

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-255/90012(DRP)

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: March 9 through April 19, 1990

Inspectors: E. R. Swanson

J. K. Heller

J. F. Schapker

Approved By: *Edward P. Fawciberg*  
Bruce L. Burgess, Chief  
Reactor Projects Section 2A

05-09-90  
Date

Inspection Summary

Inspection on March 9 through April 19, 1990 (Report No. 50-255/90012(DRP))

Areas Inspected: Routine unannounced inspection by the resident inspectors of: actions on previously identified items; plant operations; radiological controls; maintenance; surveillance; steam generator replacement; fire protection; reportable events; and, NRC Headquarters requests. Safety Issues Management System (SIMS) Item TMI II.F.24 (TAC 45156) was reviewed and closed.

Results: Of the nine areas inspected, no violations or deviations were identified in seven areas. Two violations were identified (one for inappropriate temporary procedure change use in Paragraph 2.c, one for repeated minor fire protection violations in Paragraph 8) in the remaining areas.

The inspection disclosed weaknesses in the licensee's fire protection program implementation and procedure change process. The inspection noted strengths in the licensee's predictive trending of Safety Injection Tank leakage; prompt identification and response to an increase in primary coolant leakage; improvements in dosimetry; and the comprehensiveness of the corrective actions to the temporary procedure change issue. New Open Items were identified (and are discussed in Paragraphs 3.a, and 5.a) in the areas of: monitoring of potentially contaminated water and control of vendor information.

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## DETAILS

### 1. Persons Contacted

#### Consumers Power Company

- \*G. B. Slade, Plant General Manager
- R. M. Rice, Plant Operations Manager
- D. J. Vandewalle, Technical Director
- R. D. Orosz, Engineering and Maintenance Manager
- K. M. Haas, Radiological Services Manager
- \*J. L. Hanson, Operations Superintendent
- R. B. Kasper, Mechanical Maintenance Superintendent
- \*K. E. Osborne, System Engineering Superintendent
- R. M. Brzezinski, I&C Engineering and Maintenance Superintendent
- L. J. Kenaga, Health Physics Superintendent
- \*C. S. Kozup, Technical Engineer
- J. R. Brunet, Licensing Analyst
- \*R. E. McCaleb, Site Quality Assurance Director
- S. T. Wawro, Operations Scheduling Supervisor
- R. J. Frigo, Operations Staff Support Supervisor
- W. L. Roberts, Plant Projects Supervisor
- K. A. Toner, Plant Projects Superintendent
- L. T. Phillips, Senior Systems Engineer
- D. G. Turner, Electrical Maintenance Superintendent
- \*J. R. Schepers, Site Quality Assurance Administrator

#### Nuclear Regulatory Commission (NRC)

- \*E. R. Swanson, Senior Resident Inspector
- \*J. K. Heller, Resident Inspector
- J. F. Schapker, Reactor Inspector (DRS)

\*Denotes some of those present at the Exit Interview on April 19, 1990.

Other members of the Plant staff, and several members of the Contract Security Force, were also contacted during the inspection period.

### 2. Actions on Previously Identified Items (92701, 92702)

- a. (Closed) Open Item 255/89021-01(DRP)): Licensee communication of evolved changes in the Configuration Control Project (CCP) were not communicated effectively to the NRC. The scope of the CCP was reviewed with the changes highlighted at a meeting in the NRC Region III offices on January 11, 1990, and also outlined in the licensee's January 23, 1990 letter. Further inspection of the CCP process and progress is documented in Inspection Report No. 50-255/90010(DRS).

