was identified in Inspection Report No. 50-255/84-14. This training program had just been implemented when the events identified in that noncompliance occurred. The licensee's training program to address these noncompliances is further discussed under Item No. 255/84-05-04.
- f. (Closed) Violation Severity Level IV No. 255/84-05-04: The Shift Supervisor on shift had not been trained in emergency plan implemen-

tation within the required time period. Training sessions have been conducted for all Control Room operating personnel responsible for emergency classifications and initial notifications. In addition, Duty and Call Superintendents and Shift Engineer/Shift Technical Advisors were included. These sessions held in June, July and August of 1984 included Simulator training which incorporate EAL recognition, subsequent emergency classification, and notification requirements. Also, the licensee is initiating plans to integrate the EIPs and appropriate scenarios into the Nuclear Operations Training Center (NOTC) Simulator training, including significant use of the mandatory notification requirements of the EIPs. In addition, the licensee has created the new emergency position of Shift Engineer/Shift Technical Advisor to assist and relieve the Shift Supervisor of some of his emergency responsibilities regarding event classification and notifications to offsite agencies. The inspectors interviewed three of the five newly-assigned Shift Engineer/Shift Technical Advisors. Mini-scenarios were posed which involved EAL recognition, emergency classification, required notifications, and protective action recommendations. The inspectors concluded that these individuals demonstrated adequate knowledge. Based on the corrective actions taken and those planned, this item is considered closed.

- h. (Closed) Open Item No. 255/84-18-01: Additional drills and training for PASM team with emphasis on initial response functions, pre-sampling requirements, and surveying of sample equipment needs to be conducted. Weekly training was conducted with Chemistry/Health Physics technicians during October and November 1984. Drills using Procedure EI-15.3, "Post Accident Sample Monitoring System Operator Training." These weekly training sessions, including those areas which appeared to be weak in the August 1984 exercise, will be continued until all Chemistry/Health Physics technicians are qualified in PASM. This item is considered closed.
- i. (Open) Open Item No. 255/84-18-03: Procedure EI-9 should be revised to include guidance on radiation surveying for exposure rates for teams passing through the plume and be more specific in identifying radiation instruments. The inspector reviewed a draft revision to procedure EI-9 and determined that it did include the required guidance for exposure rates of those teams performing radiation surveying while passing through the plume. Also, Attachment 1 to EI-9 has been made more specific in identifying the radiation monitoring equipment and other items listed there. Final approval of the revised EI-9 including Attachment 1 has not yet been received by the various licensee management levels. This final approval is expected within about thirty days. Pending final issuance of the procedure, this item remains open.

3. Activations of the Licensee's Emergency Plan

(Closed) Open Items No. 255/84-XX-02; 255/84-XX-03; and 255/84-XX-04: Activation of the Site Emergency Plan (SEP). During the period September 21 through December 10, 1984, the SEP was activated on three occasions, with all activations classified as Unusual Events. A previous inspection

report [50-255/84-14(DRP)] identified noncompliances associated with failure to classify and timely notify appropriate agencies for events that had occurred in July 1984. Corrective actions associated with that noncompliance were in the process of being implemented, and according to a letter from the licensee dated September 20, 1984, full compliance had been achieved by that date. Between January 1 and September 20, 1984, five events occurred which warranted Unusual Event emergency classifications; however, since these corrective actions had not been completed, the inspection did not examine emergency classifications which were made prior to September 21, 1984. For the three Unusual Events which were declared on November 15, November 19, and December 7, classifications were made in a timely manner and reported to State and local governmental agencies within fifteen minutes as required by 10 CFR Part 50, Appendix E, Section IV.D.3. For all three events the emergency classifications made appeared to be appropriate. However, the files did not always include the emergency notification forms, and for several of the events the only records obtainable were from the Shift Supervisor's log. The Emergency Planning Group should maintain a separate file of actual emergency classifications with related emergency notification forms. This would help monitor the notification requirements for these events and could be used as a training tool to aid the Shift Engineer/Shift Technical Advisor.

4. Changes to the Emergency Preparedness Program

The current Revision 3 to the Palisades Plant SEP, implemented in July 1983, indicated that the Chemistry/Health Physics Superintendent had been delegated the responsibility for coordinating the onsite review and update of the plan and its implementing procedures. The Nuclear Emergency Planning Coordinator was responsible for updating the plan and reviewing it and offsite emergency plans for compatibility. The plant's emergency planning staff informed the inspectors that completion of a draft of the next plan revision has been scheduled for February 1985. Based on the proposed changes to the plan and the differences evident from comparing the draft with the current revisions to the implementing procedures, a timely plan revision is needed. Revision 3 to the plan does not accurately reflect the current status of the licensee's emergency preparedness program in a number of significant areas.

