



**Consumers
Power
Company**

Russell B. DeWitt
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Nuclear Operations

COPY

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November 29, 1979

Mr. Victor Stello, Jr, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT -
CONTAINMENT ISOLATION NONCOMPLIANCE -
RESPONSE TO NOTICE OF VIOLATION

This letter constitutes Consumers Power Company's response, pursuant to 10 CFR §2.201, to Appendix A (Notice of Violation) of your letter dated November 9, 1979. Our answer, pursuant to 10 CFR §2.205, to Appendix B (Notice of Proposed Imposition of Civil Penalties) of your letter is being provided separately as requested.

Appendix A to your letter describes three noncompliances, with proposed civil penalties, for items that Consumers Power Company verbally reported to NRC on September 14, 1979 and reported to NRC in writing by Licensee Event Report 79-037, dated September 28, 1979 and Licensee Event Report 79-037 Rev 1 dated October 31, 1979.

The Company acknowledges management responsibility to establish, implement and audit adequate procedures to assure that containment integrity requirements are met at all times. We believe we have taken, and are taking, prompt and effective action to remedy the deficiencies in our practices and procedures that these noncompliances disclose. At the same time, we disagree with the noncompliances set forth in Appendix A, as more particularly described in the following specific responses to the cited items of noncompliance:

Item 1

"Technical Specification 3.6.1a states that containment integrity shall not be violated unless the reactor is in the cold shutdown condition.

Contrary to the above, the licensee on 424 days (Appendix D) during the period from April 1978 to September 1979, operated the reactor in other than the cold shutdown condition with containment integrity violated. Specifically, the series manual isolation valves in the containment purge exhaust bypass line were locked in an open condition.

Item 1 (Contd)

Each day that the facility was placed in other than the cold shutdown mode of operation constituted a separate violation; a civil penalty of \$5,000 is imposed for each (cumulative civil penalty \$2,120,000.00)."

Response 1

On September 11, 1979, during performance of a local leak test of Containment Building (CB) penetration 4a (CB exhaust valves bypass*), a plant employee found the two manual four-inch containment isolation valves** in the bypass line to be locked open. The reactor was in a cold shutdown condition at the time. After a preliminary investigation, it was concluded that the valves had been opened on April 6, 1978 to perform a test, and that closure of the valves had not been verified by either the test procedure documentation or the administrative check of manual isolation valves that was made prior to resumption of operation in April 1978. Since the valves could not be shown to have been closed during the period from April 6, 1978 to September 11, 1979, it was believed that containment integrity was breached during that period, contrary to Technical Specification 3.6.1. The matter was therefore reported to NRC per Technical Specification 6.9.2.a.(3) (abnormal degradation of the containment boundary).

Specifically, on April 5, 1978, the HEPA filter in the CB exhaust valves bypass line was changed. In order to demonstrate the operability of the replacement filter, it was functionally tested in accordance with an approved test procedure. Although there were other means of providing the air flow required for the test, our investigation to date tends to show that the isolation valves were opened in order to obtain the necessary air flow through the filter. At the time of the test on April 6, 1978, the reactor was in a cold shutdown condition, and containment integrity requirements were satisfied. However, we have been as yet unable to verify that the valves were closed and locked after the test was completed, or whether the valves were opened or closed at any time between April 6, 1978 and September 11, 1979.

The following elements are considered to be key factors related to this occurrence:

- The surveillance procedure governing the filter testing activities did not have adequate provisions for returning the system to normal, and had not been signed off to indicate satisfactory completion of the procedure.
- The two valves in question were not on the valve lineup sheet which was used to verify containment integrity prior to the plant start-up at the end of the refueling outage.

* Also referred to in the FSAR as the post-accident hydrogen purge line.

** Referenced as 3" - N29M2DR on P&ID M-218, Rev. 18 (size shown on P&ID corresponds to manufacturer's tag, but not to valve dimensions or to the size stamped on the valve casings).

Response 1 (Contd)

Despite the Company's preliminary conclusions and the fact that it reported these matters as a violation of containment integrity, investigations to date do not prove that the valves were open at any time other than April 6, 1978 and September 11, 1979. While our investigation of the facts is continuing, at this time we must deny any violation and request that it be withdrawn, because of this lack of conclusive evidence. It should nevertheless be clear that the Company regards the lack of adequate documentation and the demonstrated weakness in its procedures in this instance to be a very serious matter. It is beyond question that maintenance of containment integrity during operation is of vital importance, and there must be adequate assurance and verification of containment integrity. Whether or not containment integrity was actually breached in this instance is beside the point in terms of corrective action. It is clear that our procedures and the way they were implemented in this instance could have allowed containment integrity to be impaired for the period in question. Accordingly, the Company undertook immediate action, prior to receipt of the Notice of Violation, to remedy the deficiencies in its procedures and documentation so that containment integrity will be properly maintained and documented in the future:

- (1) Upon discovery, the affected valves were closed and locked in the closed position.
- (2) The surveillance procedure which governs the filter testing was revised so that return to service requirements are adequately addressed.
- (3) The containment building integrity checklist was immediately modified to require verification that these valves are locked in the closed position. A master checklist of all containment penetrations was prepared by an independent consultant, MPR Associates, Inc (Report - without photographs - is attached hereto as Exhibit 1), and verified by Consumers Power Company staff. The recommendations of the MPR report are being implemented. The master checklist was prepared by MPR from plant drawings and serves as a single reference point for the verifications described below. The checklist includes the penetration identification number, a piping diagram which includes all isolation valves, valve numbers, valve positions and other pertinent information. Each accessible* penetration was physically located, sighted and in some cases photographed, and then checked off the master checklist. The accuracy of the checklist, with respect to the piping diagram, valve positioning and numbering, penetration identification number and other pertinent data, was verified against the actual installation. As necessary, the checklist was marked to reflect any differences between it and the actual installation.

*One penetration is not readily accessible and was not visually checked.

Response 1 (Contd)

- (4) The corrected master checklist was used as a basis for the following:
 - (a) Verification of the start-up checklists used prior to start-up to verify containment isolation valve positions.
 - (b) Determining whether differences between actual installations and the checklist, if any, have any safety significance.
 - (c) Determining that plant drawings and actual installations agree.
- (5) All plant operating, maintenance, health physics, chemistry and other procedures are being screened to determine which of them may affect safety system requirements, including containment integrity. An estimated 900 procedures require screening. A detailed review of those procedures which affect safety system requirements will be performed to assure that plant initial conditions are properly addressed and that return to service steps are sufficiently explicit to assure that safety system requirements are reestablished upon completion of all such procedures.
- (6) The review process described in (5) will also be applied to system checklists.
- (7) To provide additional assurance of a meaningful review, the review process described in (5) and (6) above is being performed by a special task force (the "Palisades Management Review Task Force"; the program plan for the task force is attached hereto as Exhibit 2).
- (8) This event has been reviewed with applicable plant personnel. The requirement to exactly follow procedures (e.g., to obtain administrative reviews when required) was stressed.

Consumers Power Company will complete all of the uncompleted actions described above prior to plant startup. Although we are denying this item of noncompliance based on the facts as presently known to us, it might be substantiated as a result of our ongoing investigation. If so, it should nevertheless be reclassified as an "infraction" based on the Commission's criteria for distinguishing between "violations" and "infractions" ("Criteria for Determining Enforcement Actions," December 31, 1974). In this connection, please refer to our response to Appendix B of your November 9, 1979 letter.

Item 2

"Technical Specification 3.6.3 requires that prior to going critical after a refueling outage, an administrative check will be made to confirm that all manual containment isolation valves are closed and locked.

Contrary to the above, prior to going critical after the April 1978 refueling outage, an administrative check did not verify that two manual containment isolation valves for the containment purge exhaust bypass were closed and locked as required. This is a Violation (Civil Penalty - \$5,000.00)."

Response 2

The response for item 1 above describes this event and its corrective action as well. Palisades Plant Technical Specification 3.6.3 requires that prior to going critical after a refueling outage, an administrative check will be made to confirm that all manual containment isolation valves are closed and locked. Although the required administrative check was performed, the two valves in question were not on the checklist. This deficiency has been corrected. Consumers Power Company requests that this item of noncompliance be reclassified as an "infraction," in accordance with NRC's published enforcement criteria and description of noncompliance categories ("Criteria for Determining Enforcement Action," December 31, 1974). In this connection, please refer to our response to Appendix B of your November 9, 1979 letter.

Item 3

"Technical Specification 6.8.1.c requires implementation of procedures for surveillance and testing of safety-related equipment. Health Physics Procedure H.P.6.27 governs testing of inplace HEPA and charcoal filters in safety-related systems pursuant to Technical Specification Table 4.2.2, and requires notification and sign off by the Shift Supervisor and the plant Health Physicist on completion of testing.

Contrary to the above the required notification and signoffs were not completed after the licensee tested filters in the containment ventilation exhaust bypass line under H.P.6.27 on April 4-7, 1978. This is an infraction (Civil Penalty - \$4,000.00)."

Response 3

Consumers Power Company agrees that the alleged item of noncompliance did occur. The following corrective action has been taken:

- (1) The test procedure was revised to incorporate the requirement to verify that the containment isolation valves in question are locked in the closed position prior to return to service. This action is complete.

Response 3 (Contd)

- (2) The revised test procedure has been reviewed with applicable plant personnel, including shift supervisors and personnel responsible for such testing, to whom the importance of exactly following the procedure has been stressed. This action is complete.
- (3) The revised test procedure is one of the procedures that is being reviewed by the Palisades Management Review Task Force pursuant to paragraph (7) of Response 1. This review will be completed prior to plant startup.

Summary

- Noncompliance Item 1 is denied and should be withdrawn for lack of sufficient evidence. The Company's investigation of the item is not yet complete. Extensive corrective action was set in motion, prior to receipt of the Notice of Violation, and that action will be completed prior to plant startup.
- Noncompliance Item 2 is admitted, but should be reclassified as an "infraction," in accordance with NRC enforcement criteria. The corrective action for this item has been completed.
- Noncompliance Item 3 is admitted. The corrective action for this item has been completed except for Task Force review, which will be completed prior to plant startup.

The Company also seeks remission or mitigation of the civil penalties proposed for the three cited noncompliances. Please see our concurrent response to Appendix B of your November 9 letter.

Yours very truly,

/s/ R B DeWitt

R B DeWitt
Vice President

PALISADES NUCLEAR POWER PLANT

INDEPENDENT REVIEW OF
CONTAINMENT PENETRATIONS

MPR-639

Volume I of II Volumes

Report to
Consumers Power Company
Jackson, Michigan

Original Issue: November 5, 1979
Revision 1: November 15, 1979

TABLE OF CONTENTS

VOLUME I

- I. Introduction
- II. Summary
- III. Appendix

Procedure No. MPR-98-56-1 (Rev. 0),
"Procedure for Locating and Identifying
Containment Mechanical Penetrations
and Isolation Valves"

Addendum 1

VOLUME II

Photographs of Containment Penetrations

I. INTRODUCTION

The purpose of the report is to present the results of an independent check of the Palisades Nuclear Plant mechanical penetrations and isolation valves. This check was performed by MPR Associates, Inc., with the assistance and cooperation of the Palisades plant staff.

The independent check of the containment penetrations and isolation valves was performed as follows:

1. A procedure for performing the independent check was prepared (see Appendix).
2. A master check list of mechanical penetrations and isolation valves was prepared using the documents referenced in the procedure. These documents included the: applicable portions of the FSAR; applicable Palisades procedures and check lists, applicable P&ID's and the containment building penetration drawing.
3. All accessible containment penetrations were physically located and visually examined on both the inside and outside of the containment. Temporary markers (consisting of diamonds) with the penetration number inside were placed on the accessible penetrations. The lines were traced to locate all branches and valves which could affect containment isolation. Photographs of each

accessible penetration were taken both inside and outside of containment. These photographs are presented in Volume II of this report.

4. The as-built configuration of the penetrations and isolation valves were checked against the master check list. The master check list was revised as necessary to reflect the as-built conditions.
5. The referenced documents were checked against the master check list and the changes which were required to bring them into conformance were identified.
6. A list of all containment building mechanical penetration valves, pipe blind flanges, and pipe caps which are part of the containment integrity system was prepared.