- b. (Closed) Unresolved Item 255/89029-01(DRP)): Implementation of the Fire Protection Program. This Unresolved Item identified several minor examples of fire protection program violations. The licensee's corrective actions appear to address the identified problems, however, during this inspection period additional problems were identified and are discussed in Paragraph 8.
- c. (Closed) Potential Violation 255/89033 Paragraphs 2.c and 3.a(2)): A change of intent was made by Temporary Change Notice (TCN) to an operating procedure, and a Safety Evaluation was not conducted of the hydrostatic test of the PORVs and Block valves. The identification of the concern over TCN usage was identified by the NRC during post event review as being a probable root cause for not providing more rigorous review of the planned test method. With regard to TCN usage the licensee evaluated their use of a TCN in this situation, concluded that existing procedural controls were misleading; formally revised the particular operating procedure to reflect the appropriate valve lineup steps; demonstrated the revised procedure; and plans to revise the existing administrative controls to require formal review and procedure revision before valve lineup changes are made in the future. As interim measures, Senior Reactor Operators (who must approve TCNs) have been briefed on the lessons learned from this event, and all TCNs must be reviewed by the Operations Superintendent. Further action was being taken to evaluate whether the Primary Coolant System hydrostatic test should be an attachment to Standard Operating Procedure SOP-1 "Primary Coolant System" or a special test for future performances. Additional action was being taken to ensure that a more rigorous safety evaluation was performed for each TCN instead of a simple determination being made that an unreviewed safety question does not exist.

The second potential violation dealt with a concern for not doing a safety evaluation of the apparent "special test". As stated above, the licensee has not yet concluded that a special test is the appropriate vehicle for the performance of this test. As noted in Inspection Report No. 50-255/89033, it is not conclusive that this failure to perform additional review of the test method would have identified the susceptibility of the PORV to pop open, but the additional review may have raised the question. In view of the above corrective actions, a no response violation was issued for this item (255/90012-01(DRP)).

One violations with no response required and no deviations, unresolved or open items were identified.

3. Operational Safety Verification (71707, 71710, 42700)

Routine facility operating activities were observed as conducted in the plant and from the main control rooms. Plant startup, steady power operation, plant shutdown, and system(s) lineup and operation were observed as applicable.

The performance of: Reactor Operators; Senior Reactor Operators; Shift Technical Advisors; and, Auxiliary Equipment Operators were observed and evaluated. Included in the review was procedure use and adherence, records and logs, communications, shift/duty turnover, and the degree of professionalism of control room activities.

Evaluation, corrective action, and response for off normal conditions or events, if any, were examined. This included compliance to any reporting requirements.

Observations of the control room monitors, indicators, and recorders were made to verify the operability of emergency systems, radiation monitoring systems and nuclear reactor protection systems, as applicable. Reviews of surveillance, equipment condition, and tagout logs were conducted. Proper return to service of selected components was verified.

a. General

The plant began the reporting period at 80 percent power, and was removed from service on April 16 to begin a 30 day preplanned maintenance outage. The scope of the outage included, steam generator replacement engineering activities, safety related restraint reverification, PASM modifications, installations of motor disconnects for off-site power modifications, cooling tower modifications, safety injection tank check valve repair, and complete open outage related work requests.

b. Tours

- (1) During a tour of the turbine building on March 27, the inspector observed a pump and hose set up to remove ground water from the electrical pit, adjacent to the 1C switch gear panel, to a turbine building drain. The inspector questioned the set up since the pit has labeling indicating internal radiological contamination affixed to the pit covers. The turbine building drain was in a clean area. The inspector discussed this with operations and radiological control personnel who indicated that the turbine building sump was a monitored release path and historically contamination levels in the pit were low. Samples were taken of the pit after approximately 100 gallons had been pumped. The water had a greater radioactive concentration than expected. The water in the pit and sump were then pumped to the radiological waste system for processing. The licensee documented the situation on Radiological Incident Report Number 90-010. A copy of Report 90-010 was sent to Region III for review by a radiation specialist. This was documented as an Open Item until a Region III radiation specialist evaluates the licensee actions (Open Item 255/90012-02(DRS)).