The plant's emergency planning staff indicated that the next plan revision would include changes to the plant's normal and emergency organizations, as well as deleting reference to the General Office Control Center (GOCC) as a temporary Emergency Operations Facility (EOF). The EOF would also be staffed with plant personnel at least initially. The current plan revision states that the Shift Supervisor would function as interim Site Emergency Director (SED). Current implementing procedures and walkthroughs conducted by the inspectors indicated that the licensed Shift Technical Advisor (STA), also now designated as the Shift Engineer (SE), served as interim SED instead of the Shift Supervisor. In addition, the SE's work station is the Shift Supervisor's office adjacent to the Control Room. The plan also does not indicate, since the SE position was not defined, that the STA and the SE are the same person. During SE walkthroughs, some concern was expressed about how they would simultaneously function adequately in their SE and interim SED roles. During the inspection, the licensee

also changed the line of succession to the SED position from that provided in the plan and the current revision to Procedure EI-1. Revision of procedure EI-1 is in progress. Offsite protective action decisionmaking guidance contained in Procedure EI-6.13 was different, but improved from that found in the plan.

The licensee should complete the proposed Site Emergency Plan revision by March 1985, incorporating all changes made to the plant's emergency preparedness program since the last revision. This is an Open Item (255/84-29-01).

The licensee's provisions for preparing, reviewing, and approving plant procedures were contained in Administrative Procedure (AP) 10.41, "Procedures." AP 10.41 specified responsibilities for all persons or groups in the procedure creation or revision process, provided format guidance, and addressed temporary procedure changes. AP 10.42 specified those responsible for receiving the plan and its implementing procedures. This procedure/document review matrix contained a reminder that NRC approval is required for any change that decreases the plan's effectiveness. Procedure AP 10.43 established responsibilities for the distribution and control of documents, including the plan and implementing procedures. The Document Control Center is assigned the responsibility for distributing controlled documents and maintaining historical files of each document.

The licensee has apparently revised the definitions of the words "shall" and "should" in Attachment 12 to AP 10.41, "Recommended Writing Practices." The words "shall" or "shall be" have been defined as mandatory verbs for actions that must be performed, while "should" and "should be" were appropriate for actions that are recommended, but not mandatory. These words are not defined in the plan. Subsection 6.4.1 of the plan states that personnel accountability "should" be completed in approximately 30 minutes. Procedure EI-2.1 defines a mandatory action as one which "should" be performed within one hour. Procedure EI-13 indicates that evacuation of nonessential personnel "should" be performed at the Site Area or General Emergency. The licensee must review the plan and implementing procedures to ensure the proper use of the words "shall", "shall be", "should" and "should be" in view of current regulatory requirements and the licensee's current definitions. This is an Open Item (255/84-29-02).

5. Knowledge and Performance of Duties (Training)

The inspectors interviewed three of the five Shift Engineers on their responsibilities as interim Site Emergency Directors and checked Training Department records to determine what specific training had been given to all persons who may function as SEDs. Those interviewed were adequately familiar with relevant Emergency Implementing (EI) procedures. All were aware of the needs to notify offsite authorities within fifteen minutes of declaring an emergency and to issue offsite protective action recommendations. However, when asked under what circumstances an evacuation of nonessential onsite personnel should be delayed, the Shift Engineers did exhibit some uncertainty. While procedure EI-13 indicated that such an evacuation was warranted following a Site Area or General Emergency declaration, it did not address the need to consider delaying such an evacu-

ation if evacuees would be exposed to greater environmental, radiological, or security hazards when leaving the plant. Procedure EI-13 should be revised to include guidance concerning under what circumstances, if hazardous conditions are present outside the plant, should the Site Emergency Director consider delaying an evacuation of nonessential personnel.

The licensee's training staff has developed a matrix of emergency preparedness training modules relevant to specific positions in the emergency response organization. Training department personnel produced computerized records which indicated that all interim SEDs had completed required training modules during July or August 1984 at the licensee's Midland Nuclear Training Center, where detailed lesson plans and any test results were kept. Interim SED training modules consisted of the following: Emergency Action Levels (EALs) and Emergency Classification; Emergency Notifications; Quick Estimate of Core Damage; Rapid Dose Assessment; Formulation of Protective Action Recommendations; Site Emergency Preparedness Training for TSC Management Personnel; and a Control Room walkthrough which emphasized relevant topics of emergency preparedness. The training matrix indicated that SEDs who would function in the TSC were to complete the modules regarding training for TSC management staff, protective action decisionmaking, and EALs and emergency classifications. During this inspection, the licensee revised the normal line of succession for the TSC's Site Emergency Directors. Records indicated that all these personnel except the Maintenance Supervisor had completed the required training modules during 1984. The individual in question has not yet completed the module on protective action decisionmaking. The Maintenance Supervisor needs to complete the required training prior to assuming the duties of the TSC Site Emergency Director. This is an Open Item (255/84-29-03).

The inspectors reviewed internal correspondence dated August 29 and December 10, 1984, that included attendance sheets which indicated that emergency preparedness training had been offered to representatives from Allegan County and Van Buren County emergency response organizations. State of Michigan officials assisted in providing the training. Topics addressed included fundamentals of radiation, biological effects of radiation, emergency planning at Palisades, emergency communications, and County responsibilities during an emergency at the plant. Internal correspondence dated July 11, 1984, with attendance sheets, indicated that training on plant EALs and the protective action guidelines were provided to State and some county officials in July 1984.