II. SUMMARY

A. Independent Check of Containment Penetrations and Isolation Valves

1. The initial visual inspection of containment penetrations and walk-down to locate and identify the isolation valves was performed on October 15, 16, and 17, 1979. This inspection was performed by MPR and Palisades QC personnel. Temporary markers were placed inside and outside containment and photographs were taken.
2. The master check list was updated based on the results on the initial visual inspection and walk-down. A second inspection and walk-down was performed by MPR and Palisades operating personnel on October 23 and 24, 1979. The purpose of the inspection and walk-down was to confirm the accuracy of the updated master check list. This second check was considered necessary because a number of differences were noted between the original master list and the as-built configuration, and because it was difficult to trace the pipes in several congested areas outside the containment.
3. The updated master check list of the containment penetration and isolation valves is presented

in Table II-1. This table contains the following information:

- ° Penetration number and classification (as given in the Palisades Plant FSAR)
- ° As-built configuration showing all valves which could affect isolation
- ° The applicable P&ID number and system identification
- ° The dates of the inspection and the photographs reference number to Volume II
- ° The identification of each valve and its normal position during plant operation

The legend explaining the valve and piping symbols is presented in Figure II-1.

4. Preliminary conclusions and recommendations based on the result of this independent check of containment mechanical penetrations and isolation valves were discussed and reviewed with Palisades personnel at meetings on October 17, 24 and 29, 1979.

B. Conclusions and Recommendations

1. All manual valves which should be normally closed during normal operation and which were not being used during the refueling shutdown were found to be closed.
2. There are a number of differences between the as-built configuration and the references listed in the Appendix which require resolution. These

differences and the recommended actions are presented in Table II-2. A preliminary copy of the list was reviewed and discussed with Palisades representatives on October 29, 1979. This list was updated again based on discussions with Palisades personnel on November 7, 1979. The significant differences are as follows:

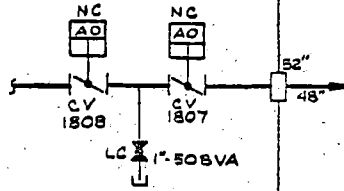
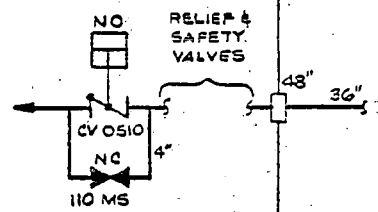
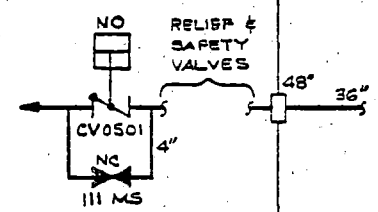
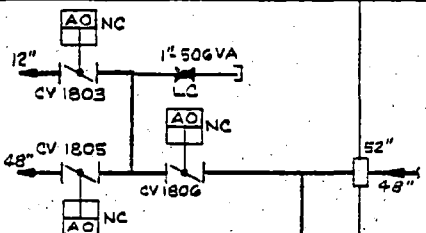
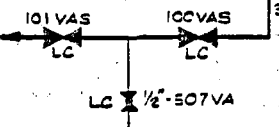
- a. It was thought that the pressurized dead weight tester line and the reactor coolant system sample line went through the containment at penetrations #20 and #21, respectively. Actually, both of these lines go through the containment at penetration #40. Accordingly, the reactor coolant system sample line penetration is now designated as penetration #40 and the pressurizer dead weight test line penetration is designated as penetration #40a.
- b. The actual configuration of the containment pressure instrumentation lines which go through penetrations #17 and #48 was different than that shown on the reference drawings. Specifically, (1) only one line was shown to go through penetration #48 instead of four which is actually the case; (2) penetration #63 which is shown to be an instrument line penetration is actually a spare; and (3) the isolation valves for the pressure switches and pressure transmitters were not shown on the applicable P&ID.
- c. Pressure taps not shown on the applicable P&ID's were found on several lines (e.g., #25 - Clean Waste Tank Vent to Stack).
- d. There were several instances where vent or drain lines with manual valves in them were found which were not shown on the applicable P&ID's (e.g., vent lines on the main feedwater lines going through penetrations #7 and #8).

- e. In some cases valve identification tags were missing and in several other instances valves had what appeared to be tags with the wrong number (for example, a tag was missing on the test valve on the service air line going through penetration #10 and the test valve on the purge air exhaust sample line going through penetration 4a should be identified as 507VA rather than 506VA).
- 3. All valves, pipe blind flanges and pipe caps which are part of the containment integrity system should appear on the Containment Isolation Check List (CL3.3) and should be tagged with a special colored tag which identifies the valve as containment isolation valve. Palisades personnel agreed to prepare dark orange lamicoid tags for this purpose. A preliminary list of components for which special tags are required was reviewed and discussed with Palisades representatives on October 29, and November 6, 1979. The updated list which lists all of these components is presented in Table II-3.
 - 4. The Containment Penetration drawing (M-140) applicable P&ID's, Palisades procedures and valve check lists, and the Palisades FSAR should be revised to conform with the as-built configuration shown in Table II-1. In this regard, a marked up copy of the Containment Penetration Drawing (M-140) was presented to Palisades representatives on October 29, 1979. The other actions necessary to update the P&ID's, Palisades procedures and valve check lists, and the Palisades FSAR are presented in Table II-2.

5. Permanent identification numbers should be affixed to the inside and outside of every accessible penetration. This will facilitate future checks of the containment penetration and isolation valves.
6. There is an outstanding deviation report (QP-79-19) pertaining to the Containment Air Sample Line (Penetration #28) which should be closed out. Since this line may have to be modified as a result of implementing the "Lessons Learned from TMI-2", consideration should be given to capping the line until the necessary modifications are designed and implemented.
7. During discussions with Palisades personnel on November 6, 1979, we learned that several Facility Changes (FC's) and Specification/Field Changes (SFC's) which would change the as-built configuration of a few penetrations had been or were scheduled to be implemented during the 1979 refueling outage. The changes are presented in the Addendum to this report at the end of Volume I. As these changes are implemented, the applicable portions of the master list (Table II-1) should be changed to show the as-built configurations. The reference documents should also be updated to be consistent with the as-built configurations and master list.

TABLE II-1
MASTER LIST OF PALLIAGES
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 1 OF 19

PENE- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
1 (A1)(1)			M-218	PURGE AIR SUPPLY	10-15-79 ⁽²⁾ 10-23-79 O-1-1 ⁽³⁾ O-1-2 O-1-3	10-16-79 10-24-79 I-1-1 ⁽³⁾
2 (C1)	 <p>SEE NOTE 4</p>		M-205 M-207	MAIN STEAM LINE (SG E 50A) - WEST -	10-15-79 10-23-79 O-2-1	10-16-79 10-24-79 I-2-1
3 (C1)	 <p>SEE NOTE 4</p>		M-205 M-207	MAIN STEAM LINE (SG E 50B) - EAST -	10-15-79 10-23-79 O-3-1 O-3-2	10-16-79 10-24-79 I-3-1
4 (A1)			M-218	PURGE AIR EXHAUST	10-15-79 10-23-79 O-4-1 O-4-2 O-4-3 O-4-4	10-16-79 10-24-79 I-4-1
4A (A2)			M-218	PURGE AIR EXHAUST SAMPLE LINE	10-15-79 10-23-79 O-4A-1	N/A

- NOTES:**
- (1) PENETRATION CLASS NUMBER IS BASED ON FSAR, TABLE 5.2
 - (2) DATES PENETRATIONS WERE LOCATED AND VISUALLY INSPECTED.
 - (3) PHOTOGRAPH CROSS REFERENCE NUMBER TO VOLUME 2: O, OUTSIDE; I, INSIDE; FIRST NUMBER IS PENETRATION NUMBER; AND SECOND NUMBER IS PHOTOGRAPH NUMBER.
 - (4) MANUAL MEIV BYPASS VALVES WILL BE REPLACED WITH MOTOR OPERATED VALVES - SEE ADDENDUM AT END OF VOLUME I.

TABLE II-1
MASTER LIST OF PALISADES
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 2 OF 19

PENETRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
5 (c2)			M-207 M-226	SG (E30A) BOTTOM BLOW	10-15-79 10-23-79 O-5-1	10-16-79 10-24-79 I-5-1
6 (c2)			M-207 M-226	SG (E30B) BOTTOM BLOW	10-15-79 10-23-79 O-6-1	10-16-79 10-24-79 I-6-1
7 (c1)			M-207	FEEDWATER TO SG (E50A)	10-15-79 10-23-79 O-7-1	10-16-79 I-7-1
8 (c1)			M-207	FEEDWATER TO SG (E50B)	10-15-79 10-23-79 O-8-1	10-16-79 I-8-1

NOTES: (S) ANOTHER ISOLATION VALVE WILL BE ADDED IN SERIES WITH THE DRAIN VALVE AND THE CHICAGO FITTING WILL BE REPLACED BY A CAP. SEE ADDENDUM AT END OF VOLUME I FOR DETAILS.

TABLE II-1
MASTER LIST OF PALISADES
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 3 OF 19

PENE- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
9 (N/A)		12"	—	SPARE	10-15-79 10-23-79 O-9-1	10-16-79 I-9-1
10 (A2)			M-212	SERVICE AIR	10-15-79 10-23-79 O-10-1	10-16-79 I-10-1
11 (C2)			M-221	CONDENSATE TO SHIELD COOLING SURGE TANK	10-15-79 10-23-79 O-11-1 O-11-2	10-16-79 I-11-1

NOTES: (6) CONTAINMENT INTEGRITY CHECK LIST (CL3.3) WILL REQUIRE CAPPING THE TEST LINE.

TABLE II-1
MASTER LIST OF PENETRATIONS
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 4 OF 19

PENETRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
12 (X)	<p>SEE NOTE 8</p>	<p>SEE NOTE 7</p>	M-208	SERVICE WATER SUPPLY	10-15-79 10-23-79 O-12-1	10-16-79 I-12-1
13 (X)	<p>SEE NOTE 8</p>		M-208	SERVICE WATER RETURN	10-15-79 10-23-79 O-13-1 O-13-2	10-16-79 I-13-1

NOTES: (7) THE SERVICE WATER SUPPLY LINE INSIDE CONTAINMENT WAS MODIFIED AFTER THE 10-16-79 WALK DOWN. PIPING FOR FIRE HOSES WAS ADDED. SEE ADDENDUM AT END OF VOLUME I FOR DETAILS.

(8) REVISED CONTAINMENT INTEGRITY CHECKLIST (CL3.3) WILL REQUIRE VENT LINES TO BE CAPPED.

TABLE II-1
MASTER LIST OF PALISADES
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 5 OF 19

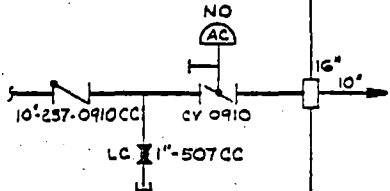
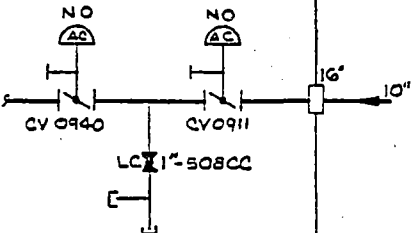
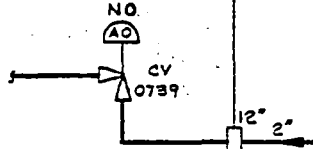
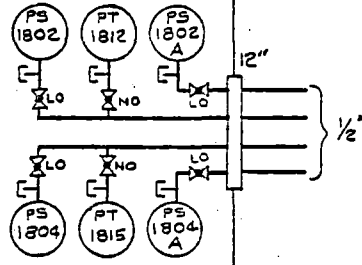
PENE- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
14 (C2)			M-209	COMPONENT COOLING WATER IN	10-15-79 10-23-79 O-14-1	10-16-79 I-14-1
15 (C2)			M-209	COMPONENT COOLING WATER OUT	10-15-79 10-23-79 O-15-1	10-16-79 I-15-1
16 (C1)			M-207	SG (E 50 A) SURFACE BLOW DOWN	10-15-79 10-23-79 O-16-1	10-16-79 I-16-1
17 (NOT GIVEN)			M-218	CONTAINMENT PRESSURE INSTRUMENT- ATION	10-15-79 10-23-79 O-17-1 O-17-2 O-17-3	10-16-79 I-17-1

TABLE 11-1
MASTER LIST OF PALISADES
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 6 OF 19

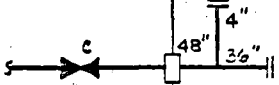
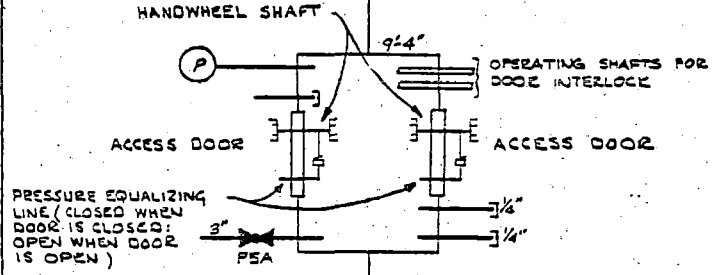


