



Consumers  
Power

**POWERING  
MICHIGAN'S PROGRESS**

Palisades Nuclear Plant: 2780 Blue Star Memorial Highway, Covert, MI 49043

G B Slade  
General Manager

January 10, 1992

Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

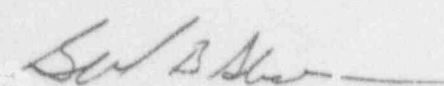
DOCKET 50-255 - LICENSE DFR-20 - PALISADES PLANT - REPLY TO NOTICE OF VIOLATION; NPC INSPECTION REPORT No. 91-022

NRC Inspection Report 91-022, dated November 29, 1991, documented the results of a routine unannounced inspection of the radioactive waste management, effluent monitoring and transportation programs and included a Notice of Violation pertaining to the performance of an inadequate 10 CFR 50.59 review of the reactivation of the South Storage Building for radioactive waste storage.

Based on the concerns raised during NRC Inspection 91-022, we do not intend to use the South Storage Building for a radioactive waste storage area, as conveyed to the NRC in our letter dated April 24, 1991, until the concerns are resolved.

In a telephone conversation between Jikueimin of CPCo and BLJorgensen, Region III Reactor Projects Section Chief, on December 23, 1991, Mr Jorgensen granted an extension for the reply to LOV 91022-01 until January 10, 1992.

The Attachment provides the response to this violation.

  
Gerald B Slade  
General Manager

CC Administrator, Region III, USNRC  
NRC Resident Inspector - Palisades

Attachment

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PDR

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CONSUMERS POWER COMPANY

To the best of my knowledge, information and belief, the contents of this  
submittal are truthful and complete.

By David P. Hoffman  
David P Hoffman, Vice President  
Nuclear Operations

Sworn and subscribed to before me this 8<sup>th</sup> day of January 1992.

LeAnn Morse  
LeAnn Morse                      Notary Public  
Van Buren County, Michigan  
My commission expires June 6, 1994

[SEAL]

ATTACHMENT

Consumers Power Company  
Palisades Plant  
Docket 50-255

REPLY TO NOTICE OF VIOLATION  
NRC INSPECTION REPORT No. 91-022  
January 10, 1992

REPLY TO NOTICE OF VIOLATION  
NRC INSPECTION REPORT No. 91-022

Violation

10 CFR 50.59(a)(1) allows licensees to make changes to the facility as described in the Safety Analysis Report without prior NRC approval, provided that the change does not require a change to the Technical Specification, or involve an unreviewed safety question.

10 CFR 50.59(a)(2) states that a proposed change shall be deemed to involve an unreviewed safety question if the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report may be increased.

Contrary to the above, on March 12, 1991, a safety analysis performed for changes to the Updated Final Safety Analysis Report (FSAR) failed to evaluate whether these changes involved an unreviewed safety question. The changes to the FSAR involved the reactivation of the south radwaste storage building for storage of radioactive waste. The safety analysis failed to identify the projected contained source term, failed to address the potential dose impact to the public, failed to evaluate radioactive material release pathways and dose impact to the public, failed to evaluate the potential for radioactive material release during normal and abnormal operating conditions and accidents; and failed to evaluate the need for filtration and radiation monitoring systems.

Reasons for the Violation

The original radwaste storage at Palisades (1971) included an outdoor pad and a shielded vault at the location of the South Radwaste Area. In 1978, an unshielded building was erected over the vault and pad. A safety review performed as part of the modification package for erecting the building determined that a safety analysis was not necessary. The basis for this determination was that an unreviewed safety question did not exist for erecting a building over an outdoor storage pad. During the 1978 construction of the building, the scope of the project was changed to include moving the baler (compactor) from the Auxiliary Building to the new storage building. A safety review (or revision to the safety review for the building) was not performed for this change to the scope of the modification. Compaction (at that time) was not considered radwaste "processing" in the context of the FSAR. The FSAR discussions concerning radwaste "processing" were interpreted to apply to the process systems for handling liquid and gaseous radwaste streams and not the handling of dry active waste.

In 1979 all shipments of radioactive waste were suspended when the burial sites were closed. Shipments were again resumed in early 1980 when the burial sites were again re-opened. However, the NRC recognized that radioactive waste shipping could at any time be interrupted and force fuel cycle and

radioactive materials licensees to store low-level radioactive waste for an indeterminate period of time. Therefore, the NRC issued Generic Letter 81-38 entitled "Storage of Low-Level Radioactive Waste at Power Reactor Sites." The generic letter did not require a response, but tasked the licensee with determining if changes to the operating licensee, technical specifications, etc., were required to address an increase in radioactive waste storage capacity. The generic letter discussed the steps to be taken by the licensee if increased storage capacity was deemed necessary as well as the reviews and approvals required. However, since shipping capability had been restored, Palisades did not envision any need to increase its radioactive waste storage capacity and no further action was taken. Furthermore, GL 81-38 was not viewed as containing design criteria against which existing radioactive waste storage capacity (buildings) were required to be evaluated, therefore, no action was taken to re-evaluate radioactive waste storage areas at Palisades.

