



**Consumers
Power
Company**

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June 13, 1978

Director, Nuclear Reactor Regulation
Att: Mr Dennis L Ziemann, Chief
Operating Reactors Branch No 2
US Nuclear Regulatory Commission
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 - PALISADES
PLANT - UPDATE OF INSERVICE INSPECTION
(ISI) PROGRAM SUBMITTALS

Attachments to this letter supercede previous submittals dated March 1, 1977, May 3, 1977, October 3, 1977 and January 13, 1978 related to the Palisades Plant proposed Technical Specifications and Inservice Inspection Program revised to meet the requirements of 10 CFR Part 50, Section 50.55a.

The attachments are as follows:

- I. Proposed Technical Specifications changes. (Included for completeness, but not changed from previous submittals except for editorial corrections.)
- II. Proposed Request for Relief From Provisions of 1974 ASME B&PV Code Section XI With Addenda Through Summer 1975.
- III. Proposed Request for Exemptions of Inservice Testing of Pumps and Valves.
- IV. Supplemental Information on Code Update and Code Implementation.
- V. Comparison of IWB-2600 and IS-261.
- VI. Inservice Inspection 40-Year Plan and Pump and Valve Program. (This attachment also includes the Pump and Valve 20-Month Update with appropriate relief requests as required by 10 CFR 50.55a(g).

The following additional information was requested during telephone conversations with Messers R Silver and G Walton of the NRC staff.

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1. Reference: Letter to Albert Schwencer from D P Hoffman dated March 1, 1977.
Subject: Palisades Plant - Technical Specifications Changes - Inservice Inspection and Testing Requirements, Page II-8, Item 10.

The staff requested information as to the number of dissimilar metal nozzle-to-safe end welds on the pressurizer which have been examined previously, and how many will be examined in this 10-year interval. Table 1 delineates this information concerning the 14 nozzle-to-safe end welds.

TABLE 1

Pressurizer Dissimilar Metal Welds
Nozzle-to-Safe Ends

<u>Weld Identification</u>	<u>Completed This Interval</u>	<u>Scheduled This Interval</u>
PCS-12-PSL-1H1-1		X
PCS-6-PRS-1A1-1		X
PCS-6-PRS-1B1-1		
PCS-6-PRS-1C1-1		X
PCS-4-PRS-1P1-1	X	
PCS-4-PSS-1P1-21	X	
8 Level Indicators		

Note 1: There are 4 level nozzles in the upper head and 4 level nozzles in the lower head. Each level nozzle is a 1" nozzle fabricated from ASTM-A-508-64 C1 2 alloy forging and fitted with an SA-182, Type F-316 alloy end. These 1" nozzles are exempt from volumetric examination by Section XI ASME B&PV Code. These nozzles shall be examined in accordance with IWA-5000 and IWB-5000 (hydros and leak tests).

Note 2: PCS-6-PRS-1B1-1 was not scheduled to be examined this interval due to a typographical error in the tables of the 40-year master plan. This error will be corrected and this weld will be examined this interval.

Note 3: All of the 6 enumerated welds above are also scheduled for volumetric examination during each of the 3 remaining intervals.

2. Reference: March 1, 1977 letter as above, Page II-9, Item 13.

The staff requested information as to whether we had baseline data on B3.1 steam generator welds. The following summarizes this information:

- a. There are 17 B3.1 welds on each steam generator.
- b. All 34 B3.1 welds are scheduled to be examined once each interval.

- c. 9 of the 34 welds were examined during the first third of the present 10-year interval.
 - d. 10 welds were examined during preservice inspection.
3. Reference: March 1, 1977 letter as above, Page II-4.

The staff requested further information explaining why the listed welds were inaccessible for UT. The NRC further requested a determination as to what method of testing would be substituted for the UT. Table 2 clarifies the previously submitted information. The proposed substitute examinations have not changed.

TABLE 2
Inaccessible Welds

<u>Weld Identification</u>	<u>Basis for Relief Request</u>
ESS-24-SIS-SH1-201, 202, 203, 204	Encased in steel plate missile shield.
ESS-24-SIS-SH2-201, 202, 203, 204	Encased in steel plate missile shield.
ESS-14-CSS-1PB-210, 211	Welds covered by pipe hanger strapping.
ESS-10-CSS-1PB-224, 225	Welds covered by pipe hanger strapping.
ESS-14-CSS-1PC-213	Weld covered by pipe hanger strapping.
ESS-14-SDC-LPD-213	Weld covered by pipe hanger strapping.
*ESS-14-SCS-2H1-209	Weld encased in containment penetration structure.
**ESS-8-CSS-SLA-224	Weld encased in containment penetration structure.
***ESS-8-CSS-SLB-224	Weld encased in containment penetration structure.
ESS-6-SIS-1HP-211	Weld encased in containment penetration structure.
ESS-6-SIS-2HP-219	Weld encased in containment penetration structure.
RWS-6-CWR-SL4-201	Weld encased in containment penetration structure.

*Typographical error previously listed this weld as: ESS-14-SCS-2H1-204.

**Typographical error previously listed this weld as: ESS-6-CSS-SLA-224.

***Typographical error previously listed this weld as: ESS-6-CSS-SLB-224.

NOTE: All of the above welds are inaccessible for NDT examination. These welds will be hydro/leak test examined in accordance with IWC-5000, Section XI.

4. Reference: January 13, 1978 letter with subject and addressee the same as your March 1, 1977 letter.

The staff requested clarification of our code usage for ISI as stated in Paragraph I of the CP Co Code Applicability Statement No 1, specifically addressing vessels. The following should clarify the code usage:

- 4
- a. Vessels will be examined in accordance with Section V and Section XI, ASME B&PV Code 1974 Edition With Addenda Through Summer 1975 (74S75). All vessel UT exams will be conducted in accordance with Appendix I, Section XI, 74S75 Edition.
 - b. Piping will be examined in accordance with Section XI and Section V, ASME B&PV Code, 74S75 Edition.
 - c. CP Co Code Applicability Statement No 1, Paragraphs II and III supplement Section V and Section XI with respect to both piping and vessels.

Guidance was taken from Appendix III, Section XI, ASME B&PV Code, 74W75 Edition when Paragraph IV (CP Co Code Applicability Statement No 1) was written to supplement Section V, ASME B&PV Code for piping examinations. The CP Co Code Applicability Statement No 1 was revised and is included as part of Attachment II.

5. Reference: January 13, 1978 letter as above.

The staff requested clarification of the code case cited in the CP Co Code Applicability Statement No 1 concerning the waiver of Ultrasonic Transfer Method. The following clarifies this issue:

- a. A typographical error listed the code case as 1968. This should read 1698.
 - b. CP Co Code Applicability Statement No 2, subject: UT Calibration Standards, addresses the acoustic similarity limitations imposed by the NRC. The NRC questions concerning acoustic similarity generated a review of the references statement which revealed an administrative error. This error has been corrected and a revised copy of Statement No 2 is included as part of Attachment II.
6. Reference: Letter to Albert Schwencer from D P Hoffman dated May 3, 1977. Subject: Palisades Plant, Inservice Inspection Program, Attachment 1, Page 1.

The staff noted that the pressurizer was not included in the scope of the 40-year plan for Class 1 system.

The omission of the pressurizer as a Class 1 vessel in the referenced letter was an oversight. The pressurizer is an integral part of the Class 1 system and has always been in the 40-year plan. The pressurizer will be examined in accordance with Section XI, ASME B&PV, 74S75 Edition, Table IWB-2600, Items B2.1 to B2.11 except where relief is granted.

7. Reference: May 3, 1977 letter as above.

The staff requested clarification of the May 3, 1977 submittal wherein Consumers Power Company referenced utilization of Appendix III, 74W75 Code. The following response was provided.

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Originally, Consumers Power Company had intended to fully utilize Appendix III as this portion of the code explicitly deals with UT examinations of piping. Appendix III procedural controls greatly increased the technical adequacy of the examination as compared to examinations conducted to Section V of the code. However, Southwest Research Institute took exception to Appendix III. As a result, a compromise was achieved with SWRI, the results of which are the Consumers Power Code Applicability Statements No 1 and No 2.