- (2) During a tour of the screen house, the inspector noted that piping for a newly added flow meter (FE-5360), for the "A" cooling tower, was vibrating excessively. During a subsequent tour and prior to discussion with plant management, the inspector observed that a temporary restraining device was installed and a work order initiated.
- (3) While touring the station battery areas, a white substance was identified floating on the surface of the batteries. The vendor (C&D) reported that it is a collection of minute glass fiber fragments from the cell mat, and that the condition was cosmetic only.
- (4) A lack of restraint of several components (breaker removal stand, vacuum cleaner) in the cable spreading room was identified. To address the concern for these objects becoming missiles or interfering with breaker/equipment operability during a seismic event, the licensee is pursuing corrective action involving appropriate restraints.

c. Primary Coolant Leakrate

On April 11, the licensee determined that an unidentified primary coolant leakrate had exceeded the 1 GPM Technical Specification limit for a 36 minute period, due to a leaking filter in the letdown line. Based on Volume Control Tank (VCT) level change the leakage was initially estimated at 7-9 GPM. Subsequent review of graphs from the Critical Function Monitor, estimated the leakage at approximately 12 GPM. Time did not permit nor was it practical to perform the proceduralized leakrate calculation. Once the leak source was identified, letdown was secured, the filter isolated, letdown reestablished and a three hour primary coolant system leakrate was performed. The results indicated 0 GPM leakage. The inspector discussed the Technical Specifications, Emergency Plan and reportability requirements with the licensee (Shift Engineer, Technical Engineer and Operations Scheduling Supervisor) and determined that the licensee: had not exceeded a Technical Specification; had not entered the Emergency Plan; and, had not exceeded the reportability threshold. The licensee's identification and prompt action reflect exemplary attention to detail in plant operation.

d. Auto-Start of the "A" Auxiliary Feedwater Pump

On March 22 the licensee notified the NRC, pursuant to 10 CFR 50.72(b)(2)(ii), of an auto-start of the "A" auxiliary feedwater pump. The pump started at 9:11 a.m., as the result of a personnel error during restoration steps of surveillance test MI-39, "Auxiliary Feedwater Actuation System Logic Test". It appears that test personnel performed the last two steps out-of-sequence, such that, a block was removed without resetting a standing auto-start signal. Due to a standing alarm from the

testing, the pump start was not annunciated, such that, the only indications of pump operation was a control switch light change (green to red) and flow indication on the vertical control room panel. Because of this, the pump ran and injected water for 21 minutes before discovery. The inspector discussed the event with the crew involved and will revisit this item when the Licensee Event Report is issued.

The inspector noted, during review of the paperwork associated with this event, that the person making the offsite NRC notifications was not a licensee operator and in fact was an auxiliary operator. This was discussed with the shift engineer who stated that auxiliary operators are trained as communicators during Emergency Plan training. The inspector did not identify problems with the communications, however, noted that other utilities have had problems when 10 CFR 50.72 notifications were made by those who do not understand the event they were reporting (reference Information Notice 85-80, "Timely Declaration Of An Emergency Class Implementation Of An Emergency Plan, And Emergency Notifications").

This was discussed with the Operations Superintendent who stated that auxiliary operators are "in training" as communicators with the intent that they will man the communication lines when continuous communications with the NRC are required. This will free the shift engineer from the phones and permit him to function as the shift technical advisor. Currently the auxiliary operators are performing on-the-job training by making the 10 CFR 50.72 notifications under the direction of the Shift Engineer.

e. Safety Injection Tanks

During a review of the control room logs, the inspector noted that the "A" Safety Injection Tank sampling frequency had been decreased from 30 days to two days. This was discussed with the Operations Scheduling Supervisor who provided the inspector with graphs predicting the inleakage rates and expected dilution rates of the tank. The supervisor was able to identify which primary coolant system check valve was leaking and discussed which instruments would indicate if the "Event V" check valves started leaking. The inspector concluded that the licensee actions are sufficiently predictive to prevent entry into an LCO due to high level or low boron concentration in the tank.