The South Storage Building (then referred to as the South Radwaste Building) was used for all processing and storing of dry active waste produced at Palisades from 1978 to 1989. During this period several cooling tower overflows occurred which resulted in flooding this building and spreading contamination from the processing area to the surrounding soil. This spread of contamination necessitated implementation of actions to prevent future flooding and resulted in NRC Open Items 85019-01 and 89025-01. In 1988 it was decided to relocate the dry active waste processing functions performed in the South Radwaste Building to a new addition at the East Radwaste Building to prevent the spread of contamination in the event of future cooling tower overflows. The transfer of these activities from the South Radwaste Building to the East Radwaste Building was considered to be similar to the relocation of these same activities which occurred in 1978 mentioned previously. All dry active waste packaging equipment was relocated to the East Radwaste Building and the South Radwaste Building was decontaminated. The South Radwaste Building (then re-named the South Storage Building) was no longer used for radioactive waste processing.

In November 1990, radioactive waste generators in the State of Michigan were banned from the three currently active burial sites. As a result of this ban action was taken to ensure that Palisades maintained the interim capability to store radioactive waste until such time as we were again able to gain access to the burial sites. Since it was envisioned that Palisades may be forced to store low level radioactive waste for an indeterminate period of time, a decision was made to reactivate the South Storage Building for use as a dry active waste (DAW) storage area. When use of the South Storage Building for DAW storage was evaluated, a safety analysis was performed to address previous NRC concerns on contamination of soil in the area, even though the South Storage Building was being returned to its original (radioactive waste storage) use as described in the FSAR. The safety evaluation (10CFR50.59 evaluation) specifically addressed recent criteria for storage facilities provided by the NRC in Information Notice 90-09, dated February 5, 1990, entitled "Extended Interim Storage of Low-Level Radioactive Waste by Fuel Cycle and Materials Licensees." The safety evaluation made no attempt to reconstruct the original bases for use of the building in the manner described in the FSAR.



In IN 90-09, the NRC provided guidance on interim storage facilities. This information notice was referenced in the safety evaluation as a source of requirements applicable to the South Storage Building. It was planned that this building would be used for radioactive waste packaged in accordance with NRC, Department of Transportation, and burial state requirements which minimizes dose and effluent concerns. The safety evaluation preparer interpreted IN 90-09 to suggest that the most significant building requirement was for a structure in which "...the waste will be protected from the weather at all times." [IN 90-09, Attachment 1, Item 3.c.] It was also assumed that previous use of the South Storage Building for radwaste storage and the FSAR description of the South Storage Building as a radwaste storage facility would continue to qualify the building as a radwaste storage facility. It was again not recognized that Generic Letter 81-38 had backfit additional requirements to be considered.

Since the time the safety evaluation for the reactivation of the South Storage Building was approved, no radioactive waste has been stored in the building.

The root cause of the violation was inadequate understanding of the design requirements applicable to radioactive waste processing and storage facilities, and inadequate sensitivity to the FSAR discussions pertinent to these facilities.

#### Corrective Actions Taken and Results Achieved

During Inspection 91-022, CPCo decided to stop all radioactive waste processing in areas outside the auxiliary building until the concerns raised during the inspection were addressed. One exception to this position, which was discussed with the NRC Inspector, the NRC Senior Resident Inspector and the Region III Chief of Radiological Controls and Emergency Preparedness Section prior to the activity taking place, was the movement of a de-watered resin high integrity cask (HIC) from the auxiliary building to the East Radwaste Building. A safety evaluation was prepared for the movement and storage of the HIC. None of the NRC staff involved in the discussion expressed any concerns with the movement of the HIC. In mid-December 1991 the HIC was moved without incident.

#### Corrective Action to Avoid Future Non-Compliance

1. An evaluation will be performed to define all applicable design requirements for site facilities in which radioactive materials are stored or processed. This activity is scheduled for completion in February 1992.
2. After applicable design requirements have been defined, the safety evaluation for use of the South Storage Building will be rewritten to address all relevant licensing bases. This activity is scheduled for completion in February 1992.
3. Any hardware additions (eg. ventilation, process monitors, dose rate monitors, fire extinguishers, etc.) to the radioactive material storage and processing areas which result from the new safety

evaluation will be installed prior to beginning any radioactive material handling activities in the area. This activity is scheduled for completion in February 1992.

4. Existing site buildings used for radioactive material storage will also be reviewed to verify compliance with the applicable design criteria. If the FSAR description of those facilities is found to be in error, corrections will be submitted. This activity is scheduled for completion in May 1992.
5. Training will be provided for preparers and reviewers of safety evaluations pertaining to radwaste processing and storage facilities to assure understanding and consistent interpretation of requirements. This training will consider the guidance provided by Information Notice 90-09, IE Circular 80-18, and Generic Letters 81-38 and 85-14, as well as the information in the FSAR. This activity is scheduled for completion in March 1992.
6. The Plant Safety and Licensing Department will evaluate the Generic Letter handling process to determine if an administrative process is required to ensure new requirements of Generic Letters are input into design criteria, etc. This activity is scheduled for completion in August 1992.

Date When Full Compliance will be Achieved

All radioactive waste processing activities in areas outside the Auxiliary Building have ceased at Palisades until evaluations and modification for the East Radwaste Building have been completed. Radioactive waste continues to be stored in the East Radwaste Building. No radioactive waste will be stored in the South Storage Building until the concerns identified in this violation are addressed.