PENE- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
18 (X)			—	FUEL TRANSFER TUBE	NOT ACCESSIBLE	NOT ACCESSIBLE
19 (X)			—	PERSONNEL LOCK	10-15-79 10-24-79 O-19-1 O-19-2 O-19-3 O-19-4	10-15-79 10-24-79 I-19-1 I-19-2 I-19-3
20 (N/A)			—	SPARE	10-16-79 O-20-1	10-16-79 I-20-1
21 (N/A)			—	SPARE	10-16-79 O-21-1	10-16-79 I-21-1

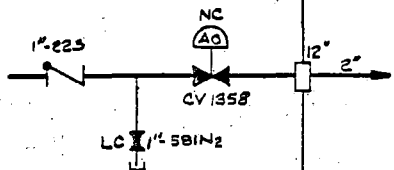
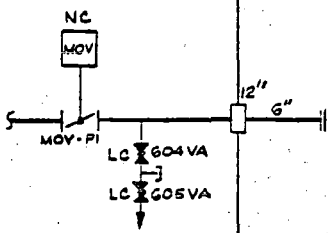
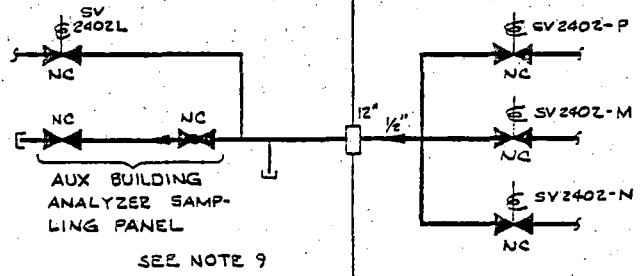
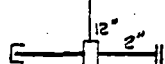
TABLE II-1
MASTER LIST OF PALISADES
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 7 OF 19

PENE- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
22 (X)			M-203 M-204	REDUNDANT H.P. SAFETY INJECTION	10-16-79 10-24-79 O-22-1	10-16-79 10-24-79 I-22-1
23 (X)			M-203 M-204	H.P. SAFETY INJECTION	10-16-79 10-24-79 O-23-1	10-16-79 10-24-79 I-23-1
24 (N/A)			—	SPARE	10-16-79 O-24-1	10-16-79 I-24-1
25 (C2)			M-210	CLEAN WASTE RECEIVER TANK VENT TO STACK	10-16-79 10-23-79 O-25-1	10-16-79 I-25-1

TABLE II-1
MASTER LIST OF PALISADES
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 9 OF 19

PENE- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
26 (C2)			M-222	NITROGEN TO QUENCH TANK	10-16-79 10-23-79 O-26-1	10-16-79 I-26-1
27 (X)			—	ILRT FILL LINE	10-16-79 10-23-79 O-27-1	10-16-79 I-27-1
28 (NOT GIVEN)			M-224	CONTAINMENT AIR SAMPLE	10-16-79 O-28-1	10-16-79 10-24-79 I-28-1 I-28-2
29 (N/A)			—	SPARE	10-16-79 O-29-1	10-16-79 I-29-1

NOTES: (9) THIS LINE WILL BE CAPPED JUST OUTSIDE CONTAINMENT. SEE ADDENDUM AT END OF VOLUME I FOR DETAILS.

TABLE II-1
MASTER LIST OF PALISADES
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 18 OF 19

PENE- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
66 (X)			—	ILRT INSTRUMENT LINE	10-16-79 10-23-79	10-16-79
67 (C2)			M-210	CLEAN WASTE RECEIVER TANK PUMP RECIRC	10-16-79 10-24-79	10-16-79
68 (A1)			M-218	AIR SUPPLY TO AIR ROOM	10-16-79 10-23-79	10-16-79
69 (C2)			M-210	CLEAN WASTE RECEIVER TANK PUMP SUCTION	10-16-79 10-23-79	10-16-79

TABLE II-1
MASTER LIST OF PALISADES
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 19 OF 19



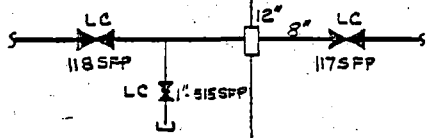



PENE- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
70 (N/A)			—	SPACE	10-16-79 O-70-1	10-16-79 I-70-1
71 (N/A)			—	SPACE	10-16-79 O-71-1	10-16-79 I-71-1
72 (A2)			M-221	REACTOR REFUELING CAVITY DRAIN	10-16-79 10-23-79 O-72-1	10-16-79 10-23-79 I-72-1
73 (N/A)			—	SPACE	10-15-79 10-23-79 O-73-1	10-16-79 I-73-1

TABLE II-2
RESULTS OF CONTAINMENT PENETRATION AND ISOLATION
VALVE CHECK

PENE- TRATION No.	ACTION ITEMS	RESPON- SIBILITY	STATUS
4a. cont'd	b. Isolation valve ID#'s should be added to P&ID M-218 c. Penetration should be given a classification (A-2) and described in FSAR d. Valves 100VAS & 101VAS should be added to Containment Integrity Checklist	Mieras Palmer Mieras	Complete
5.	None		
6.	None		
7.&8.	a. Drain valves should be given ID#'s and tagged with normal tags (Black). Also adding another drain valve in service	Mieras	Done. Drain valves have been identified as 746FW and 746AFW

TABLE II-2
RESULTS OF CONTAINMENT PENETRATION AND ISOLATION
VALVE CHECK

PENE- TRATION No.	ACTION ITEMS	RESPON- SIBILITY	STATUS
7.&8. cont'd	b. Drain valves should be added to P&ID M-207 c. FSAR should note that check valves are in parallel d. Procedure for ensuring valves are closed should be identified	Mieras Palmer Mieras	
9.	None		
10.	a. Test valve 142CA not tagged (This will be covered by special isolation valve tags)	Mieras	
11.	a. Test valve 536CD not tagged. (This will be covered by special isolation valve tags)	Mieras	

TABLE II-2
RESULTS OF CONTAINMENT PENETRATION AND ISOLATION
VALVE CHECK

PENE- TRATION No.	ACTION ITEMS	RESPON- SIBILITY	STATUS
11. cont'd	<p>b. Second test valve should be given an ID# and tagged with a special isolation valve tag</p> <p>c. P&ID M-211 should be changed to show test valve</p>	<p>Mieras</p> <p>Mieras</p>	Done. Valve number is 536A-CD. Tag in preparation
12.& 13.	<p>a. Vent valves should be given ID#'s and tagged with normal tags (Black)</p> <p>b. Vent valves should be added to P&ID M-208</p> <p>c. Procedure for ensuring vent valves are closed should be identified</p> <p>d. Pipe for in-containment fire hoses will be connected to this penetration per Facility Change 407. See Addendum at end of Volume I for details</p>	<p>Mieras</p> <p>Mieras</p> <p>Mieras</p> <p>Mieras</p>	
14.	None		

TABLE II-2
RESULTS OF CONTAINMENT PENETRATION AND ISOLATION
VALVE CHECK

PENE- TRATION No.	ACTION ITEMS	RESPON- SIBILITY	STATUS
15.	None		
16.	None		
17.	a. Isolation valves should be given ID#'s and tagged with normal tags (Black) b. Valves should be shown on P&ID M-218 c. Procedure for ensuring proper valve position (LO or NO) and cautioning that these valves are part of containment boundary should be identified d. Penetration should be given classification and described in FSAR	Mieras Mieras Palmer	 It is the policy at Palisades not to show pressure instrumentation line (and sample line) isolation valves on P&ID's. These valves will appear on the appropriate valve check lists

TABLE II-2
RESULTS OF CONTAINMENT PENETRATION AND ISOLATION
VALVE CHECK

PENE- TRATION No.	ACTION ITEMS	RESPON- SIBILITY	STATUS
18.	a. Fuel transfer tube isolation valve should be given ID#. b. Procedure for ensuring valve is closed during normal operation should be identified	Mieras Mieras	This 48" diameter valve is identified by its name rather than by a number.
19.	a. Procedure to check integrity of personnel lock should be identified	Mieras	
20.	a. This is a spare penetration. It does not have the PZR dead weight tester line. This is one of two lines coming out of penetration 40.		
	b. P&ID M-201 should be revised to show correct penetration number c. Table 1 of Local Leak Test Results should be revised to show correct penetration number	Mieras Mieras	

TABLE II-2
RESULTS OF CONTAINMENT PENETRATION AND ISOLATION
VALVE CHECK

PENE- TRATION No.	ACTION ITEMS	RESPON- SIBILITY	STATUS
20. cont'd	d. Containment Integrity Check List should be revised to show correct penetration number	Mieras	
	e. FSAR should be revised to show correct penetration number	Palmer	
21.	a. This is a spare capped penetration. It no longer has the NSS sample line. This is now one of two lines coming out of penetration 40. NOTE THAT COMMENTS B,C,D,&E ABOVE (#20) APPLY TO THIS PENETRATION AS WELL	Mieras & Palmer	
22.& 23.	a. Procedure for insuring isolation valves in pressure lines are open during normal operation should be identified	Mieras	
	b. Procedure for ensuring sample line valves are closed during normal operation should be identified	Mieras	In the short term until a decision on the use of sample lines is made based on TMI-2 considerations, these valves will be locked closed. They will be added to the CI check

TABLE II-2
RESULTS OF CONTAINMENT PENETRATION AND ISOLATION
VALVE CHECK

PENE- TRATION No.	ACTION ITEMS	RESPON- SIBILITY	STATUS
22. & 23.	c. Add pressure lines and sample line to P&ID's M-203 and M-204		list and given special colored tags See comments for 17.b.
24.	None		
25.	a. Add pressure tap and isolation valve to P&ID M-210 b. Procedure for ensuring integrity of pressure tap should be identified c. Test valve 512CR has no ID tag (This will be covered by special isolation valve tags) d. If cap on drain stub is not welded, it should be tagged and added to CI check list	Mieras Mieras Mieras	See comments for 17.b
26.	None		

TABLE II-2
RESULTS OF CONTAINMENT PENETRATION AND ISOLATION
VALVE CHECK

PENE- TRATION No.	ACTION ITEMS	RESPON- SIBILITY	STATUS
27.	a. Arrangement for ILRT isolation valves should be shown on P&ID or other controlled document	Mieras	ILRT configuration will be added to P&ID M-218
28.	a. Palisades deviation report OP-79-19 should be closed out	Wong	Specification/Field Change (SFC) 79-23 calls for this line to be capped
	b. This penetration should be given a classification and described in FSAR	Palmer	
	c. Valves on Aux Building Analyzer Sampling Panel should be given ID# and tagged	Mieras	
	d. Procure for controlling position of these valves should be identified	Mieras	
	e. P&ID M-224 should be revised to show as-built configuration	Mieras	
29.	None		

TABLE II-2
RESULTS OF CONTAINMENT PENETRATION AND ISOLATION
VALVE CHECK

PENE- TRATION No.	ACTION ITEMS	RESPON- SIBILITY	STATUS
30. & 31.	a. The locked open isolation valves should be given ID#'s and tagged with normal tags (Black).	Mieras	Done. The valve numbers are shown on Rev. 15 of the P&ID
	b. The valve ID#'s should be added to P&ID M-203	Mieras	
32.	a. Test valve 3163ES should be added to the Containment Integrity Check List	Mieras	It is not normal Palisades policy to tag check valves
	b. Check valve 3103ES should be tagged with a normal tag		
33.	a. The isolation valve on the sample line (3235ES) should be added to CI check list and tagged with the special CI tag	Mieras	See comments for 17.b
	b. This valve should be added to P&ID M-204		
34.	None		

TABLE II-2
RESULTS OF CONTAINMENT PENETRATION AND ISOLATION
VALVE CHECK

PENE- TRATION No.	ACTION ITEMS	RESPON- SIBILITY	STATUS
35.	a. RV 0401 is tagged RV 3342ES. This discrepancy should be checked and resolved b. Procedure for ensuring MOV's 3015 & 3016 are electrically locked closed (ELC) during normal operation should be identified c. Determine whether manual valves 3190ESS, 3199ESS and 3205ES should be included on CI Check List	Mieras Mieras Mieras	Manual valve 3205ES will be put on CI check list (CL3.3). The other two valves will be put on check list CL3.2
36.	a. Valve line-up for local leak testing should be defined	Mieras	
37.	None		
38.	a. FSAR description should be revised to agree with as-built configuration		
39.	a. FSAR description should be revised to agree with as-built configuration		