The licensee determined that the repair of primary coolant system check valve (CK-ES3101) would be performed during the current 30 day maintenance outage. The inspector discussed the repair with the Operations Scheduling Supervisor since Primary Coolant System water level would be lowered to half loop operation to facilitate repairs. The supervisor indicated that the check valve bonnet can be removed and temporary plugs installed while the water level was at 1/2 loop operations without interrupting shutdown cooling flow. If the temporary plugs (which can withstand a water pressure of 22 inches) fail then water level would stabilize at the half level and not flow out the check valve opening or interrupt shutdown cooling.

f. Plant Shutdown

During the April 16 shutdown the inspector observed the following activities:

- (1) Removal from service the "A" main feedwater pump (SOP-12)
- (2) Transfer of 4160V buses "A", "B", "E", & "F" from station power to startup transformers (SOP-30)
- (3) Opening of the PORV isolation valves (SOP-1)
- (4) Movement of heavy loads (Equipment hatch concrete blocks) in the Spent Fuel Pool area (FHS-M-23)
- (5) Placing Shutdown Cooling in Service (SOP-1)

g. System Walkdown

The inspector verified operability of the 1-1 Diesel Generator by verifying system alignment using the applicable portions of Revision 17 to Checklist 22.1, "Diesel Generator System Checklist." No items were found that degraded the system, however, the following minor items were identified:

- (1) ME-DE 661, "Prelube Pump Discharge PS-1477 Isolation Valve" is identified as a lock open manual valve. The inspector found the valve open but not locked.
- (2) A number of drain lines were found with a cap installed, however, the valve lineup sheet did not require verification of the cap.
- (3) MV-DE 515, "Day Tank T-25A Drain" has a two quart bucket attached to the valve to catch fuel oil leakage. The bucket was approximately 1/8 full. At the inspector's request the licensee reviewed the leakage and initiated a work request.

Items 1 and 2 were discussed with the Operations Superintendent who indicated similar checklist problems were addressed on an open deviation report. These items should be resolved when the deviation report is closed.

h. Drawing Control

Drawing control was reviewed after it was identified that a drawing was missing from the site aperture card files but was in the controlled hard copy drawings. Licensee considers the aperture card file an informational file that, although updated along with controlled files, was not maintained with "red-lining" suitable for engineering or critical plant uses. The Palisades site has upgraded their aperture files by annotating the cards when modifications/revisions are in

progress. In this way the user would know whether he needs to seek a controlled copy or not. Aperture card files are maintained in the site document control, the Technical Support Center and the Emergency Operations Facility. It was also determined that the Engineering Records Center in Jackson, Michigan, produces drawing revisions to P&IDs in less than 30 days. Eight sets of controlled drawings are available on site.

No violations, deviations, unresolved or open items were identified.

4. Radiological Controls (71707)

During routine tours of radiologically controlled plant facilities or areas, the inspector observed occupational radiation safety practices by the radiation protection staff and other workers.

Effluent releases were routinely checked, including examination of on-line recorder traces and proper operation of automatic monitoring equipment.

Independent surveys were performed in various radiologically controlled areas.

- a. On March 26 and 27, the resident inspector was informed of walkouts by the International Brotherhood of Electrical Workers (IBEW) contract radiological services technicians. This was discussed with the Radiological Service Manager who stated that eight contractor radiological services technicians from General Technical Services were on site; none participated in the walkout. This subject was revisited on April 10, and the Radiological Service Manager indicated that the majority (46 out of 48) of the contract radiological services technicians scheduled for the April 16 maintenance outage were onsite. Indications are that the IBEW does not plan additional walkouts at this time.
- b. A change in primary dosimetry was made effective April 1, 1990, which replaced the film badge with a Panasonic Thermo-luminescent device. The inspector was briefed on the licensee's plans to replace their secondary dosimetry and self readers with state-of-the-art solid state, multi-function, alarming dosimeters on June 1, 1990. This action is expected to greatly improve exposure control.
- c. The new epoxy flooring is essentially complete in the Auxiliary Building and facilitates spill cleanup and decontamination. One drawback is that water on the high gloss floor is hard to see. Several individuals received shoe contamination on April 11 when a flange in the letdown system leaked.

No violations, deviations, unresolved or open items were identified.