The staff felt that since Consumers Power had submitted the above-mentioned statements, specific reference to Appendix III was no longer required provided that relief was requested allowing the use of the 100% DAC Reporting/Evaluating level. The attachments provide the necessary updates.

This submittal is intended to address any outstanding NRC staff concerns related to the Palisades Plant proposed Technical Specifications changes and Inservice Inspection Program to meet requirements of 10 CFR 50.55a.

Edith McKnight for

David P Hoffman
Assistant Nuclear Licensing Administrator

CC: JGKeppler, USNRC

ATTACHMENT I

Proposed Technical Specifications Change

Sections 4.3, 4.8 and 4.9

Tables 4.2.2 and 4.3.1

Palisades Technical Specifications

Docket 50-255

License DPR-20

TABLE 4.2.2

MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

	<u>Test</u>	<u>Frequency</u>	<u>FSAR Section Reference</u>
1.	Control Rods	Drop Times of All Full-Length Rods	Each Refueling Shutdown 7.4.1.3
2.	Control Rods	Partial Movement of All Rods (Minimum of 6 In)	Every Two Weeks 7.4.1.3
3.	Pressurizer Safety Valves	Set Point	As Required by Spec 4.3c 7.3.7
4.	Main Steam Safety Valves	Set Point	As Required by Spec 4.3c 4.3.4
5.	Refueling System Interlocks	Functioning	Prior to Refueling Operations 9.11.3
6.	Service Water System Valve Actuation (SIS-CHP)	Functioning	As Required by Spec 4.3c 9.1.2
7.	Fire Protection Pumps and Power Supply	Functioning	Monthly 9.6.2
8.	Primary System Leakage	Evaluate	Daily 4 Amend 15, Ques 4.3.7
9.	Diesel Fuel Supply	Fuel Inventory	Daily 8.4.1
10.	Critical Headers Service Water System	150 Psig Hydrostatic Test	Every Five Years 9.1.2
11.	Charcoal and Hi Efficiency Filters for Control Room, Fuel Storage Building and Containment Purge System (Containment Post-Accident Filter)	Charcoal Filters Checked \geq 99% Efficiency per Freon 112 test (ORNL) - HEPA Filters checked \geq 99% Efficiency per ANSI NL01.1-1972	Each Refueling Shutdown and at Any Time Work on Filters Could Alter Their Integrity Amend 14, Ques 14.19-1, 6.5.1, 9.8.3

4.3 SYSTEMS SURVEILLANCE

APPLICABILITY

Applies to preoperational and inservice structural surveillance of the reactor vessel and other Class 1, Class 2 and Class 3 system components.

OBJECTIVE

To insure the integrity of the Class 1, Class 2 and Class 3 piping systems and components.

SPECIFICATIONS

- a. Prior to initial plant operation, an ultrasonic survey shall be made of reactor vessel shell welds, vessel nozzles, vessel flange welds, piping system butt welds and major welds on the pressurizer and steam generators to establish preoperational system integrity and basic conditions for future testing.
- b. The structural integrity of ASME Class 1, 2 and 3 components, as determined by 10 CFR 50, Section 50.55a and Reg Guide 1.26, shall be verified and maintained at an acceptable level in accordance with Section XI of the ASME B&PV Code with applicable addenda as required by 10 CFR 50, Section 50.55a(g), except where specific relief has been granted by the NRC, and where provisions of Section 4.12 take precedence.
- c. Inservice testing of ASME Class 1, 2 and 3 pumps and valves, as determined by 10 CFR 50, Section 50.55a and Reg Guide 1.26 shall be performed in accordance with Section XI of the ASME B&PV Code with applicable addenda as required by 10 CFR 50, Section 50.55a(g), except where specific relief has been granted by the NRC.
- d. Sufficient records of each inspection shall be kept to allow comparison and evaluation of future tests.
- e. The Inservice Inspection program shall be reevaluated as required by 10 CFR 50, Section 50.55a(g)(5) to consider incorporation of new

inspection techniques that have been proven practical, and the conclusions of the evaluation shall be used as appropriate to update the inspection program.

- f. Surveillance of the regenerative heat exchanger and primary coolant pump flywheels shall be performed as indicated in Table 4.3.2.
- g. A surveillance program to monitor radiation induced changes in the mechanical and impact properties of the reactor vessel materials shall be maintained as described in Section 4.5.3 of the FSAR. The specimen removal schedule shall be as indicated in Table 4.3.3.

BASIS

The inspection program specified places major emphasis on the areas of highest stress concentration as determined by general design evaluation and experience with similar systems.⁽¹⁾ In addition, that portion of the reactor vessel shell welds which will be subjected to a fast neutron dose sufficient to change ductility properties will be inspected. The inspections will rely primarily on ultrasonic methods utilizing up-to-date analyzing equipment and trained personnel. Preoperational inspections will establish base conditions by determining indications that might occur from geometrical or metallurgical sources and from discontinuities in weldments or plates which might cause undue concern on a postservice inspection. To the extent applicable, based upon the existing design and construction of the plant, the requirements of Section XI of the Code shall be complied with. Significant exceptions are detailed in the requests for relief which have received NRC approval and are contained in the Class 1, Class 2 and Class 3 Long-Term Inspection Plans.

REACTOR VESSEL SURVEILLANCE SPECIMENS

Table 4.3.3 is consistent with the surveillance program as presented in the FSAR.⁽²⁾ However, the withdrawal schedule has been modified to reflect the slightly different wall fluence values resulting from removal of the thermal shield.

REFERENCES

- (1) FSAR, Section 4.5.6.
- (2) FSAR, Section 4.5.3.

TABLE 4.3.1

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4.8 MAIN STEAM ISOLATION VALVES

APPLICABILITY

Applies to periodic testing of the main steam isolation valves.

OBJECTIVE

To verify the ability of the main steam isolation valves to close upon signal.

SPECIFICATIONS

The operation of the main steam isolation valves shall be tested as required by Specification 4.3c to demonstrate a closure time of five seconds or less under no-flow conditions.

BASIS

The main steam isolation valves serve to limit an excessive primary coolant system cooldown rate and resultant reactivity insertion following a main steam break incident. Their ability to close upon signal should be verified on a regular basis.

REFERENCES

FSAR, Sections 7.2.3.8 and 14.14.

4.9 AUXILIARY FEED-WATER SYSTEM

APPLICABILITY

Applies to periodic testing requirements of the turbine-driven and motor-driven auxiliary feed-water pumps.

OBJECTIVE

To verify the operability of the auxiliary feed-water system and its ability to respond properly when required.

SPECIFICATIONS

The operability of the motor- and steam-driven auxiliary feed pumps, and discharge valves CV-0736A and CV-0737A, shall be confirmed as required by Specification 4.3c.

BASIS

The periodic testing of the auxiliary feed-water pumps will verify their operability by recirculating water to the condensate storage tank and simultaneously partially opening, one at a time, the discharge valves (CV-0736A and CV-0737A) to confirm a flow path to the steam generators.

Proper functioning of the steam turbine admission valve and the feed-water pumps' start will demonstrate the integrity of the steam-driven pumps. Verification of correct operation will be made both from instrumentation within the main control room and direct visual observation of the pumps.

REFERENCES

FSAR, Section 9.7.

ATTACHMENT II

Proposed Request for Relief From

Provisions of 1974 ASME B&PV Code Section XI

With Addenda Through Summer 1975

Pursuant to 10 CFR 50, Section 50.55a(g)(6)(i)

The following table delineates those areas of the 1974 ASME B&PV Code Section XI with Addenda through Summer 1975 which cannot be implemented at the Palisades Nuclear Plant. Inasmuch as the revised plant Technical Specifications will incorporate by reference the 1974 ASME Code with Addenda through Summer 1975, this submittal represents those areas for which it is requested that the NRC grant relief from the provisions of the 1974 ASME B&PV Code Section XI with Addenda through Summer 1975.

The areas requiring relief are identified by the item numbers listed in Table IWB-2600 of the Summer '75 Addenda.

The notes following the table provide information concerning the basis for each relief request and concerning the implementation of the reference code.