TABLE II-2
RESULTS OF CONTAINMENT PENETRATION AND ISOLATION
VALVE CHECK

PENE- TRATION No.	ACTION ITEMS	RESPON- SIBILITY	STATUS
40.	<p>a. The PCS sample line should be defined as penetration 40 and given a classification of B1</p> <p>b. As noted above for penetration 21, the P&ID, Local Leak Test Procedure, Containment Integrity Check list and FSAR should be revised</p>		
40a.	<p>a. The pressurizer dead weight tester line should be defined as penetration 40a and given the correct classification.</p> <p>NOTE: Currently this line as a C-3 classification</p> <p>b. As noted above for penetration 20, the P&ID, Local Leak Test Procedure, Containment Integrity Check list and FSAR should be revised to show the as-built configuration</p>	<p>Meincke</p> <p>Mieras</p>	<p>According to the Reactor Engineer, this line is no longer used and it has been capped inside and outside the containment. If the line is no longer in use it should be capped at the penetration and the associated valves, tubing and equipment should be removed</p>
41.	None		

TABLE II-2
RESULTS OF CONTAINMENT PENETRATION AND ISOLATION
VALVE CHECK

PENE- TRATION No.	ACTION ITEMS	RESPON- SIBILITY	STATUS
42.	a. Test valve 1126PC is not tagged. This valve should be tagged	Mieras	
43.	None		
44.	a. Test valves are being added in accordance with Facility Change 446. See the Addendum at the end of Volume I for details	Harshe	
45.	None		
46.	a. Test valve 500WG is not tagged. This valve should be tagged	Mieras	
47.	None		
48.	All comments, a,b,c,&d, for Penetration 17 are applicable to this penetration	Mieras & Palmer	

TABLE II-2
RESULTS OF CONTAINMENT PENETRATION AND ISOLATION
VALVE CHECK

PENE- TRATION No.	ACTION ITEMS	RESPON- SIBILITY	STATUS
49.	a. The second valve in the test line (514 CRW) should be added to the CI Check list	Mieras	
50.	a. Isolation valve P5VA was not locked. It should be locked	Mieras	
	b. Procedure to check integrity of emergency access should be identified	Mieras	
	c. Emergency access door could not be opened from inside containment. The operability of this door should be checked	Open Item	
51.	None		
52.	None		

TABLE II-2
RESULTS OF CONTAINMENT PENETRATION AND ISOLATION
VALVE CHECK

PENE- TRATION No.	ACTION ITEMS	RESPON- SIBILITY	STATUS
59.	None		
60.	None		
61.	None		
62.	None		
63.	a. P&ID M-218 shows this penetration as being used for pressure instruments. It is not. This penetration is a spare. The P&ID should be revised	Mieras	
64.	None		
65.	a. Test valve 612CA is shown as 141CAS on P&ID M-212. This discrepancy should be resolved	Mieras	
	b. The test valve should be added to the CI check list	Mieras	

TABLE II-2
RESULTS OF CONTAINMENT PENETRATION AND ISOLATION
VALVE CHECK

PENE- TRATION No.	ACTION ITEMS	RESPON- SIBILITY	STATUS
65. cont'd	c. Procedure to check integrity of pressure line should be identified	Mieras	The configuration will be shown on P&ID M-218
66.	a. Arrangement for ILRT isolation valves should be shown on P&ID or other controlled document	Mieras	
67.	a. CV1037 does not have a tag. It should be tagged with a normal tag (Black)	Mieras	
68.	a. CV1813 & CV1814 do not have tags. These valves should be tagged with normal tags (Black)	Mieras	
69.	None		
70.	None		
71.	None		

TABLE II-2
RESULTS OF CONTAINMENT PENETRATION AND ISOLATION
VALVE CHECK

PENE- TRATION No.	ACTION ITEMS	RESPON- SIBILITY	STATUS
72.	None		
73.	a. The test valve on this penetration should be given an ID# and tagged with a special color CI tag	Mieras	
	b. The test valve should be added to the CI check list	Mieras	

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
1	Purge Air Supply	CV1807 CV1808 508VA -----	Control Valve Control Valve Manual Test Valve Test Connection	Normally Closed Normally Closed Locked Closed Capped	
2	Main Steam Line (SGE50A)	CV0510 110MS	MSIV Manual MSIV Bypass Valve	Normally Open Normally Closed	This valve is to be replaced by mo- tor operated valve MOV 0510A (see FC445-1)
3	Main Steam Line (SGE50B)	CV0501 111MS	MSIV Manual MSIV Bypass Valve	Normally Open Normally Closed	This valve is to be replaced by mo- tor operated valve MOV 0501A (see FC445-2)
4	Purge Air Exhaust	CV1803 CV1805 CV1806 506VA -----	Control Valve Control Valve Control Valve Manual Test Valve Test Connection	Normally Closed Normally Closed Normally Closed Locked Closed Capped	

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
4a	Purge Air Exhaust	100VAS	Manual Isolation Valve	Locked Closed	
	Sample Line	101VAS	Manual Isolation Valve	Locked Closed	
		507VA -----	Manual Test Valve Test Connection	Locked Closed Capped	
5	SG (E50A) Bottom Blow	CV0767	Control Valve	Normally Closed	
		CV0771	Control Valve	Normally Closed	
		567MS -----	Manual Test Valve Test Connection	Locked Closed Capped	
6	SG (E50B) Bottom Blow	CV0768	Control Valve	Normally Closed	
		CV0770	Control Valve	Normally Closed	
		568MS -----	Manual Test Valve Test Connection	Locked Closed Capped	
7	Feedwater to SG (E50A)	746FW	Manual Drain Valve	Locked Closed	
		746AFW	Manual Drain Valve	Locked Closed	
		-----	Drain Connection	Capped	
8	Feedwater to SG (E50B)	747FW	Manual Drain Valve	Locked Closed	
		747AFW	Manual Drain Valve	Locked Closed	
		-----	Drain Connection	Capped	

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
9	Spare				
10	Service Air	122CAS 142CA ----- 263	Manual Isolation Valve Test Valve Test Connection Check Valve	Locked Closed Locked Closed Capped Closed	
11	Condensate to Shield Cooling Tank	CV0936 536CD 536ACD ----- 223	Control Valve Test Valve Test Valve Test Connection Check Valve	Normally Open Locked Closed Locked Closed Capped Open	
12	Service Water Supply	}			The service water system is not with- in the scope of the containment integ- rity check list.
13	Service Water Return				
14	Component Cooling	CV0910 507CC ----- 0910CC	Control Valve Manual Test Valve Test Connection Check Valve	Normally Open Locked Closed Capped Open	

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
15	Component Cooling Water Out	CV0911 CV0940 508CC ----- -----	Control Valve Control Valve Manual Test Valve Test Connection Test Connection	Normally Open Normally Open Locked Closed Capped Capped	
16	SG (E50A) Surface Blow Down	CV0739	Control Valve	Normally Closed	
17	Containment Pres- sure Instrumentation	PS1802 ----- PS1802A ----- PS1804 ----- PS1804A ----- PT1812 -----	Pressure Switch Isolation Valve for PS1802 Pressure Switch Isolation Valve for PS1802A Pressure Switch Isolation Valve for PS1804 Pressure Switch Isolation Valve for PS1804A Pressure Trans- mitter Isolation Valve for PT1812	Installed Locked Open Installed Locked Open Installed Locked Open Installed Locked Open Installed Normally Open	

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
17 contd	Fuel Transfer Tube	PT1815	Pressure Trans- mitter	Installed	
		-----	Isolation Valve for PT1815	Normally Open	
18		----- ----- -----	4" Flange 36" Flange 36" Manual Valve	Blanked Off Blanked Off Normally Closed	
19	Personnel Lock Outer Door	P5A -----	Manual Test Valve Pressure Tube	Locked Closed Pressure Gauge Installed	
	Inner Door	-----	Pressure Tube	Capped	
		-----	Equalizing Valve	Normally Closed	
		-----	Pressure Tube	Capped	
		-----	Pressure Tube Equalizing Valve	Capped Normally Closed	
20	Spare				
21	Capped Spare	-----	Pipe End (Inside Containment)	Capped	

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
21 contd		-----	Pipe End (Outside Containment)	Capped	
22	Redundant High Pressure Safety Injection				The high pressure safety inspection system is not with- in the scope of the containment in- tegrity check list.
23	High Pressure Safety Injection				
24	Spare				
25	Clean Waste	CV1064 CV1065 512CR ----- ----- PT1065 647CRW	Control Valve Control Valve Manual Test Valve Test Connection Drain Connection Pressure Trans- mitter Isolation Valve for PT1065	Normally Open Normally Open Locked Closed Capped Capped Installed Normally Open	

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
26	Nitrogen to Quench Tank	CV1858 581N2 ----- 223	Control Valve Manual Test Valve Test Connection Check Valve	Normally Closed Locked Closed Capped Closed	
27	ILRT Fill Line Inside Containment Outside Containment	----- MOV-P1 604VA 605VA -----	Pipe Flange Motor Operated Iso- lation Valve Manual Isolation Valve Manual Isolation Valve Test Connection	Blanked Off Normally Closed Locked Closed Locked Closed Capped	
28	Containment Air Sample Line Inside Containment Outside Containment	SV202-P SV202-M SV202-N ----- -----	Solenoid Valve Solenoid Valve Solenoid Valve Pipe End Pipe End	Normally Closed Normally Closed Normally Closed Capped Capped	This penetration will be capped out- side containment per SFC 79-094.

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
29	Capped Spare				
	Inside Containment	-----	Pipe Flange	Blanked Off	
	Outside Containment	-----	Pipe End	Capped	
30	Containment Spray	CV3001	Control Valve	Normally Closed	Isolation valve 3258ES, which should be locked open, is not within the scope of the containment integrity check list.
		3227ES	Manual Isolation Valve	Locked Closed	
		3344ES	Manual Test Valve	Locked Closed	
		-----	Test Connection	Capped	
31	Containment Spray Pump Discharge	CV3002	Control Valve	Normally Closed	Isolation valve 3259ES, which should be locked open, is not within the scope of the containment integrity check list.
		3217ES	Manual Isolation Valve	Locked Closed	
		3346ES	Manual Test Valve	Locked Closed	
		-----	Test Connection	Capped	

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
32	Low Pressure Safety Injection	3163ES	Manual Isolation Valve	Locked Closed	The other valves associated with this penetration are not within the scope of the con- tainment integrity check list.
33	Safety Injection Tank Drain	3234ES	Manual Isolation Valve	Locked Closed	
		3235ES	Manual Sample Line Valve	Locked Closed	
		3236ES	Manual Isolation Valve	Locked Closed	
		3237ES	Manual Isolation Valve	Locked Closed	
		3348ES	Manual Test Valve	Locked Closed	
		-----	Test Connection	Capped	
34	Spare	-----	Sample Line Connection	Capped	

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
35	Shutdown Cooling Return	MOV3015ES	Motor Operated Valve	Electrically Locked Closed	Other manual valves are covered by Engineered Safe- guards Valve Check List.
		MOV3016ES	Motor Operated Valve	Electrically Locked Closed	
		RV0401	Relief Valve	Normally Closed	
		RV3164	Relief Valve	Normally Closed	
		3204ES	Manual Sample Line Valve	Locked Closed	
		----- 3205ES	Sample Connection Manual Isolation Valve	Capped Locked Closed	
36	Letdown to Purifi- cation Ion Ex- changer	----- CV2009	Control Valve Manual Test Valve Test Connection	Normally Open Locked Closed Capped	
		2320CVC			

37	Primary System	CV1001	Control Valve Manual Test Valve Check Valve Test Connection	Normally Closed Locked Closed Closed Capped	
		503CRW			

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
38	Condensate Return From Steam Heat- ing Units	CV1501 CV1502 502VA -----	Control Valve Control Valve : Manual Test Valve Test Connection	Normally Closed Normally Closed Locked Closed Capped	
39	Containment Heat- ing System	CV1503 503VA ----- -----	Control Valve Manual Test Valve Test Connection Pipe Flange	Normally Closed Locked Closed Capped Blanked Off	
40	PRC Sample Line	CV1910 CV1911 1170A 1170B -----	Control Valve Control Valve Manual Test Valve Manual Test Valve Test Connection	Normally Open Normally Open Locked Closed Locked Closed Capped	
40a	PZR Dead Weight Tester	CV0120 CV0121 1129PC -----	Control Valve Control Valve Manual Test Valve Test Connection	Normally Closed Normally Closed Locked Closed Capped	
41	Degassifier Pump Discharge	CV1004 506CRW -----	Control Valve Manual Test Valve Test Connection	Normally Open Locked Closed Capped	

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
41 contd		-----	Check Valve	Open	
42	Demineralized Water to Quench Tank	CV0155 1126PC ----- -----	Control Valve Manual Test Valve Test Connection Check Valve	Normally Closed Locked Closed Capped Closed	
43	Spare				
44	Controlled Bleed Off From RCP's	CV2083 2083 2083A -----	Control Valve Manual Test Valve Manual Test Valve Test Connection	Normally Open Locked Closed Locked Closed Capped	Manual test valve 2083A is to be added per SF
45	Charging Pump Discharge	CV2111 2110	Control Valve Check Valve	Normally Open Open	
46	Containment Vent Header	CV1101 CV1102 500WG -----	Control Valve Control Valve Manual Test Valve Test Connection	Normally Open Normally Open Locked Closed Capped	