5. Maintenance (62703, 42700)

Maintenance activities in the plant were routinely inspected, including both corrective maintenance (repairs) and preventive maintenance. Mechanical, electrical, and instrument and control group maintenance activities were included as available.

The focus of the inspection was to assure the maintenance activities reviewed were conducted in accordance with approved procedures, regulatory guides and industry codes or standards and in conformance with Technical Specifications. The following items were considered during this review: the Limiting Conditions for Operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures; and post maintenance testing was performed as applicable.

The following activities were inspected:

- a. Shutdown Cooling Heat Exchanger Isolation valve SV-3223A had an air leak (Work Order (W.O.) 24001715). Step 4 of the work order stated ". . . install a rebuilt kit in SV-3223A, refer to ASCO Bulletin NP8316 . . ." The work order package contained NP8316, with portions of the installation instructions highlighted. The inspector found that NP8316 was not controlled per Palisades Nuclear Plant Administrative Procedure 10.45, "Vendor Manual Control." Paragraphs 6.2 and 6.3 of Procedure 10.45 provided specific steps pertaining to review, approval and identification of vendor manuals. Paragraph 4.0 of Procedure 10.45 defines vendor manual as "technical information supplied by equipment manufacturers that addresses installations . . . of equipment." NP8316 appears to fit this definition.

The inspector discussed this with the electrical superintendent who indicated that the instructions received with the parts were not controlled and it has not been the plant practice, nor was it intended, to control the instruction. However, when the work order was written and issued, personnel reviewed the instruction to determine the applicable steps. This was evidenced by the highlighting of the vendor instructions.

The inspector reviewed the licensee response dated May 15, 1985, to the vendor interface Paragraphs (2.1 and 2.2) of Generic Letter 83-28, "Salem Anticipated Transients Without Scram." This response implied that all vendor information will be processed and controlled by an administrative procedure to assure it was complete and up-to-date. Attached to the response was a copy of Administrative Procedure 10.45. At the exit interview the licensee was asked to review this item and the response to Generic Letter 83-28, to determine if their current program and practice meet the intent of the program submitted to the NRC (Open Item 255/89012-03(DRP)).

- b. During this inspection period several wiring-related issues have been identified by the licensee, for which corrective actions are being taken. The licensee had indicated that the modification process will be revised to include wire verification point to point in the installation procedure. Further improvement in scoping the post modification testing process is also underway. One example is covered under D-Pal-90-034 and -053 where a wiring error was made while installing alternate power capability for the P-55C charging pump. The wiring to the alternate power supply indicator light in the control room was not properly wired, and this feature was not checked by post-modification testing. Subsequent operation identified the indicator light inoperability. This feature was repaired and tested. Subsequent to this activity, the P-55C pump failed to start on a low pressurizer level as designed. Investigation determined that a wire was lifted during the previous corrective action, which was not relanded. Workers had failed to document and verify the lifted wire as required by the Work Order and as performed for other wires. Testing following the correction of this error was thorough in testing all starting, indication and trip circuits associated with the pump.
- c. Diesel Generator 1-2 was removed from service the week of April 2, 1990, to perform various preventive and corrective maintenance activities (W.O.s 24000997, 24001050, 24905609). Subsequent testing of the diesel generator reflected two recurring problems had not been solved. First, that one (of the two normally in service) air start motor did not start the diesel in less than 10 seconds; and the replacement lube oil pump did not correct the low oil pressure condition that had been previously noted. These issues, along with other non-disabling outstanding diesel generator action items, were reviewed with the System Engineer to ensure his knowledge of the conditions and identify the planned actions. The inspector also reviewed the operability testing trends to ensure that all apparent adverse conditions are being addressed.

One generic concern for the diesel is the survivability of instrumentation on the diesel. Numerous instruments have failed repeatedly due to vibration and the current plan is to substitute more environmentally suited instrumentation. The licensee was encouraged to reevaluate their priorities concerning this work.

In general, the diesel generators have been very reliable from a starting on demand perspective. Historically, hours in the LCO are high because the licensee uses the LCO time limit to perform preventive maintenance on-line.