RELIEF REQUESTS
PALISADE NUCLEAR PLANT

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Area of Relief	Sect XI Category	Component	Function	Safety Class	Relief Requested	Testing Substituted	Implementation
B1.2	B-B	Vessel Closure Head	Primary Pressure Boundary	1	Meridional & Circum. Seam Welds Generally Inaccessible for Volumetric Exam	a. Vessel Hydros b. Vessel Coupons c. Bl.1, Bl.2 Bl.3 Testing	a.&b. Tech Specs c. 40-Year Plan
B1.2	B-B	Vessel Bottom Head	Primary Pressure Boundary	1	Meridional & Circum. Seam Welds Generally Inaccessible for Volumetric Exam	a. Vessel Hydros b. Vessel Coupons c. Bl.1, Bl.2, Bl.3 Testing	a.&b. Tech Specs c. 40-Year Plan
B1.3	B-C	Vessel to Flange	Primary Pressure Boundary	1	Mechanized UT To Be Performed Once per Interval Coincident to Core Barrel Removal	a. Vessel Hydros b. Bl.3 Testing	a. Tech Specs b. 40-Year Plan
B1.4	B-D	Nozzle to Vessel	Primary Pressure Boundary	1	Core Barrel To Be Removed Once Each 10-Year Interval	a. Vessel Hydros b. Bl.4, Bl.15 Testing	a. Tech Specs b. 40-Year Plan
B1.4	B-D	Nozzle Inside Radius	Primary Pressure Boundary	1	Core Barrel To Be Removed Once Each 10-Year Interval	a. Vessel Hydros b. Bl.4, Bl.15 Testing	a. Tech Specs b. 40-Year Plan
B1.6	B-F	Vessel Safe-End Welds	Primary Pressure Boundary	1	Not a Dissimilar Metal Weld	Welds Covered as B4.5, B-J	40-Year Plan
B1.14	B-I-1	Vessel Cladding	Primary Pressure Boundary	1	Core Barrel To Be Removed Once Each 10-Year Interval	a. Vessel Hydros b. Bl.13, Bl.14, Bl.15 Testing	a. Tech Specs b. 40-Year Plan
B3.3	B-F	Steam Generator Safe-End Welds	Primary Pressure Boundary	1	Not a Dissimilar Metal Weld	Welds Covered as B4.5, B-J	40-Year Plan
B4.1	B-F	Safe-End - To Pipe	Primary Pressure Boundary	1	Record at 50%; Evaluate at 100% DAC	None Examination Performed as Scheduled	40-Year Plan
B4.5	B-J	Circum. and Long Pipe Welds	Primary Pressure Boundary	1	Record at 50%; Evaluate at 100% DAC	None - Examination Performed as Scheduled	40-Year Plan
B4.5	B-J	PCS-42-RCL-1HL-2LD, 3LU, 3, 3LD PCS-42-RCL-2HL-2LD, 3LU, 3, 3LD	Primary Pressure Boundary	1	Inaccessible for UT	a. Hydros b. Remaining B-J Welds in System	a. Tech Specs b. 40-Year Plan
B4.6	B-J	Branch Connection >6"	Primary Pressure Boundary	1	Record at 50%; Evaluate at 100% DAC	None - Examination Performed as Scheduled	40-Year Plan
B4.9	B-J	Integrally Welded Supports	Primary Pressure Boundary	1	Record at 50%; Evaluate at 100% DAC	None - Examination Performed as Scheduled	40-Year Plan

<u>Area of Relief</u>	<u>Sect XI Category</u>	<u>Component</u>	<u>Function</u>	<u>Safety Class</u>	<u>Relief Requested</u>	<u>Testing Substituted</u>	<u>Implementation</u>
C2.1	C-G	ESS-24-SIS-SH1-201, 202, 203, 204	Pressure Boundary	2	Inaccessible for UT	a. Hydro b. C2.1 Testing on Remainder of System	a.&b. 40-Year Plan
C2.1	C-G	ESS-24-SIS-SH2-201, 202, 203, 204	Pressure Boundary	2	Inaccessible for UT	a. Hydro b. C2.1 Testing on Remainder of System	a.&b. 40-Year Plan
C2.1	C-G	ESS-14-CSS-1PB-210, 211	Pressure Boundary	2	Inaccessible for UT	a. Hydro b. C2.1 Testing on Remainder of System	a.&b. 40-Year Plan
C2.1	C-G	ESS-10-CSS-1PB-224, 225	Pressure Boundary	2	Inaccessible for UT	a. Hydro b. C2.1 Testing on Remainder of System	a.&b. 40-Year Plan
C2.1	C-G	ESS-14-CSS-1PC 213	Pressure Boundary	2	Inaccessible for UT	a. Hydro b. C2.1 Testing on Remainder of System	a.&b. 40-Year Plan
C2.1	C-F	ESS-14-SDC-LFD-213	Pressure Boundary	2	Inaccessible for UT	a. Hydro b. C2.1 Testing on Remainder of System	a.&b. 40-Year Plan
C2.1	C-G	ESS-14-SCS-2H1-209	Pressure Boundary	2	Inaccessible for UT	a. Hydro b. C2.1 Testing on Remainder of System	a.&b. 40-Year Plan
C2.1	C-G	ESS-8-CSS-SLA-224	Pressure Boundary	2	Inaccessible for UT	a. Hydro b. C2.1 Testing on Remainder of System	a.&b. 40-Year Plan
C2.1	C-G	ESS-8-CSS-SLB-224	Pressure Boundary	2	Inaccessible for UT	a. Hydro b. C2.1 Testing on Remainder of System	a.&b. 40-Year Plan
C2.1	C-G	ESS-6-SIS-LHP-211	Pressure Boundary	2	Inaccessible for UT	a. Hydro b. C2.1 Testing on Remainder of System	a.&b. 40-Year Plan

Area of Relief	Sect XI Category	Component	Function	Safety Class	Relief Requested	Testing Substituted	Implementation
C2.1	C-G	ESS-6-SIS-2HP-219	Pressure Boundary	2	Inaccessible for UT	a. Hydro b. C2.1 Testing on Remainder of System	a.&b. 40-Year Plan
C2.1	C-G	RWS-6-CWR-SL4-201	Pressure Boundary	2	Inaccessible for UT	a. Hydro b. C2.1 Testing on Remainder of System	a.&b. 40-Year Plan
C2.1	C-F	ESS-12-SIS-1LP-232	Pressure Boundary	2	Inaccessible for UT	a. Hydro b. C2.1 Testing on Remainder of System	a.&b. 40-Year Plan
C2.1	C-F	SFP-8-CPL-DLI-207	Pressure Boundary	2	Inaccessible for UT	a. Hydro b. C2.1 Testing on Remainder of System	a.&b. 40-Year Plan
C2.1	C-F	SFP-6-CPL-SLI-207	Pressure Boundary	2	Inaccessible for UT	a. Hydro b. C2.1 Testing on Remainder of System	a.&b. 40-Year Plan

Notes on Relief Requests

1. Item Bl.2 (Long, Cir, and Meridional welds in Rx Vessel heads)

BASIS STATEMENT

The dollar plates weld in the closure head is inaccessible for volumetric examination due to control rod guide tube constraints. Meridional welds in the closure head are partially accessible for volumetric examination.

Determination of 10% weld length accessibility will be made during the next refueling outage. An attempt will be made to volumetrically inspect the meridional and circumferential seam welds in the bottom head during the next refueling outage in which mechanized inspection is performed on the Rx vessel.

REMARKS

See CE Dwg E-232-139-1.

IMPLEMENTATION

Meridional welds in the closure and bottom heads and circumferential welds in the bottom head may be accessible for volumetric examinations due to new inspection techniques.

2. Item Bl.3 (Vessel to flange weld)

BASIS STATEMENT

Mechanized UT Examinations to be deferred to end of interval.

REMARKS

Deferment to the end of 10 year interval will allow all Mechanized UT Examinations to be performed during the same outage when core barrel is removed. Intent of ASME Section XI Code Committee is to require removal of core barrel only once every ten years, as evidenced by the 74W75 Addenda.

IMPLEMENTATION

Relief requested to defer Item Bl.3 examinations to the end of interval.

3. Item Bl.4 (Nozzle to Vessel Welds)

BASIS STATEMENT

Complete Mechanized UT Examinations of Rx vessel nozzles can be accomplished only when core barrel is removed.

REMARKS

Core barrel is scheduled to be removed only at end of each interval. All Mechanized UT Examinations to be accomplished when core barrel is removed. Performance of Rx vessel nozzle examinations at the end of the interval is consistent with the former 10 year plan and with the intent of the Section XI Code Committee, as expressed in Item Bl.3 above.