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
47	Primary System Drain Tank Pump Suction	CV1002 CV1007 502CRW -----	Control Valve Control Valve Manual Test Valve Test Connection	Normally Open Normally Open Locked Closed Capped	
48	Containment Pres- sure Instrumenta- tion	PS1801 ----- PS1801A ----- PS1803 ----- PS1803A ----- PT1805 ----- PT1814 -----	Pressure Switch Isolation Valve for PS1801 Pressure Switch Isolation Valve for PS1801A Pressure Switch Isolation Valve for PS1803 Pressure Switch Isolation Valve for PS1803A Pressure Trans- mitter Isolation Valve for PT1805 Pressure Trans- mitter Isolation Valve for PT1814	Installed Locked Open Installed Locked Open Installed Locked Open Installed Locked Open Installed Normally Open Installed Normally Open	

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
49	Clean Waste Receiver Tank Circ Pump Suction	CV1036 CV1038 513CRW ----- 514CRW	Control Valve Control Valve Manual Test Valve Test Connection Manual Drain Valve	Normally Open Normally Open Locked Closed Capped Locked Closed	
50	Emergency Access Inside Containment Outside Contain- ment	----- ----- ----- ----- ----- ----- P6VA ----- -----	Pressure Equali- zing Valve Pressure Tube Pressure Tube Pressure Equali- zing Valve Pressure Tube Pressure Tube Manual Test Valve Test Connection O-Ring Test Con- nection	Normally Closed Capped Capped Normally Closed Pressure Gauge Installed Capped Locked Closed Capped Capped	
51	Equipment Door	-----	O-Ring Test Con- nection	Capped	

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
52	Containment Pump Drain to Pump Tank	CV1103 CV1104 500DRW -----	Control Valve Control Valve Manual Test Valve Test Connection	Normally Closed Normally Closed Locked Closed Capped	
53	Containment Spray Pump Suction	CV3029 3182ES 3181 -----	Control Valve Manual Test Valve Check Valve Test Connection	Normally Closed Locked Closed Closed Capped	
54	Containment Spray Pump Suction	CV3030 3167ES 2166 -----	Control Valve Manual Test Valve Check Valve Test Connection	Normally Closed Locked Closed Closed Capped	
55	SG (E50B) Surface Blowdown	CV0738	Control Valve	Normally Open	
56	Spare				
57	Spare				

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
58	Spare				
59	Spare				
60	Spare				
61	Spare				
62	Spare				
63	Spare				
64	Reactor Cavity Fill and Recirc	120SFP 121SFP 514SFP -----	Manual Isolation Valve Manual Isolation Valve Manual Test Valve Test Connection	Locked Closed Locked Closed Locked Closed Capped	

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
65	Instrument Air	CV1211 612CA 263 PS1220 611CA ----- -----	Control Valve Manual Test Valve Check Valve Pressure Switch Isolation Valve for PS1220 Test Connection	Normally Open Locked Closed Open Installed Normally Open Capped	
66	ILRT Instrument Line	601VA 602VA 603VA L6 ----- -----	Manual Isolation Valve Manual Test Valve Manual Test Valve Manual Isolation Valve Test Connection Test Connection	Locked Closed Locked Closed Locked Closed Locked Closed Capped Capped	
67	Clean Waste Receiver Tank Pump Recirc	CV1037 515CRW ----- -----	Control Valve Manual Test Valve Test Connection Check Valve	Normally Open Locked Closed Capped Open	

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
68	Air Supply to Air Room	CV1813 CV1814 505VA -----	Control Valve Control Valve Manual Test Valve Test Connection	Normally Closed Normally Closed Locked Closed Capped	
69	Clean Waste Receiver Tank Pump Suction	CV1044 CV1045 518CRW -----	Control Valve Control Valve Manual Test Valve Test Connection	Normally Open Normally Open Locked Closed Capped	
70	Spare				
71	Spare				
72	Reactor Refueling Cavity Drain	117SFP 118SFP 515SFP -----	Manual Isolation Valve Manual Isolation Valve Manual Test Valve Test Connection	Locked Closed Locked Closed Locked Closed Capped	

TABLE II-3
LIST OF ITEMS FOR CONTAINMENT INTEGRITY
CHECK LIST

PENE- TRATION NO.	SYSTEM	IDENTIFICATION NUMBER	DESCRIPTION	CONDITION DURING NORMAL OPERATION	COMMENTS
73	Capped Spare	----- 509VAS -----	Pipe Flange (Inside Containment) Pipe End Manual Test Valve Test Connection	Blanked Off Capped Locked Closed Capped	

MPR ASSOCIATES, INC.

III. APPENDIX

PALISADES NUCLEAR PLANT

Procedure for Locating and Identifying
Containment Mechanical Penetrations and
Isolation Valves

Procedure No. MPR-98-56-1

Rev. 0 10/11/79

RECORD OF REVISIONS

Rev. No.	Description of Changes	Date	Affected Pages
0	Original Issue	10/11/79	

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Rev. 0, 10/11/79

PALISADES NUCLEAR PLANT
PROCEDURE FOR LOCATING AND
IDENTIFYING CONTAINMENT MECHANICAL
PENETRATIONS AND ISOLATION VALVES
(MPR-98-56-1)

1.0 PURPOSE

The purpose of this procedure is to define the steps to be taken to (1) check the configuration of all containment mechanical penetrations which require isolation after postulated accidents and associated isolation valves and (2) ensure that the applicable documents as listed in Attachment 1, confirm to the as-built configuration.

2.0 REFERENCES

See Attachment 1 for list of drawings and other references.

3.0 PREREQUISITES

- 3.1 Radiation protection requirements have been determined for personnel performing work and Radiation Work Permit (RWP) has been obtained from Rad. Pro.
- 3.2 Access to the inside and outside of the containment building is required.
- 3.3 The master list (Table 1) mechanical penetrations and isolation valves has been prepared using the referenced documents.

4.0 PRECAUTIONS AND LIMITATIONS

- 4.1 Contamination and radiation will be present for some of this work. Radiation protection requirements must be determined prior to starting any work.

5.0 PROCEDURE

- 5.1 Physically locate each containment penetration which requires isolation after postulated accidents and associated isolation valves on the master list (Table 1) and place a temporary identifying mark. Whenever possible, take a photograph of each penetration both inside and outside the containment. Note the picture number in the appropriate column of Table 1.
- 5.2 Based on this inspection make corrections and changes on the master check list so that the configuration on the master list conforms with the as-built conditions.
- 5.3 Visually check all mechanical penetrations which require isolation after postulated accidents and associated isolation valves to ensure that each one has been accounted for.
- 5.4 Check the referenced documents (Attachment 1) against the master list (Table 1) and note any corrections or changes which are required to bring the referenced documents into conformance.

5.5 Prepare a list of all containment penetration automatic and manual valves which should be closed during normal operation. The purpose of this list is to permit Palisades plant personnel to place a tag on each one of these valves noting that the valve should be closed during normal operation.

LIST OF REFERENCES

1. Palisades FSAR Table 5.2 (Rev. 09/14/79), "Containment Penetrations and Valves."
2. Palisades Procedure RO-32, Table 1 (Rev. 09/04/78), "Local Leak Test Results."
3. Palisades "Containment Integrity Check List (Rev. 3)."
4. Bechtel P&ID's for Palisades:
 - M-201 (Rev. 18) Primary Coolant System
 - M-202 (Rev. 19) Chemical and Volume Control System
 - M-203 (Rev. 16) Safety Injection, Containment Spray and Shutdown Cooling System
 - M-204 (Rev. 16) Safety Injection, Containment Spray and Shutdown Cooling System
 - M-207 (Rev. 31) Feedwater and Condensate System
 - M-208 (Rev. 19) Service Water System
 - M-209 (Rev. 19) Component Cooling System
 - M-210 (Rev. 14) Radioactive Waste Treatment System, Clean
 - M-211 (Rev. 26) Radioactive Waste Treatment System, Dirty Waste & Gaseous Waste
 - M-212 (Rev. 9) Service and Instrument Air Systems
 - M-215 (Rev. 14) Plant Heating System
 - M-218 (Rev. 18) Heating, Ventilation and Air Conditioning
 - M-219 (Rev. 10) Process Sampling System
 - M-221 (Rev. 9) Spent Fuel Pool Cooling and Shield Systems
 - M-222 (Rev. 9) Miscellaneous Gas Supply Systems
5. Bechtel Construction Drawings
 - M-140 (Rev. 4) Penetrations - Containment Building Wall

TABLE 1
MASTER LIST OF PENETRATIONS
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 1 OF 1

PENETRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
1 (AI)			M-218	PURGE AIR SUPPLY		
2 (CI)	<p>MAIN STEAM LINE FROM STEAM GENERATOR A FOR DETAILS SEE FIGURE A-1</p>		M-207	MAIN STEAM LINE		
3 (CI)	<p>MAIN STEAM LINE FROM STEAM GENERATOR B FOR DETAILS SEE FIGURE A-2</p>		M-207	MAIN STEAM LINE		
4 (AI)			M-218	PURGE AIR EXHAUST		

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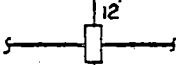
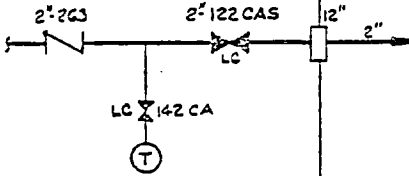
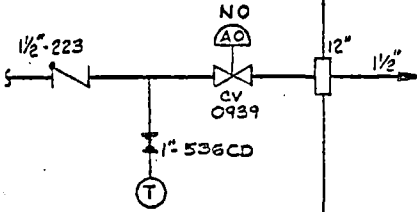
TABLE 1
MASTER LIST OF PENETRATIONS
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 2 OF 2

PENETRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
5 (c2)	<p>1" SG7 MS CV 0771 CV 0767</p>	<p>12" 2"</p>	M-207 M-226	SG (E50A) BOTTOM BLOW		
6 (c2)	<p>1" SG8 MS CV 0770 CV 0768</p>	<p>12" 2"</p>	M-207 M-226	SG (E50B) BOTTOM BLOW		
7 (c1)	<p>6" N218R-0704 12" N218R-0702</p>	<p>30" 12"</p>	M-207	FEEDWATER TO SG (E50A)		
8 (c1)	<p>6" N218R-0703 12" N218R-0701</p>	<p>30" 12"</p>	M-207	FEEDWATER TO SG (E50B)		

TABLE 1
MASTER LIST OF PENETRATIONS
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 3 OF

PEN- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
9 (N/A)			—	SPARE		
10 (A2)			M-212	SERVICE AIR		
11 (C2)			M-221	CONDENSATE TO SHIELD COOLING SURGE TANK		

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TABLE 1
MASTER LIST OF PENETRATIONS
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 4 OF 4

PEN- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
12 (X)			M-208	SERVICE WATER SUPPLY		
13 (X)			M-208	SERVICE WATER RETURN		

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TABLE 1
MASTER LIST OF PALISADES
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 5 OF 5

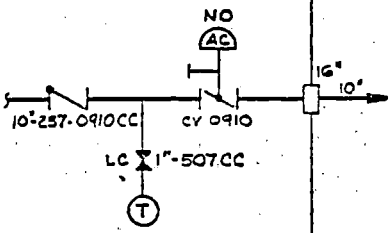
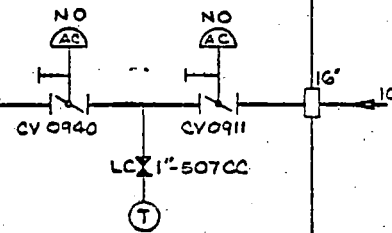
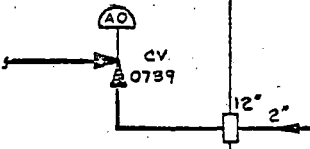
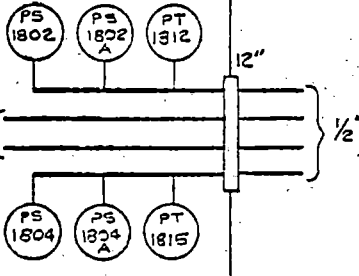
PENETRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
14 (C2)			M-209	COMPONENT COOLING WATER IN		
15 (C2)			M-209	COMPONENT COOLING WATER OUT		
16 (C1)			M-207	SG (E 50 A) SURFACE BLOW DOWN		
17 (NOT GIVEN)			M-218	CONTAINMENT PRESSURE INSTRUMENTATION		