- d. W.O. 2400986, "Replace recorder FR-0701/0702 per SC 89-293"
- e. W.O. 2402168, "Repack CV-0522B with live load packing"

No violations, deviations, unresolved or open items were identified.

6. Surveillance (61726, 42700)

The inspector reviewed Technical Specifications required surveillance testing as described below and verified that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated, that Limiting Conditions for Operation were met, that removal and restoration of the affected components were properly accomplished, that test results conformed with Technical Specifications and procedure requirements and were reviewed by personnel other than the individual directing the test, and that deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

The following activities were inspected:

- a. MO-7A-1 and 2 Diesel Generator Operability Test
- b. MR-6 Area Monitor Operational Check
- c. PPAC 236 Control Rod Exercising
- d. DWO-1 Daily Control Room Surveillance.
- e. SHO-1 Operators Shift Surveillance.

No violations, deviations, unresolved or open items were identified.

7. Steam Generator Replacement (73753)

- a. The inspector observed the base line eddy current examination that was performed by the licensee with contracted services from Allen Nuclear Associates (ANA). Eddy current examination was performed using Zetec MIZ 18 data acquisition with bobbin, 8x1, and motorized rotating pancake coils (MRPC). A 100 percent steam generator tubes examination was performed using bobbin coil, supplemented with a random sample of 8x1 coil examinations. The MRPC was utilized to evaluate any distorted indications detected with bobbin or 8x1. In addition, visual inspections were performed to evaluate indications which were accessible.

The licensee identified distorted indications with the bobbin coil. These indications were located approximately four to six inches from the tube sheet face. Visual examinations confirmed that the eddy current indications were due to weld spatter adherence to the tube internal diameter. The eddy current signal response was indicative of the visually observed inner diameter distortion.

Eddy current data identified 12 tubes which were not expanded and two that were over expanded during fabrication. The licensee has contacted the vendor for disposition of the improperly expanded tubes. In addition, permeability indications were found in various

tube locations. These indications will be reinspected with a magnetically biased probe upon completion of the current bobbin examination. The inspector will review the disposition of the tube expansion problem and the permeability indications during a future inspection.

The inspector observed: the installation of the tube sheet templates; cleanliness control; ET data collection, management, and analyses; and reviewed the following procedures:

<u>Procedure No.</u>	<u>Title</u>	<u>Revision</u>	<u>Date</u>
NDT-G-06	Installation of Tube Sheet Templates - Palisades Steam Generators	1	03/29/90
NDT-ET-17	Eddy Current Examination - Motorized Rotating Pancake Coil (MRPC)	0	03/29/90
NDT-ET-18	Eddy Current Examination - MIZ-18 Pull Through Techniques	0	03/29/90
EM-09-11	Palisades Eddy Current Procedure for Data Management for the Replacement Steam Generators	0	03/30/90
ECT-SG-1	Inservice Inspection Steam Generator Plan Inspection	18	03/28/90
SQAP-041	Palisades Eddy Current Examination for the Replacement Steam Generators	0	03/31/90

Eddy current inspector qualification records and certifications complied with SNT-TC-1A requirements. Review of ET equipment certifications and calibrations complied with ASME Section XI, Article IV, 1983 Edition, 1983 Addenda.

The licensee's baseline eddy current program exceeds the ASME Section XI Code and Technical Specification requirements and provides a good basis for future eddy current examinations of the steam generators.

- b. The inspector toured the new steam generator laydown area. Workers were in the primary side hot leg bowls and the secondary side steam separator/dryer area of both steam generators. The inspector observed that tools were taken into the secondary side without any provisions for tool accountability. The inspector discussed this item with the steam generator replacement project manager who stated that the vendor will perform an inspection (via a remote controlled robot and camera) once the steam generators are uprighted.