IMPLEMENTATION

Relief requested to defer Item Bl.4 examinations to the end of the interval.

4. Item Bl.6 (Nozzle-to-safe-end-welds)

BASIS STATEMENT

The transition pieces between the carbon steel nozzles and the carbon steel piping are also carbon steel and thus not dissimilar metal safe ends. The nozzle-to-safe-end-welds are therefore classed as B4.5, B-J welds rather than Bl.6, B-F welds.

Although it is recognized that the nozzle-to-safe-end areas will be subjected to the higher stress levels associated with terminal ends and wall thickness transitions, examination other than mechanized UT from the inside of the nozzle is not possible due to accessibility constraints.

REMARKS

See CE Dwg E-232-119-11. The VT has been dropped from the Code.

IMPLEMENTATION

Relief requested as before.

5. Item B1.14 (Vessel cladding)

BASIS STATEMENT

Cladding patch examination can be accomplished only when core barrel is removed.

REMARKS

Core barrel is scheduled to be removed only at end of each interval. Remote visual examination to be accomplished when core barrel is removed.

Supplementary examination during interval to include remote visual examination of Vessel Interior (Item B1.15), Closure Head Cladding (Item B1.13), and if possible clad surface of outlet nozzles.

IMPLEMENTATION

Relief requested to defer Item B1.14 examinations to end of interval.

6. Item B3.3 (Nozzle-to-safe-ends)

BASIS STATEMENT

See B1.6.

REMARKS

See B1.6.

IMPLEMENTATION

Relief requested as before.

7. Items B4.1, B4.5, B4.6, B4.9 (Pressure retaining piping)

BASIS STATEMENT

Section V, ASME B&PV Code 74S75 Edition requires defect evaluation, (from UT Examinations) at the 20% DAC level. Newer technology has shown that numerous nonrelevant and geometric reflectors are detected at the 20% DAC level. More recent codes (ie. Section XI, ASME B&PV, 74W75 Edition with Appendix III) allows use of notch reflectors and 100% DAC evaluation level.

REMARKS

CPCo will record all UT indications at the 50% DAC level and evaluate all UT indications at the 100% DAC level for piping (see CPCo Applicability Statements Nos 1 and 2, which are attached). CPCo further intends to utilize hole type reflectors (where possible) rather than notch type reflectors thereby increasing sensitivity by a factor of about two.

IMPLEMENTATION

Relief requested allowing use of 100% DAC evaluation level in lieu of 20% DAC evaluation level for UT indications.

8. Item B4.5 (Pressure retaining piping)

BASIS STATEMENT

Welds PCS-42-RCL-1H1-2LD, 3LU, 3, 3LD, and PCS-42-RCL-2H1-2LD, 3LU, 3, 3LD are located inside the cement reactor shield and are inaccessible for UT.

REMARKS

The area between the last known weld (at the elbow entrance to the steam generator) and the reactor shield was visually examined; no welds were apparent in this region. Therefore, it is concluded that the welds are buried inside the reactor shield.

IMPLEMENTATION

Relief requested to allow those welds to be examined solely in accordance with IWA/IWB-5000.

9. Item C2.1 (Pressure retaining piping)

BASIS STATEMENT

Welds encased in steel plate missile shield; welds inaccessible for NDT Examination.

REMARKS

Basis statement applicable to the following welds:

ESS-24-SIS-SH1-201, 202, 203, 204;
ESS-24-SIS-SH2-201, 202, 203, 204.

IMPLEMENTATION

Relief requested to examine above welds in a Hydro/Leak Test.

10. Item C2.1 (Pressure retaining piping)

BASIS STATEMENT

Welds covered by pipe hanger strapping; welds inaccessible for NDT Examination.

REMARKS

Basis statement applicable to the following:

ESS-14-CSS-1PB-210, 211
ESS-10-CSS-1PB-224, 225
ESS-14-CSS-1PC-213
ESS-14-SDC-LPD-213

IMPLEMENTATION

Relief requested to examine the above welds via Hydro/Leak Test.

11. Item C2.1 (Pressure retaining piping)

BASIS STATEMENT

Welds encased in containment penetration structure. Welds are inaccessible for NDT Examination.

REMARKS

Basis Statement applicable to the following welds:

ESS-14-SCS-2H1-209

ESS-12-SIS-1LP-232

ESS-8-CSS-SLA-224

SFP-3-CPL-DLI-207

ESS-8-CSS-SLB-224

SFP-6-CPL-SLI-207

ESS-6-SIS-1HP-211

ESS-6-SIS-2HP-219

RWS-6-CWR-SLA-201

IMPLEMENTATION

As above.

Addenda
To
ATTACHMENT II
Concerning
CP Co Code Applicability Statements

PALISADES CODE USE FOR INTERVALTHIRD 10/31/76 TO 2/28/80

CONSUMERS POWER COMPANY CODE APPLICABILITY STATEMENT NO 1

SUBJECT: PIPING AND VESSEL EXAMINATIONS

- I. The basic requirements for piping and vessel examinations shall be in accordance with Section V, 1974 Edition of the ASME Boiler and Pressure Vessel Code with addenda through Summer 1975 as referenced in Section XI, 1974 Edition of the ASME Code with addenda through Summer 1975. Guidance was taken from Section XI, Appendix III, 1974 Edition of the ASME Code with addenda through Winter 1975 for piping examinations.
- II. The Section V requirements should be modified by the application of:
 - A. Code Case 1698 - Waiver of Ultrasonic Transfer Method
 - B. Code Case 1705 - Ultrasonic Examination - Calibration Block Tolerance.
- III. The requirements of Paragraph T-511 of Article 5 of Section V will be modified as follows:
 - A. A pulse-echo type ultrasonic flaw indication instrument shall be used.
 - B. The instrument shall be equipped with a gain control calibrated in units of 2 dB or less.
- IV. The ultrasonic examinations of piping components shall have the additional requirements as follows:
 - A. Ultrasonic examinations shall be performed in accordance with a written procedure which shall include the following information:
 - 1. Weld type and configuration including thickness dimensions, material, and product form (casting, forging, etc).
 - 2. Surface or surfaces from which the examinations shall be the performed.
 - 3. Surface condition.
 - 4. The couplant used in the examination shall be the same as used in the calibration.
 - 5. The examination technique (straight beam, angle, beam, contact, and/or immersion) shall be specified.

6. The angles and mode or modes of wave propagation in the material shall be specified.
 7. The type, frequency, and transducer sizes shall be specified.
 8. Special search units, wedges, shoes, or saddles if used shall be specified.
 9. The type and length of search unit cables shall be specified.
 10. The ultrasonic instrument type shall be specified.
 11. A description of the method of calibration shall be specified.
 12. The direction and extent of the scanning shall be specified.
 13. Data to be recorded and the method of recording in either automatic or manual mode shall be specified.
 14. The use of the automatic alarm and recording equipment, or both, if used shall be specified.
 15. Any rotating, revolving, or scanning mechanisms if used shall be specified.
 16. Personnel qualification requirements shall be specified.
 17. The procedure shall be approved as required by Paragraph IWA-2120 of Section XI.
- B. Instrument screen height linearity and amplitude control linearity shall be in accordance with established procedures and quality assurance requirements.
- C. Pipe marking identification shall be in accordance with CP Co's Master Plan.
- D. Calibration shall be checked by verifying the instrument sensitivity and sweep range calibration at the start and finish of each examination, with any change in examination personnel, and at least every 4 hours during the examination.
- E. Calibration data shall include the following information:
1. Calibration sheet identification and date
 2. Examination personnel

3. Examination procedure number and revision.
4. Basic calibration block identity.
5. Ultrasonic instrument identity and serial number.
6. Beam angle, couplant used, mode of wave propagation, and material examined.
7. Orientation of search unit with respect to the pipe longitudinal or circumferential direction.
8. Search unit identity, frequency, size, and manufacturer's serial number.
9. Special search units, wedges, wedge type, and saddle identity if used.
10. Search unit cable type and length.
11. Clock time of the initial calibration and all subsequent calibration checks.
12. Amplitude and sweep readings obtained from calibration reflectors.