TABLE 1
MASTER LIST OF PALSAPES
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 9 OF

PENETRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
30 (X)			M-203	CONTAINMENT SPRAY PUMP DISCHARGE		
31 (X)			M-203	CONTAINMENT SPRAY PUMP DISCHARGE		
32 (X)			M-203 M-204	L.P. SAFETY INJECTION		
33 (C3)			M-204	SAFETY INJECTION TANK DRAIN		

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TABLE 1
MASTER LIST OF PENETRATIONS
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 10 OF 10

PENETRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
34 (N/A)		18"	—	SPARE		
35 (B2)			M-204	SHUTDOWN COOLING RETURN		
36 (B1)			M-202	LETDOWN TO PURIFICATION ION EXCHANGER		
37 (C2)			M-210	PRIMARY SYSTEM DRAIN PUMP RECIRC		

TABLE 1
MASTER LIST OF PALISADES
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 11 OF 11

PENE- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
38 (X)			M-215	CONDENSATE RETURN FROM STEAM HEATING UNITS		
39 (X)			M-215	CONTAINMENT HEATING SYSTEM		
40 (N/A)			—	SPARE		
41 (C2)			M-210	DEGASSIFIER PUMP DISCHARGE		

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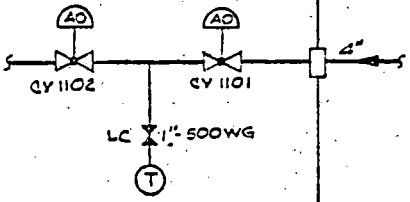
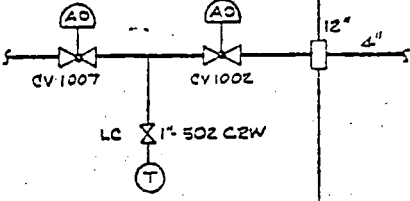
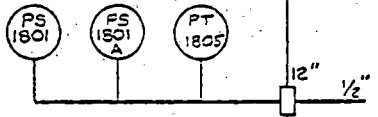
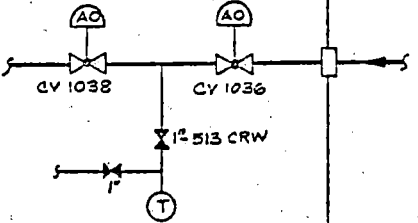
TABLE 1
MASTER LIST OF PALISADES
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 12 OF

PENETRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
42 (C2)			M-201	DEMINERALIZED WATER TO QUENCH TANK		
43 (N/A)			—	SPARE		
44 (C2)			M-202	CONTROLLED BLEED OFF FROM RCP'S		
45 (BI)			M-202	CHARGING PUMP DISCHARGE		

TABLE 1
MASTER LIST OF PENETRACTIONS
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 13 OF 14

PENETRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
46 (C2)			M-211	CONTAINMENT VENT HEADER		
47 (C2)			M-210	PRIMARY SYSTEM DRAIN TANK PUMP SUCTION		
48 (NOT LISTED)			M-218	CONTAINMENT PRESSURE INSTRUMENTATION		
49 (C2)			M-210	CLEAN WASTE RECEIVER TANK CIRC. PUMP SUCTION		

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TABLE 1
MASTER LIST OF PALISADES
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 14 OF

PENE- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
50 (x)	LATER	5'-10" 	—	EMERGENCY ACCESS		
51 (x)	LATER	12'-0" 	—	EQUIPMENT DOOR		
52 (AI)		EMBEDDED 4" 	M-211	CONTAINMENT SUMP DRAIN TO SUMP TANK		
53 (x)		EMBEDDED 24" 	M-204	CONTAINMENT SPRAY PUMP SUCTION		

TABLE 1
MASTER LIST OF PALISADES
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 15 OF 15

PENETRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
54 (X)			M-204	CONTAINMENT SPRAY PUMP SUCTION		
55 (CI)			M-207 M-226	SG (E 50 B) SURFACE BLOWDOWN		
56 (N/A)			—	SPARE		
57 (N/A)			—	SPARE		

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TABLE 1
MASTER LIST OF PALISADES
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 16 OF






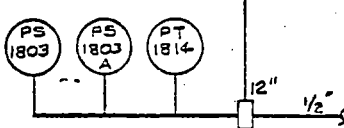
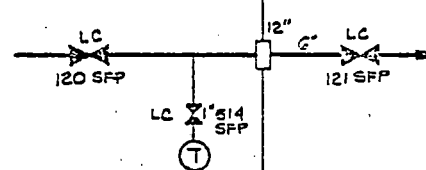
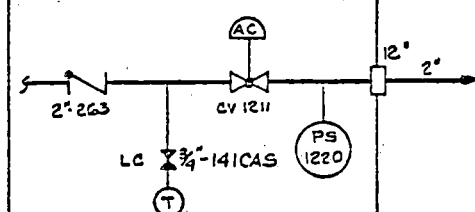
PENE- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
58 (N/A)		12" 	—	SPACE		
59 (N/A)		12" 	—	SPACE		
60 (N/A)		12" 	—	SPACE		
61 (N/A)		12" 	—	SPACE		

TABLE 1
MASTER LIST OF PALISADES
CONTAINMENT MECHANICAL PENETRATIONS

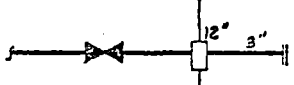
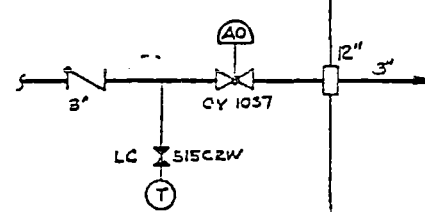
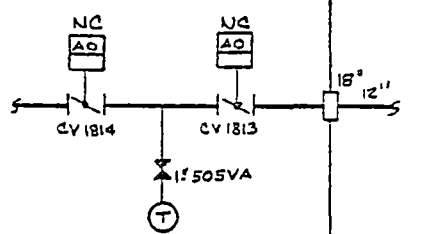
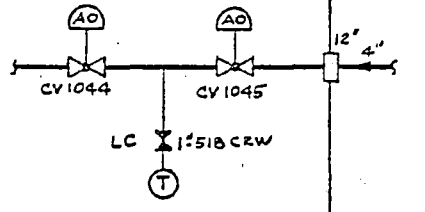
SHEET 17 OF

PENE- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
62 (N/A)			—	SPACE		
63 (NOT LISTED)			M-218	CONTAINMENT PRESSURE INSTRUMENTATION		
64 (A2)			M-221	REACTOR CAVITY FILL & RECIRC.		
65 (X)			M-212	INSTRUMENT AIR		

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TABLE 1
MASTER LIST OF PALISADES
CONTAINMENT MECHANICAL PENETRATIONS

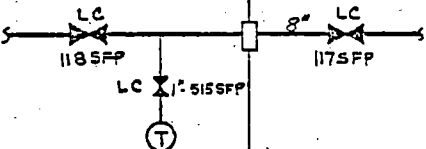
SHEET 18 OF 19

PENE- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
66 (X)	DETAILS LATER 		?	ILRT INSTRUMENT LINE		
67 (C2)			M-210	CLEAN WASTE RECEIVER TANK PUMP RECIRC		
68 (A1)			M-218	AIR SUPPLY TO AIR ROOM		
69 (C2)			M-210	CLEAN WASTE RECEIVER TANK PUMP SUCTION		

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TABLE 1
MASTER LIST OF PENETRATIONS
CONTAINMENT MECHANICAL PENETRATIONS

SHEET 19 OF 19

PEN- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	LOCATED, INSPECTED AND PHOTOGRAPHED	
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			OUTSIDE	INSIDE
70 (N/A)		12"	—	SPACE		
71 (N/A)		12"	—	SPACE		
72 (A2)			M-221	REACTOR REFUELING CAVITY DRAIN		
73 N/A		12" 1 1/2"	—	SPACE		

MPR-98-56-1
Rev. 0, 10/11/79

MPR ASSOCIATES, INC.

ADDENDUM 1

to

Report MPR-693, "Palisades Nuclear Plant -
Independent Review of Containment Penetrations"

Table 1 of this addendum presents the new configuration of several penetrations which have been or will be modified since the initial inspections were performed on October 15-17 and 23-24, 1979. When these modifications are implemented, the master list (Table II-1) and the reference documents should be updated to be consistent with the as-built configurations.

TABLE 1 OF ADDENDUM
SUMMARY OF CHANGES IN PROGRESS OF
AS-BUILT CONFIGURATION OF PENETRATION
LINES AND VALVES AFFECTING CONTAINMENT ISOLATION

SHEET 1 OF 2

PENE- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	COMMENTS
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			
2 (ci)			M-205 M-207	MAIN STEAM LINE (SG E 50A) - WEST -	MANUAL BYPASS VALVES ARE TO BE REPLACED WITH MOTOR OPERATED BYPASS VALVES. MODIFICATION DESCRIBED ON FACILITY CHANGE (FC) 445-1 AND 445-2. SCHEDULED TO BE COMPLETED BY END OF OUTAGE
3 (ci)			M-205 M-207	MAIN STEAM LINE (SG E 50B) - EAST -	
7 (ci)			M-207	FEEDWATER TO SG (E 50A)	SECOND ISOLATION VALVE (746AFW) WILL BE ADDED TO DRAIN LINE. MODIFICATION DESCRIBED ON SFC BEING PROPOSED BY E.T. WONG. SCHEDULED TO BE COMPLETED BY END OF OUTAGE
8 (ci)			M-207	FEEDWATER TO SG (E 50B)	SECOND ISOLATION VALVE (747AFW) WILL BE ADDED TO DRAIN LINE. MODIFICATION DESCRIBED ON SFC BEING PROPOSED BY E.T. WONG SCHEDULED TO BE COMPLETED BY END OF OUTAGE. LINE ADDED TO SUPPLY WATER FOR FIRE- HOSES INSIDE CONTAINMENT

TABLE 1 OF ADDENDUM
SUMMARY OF CHANGES IN PROGRESS OF
AS-BUILT CONFIGURATION OF PENETRATION
LINES AND VALVES AFFECTING CONTAINMENT ISOLATION

SHEET 2 OF 2

PENE- TRATION NUMBER AND CLASS	CONFIGURATION		P&ID NUMBER	SYSTEM	COMMENTS
	OUTSIDE CONTAINMENT	INSIDE CONTAINMENT			
12 (X)			M-208	SERVICE WATER SUPPLY	MODIFICATION DESCRIBED ON FACILITY CHANGE (FC) 407. THIS CHANGE WAS COMPLETED DURING WEEK OF Oct 29, 1979.
28 (NOT GIVEN)			M-224	CONTAINMENT AIR SAMPLE	THIS LINE WILL BE CAPPED AT PENETRATION. DESCRIPTION/ SPECIFICATION FIELD CHANGE (FC) 79-28. SCHEDULE TO BE COMPLETED BY END OF OUTAGE.
44 (C2)			M-202	CONTROLLED BLEED OFF FROM RCP'S	TEST LINE WILL BE ADDED TO PERMIT LOCAL LEAK TESTING. DESCRIBED ON FACILITY CHANGE (FC) 446. SCHEDULED TO BE COMPLETED BY END OF OUTAGE

PALISADES MANAGEMENT
REVIEW TASK FORCE

PROGRAM PLAN
Revision 2 November 28, 1979

I. Introduction

Quality Assurance Program Procedure 1-52 requires the preparation of a written plan to identify personnel, assign responsibilities and establish lines of communication as part of a task force formation. This Program Plan fulfills that function for the Palisades Management Review Task Force (PMRTF).

II. Task Force Objectives

The objectives of the PMRTF are to organize and direct the actions to be taken by Consumers Power Company as required by the modification to the Palisades Plant operating license (License No DPR-20), dated November 9, 1979. The Task Force was originated to accomplish these activities in a coordinated fashion and on a schedule consistent with plant startup. Specific requirements are:

- A. Conduct a comprehensive review of all procedures and checklists prior to startup following the present refueling to assure that:
 - (1) all valves and other controls for engineered safety features have been identified in such procedures and checklists;
 - (2) such procedures and checklists require that all such valves and other controls are in their proper position prior to startup after any cold shutdown; and
 - (3) such procedures and checklists require that after testing, maintenance or other activities which involve manipulating such valves and other controls, the valves and other controls have been returned to their proper position for operation.
- B. Prepare procedures for:
 - (1) inspecting all accessible valves and other controls for engineered safety systems for compliance with the Limiting Condition for Operation (LCO) requirements of the Technical Specifications at least monthly during operation, and
 - (2) reporting the results of B(1) to the Director of the NRC's Region III office.
- C. Prepare information for presentation to the Director, NRC Office of Inspection and Enforcement prior to startup following the present refueling which explains how the requirements of the November 9, 1979 modifications to License No. DPR-21 will be implemented.