The inspector reviewed the licensee evaluation of Information Notice 88-06, "Foreign Objects In Steam Generators". This notice stated that Catawba 2 experienced a loss of steam generator tube wall thickness because of foreign objects left in the top works of the steam generators that were washed down to the tube sheet during the first fuel cycle. The licensee evaluation and inspections addressed the installed steam generators and not the new ones, because replacement was not planned at the time of the information notice. The licensee was asked if the planned pre-service inspection would address the problems identified in Information Notice 88-06. This was discussed with steam generator project personnel and at the exit interview.

Recently the inspector learned that another utility had developed a method to wash down the steam generators tubes by use of a modified sludge lance. This resulted in dislodging previously unidentified foreign material. This information was discussed at the exit interview and the staff indicated that they were aware of this through EPRI communications.

No violation, deviations, unresolved or open items were identified.

8. Fire Protection (71707, 64704)

Fire protection program activities, including fire prevention and other activities associated with maintaining capability for early detection and suppression of postulated fires, were examined. Plant cleanliness, with a focus on control of combustibles and on maintaining continuous ready access to fire fighting equipment and materials, was included in the items evaluated.

On March 22 the inspector opened a flammable storage locker located near the counting room, at the north end of the controlled corridor on the 611 elevation of the Auxiliary Building. Within the locker were a number of Class 1 flammable liquids, that were in the original vendor's containers versus safety cans equipped with flame arresters and spring activated caps, as required by Paragraph 6.3.3.b of Palisades Nuclear Plant Fire Protection Implementing Procedure FPIP-7 "Fire Prevention Activities". In addition, on April 17 a five gallon can (without a flame arrester and spring cap) of Class 1 solvent (thinner) was used during floor coating activities in the 1-2 Diesel Generator room.

Compliance to FPIP-7 is a requirement of Technical Specification 6.8.1.f. Failure to implement FPIP-7, as stated above, is a violation of Technical Specification 6.8.1.f (255/90012-04(DRP)).

Both of the above items were discussed with the Fire Protection coordinator who determined that the amount of the Class 1 liquid did not create a safety or fire hazard. Based on this information the inspector would consider this a violation with minor safety impact and not pursue enforcement action. However, since October 6, 1989, these are the third and fourth examples of noncompliance with FPIP-7 that the inspector has

identified to the licensee without effective corrective actions being taken. Therefore enforcement action is considered appropriate. The other two examples were addressed in Paragraph 7 of Inspection Report No. 50-255/89029 (Unresolved Item 255/89029-01(DRP)). In addition, the licensee's audit organization has identified and documented examples of compliance problems with FPIP-7.

The amount of liquids in the storage locker consisted of:

- 5 - one liter plastic bottles of ethyl alcohol
- 2 - one quart glass bottles of Morpholine
- 4 - one gallon glass bottles of Propanol

All of the bottles were 1/2 to 7/8 full, which indicated that personnel would obtain new bottles from the store room versus use or dispose of leftover quantities. Based on the amount of Class 1 liquids in the storage locker it would appear that the licensee was not implementing the spirit of Paragraph 6.3.3.a to FPIP-7. Paragraph 6.3.3.a states that "storage of flammable/combustible liquids should always be maintained at the lowest practical quantity."

One violation and no deviations, unresolved or open items were identified.

9. Safety Assessment/Quality Verification (35502, 40500)

The effectiveness of management controls, verification and oversight activities, in the conduct of jobs observed during this inspection, was evaluated.

The inspector frequently attended management and supervisory meetings involving plant status and plans and focusing on proper co-ordination among Departments.

The results of licensee auditing and corrective action programs were routinely monitored by attendance at Corrective Action Review Board (CARB) meetings and by review of Deviation Reports, Event Reports, Radiological Incident Reports, and security incident reports. As applicable, corrective action program documents were forwarded to NRC Region III technical specialists for information and possible followup evaluation.

No violations, deviations, unresolved or open items were identified.

10. Reportable Events (92700, 92720)

The inspector reviewed the following Licensee Event Reports (LERs) by means of direct observation, discussions with licensee personnel, and review of records. The review addressed compliance to reporting requirements and, as applicable, that immediate corrective action and appropriate action to prevent recurrence had been accomplished.