F. Examination data sheets shall include at least the following information:

1. Data sheet identity number and date.
2. Examination personnel.
3. Examination procedure and revision.
4. Applicable calibration sheet identity number.
5. Identification and location of the weld or volume scanned.
6. Surface or position from which the examination is conducted.
7. Record of indications or statement that no recordable indications were observed.

G. All ultrasonic reflectors producing a response 50% or greater of the reference level shall be recorded on the appropriate Examination Record.

All ultrasonic reflectors 100% or greater of the reference level in piping, shall be investigated to determine the shape, size, identity, and location of the reflector and reported to Consumers Power.

All ultrasonic reflectors 50% or greater of the reference level in vessels shall be investigated to determine the shape, size, identity, and location of the reflector and reported to Consumers Power.

PALISADES CODE USE FOR INTERVAL

THIRD 10/31/76 TO 2/28/80

CONSUMERS POWER COMPANY CODE APPLICABILITY STATEMENT NO 2

SUBJECT: UT CALIBRATION STANDARDS

- I. All UT Standards will be fabricated from material in accordance with Section XI, Appendix I, Paragraph I-3120, 1974 Edition of the ASME Boiler and Pressure Vessel Code with addenda through Summer 1975.
- II. All UT Standards will be fabricated to conform in radius of curvature, thickness, and dimensional tolerance as specified on AE drawings supplied by Consumers Power Company. Standards will be designed for nominal piping, vessel head, or vessel shell, as appropriate.
- III. Deviations from these requirements may be made in accordance with guidance existing in Paragraphs I-3130 and I-3140 of the above-referenced code. Deviation from Material Specifications will be allowed provided the substitution is Code Acceptable under the applicable Code Section. Each deviation in material, curvature or thickness will be addressed on a case-by-case basis. Sufficient justification and approvals are required for each deviation.
- IV. Basic reflector locations for Piping and Vessel Standards shall conform to Paragraph I-3200 of the above-referenced code or equivalent. It is noted that the curved basic calibration block listed as Figure I-3240 in the 1974 Edition of Section XI, ASME code was deleted from the Summer 1975 addendum and re-issued in the Winter 1975 addendum. Curved basic calibration blocks to be utilized by Consumers Power Company will be in accordance with Figure I-3240, 1974 Edition Section XI, ASME Code.

V. Basis

This policy is intended to provide guidance for the procurement and utilization of UT Standards throughout the entire 40-Year Planned ISI Program. This policy conforms to existing codes and is expected to conform to the future trend of the code. This policy is also based on a reasonable and economic approach to UT Standards.

VI. Allowances

Although this policy commits CP Co's ISI program to a higher level of calibration block quality than required by the existing code, this policy does not require modification of vendor ISI procedures provided that these procedures are within the limits specified in Section V and Section XI, ASME Code. It is felt that the increased cost incurred as well as the burden on a vendor (who may utilize these same procedures at numerous other facilities) resulting from this policy would not be in the best interest of both parties. Therefore, vendor procedures are deemed acceptable if they are code acceptable. Likewise, the vendor will use solely those standards deemed acceptable by CP Co.

VII. Implementation

This policy will be implemented during the remainder of the present 3 1/3 year interval.

ATTACHMENT III

Proposed Request for Exemptions

of Inservice Testing of Pumps and Valves

Pursuant to 10 CFR 50, Section 50.55a (g)(6)(i)

Period of Applicability

11/1/76 - 6/30/78

INSERVICE TESTING OF PUMPS AND VALVES

REQUEST FOR EXEMPTIONS

Inservice testing of ASME Code Class 1, Class 2 and Class 3 pumps and valves shall be performed in accordance with the 1974 ASME B&PV Code Section XI with Addenda through Summer 1975 and including Appendix III from Winter 1975 with the following exceptions:

INSERVICE PUMP TESTING

- L. Plant system designs do not include provisions for measuring the suction pressures of any pumps included under this program. Suction pressures will be calculated as applicable by taking the differences between each pump section and its associated expansion tank level plus expansion tank pressure.

To measure pump suction pressure would require extensive modification (electrical/mechanical). The method currently used will give adequately accurate results.

2. The design of the service water pumps does not permit measurement of bearing temperatures or monitoring of pump lubrication since the pump is submerged in water.
3. The design of the charging pumps does not permit measurement of bearing temperature since the bearings are inaccessible unless the pumps are disassembled, and crankcase oil temperature is not representative of bearing temperatures because of the installed oil coolers.
4. The design of the concentrated boric acid pumps does not permit direct measurement of bearing temperatures. A representative temperature will be obtained by measuring the surface contact temperatures of the bearing housing. Since there are not installed oil coolers, these temperatures are responsive to oil temperatures which are, in turn, responsive to bearing temperatures.

INSERVICE VALVE TESTING

1. With respect to those Category A valves for which seat leakage is important from a containment isolation standpoint but not from a system functional standpoint, the leakage rates will be determined at the test pressure specified in Technical Specification Section 4.5.2, Local Leak Detection Tests (between 70 psia and 80 psia). Since these pressures are representative of system pressure at the valve during containment isolation, no exemption is requested.

NOTE: Application of IWV 3420(c)(5) is not required in the testing of these valves.

2. Category C relief valve tests may be distributed over each refueling cycle such that the required number of relief valves will have been tested by the end of each cycle.

3. Normally open valves for which it is impractical to partially stroke during operations are identified and full stroke tested during each required cold shutdown.
4. It is unreasonable to follow the timing acceptance requirements of IWV-3410 (c)(3) for valves with stroke times under 10 seconds (ie, Palisades has had experience where a valve operates in 1 second one month and 2 seconds the next; therefore, test frequency is required to be increased). Palisades will apply the following acceptance criteria for valves with stroke times less than 10 seconds: If an increase in stroke time of 25% or more from the previous test for valves with stroke time greater than 10 seconds or 50% or more for valves with stroke time from 5 to 10 seconds, or an increase of 5 seconds for valves with stroke times under 5 seconds, test frequency shall be increased to once each month until corrective action is taken, at which time the original test frequency shall be resumed.

DESCRIPTION OF PUMP AND VALVE TESTING PROGRAMS

Complete descriptions of the established procedures for inservice testing of selected pumps and valves are included in the Palisades Plant Engineering Manual. Procedure No EM-09-04, dated 10/14/76, provides general requirements for the performance and administration of the inservice testing program for selected pumps. Procedure No EM-09-02, dated 10/29/76, provides general requirements for the performance, administration and evaluation of inservice testing and exercising of selected valves.

ATTACHMENT IV

Supplemental Information

On Code Update & Code

Implementation

The following notes delineate, in part, the implementation of Section XI through the Palisades Technical Specifications. No relief is requested for any of the items which follow. This attachment was written to impart to the regulatory authority information concerning previously approved relief requests which are hereby withdrawn, or information concerning our inability to perform examinations due to the nonexistence of components or to document our interpretation of the Code.

1. Item B1.5 (Vessel Penetrations)

BASIS STATEMENT

Penetration welds can be subjected to the visual examination during the prestart-up hydro.

REMARKS

1971 Code called for volumetric inspection of all vessel penetrations including CRDs. The 1974 Code now lists CRD housing welds as B1.18, B-0, requiring volumetric examination of the peripheral CRD housing welds. The B1.5 examination is a hydro visual only. Both the B1.18 and B1.5 examinations can be performed and will be so scheduled.

IMPLEMENTATION

No relief requested.

2. Item B1.11 (Pressure Retaining Bolting)

BASIS STATEMENT

None.

REMARKS

The original exemption addressed bolting $\geq 2"$. The 1971 Code and the 1974 Code both address bolting $\leq 2"$. Since certain penetration bolting falls in this category and will at times be available for VT Examination, this category will be added to the 40-year plan.

IMPLEMENTATION

No relief requested.

3. Item Bl.12 (Vessel Supports)

BASIS STATEMENT

The vessel supports are welded to bosses integrally formed from reinforcing material that is part of the nozzle forging. The bosses represent material beyond that which is required for the nozzles themselves. It can be postulated that the support weld heat affected zone may extend into the material within the normal nozzle geometry. This would conservatively identify these supports as integrally welded to nozzles. Category B-H specifically excludes supports integrally welded to nozzles from the required exams. Therefore, these weld areas need not be examined.