III. Task Force Organization

In order to accomplish the PMRTF objectives, four action sequences must be completed. They are:

1. Review applicable checklists and procedures and correct deficiencies.
2. Review Technical Specifications Section 3 to identify monthly procedures for use during operations. Develop new ones if needed.
3. Develop an equipment/limiting condition of operation matrix to strengthen the equipment outage request processing done for many maintenance procedures.
4. Develop both written and oral responses to the NRC letter.

The steps necessary to accomplish each action are displayed in flow charts numbered "FC-1" through "FC-4", which also identify team responsibility for each step.

To accomplish these action sequences, the PMRTF has been formed with a Task Force Manager, a Task Force Coordinator, and five working teams, each with a Team Leader (See Appendix A). Each team is assigned the specific responsibilities shown in Appendix B.

Team Leaders are responsible for developing the procedures identified in Appendix C. Team Leaders also establish personnel qualifications requirements for their team. The Task Force Coordinator reviews team procedures and personnel qualification requirements, documents personnel qualifications, and secures personnel as needed.

IV. Records of Activities

- A. PMRTF Meetings: A resume of all PMRTF meetings will be prepared by the Task Force Coordinator and distributed to members of the Task Force, the Executive Vice President - Energy Supply, and to Document Control.
- B. All Task Force correspondence will be permanently filed under the following Uniform File Index numbers:

950*40*01
X950*71*01*05
X950*02200

- C. All reviews will be documented and will be signed by the reviewers.

V. Reporting

- A. Routine: The Task Force Coordinator is responsible for preparing a written report for the Task Force Manager each seven days commencing Wednesday, November 21, 1979. This status report will include:
 - (1) Brief discussion of significant problems, proposed resolution and their schedule impact;
 - (2) Recap of the past week's activities;

- (3) Brief description of plan for the following week;
- (4) Number and source of personnel involved, including contractors, and
- (5) Current overall schedule.

B. NRC Reporting: The Task Force Manager is responsible for preparation of the 20 day response to the NRC and subsequent reporting. Routine contacts with NRC Region III will be the responsibility of the Palisades Plant Staff.

VI. Follow-up Mechanisms

- A. Short-term: All discrepancies which require resolution prior to plant startup will be documented and dispositioned on the checklists included in the procedures covering the activity under review. Each discrepancy will have a unique identification number and all documents dealing with evaluation and disposition of the discrepancy will reference the identification number. Resolution of discrepancies will be handled in accordance with controlling procedures. One or more corrective action documents will be issued to report all discrepancies resolved prior to startup.
- B. Long-term: Corrective action documents will be written to encompass all corrective actions required for a checklist or procedure and the normal corrective action procedures will apply.

VII. Approvals

Prepared by:

Fredrick W. Burman
Task Force Coordinator

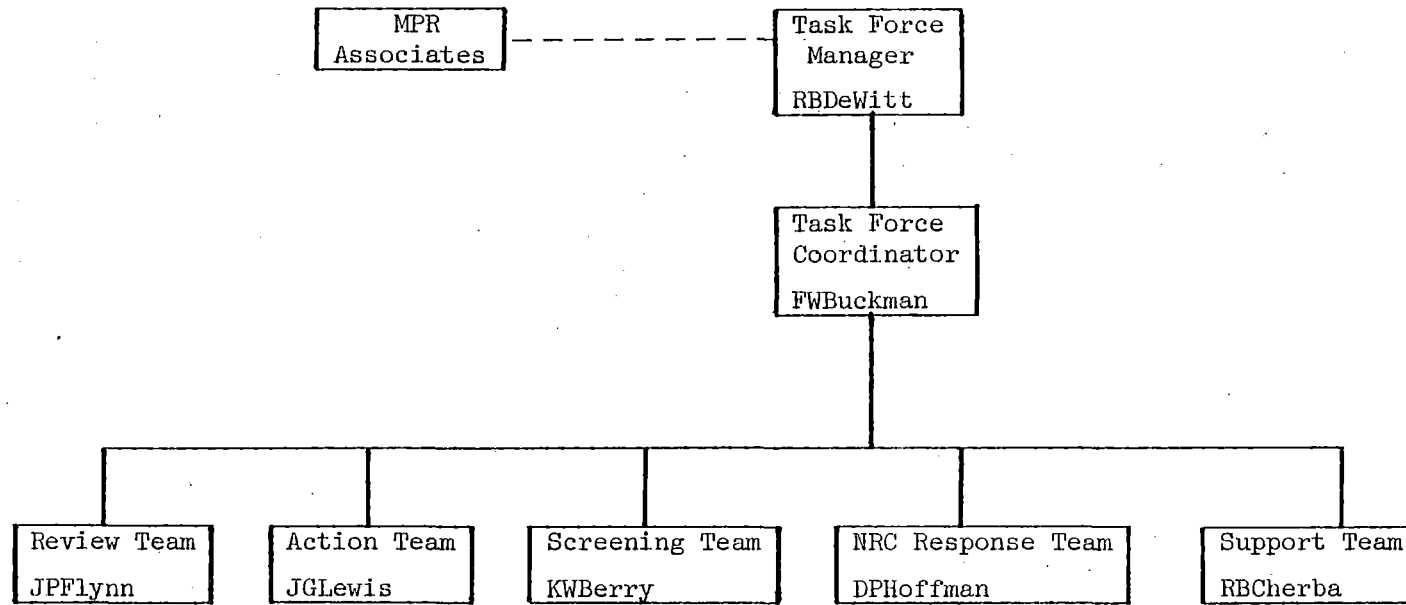
Approved by:

[Signature]
Task Force Manager

Approved by:

R. B. Cherba
Director of Quality Assurance -
Nuclear Operations

PALISADES MANAGEMENT REVIEW TASK FORCE



APPENDIX B

TEAM RESPONSIBILITIES

Note that this is a non-sequential compilation of responsibilities. Additional items may be assigned by the Task Force Coordinator as the need may arise.

Review Team

1. Assemble safety-related equipment checklists.
2. Compare P&ID to checklists.
3. Verify Correctness of P&ID (vis-a-vis checklists) - may include mark-up of drawings.
4. Review procedures identified by Screening Team
5. Identify problems w/ checklists or procedures.

Action Team

1. Process checklist/procedure revisions to correct problems identified by Review Team.
2. Process corrections to P&ID's from Review Team.
3. Implement new surveillance procedures identified by Screening Team.

Screening Team

1. Sort procedures that have an effect on plant safety systems. Provide results to Review Team.
2. Review Technical Specification Section 3 for LCO's that involve accessible safety systems equipment.
3. List existing surveillance procedures for item 2, or identify needed new procedures.
4. Compare identified safety systems from item 2 with prior existing lists.
5. Write procedure.

NRC Response Team

1. Develop draft response per NRC letter. Receive inputs from team leaders and Task Force Coordinator.
2. Prepare an oral response per NRC letter.

Support Team

1. Complete Technical Specification Test Audit. Provide results to Screening Team.
2. Develop Equipment/LCO matrix.
3. Provide for audits of all activities.

APPENDIX C

TEAM PROCEDURES

1. The following team procedures are required.

Checklist Review -	Review Team
Procedure Review -	Review Team
Safety Related Boundaries -	Review Team
Checklist/Procedure Revision -	Action Team
P&ID Corrections -	Action Team
Sorting Review -	Screening Team
Surveillance/Tech Spec Review -	Screening Team
Matrix Development for LCO's -	Support Team

2. The procedures should identify: actions; persons responsible; acceptance criteria; documentation requirements; needed reviews of documents; distribution of documents/results to other teams; ultimate disposition of records.
3. Team procedures are reviewed by the Task Force Coordinator. Changes may be made by Team Leaders, with notification of change to Task Force Coordinator (no review prior to change).
4. Procedures will be controlled by assigned number and revision status. A single master list identifying approved revisions is maintained by the Task Force Coordinator.

APPENDIX D - 1

VICE PRESIDENT FOR NUCLEAR OPERATIONS (R B DEWITT)

Education

Bachelor of Science in Mechanical Engineering, Tri State University, Angola, Indiana

University of Michigan, Ann Arbor, Michigan (Post Graduate Work)

Western Michigan University, Kalamazoo, Michigan

Experience

1949-50: Junior Engineer, B C Cobb Steam-Electric Generating Plant, Consumers Power Company (510 MWe)

1950-52: Engineering Assistant, B C Cobb Plant, Consumers Power Company

1953: General Engineer, Consumers Power Company, General Office

1953-60: Plant Results Supervisor, B E Morrow Steam-Electric Generating Plant, Consumers Power Company (186 MWe)

1960: Senior General Engineer assigned to Enrico Fermi Nuclear Power Plant, Detroit Edison Company

1960-66: Assistant Plant Superintendent, Big Rock Point Nuclear Plant, Consumers Power Company

1966-68: Plant Superintendent, Big Rock Point Nuclear Plant, Consumers Power Company

1968-73: Superintendent of Midland Nuclear Power Plant, Consumers Power Company

1973-75: Superintendent of Palisades Nuclear Plant, Consumers Power Company

1975: Nuclear Production Administrator-Acting, Consumers Power Company

1975-79: Manager, Production-Nuclear, Consumers Power Company

1979 - Vice President for Nuclear Operations, Consumers Power Company
present

DIRECTOR - NUCLEAR ACTIVITIES (F W BUCKMAN)

Education

- 1962 - 1966: Bachelor of Science, University of Michigan
1966 - 1970: Doctorate (PhD) in Nuclear Engineering, Massachusetts Institute of Technology

Experience

- 1970 - 1972: Reactor Engineer, Consumers Power Company, General Office
1972: Senior Reactor Engineer, Consumers Power Company, General Office
1972 - 1974: Temporarily assigned to Project Management Corporation working on Liquid Metal-Cooled Fast Breeder Reactor (LMFBR) research
1974 - 1977: Nuclear Fuels Administrator, Consumers Power Company, Operating Services Department, General Office
1977 -
Present Director of Nuclear Activities, Consumers Power Company, General Office

Responsible for all nuclear activities required to support operation of Consumers Power's nuclear plants, including licensing, reactor physics, safety analysis, fuel specifications and fuel performance, and health physics.

APPENDIX D - 3

OPERATIONS SUPERINTENDENT (J P FLYNN)

Education

- 1964: US Navy Nuclear Power Training Program, Bainbridge, Maryland and S3G Prototype, West Milton, New York
- 1972: Bachelor of Science in Electrical Engineering, Purdue University, West Lafayette, Indiana
- 1972: Heart-Lung Resuscitation
- 1975: 16 hours QA Program Indoctrination, Quality Assurance Program-Nuclear
- 1976: 3 hours Transient Analysis - Supervisors
- 1977: 40 hours Managerial Economics; 16 hours Monetary Control/Budget; 3 hours Fire Training
- 1978: B&W NPP Op for Management; 8 hours Multi-Media First-Aid Training
- 1979: B&W NSSS (7 weeks); Mechanical Systems Training (11 weeks)

Experience

- 1964-68: US Navy - Electrician's Mate aboard USS John Adams SSBN 620. Qualified Shutdown Watch, Electric Plant Control Panel, Steam Plant Control Panel, Upper Level AMR #2, Auxiliary Electrician. Made eight FBM submarine patrols (PWR)
- 1972-74: Associate Engineer, Palisades Nuclear Plant. Assigned plant modifications and engineering projects. Shift test engineer during power escalation to 100% power. (PWR - CE)
- 1974-75: General Engineer, Palisades Nuclear Plant. Assigned plant modifications and engineering projects.
- 1975-76: Senior Engineer, Palisades Nuclear Plant. Assigned as project leader for a group of engineers performing plant modifications and engineering projects.
- 1976-77: Maintenance Superintendent, Big Rock Point Nuclear Plant (BWR - GE)
- 1977-78: Operations Superintendent, Big Rock Point Nuclear Plant (BWR - GE)
- 1978 - present: Operations Superintendent, Midland Nuclear Plant (BWR - PWR)

Associated Experience

Senior Reactor Operator License No SOP-2497 - Palisades Plant (PWR - CE)

GENERAL MANAGER - PALISADES (J G LEWIS)

Education

- 1953 - 1957: Bachelor of Science in Electrical Engineering, Michigan Technical University
- 1961: Computer Graduate Courses, University of Florida
- 1963: Nuclear Engineering Short Course, University of Michigan
- Various other short courses during nuclear plant training period