- a. (Closed) LER 255/86022: Overstressed High Pressure Safety Injection Piping using existing FSAR response spectra. The licensee considers that updating their FSAR to reflect implementation of ASME Code Case N-411 (Alternative Dumping Values for Seismic Analysis of Classes 1, 2, and 3 Piping Systems). This issue was reviewed by the NRC in Inspection Report No. 50-255/89024 and will be reviewed during closeout of the Notice Of Violation issued concerning seismic analysis issues.
- b. (Closed) LER 255/89023 Revision 1: IE Bulletin 79-14 discrepancies. As of the submittal date of the LER, only one hanger (U-bolt) assembly exceeded the FSAR allowables and interim operability criteria detailed in the licensee's letter dated November 2, 1989. Further followup will be conducted by Region III, DRS of the licensee's resolution to their IEB 79-14 reverification effort.
- b. (Closed) LER 255/89025: Power Operated Relief Valve (PORV) opening, zero-power reactor trip and Safety Injection Actuation. This event was reviewed in Inspection Report No. 50-255/89033 and the adequacy of the licensee's numerous corrective actions and test program are being evaluated by NRR. Additional issues raised in the above referenced report are discussed in Paragraph 2.c of this report.
- c. (Closed) LER 89-TS2: Channel Failure of the Reactor Vessel Level Monitoring System (RVLMS). The licensee's action plan for restoring operability was reviewed and found satisfactory.
- d. (Closed) LER 255/90002: Reactor trip caused by cooldown during power reduction after feedwater pump trip. Three equipment failures precipitated or contributed to the reactor trip. First the feedpump trip, for which a definitive cause has not been identified, may have been caused by intermittent diodes in the feedpump vibration alarm circuit interacting with the thrust trip circuit. These diodes were replaced. Second, the "C" charging pump failed to start on low pressurizer level due to an error in maintenance work practices where a lead was lifted and not relanded. Adequate work controls existed but were not implemented by the work crew. The licensee discussed this item with the workers involved. Third, the Control Room annunciator chime bell failed intermittently. A faulty solenoid coil was replaced. These latter two failures both distracted the operator and failed to alert him that a pre-trip was reached on the Thermal Margin Monitor. The inspector reviewed the corrective actions and found them adequate.

No violations, deviations, unresolved or open items were identified.

11. Region and Headquarters Requests (255065)

(Closed) TMI Item II.F.2.4 (SIMS TAC 45156): Installation of the Reactor Vessel Level Monitoring System (RVLMS). The system was installed during the 1988 refueling outage, and, as requested by the NRC Safety Evaluation dated January 12, 1987, the licensee submitted an implementation letter on January 9, 1989. In this letter the licensee identified that one point of eight on one channel failed shortly after testing.

Subsequently, one other point on this channel failed and another was declared inoperable due to low output. The entire other channel was declared inoperable due to the heater circuit failure. As required by the Technical Specifications, a special report (89-TS2) was submitted to the NRC on October 23, 1989 describing the circumstances and outlining their plans to replace the failed sensor channel probe during the 1990 refueling outage, and two of the three failed sensors on the other channel. The inspector witnessed portions of the installation under FC-567 and the preoperational testing; verified that appropriate changes were made to operating procedures (EOPs and SOP-1), that operator training was conducted, that the system engineer was aware of system deficiencies and had planned corrective action, and that bi-weekly and refueling outage testing (D/W-01, RI-113) is planned and conducted. A comment was made at the exit meeting regarding the operators' mistrust of the new system, largely as a result of its current state of operability.

No violations, deviations, unresolved or open items were identified.

12. Open Items

Open Items are matters which have been discussed with the licensee, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or licensee or both. Open Items disclosed during the inspection are discussed in Paragraphs 3.b.1 and 5.a.

13. Management Interview (30703)

The inspectors met with licensee representatives (denoted in Paragraph 1) on April 19, 1990 to discuss the scope and findings of the inspection. In addition, the inspector also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. The licensee did not identify any such documents/processes as proprietary.