REMARKS

See CE Dwg E-232-111-3 and E-232-116-5.

IMPLEMENTATION

No relief requested.

4. Item Bl.15 (Vessel Interiors)

BASIS STATEMENT

None.

REMARKS

Remote visual examination to be conducted using underwater TV camera.

IMPLEMENTATION

No relief requested.

5. Item Bl.16 (Interior attachments and core support structure)

BASIS STATEMENT

None.

REMARKS

Category B-N-2 applies only to EWRs. Therefore, no inspection is required for the bottom snubbers and drop prevention supports.

IMPLEMENTATION

No relief requested (none required).

6. Item Bl.17 (Core support structure)

BASIS STATEMENT

None.

REMARKS

The core barrel flange and associated vessel support ledge are inspectable and will be so scheduled.

IMPLEMENTATION

No relief requested.

7. Item B2.2

BASIS STATEMENT

See Item 23.

REMARKS

All nonexempt penetrations will be examined in accordance with the cited code. Exempt components will be examined in accordance with IWA/IWB-5000.

IMPLEMENTATION

No relief requested.

8. Item B2.3 (Heater penetrations)

BASIS STATEMENT

None.

REMARKS

74S75 requires VT during hydro only. This examination will be scheduled.

IMPLEMENTATION

No relief requested.

9. Item 2.4 (Heater penetration) (IS-261)

BASIS STATEMENT

None.

REMARKS

Heater Connections (E-2) has no 74S75 counterpart.

IMPLEMENTATION

No relief requested.

10. Item B2.4 (Nozzle-to-safe-end welds)

BASIS STATEMENT

There are 14 dissimilar metal nozzle-to-safe-end welds, of which eight are one inch level nozzles. The vessel stainless cladding is carried over the weld ends of the carbon steel nozzles. The safe ends are either stainless or Inconel. The nozzles-to-safe-end welds appear as Category B2.4, B-F.

REMARKS

See CE Dwg #-231-985-11.

IMPLEMENTATION

No relief requested.

11. Item B2.5, B2.6, B2.7 (B-G-1) (Pressure retaining bolting)

BASIS STATEMENT

None.

REMARKS

There is no pressurizer bolting $\geq 2"$.

IMPLEMENTATION

No relief requested (none required).

12. Item B2.8 (Integrally welded vessel supports)

BASIS STATEMENT

The welds can be volumetrically inspected and will be so scheduled.

REMARKS

None.

IMPLEMENTATION

No relief requested.

13. Item B3.1 (Long and circ welds, steam generator)

BASIS STATEMENT

None.

REMARKS

Original Technical Specifications appear to be in error since these welds do exist and are inspectable. The welds will be so scheduled.

IMPLEMENTATION

No relief requested.

14. Item B3.4, B3.5, and B3.6 (B-G-1) (Pressure retaining bolting)

BASIS STATEMENT

None

REMARKS

There is no steam generator bolting $\geq 2"$.

IMPLEMENTATION

No relief requested (none required).

15. Item B4.1

BASIS STATEMENT

There are six nozzle-to-safe-end dissimilar metal welds and 49 pipe-to-nozzle dissimilar metal welds of which 40 are smaller than 1". The nozzle-to-safe-end welds will appear as B4.1, B-F and the pipe-to-nozzle welds as branch connection B4.6 or B4.7, B-J.

The primary coolant pump suction/discharge-to-transition piece welds are dissimilar metal welds. Since there is no pump-to-safe-end category, these will be arbitrarily classed B4.1, B-F.

REMARKS

See CE Dwg E-232-673-7, E232-675-4 and E-232-676-7.

IMPLEMENTATION

No relief requested.

16. Item B4.2, B4.3, B4.4, (B-G-1) (Pressure retaining bolting)

BASIS STATEMENT

None.

REMARKS

There is no pipe bolting $\geq 2"$.

IMPLEMENTATION

No relief requested.(none required).

17. Item B5.1, B5.2 and B5.3

BASIS STATEMENT

None.

REMARKS

VT can be performed on PCS pump nuts and ligaments during teardown inspection and will be so scheduled.

IMPLEMENTATION

No relief requested.

18. Item B5.4

BASIS STATEMENT

The primary coolant pump supports are thought to be welded to the cast stainless casings with partial penetration welds. UT Examination will be attempted.

REMARKS

See BJ Dwg 2F-1129.

IMPLEMENTATION

No relief requested.

19. Item B5.6

BASIS STATEMENT

Pump casing material and design make meaningful UT Examination of the welds difficult. Area background will preclude RT. UT Examination will be attempted, probably from the inside of the pump casing.

REMARKS

Casing is cast stainless.

IMPLEMENTATION

No relief requested at this time.

20. Item B5.7

BASIS STATEMENT

None.

REMARKS

The visual examination can be performed on pump teardown and will be so scheduled.

IMPLEMENTATION

No relief requested.

21. Items B6.1, B6.2, B6.3 (B-G-1) (Valve bolting)

BASIS STATEMENT

None.

REMARKS

No valve bolting ≥ 2 ".

IMPLEMENTATION

No relief requested (none required).

22. Item B6.6 (B-M-1) (Valve seam welds)

BASIS STATEMENT

None.

REMARKS

No seam welded valves have been used.

IMPLEMENTATION

No relief requested (none required).

23. Generic Statement on Code Allowable Exemptions

BASIS STATEMENT

ASME B&PV Code, Section XI.74S75 Edition

REMARKS

The 40-year Master Plan implements the above cited code to include frequency of examinations, extent of examination, the type of examination and permitted exemption except as delineated in notes 1 through 22 above.

The 40 year Master Plan implements exemptions pursuant to the following paragraphs of the above cited code.

1. IWB-1220
2. IWB-2500
3. IWB-2600
4. IWB-5000
5. IWC-1220
6. IWC-2500
7. IWC-2600
8. IWC-5000
9. IWD-2600
10. IWD-5000

IMPLEMENTATION

No relief requested (none required).

ATTACHMENT V

INTRODUCTION TO COMPARISON OF IWB-2600 & IS-261

COMPARISON OF IWB-2600 & IS-261

INTRODUCTION

The attached table compares Section XI IWB-2600 (74S75) and IS 261 (71). The table was drawn up for internal accounting purposes. A need exists to document and follow the evolution of both the ASME B&PV Code, Section XI, and the ISI portion of the Palisades Technical Specifications. This is important because of the requirement (10 CFR 50.55a(g)) to update the Technical Specifications ISI program every 40 months and because Palisades was constructed prior to 1971.

A few words of explanation concerning the tables may be helpful in interpreting them.

1. It is not possible to make a one-to-one correspondence between Item Numbers in each Code Edition. Additionally, there is not a direct correspondence between the Section XI category components to be examined, or the examination method under each item number.
2. The remarks section attempts to delineate the history behind relief requests. The remarks section contains four categories of statements concerning the history of relief requests.
 - a. No relief requested
 - b. Relief request in the past and the present
 - c. Relief requested in the past but not in the present
 - d. No relief in the past, but relief is presently requested
3. The table does not include Class 2 components since Class 2 was not inspected pursuant to the 1971 Section XI Code.