Experience

- 1957 - 1962: Experimental Test Engineer, Pratt Whitney Aircraft R&D Section
- 1963 - 1966: Computer Engineer, Big Rock Point Plant, Consumers Power Company
- 1967 - 1968: I&C Engineer, Big Rock Point Plant, Consumers Power Company
- 1969 - 1974: Technical Engineer, Palisades Plant, Consumers Power Company
- 1974 - 1975: Operations Superintendent, Palisades Plant, Consumers Power Company
- 1975 - 1979: Plant Superintendent, Palisades Plant, Consumers Power Company
-
- 1965: SRO License (NRC), Boiling Water Reactor, Big Rock Point Plant
- 1970: SRO License (NRC), Pressurized Water Reactor, Palisades Plant

SENIOR STAFF ENGINEER (K W BERRY)

Education

- 1961 - 1965: Bachelor of Science in Electrical Engineering, Ohio State University
- 1968: Graduate Courses in Nuclear Engineering, Ohio State University
- 1966 - 1967: Graduate Courses in Mathematics, Ohio State University
- 1974: Nuclear Power Preparatory Training, Palisades Plant, Consumers Power Company

Experience

- Three summers Part time employee at Ohio Valley Electrical Corporation Headquarters - Assistant to microwave telemetering equipment maintenance
- 1963 - 1969: Goodyear Atomic Corporation Gaseous Diffusion Plant Mass Spectrometer Laboratory - development and unusual maintenance
- 1969 - 1970: Associate Engineer, Palisades Plant, Consumers Power Company - assisted I&C Engineer in initial plant checkout of plant instruments
- 1970 - 1971: General Engineer, Palisades Plant, Consumers Power Company - Test Engineer during initial criticality
- 1971 - 1975: I&C Engineer, Palisades Plant, Consumers Power Company - Plant
- 1975 - 1979: Technical Superintendent, Palisades Plant, Consumers Power Company

NUCLEAR LICENSING ADMINISTRATOR (D P HOFFMAN)

Education

- 1962 - 1968: Bachelor of Science in Mechanical Engineering, University of Michigan
- 1968 - 1970: Master of Science in Mechanical Engineering, University of Michigan

Experience

- 1965 - 1967: Plant Engineer, Dow Chemical Company
- 1967 - 1970: Senior Reactor Operator, University of Michigan
- 1970 - 1975: Senior Engineer, Detroit Edison Company
- 1975 - 1977: Senior Engineer, Consumers Power Company, Operating Services Department, General Office
- 1977 - 1979: Assistant Nuclear Licensing Administrator, Nuclear Activities Department, Consumers Power Company, General Office

APPENDIX - 7

DIRECTOR OF QUALITY ASSURANCE (R B CHERBA)

Education

1959: Bachelor of Science in Electrical Engineering, University of Michigan

Experience

1963-66: Plant Engineer, Karn-Weadock Plants, Consumers Power Company

1966-68: Plant Engineer, Big Rock Point Nuclear Plant, Consumers Power Company

1968-70: Start-Up Engineer, Palisades Nuclear Plant, Consumers Power Company

1970-71: Test Coordinator/Plant Engineer, Palisades Nuclear Plant, Consumers Power Company

1971-75: Region Area Superintendent, Traverse City, Consumers Power Company

1975-76: Nuclear Operations Supervisor, General Office, Consumers Power Company

1976-79: General Superintendent, Production-Nuclear, General Office, Consumers Power Company

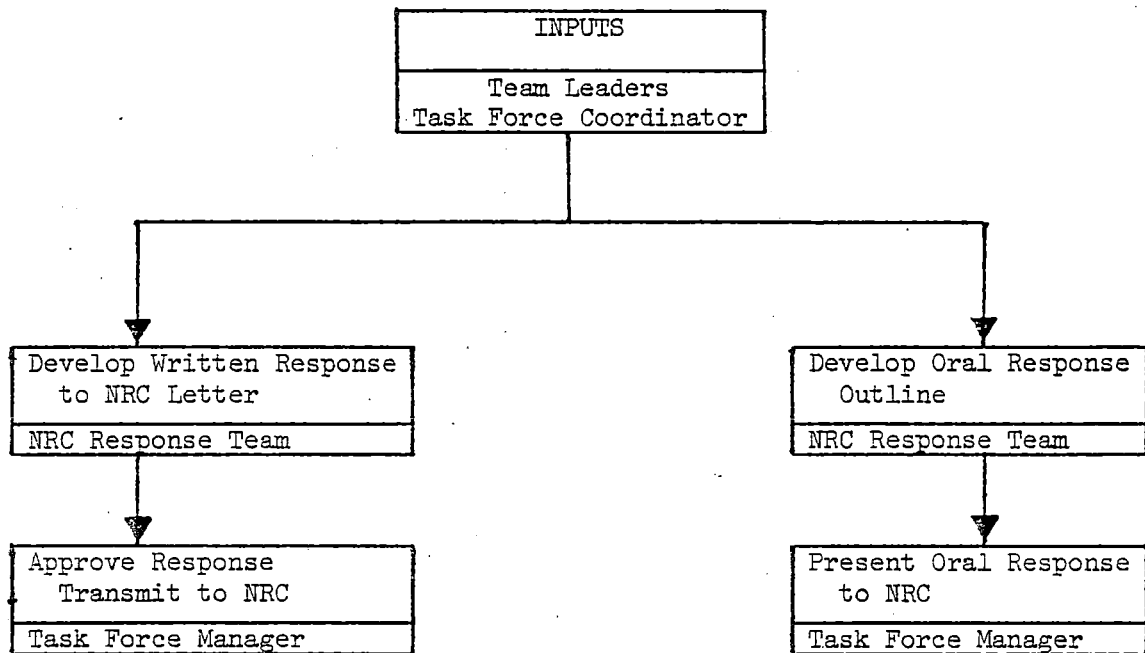
1979 - Director of Quality Assurance-Nuclear Operations, General Office,
present Consumers Power Company

MPR ASSOCIATES, INC

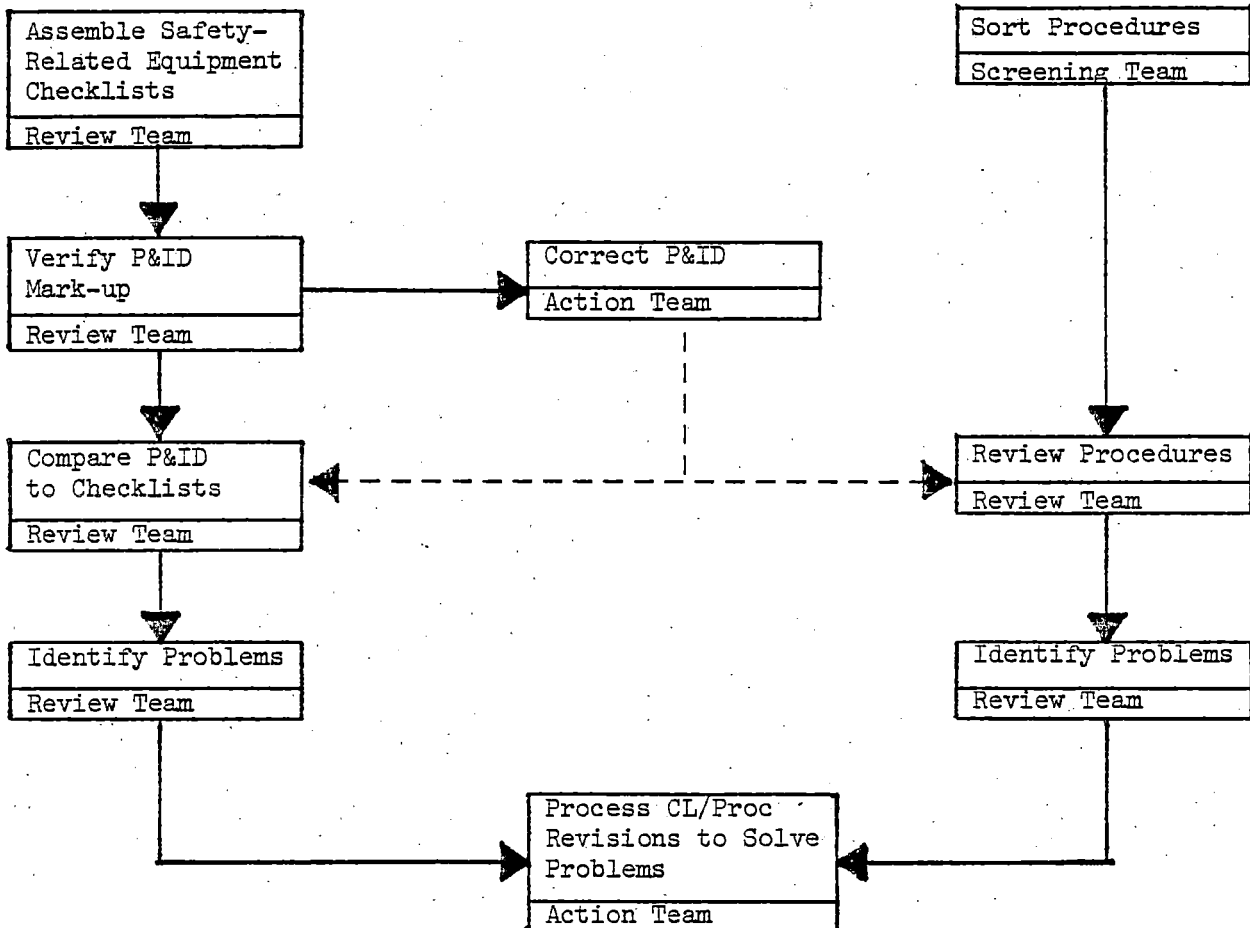
Three engineers, Willard Grant, Gordon Anderson and Philip Hildebrandt, are doing an independent check of the Palisades Nuclear Plant mechanical penetrations and isolation valves.

MPR Associates, Inc provides engineering services to industry and government with particular emphasis on energy and power production. MPR has extensive background in power plants and other fields requiring high technical standards.

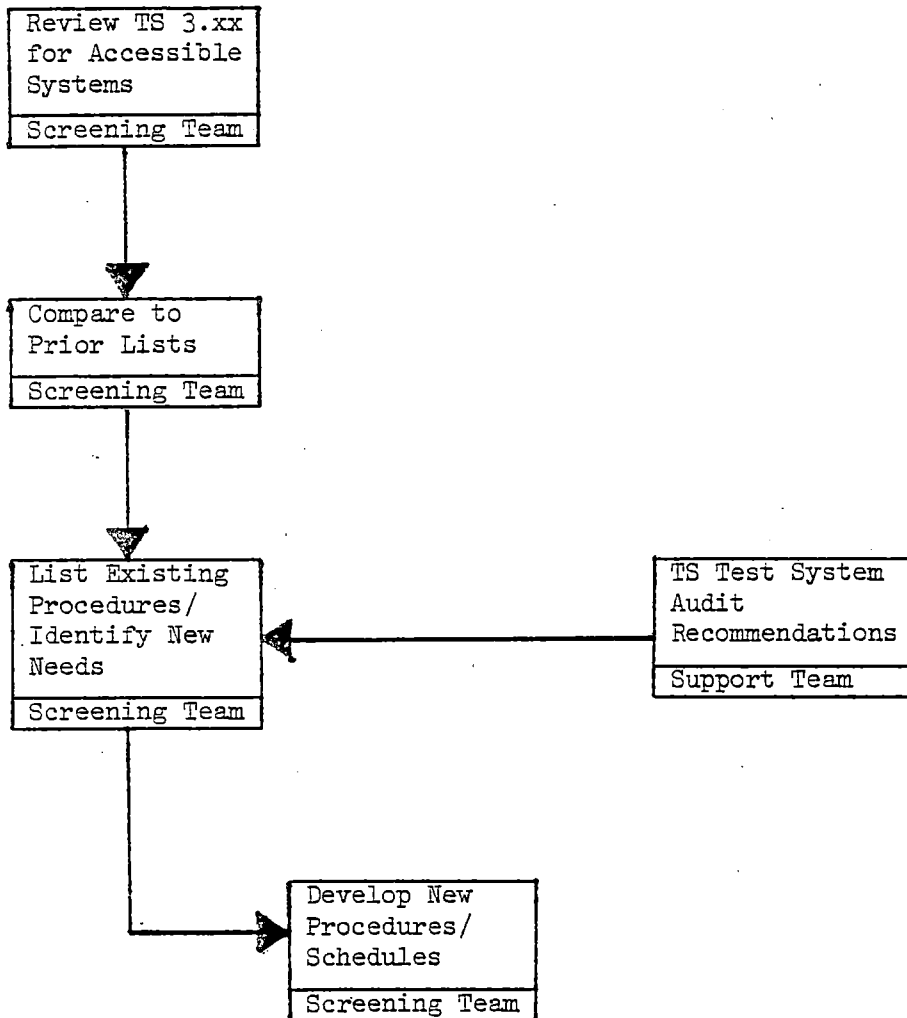
Response to NRC



Checklist & Procedure Review



Surveillance Procedures



Equipment/LCO Matrix

Develop Matrix
Support Team