6. Licensee Audits

The inspectors reviewed documentation of three audits of the plant's emergency preparedness program that were performed during 1983 and 1984 by Quality Assurance (QA) Department personnel based at the licensee's General Office. Audit records were maintained at that location, for a scheduled five-year period. Audit records were comprised of several distinct parts. Summary reports consisted of general conclusions, listings of audit reference documents and persons involved in the audit, and a listing of negative conclusions which were categorized as either observations or findings. Complete listings of all items examined during these audits were filed separately on detailed Nuclear Operations Department Audit checklists.

Checklist pages identified the reference document and specific requirement or commitment, the auditor's comments, and a conclusion on whether the requirement or commitment had been adequately met. Documentation of corrective actions taken on findings or observations were spotchecked by the inspector. The licensee has utilized several mechanisms to ensure resolution of internal audit findings or observations, items identified in NRC inspection reports, and items identified in the licensee's drill and exercise critiques. These mechanisms included Event Reports, Deviation Reports, Action Item Requests, Document Revision Requested, plus a relatively informal work item list kept by the plant's emergency preparedness staff.

Two of the three audit reports addressed only onsite aspects of emergency preparedness including drills, exercises, the plan and procedures, emergency supplies, and capabilities. Neither of these "onsite" audits addressed the adequacy of the plant's interface with State and local emergency support organizations. Although plant staff have interfaced with representatives of such organizations, lead responsibility for maintaining this interface apparently remained with General Office emergency preparedness personnel. The adequacy of this interface was addressed in a separate audit of the emergency preparedness program. The 1983 and 1984 audits of the onsite aspects of the program were contained in records titled, "Audits of Health Physics, Emergency Planning, Packaging and Shipping of Greater than Type A Materials." Audit number A-QT-83-14 was conducted on July 18-22, 1983, while audit number A-QT-84-17 was done on September 10-14, 1984. Considering that both audits were intended only to address onsite aspects of emergency preparedness, their somewhat different scopes were adequate. Audit number A-QA-84-2, which did address the plant's interface with State and local emergency support organizations, was performed in January 1984. This audit determined whether letters of agreement were current, whether annual emergency preparedness training had been offered to offsite groups, whether adequate procedures were in place for accomplishing initial and follow-up offsite notifications, and what provisions had been made to inform the general public and media of any protective actions to be taken following an emergency declaration.

The inspectors reviewed internal correspondence dated October 9 and November 26, 1984, regarding the licensee's proposed corrective actions for improving audits of the emergency preparedness program resulting from an NRC inspection at the Big Rock Point Nuclear Plant (Inspection Report 50-155/84-14). These corrective actions would also impact audits of the program at the Palisades Plant. The licensee's intentions have been to better ensure that future audits will be conducted by persons not responsible for the emergency preparedness program while also trying to provide greater emergency preparedness expertise to the audit team. The options being considered were exchanging emergency planning staff with another licensee, with exchanged personnel serving as exercise observers and/or as members of a team auditing additional aspects of the plant's program.

The inspectors reviewed records of drills conducted during 1984 to satisfy commitments made in Section 8.0 of the Emergency Plan. The inspector noted that all required drills had been conducted, although the annual communications drill did not occur until after its omission had been identified during a 1984 internal audit. Drill records were satisfactorily

detailed and retrievable. However, all records were not in final form for a late November radiation safety/chemistry drill and the December medical emergency drill. The inspectors determined that several types of drills had been done at a frequency or with a personnel involvement greater than had been indicated in the plan. For example, there had been two accountability drills in addition to that done during the 1984 exercise. A total of six offsite monitoring team drills were conducted before the exercise, with each drill involving different personnel. The inspectors noted a "serious concern" identified in available documentation on the December 1984 medical drill. The concern was whether Operations or Health Physics personnel should be given responsibility for administering onsite first aid. The record, dated December 10, 1984, indicated that, while certain operations personnel have received multi-media first aid training, it was felt that Health Physics personnel should be trained to perform such tasks. The Emergency Planning Coordinator indicated that he and the Plant Safety Officer would seek a management decision regarding whether it was more appropriate for first aid responsibility and training to be given to Operations or Health Physics personnel. The Emergency Plan did not specify which work group had been given first aid training and responsibility for administering first aid.

Based on the above findings, the following items should be considered for improvement:

- The next plan revision should contain additional descriptive information regarding the scope of emergency preparedness audits, where audit records are maintained, and how appropriate State and local organizations can have access to portions of audits dealing with the plant's interface with State and local support organization.
- Should the licensee exchange emergency preparedness staff members with those of another licensee, such personnel should, at least, assist in independent audits of the emergency preparedness program and not just function as exercise observers.
- Management should resolve the apparent concern regarding which station personnel should receive training and have responsibility for administering onsite first aid.

7. Exit Meeting

The inspectors met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on December 21, 1984. The inspectors summarized the scope and findings of the inspection, especially the need to update the Site Emergency Plan to reflect the current policy and practices.