COMPARISON OF IWB-2600 & IS261

<u>Item Number</u>		<u>Component</u>	<u>Remarks</u>
<u>IWB-2600</u>	<u>IS261</u>		
Bl.1	1.1	Rx Vessel Welds - Beltline Region	No Relief Requested
Bl.2	1.2	Rx Vessel Welds - Non Beltline	Relief Requested from IWB-2600 & IS261
Bl.3	1.3	Vessel-to-Flange & Flange-to-head	Relief Request from IWB-2600
Bl.4	1.4	Nozzle-to-Vessel	Relief Request from IWB-2600
Bl.5	1.6	Vessel Penetrations	No Relief Requested
Bl.6	1.7	Nozzle-to-Safe ends	Relief Requested from IWB-2600 & IS261
Bl.7	1.8	Closure Studs $\geq 2"$	No Relief Requested
Bl.8	1.8	Closure Studs $\geq 2"$	No Relief Requested
Bl.9	1.9	Ligaments between Stud Holes	No Relief Requested
Bl.10	1.10	Closure Washers	No Relief Requested
Bl.11	1.11	Bolting $< 2"$	No Relief Requested
Bl.12	1.12	Integrally Welded Supports	No Relief Requested
Bl.13	1.13	Closure Head Cladding	No Relief Requested
Bl.14	1.14	Vessel Cladding	Relief Requested from IWB-2600
Bl.15	1.15	Vessel Interior	No Relief Requested
Bl.16	1.15	Interior Attachments	Not Applicable to PWR
Bl.17	1.15	Core Support Structure	No Relief Requested
Bl.18	1.5	CRD Housing	No Relief Requested from IWB-2600 Relief Formerly Requested from IS261
Bl.19	-	Exempted Components	Exemptions will be in accordance with Section XI, 74S75, and Specific Relief Granted by the NRC
B2.1	2.1	Longitudinal & Circumferential Welds	No Relief Request
B2.2	2.2	Nozzle-to-Vessel Welds	No Relief Request
B2.3	2.3, 2.4	Heater Penetrations	No Relief Request Relief Formerly Requested from item 2.3, IS261

Number		Component	Remarks
IWB-2600	IS261		
B2.4	-	Nozzle-to-Safe end	Relief Formerly Requested from item 2.2 IS261
B2.5	2.5	Bolting $\geq 2"$	Relief Formerly Requested from item 2.5 IS261
B2.6	2.5	Bolting $\geq 2"$	Relief Formerly Requested from item 2.5 IS261
B2.7	2.5	Bolting $\geq 2"$	Relief Formerly Requested from item 2.5 IS261
B2.8	2.7	Integrally Welded Supports	Relief Formerly Requested from item 2.7 IS261
B2.9	2.8	Vessel Cladding	No Relief Requested
B2.10	-	Exempted Components	See Item B1.19 Above
B2.11	2.6	Bolting $< 2"$	No Relief Requested
B3.1	3.1	Longitudinal & Circumferential Welds Steam Generator and Heat Exchangers	No Relief Request Relief Formerly Requested from IS261
B3.2	3.2	Nozzle-to-Head Welds	No Relief Request
B3.3	3.3	Safe-Ends	See Item B1.6 above
B3.4	3.4	Bolting $\geq 2"$	No Relief Requested
B3.5	3.4	Bolting $\geq 2"$	No Relief Requested
B3.6	3.4	Bolting $\geq 2"$	No Relief Requested
B3.7	3.6	Integrally Welded Supports	No Relief Requested
B3.8	3.7	Vessel Cladding	No Relief Requested
B3.9	---	Exempted Components	See Item B1.19 above
B3.10	3.5	Bolting $< 2"$	No Relief Requested
B4.1	4.1	Safe-end-Welds	Relief Requested from IWB-2600 & IS261
B4.2	4.3	Bolting $\geq 2"$	No Relief Requested
B4.3	4.3	Bolting $\geq 2"$	No Relief Requested
B4.4	4.3	Bolting $\geq 2"$	No Relief Requested
B4.5	4.2, 4.7	Longitudinal & Circumferential Pipe Welds	Relief Request from IWB-2600
B4.6	4.2	Branch Connection Welds $> 6"$ Diameter	Relief Request from IWB-2600

C-3

<u>Item Number</u>		<u>Component</u>	<u>Remarks</u>
<u>IWB-2600</u>	<u>IS261</u>		
B4.7	4.2, 4.8	Branch Connection Welds $\leq 6"$ Diameter	No Relief Requested
B4.8	4.8	Socket Welds	No Relief Requested
B4.9	4.5	Integrally Welded Supports	Relief Requested from IWB-2600
B4.10	4.6	Support Components	No Relief Requested
B4.11	---	Exempted Components	See Item B1.19 above
B4.12	4.4	Bolting $< 2"$	No Relief Requested
B5.1	5.4	Bolting $\geq 2"$	No Relief Requested
B5.2	5.4	Bolting $\geq 2"$	No Relief Requested
B5.3	5.4	Bolting $\geq 2"$	No Relief Requested
B5.4	5.6	Integrally Welded Supports	No Relief Requested
B5.5	5.7	Support Components	No Relief Requested
B5.6	5.1	Pump Casing Welds	No Relief Requested; Relief Formerly Requested from IS261
B5.7	5.2	Pump Casing	No Relief Requested; Relief Formerly Requested from IS261
B5.8	---	Exempt Components	See B1.19 above
B5.9	5.5	Pressure retaining Bolting	No Relief Requested
B6.1	6.4	Bolting $\geq 2"$	No Relief Requested
B6.2	6.4	Bolting $\geq 2"$	No Relief Requested
B6.3	6.4	Bolting $\geq 2"$	No Relief Requested
B6.4	6.6	Integrally Welded Supports	No Relief Requested
B6.5	6.7	Support Components	No Relief Requested
B6.6	6.1	Valve Body Welds	No Relief Requested
B6.7	6.2	Valve Body	No Relief Requested
B6.8	---	Exempt Components	See B1.19 above
B6.9	6.5	Bolting $< 2"$	No Relief Requested

7-1

ATTACHMENT VI
INSERVICE INSPECTION 40-YEAR PLAN
AND
PUMP AND VALVE PROGRAM

INSERVICE INSPECTION ON 40-YEAR PLAN

EXTENT OF COVERAGE

The Palisades Plant Inservice Inspection Program has been updated per 10 CFR 50, Section 50.55a requirements as noted below:

- a. Applicable Code: ASME B&PV Code Section XI, 1974 Edition through Summer '75 Addenda.
- b. Period of Applicability: 10/31/76 through 2/28/80 (current interval 12/31/71 through 6/30/83).
- c. Component Identification: This attachment covers the extent of the ISI program. Tables within the program plan itemize each component by a unique identifier and list ASME Section XI item number and category. Components were selected for coverage by the plan through use of the Palisades Code Classification P&ID (developed by application of Reg Guide 1.26) for Classes 1, 2 and 3 components and Technical Specifications, Section 4.12 for the high energy piping.
- d. Inservice Requirements: Examination categories and methods are detailed within the program plan. The plan requires that code unacceptable discontinuities be dispositioned through application of Consumers Power Quality Assurance Program Procedure 16-51, Deviations. Fulfilling the requirements of this procedure will initiate, as required, additional code (IWB-2430, IWC-2430, IW-4000) requirements which will be implemented by plant and/or General Office procedures, as necessary.

The Plan covers the four 10-year inspection intervals that comprise the 40-year lifetime of the plant.

Selected portions of the major components and/or systems to be examined in accordance with Section XI are as follows:

(1) Class 1

- (a) Reactor Pressure Vessel
- (b) Reactor Pressure Vessel Closure Head
- (c) Steam Generators - Primary Side
- (d) Pressurizer
- (e) Piping
 - (i) Primary Coolant System
 - (ii) Engineered Safeguards System
 - (iii) Chemical and Volume Control System
- (f) Primary Coolant Pumps
- (g) Valves

(2) Class 2

- (a) Pressure Vessels:
 - (i) Air Receiver Tanks
 - (ii) Deborating Ion Exchanger
 - (iii) Concentrated Boric Acid Tanks
 - (iv) Volume Control Tank
 - (v) Safety Injection Tanks
 - (vi) Boric Acid Filter
 - (vii) Purification Filters
 - (viii) Steam Generators - Secondary Side
 - (ix) Regenerative Heat Exchangers
 - (x) Letdown Heat Exchanger
 - (xi) Shutdown Cooling Heat Exchangers

(b) Piping:

- (i) Primary Coolant System
- (ii) Main Steam System
- (iii) Feedwater System
- (iv) Engineered Safeguards System
- (v) Chemical and Volume Control System
- (vi) Primary Makeup Water System
- (vii) Radwaste System
- (viii) Waste Gas System
- (ix) Vent and Air Conditioning System
- (x) Containment Air System

(c) Pumps:

- (i) Containment Spray Pumps
- (ii) Charging Pumps
- (iii) Concentrated Boric Acid Pumps
- (iv) High Pressure Safety Injection Pumps
- (v) Low Pressure Safety Injection Pumps

(3) Class 3

(a) Pressure Vessels:

- (i) Condensate Storage Tank
- (ii) Component Cooling Surge Tank
- (iii) Emergency Diesel Generator Day Tanks
- (iv) Fuel Pool Demineralizer Tank
- (v) Radwaste Demineralizer Tanks
- (vi) Vacuum Degasifier Tank
- (vii) Safety Injection and Refueling Water Tank
- (viii) Shield Cooling Tank

- (ix) Waste Gas Surge Tank
- (x) Waste Gas Decay Tanks
- (xi) Spent Resin Storage Tank
- (xii) Quench Tank
- (xiii) Primary System Drain Tank
- (xiv) Primary System Make-up Storage Tank
- (xv) Clean Waste Distillate Tank
- (xvi) Radwaste Polishing Demineralizer Tank
- (xvii) Miscellaneous Waste Distillate Tanks
- (xviii) Spent Resin Storage Tank (addition)
- (xix) Waste Gas Decay Tanks (addition)
- (xx) Iodine Removal NaOH Tank
- (xxi) Iodine Removal Make-up NaOH Tank
- (xxii) Vacuum Degasifier Seal Coolant Tank
- (xxiii) Fuel Pool Filter
- (xxiv) Dirty Waste Filter
- (xxv) Laundry Drain Filter
- (xxvi) Primary System Filters
- (xxvii) Evaporate Concentrate Filter
- (xxviii) Miscellaneous Waste Filter
- (xxix) Spent Fuel Pool Heat Exchangers
- (xxx) Component Cooling Heat Exchangers
- (xxxi) Letdown Heat Exchanger
- (xxxii) Shutdown Cooling Heat Exchangers
- (xxxiii) Shield Cooling Heat Exchanger
- (xxxiv) Radwaste Evaporators

- (xxxv) Engineered Safeguards Room Coolers
- (xxxvi) Control Room Air Conditioning Units
- (xxxvii) Containment Air Coolers

(b) Piping:

- (i) Primary Coolant System
- (ii) Main Steam System
- (iii) Feedwater System
- (iv) Engineered Safeguards System
- (v) Chemical and Volume Control System
- (vi) Service Water System
- (vii) Component Cooling System
- (viii) Waste Gas System
- (ix) Radwaste System
- (x) Shield Cooling System
- (xi) Chemical Addition System
- (xii) Emergency Power System
- (xiii) Ventilation and Air Conditioning System
- (xiv) Spent Fuel Pool System
- (xv) Makeup and Domestic Water System
- (xvi) Primary Makeup Water System
- (xvii) Utility Water System

(c) Pumps:

- (i) Service Water Pumps
- (ii) Auxiliary Feedwater Pumps
- (iii) Fuel Pool Cooling Pumps
- (iv) Component Cooling Pumps
- (v) SIRW Tank Recirculation Pump

- (vi) Shield Cooling Pumps
- (vii) Miscellaneous Waste Distillate Pumps
- (viii) Miscellaneous Waste Transfer Pumps
- (ix) Clean Waste Transfer Pump
- (x) Evaporator Concentrate Transfer Pumps
- (xi) Recycled Boric Acid Pump
- (xii) Clean Waste Distillate Pumps
- (xiii) Steam Generator Blowdown Pumps
- (xiv) Waste Gas Compressors
- (xv) Vacuum Degasifier Compressor
- (xvi) Waste Gas Compressor (addition)
- (xvii) Auxiliary Feedwater Pump Turbine Driver

PUMP AND VALVE PROGRAM

EXTENT OF COVERAGE

Pump and Valve Testing Program

- a. Applicable Code: ASME B&PV Code, Section XI, 1974 Edition through Summer '75 Addenda.
- b. Period of Applicability: 11/1/76 - 6/30/78.
- c. Pump Testing
 - (1) Component Identification: Attachment 2, Table 1, lists the applicable pumps. Pumps not included were included as a part of the relief request previously transmitted in our March 1, 1977 letter:
 - (2) Measured Parameters: These will include, typically, bearing temperature, vibration, suction head, flow and discharge pressure. From certain of these measurements, suction pressure and differential pressure will be calculated as defined in the Palisades Plant Engineering Manual Procedure EM-09-04, Pumps.
 - (3) Test Intervals: Testing will be performed monthly except during plant shutdown and 96 hours after return to service following replacement or repair affecting pump performance. The test frequency is to be increased if performance is determined marginal.
 - (4) Complete details are contained in the Palisades Plant Engineering Manual, Procedure EM-09-04, Pumps.
- d. Valve Testing

The valves covered were selected in accordance with the guidelines of Section XI, Subsection IWV and include all Classes 1, 2 and 3 valves in the following classifications:

- (1) Those valves required to operate following a LOCA, including containment penetration isolation valves.
- (2) Valves affording protection to a system or component, such as relief valves and rupture discs.
- (3) Boundary valves which prevent the unintentional release of radioactive fluids or gases to the water or atmosphere outside the containment and auxiliary buildings.
- (4) Additional valves not having a specific safety function but considered important enough from a reactor or radiological safety standpoint to warrant special testing.
- (5) Complete details are contained in the Palisades Plant Engineering Manual Procedure EM-09-02, Valves.

All remaining plant valves are considered installed for operating convenience or maintenance and, therefore, are not included in this program.

(6) Categories A & B Exercise Test:

On a quarterly basis, all valves indicated "Category A or B" in Table 2 of Attachment 2 shall be exercised unless valve operation is not practical during plant operation. If valve operation is not practical, the following applies:

- (a) Normally open valves, where practical without imposing undue risk to equipment or plant operation, shall be exercised by partially closing and then reopening the valve. These valves shall then be full-stroke exercised during each cold shutdown.
- (b) Normally closed valves which cannot be opened during plant operation are identified in each individual test procedure. These valves shall be full-stroke exercised during each cold shutdown.
- (c) If frequent cold shutdowns occur, these valves need not be exercised more often than once every three months.

(7) Category A Leak Test:

During each refueling outage, but not less than once every two years, all Category A valves identified in Table 2 of Attachment 2 shall be tested to determine seat leakage rates.

(8) Category C Exercising Test:

On a quarterly basis, check valves listed in Table 2 of Attachment 2 as Category C shall be exercised unless valve operation is not practical during plant operation. For normally open valves, if only limited operation is practical during plant operation, each valve shall be part-stroke exercised each quarter, and full-stroke exercised during each cold shutdown. Normally closed valves which cannot be exercised during plant operation shall be identified in the individual valve test procedure and will be full-stroke exercised during each cold shutdown. In the case of frequent cold shutdowns, valves which cannot be exercised or which can only be part-stroke exercised during plant operation need not be full-stroke exercised more frequently than once every nine months.

(9) Category C Set Point Test:

All Category C safety and relief valves shall have their set points verified at least once in each five-year period. The valve tests shall be distributed over each 60-month period such that $N/60 \times 141$ valves have been tested by the end of each refueling outage, where N = number of months from the start of the 60-month period to the end of each refueling outage and 141 is the total number of reliefs which are included in this program.

(10) Categories D & E Valves:

Categories D and E valves are listed in Table 2 of Attachment 2 for information only. There are no special testing requirements applicable to Palisades for these categories. The code-required position verifications are satisfied by Palisades Plant Operations Department Checklists and Operating Procedures.

TABLE 1

PUMP TESTING REQUIREMENTS *

<u>PUMP</u>	<u>ASME CLASS</u>	<u>TEST PROCEDURE</u>
P7A, B, C, Service Water Pumps	3	MO-16
P8A, B, Auxiliary Feedwater Pumps	3	MO-24
P52A, B, C, Component Cooling Pumps	3	MO-18
P54, A, B, C, Containment Spray Pumps	2	MO-19
P55A, B, C, Charging Pumps	2	MO-20
P56A, B, Boric Acid Pumps	2	MO-21
P66A, B, C, HP Safety Injection Pumps	2	MO-22
P67A, B, LP Safety Injection Pumps	2	MO-23

* Based on ASME B&PV Section XI, 1974 edition, with Addenda through S75.
Includes those pumps important to Reactor safety which transfer automatically
and restart on an emergency power supply under accident conditions.

TABLE 2

TITLE: INSERVICE TESTING OF PLANT VALVES									
VALVE	SEC XI CAT.	SYSTEM/P&ID			ASME CODE CLASS	SCHED FREQ	PLANT PROCEDURE		
							EXERCISE	LK TEST	MAINT.
		<u>CONTAINMENT ISOLATION **</u>							
CV-0155	A	PMW	M201/H-7	P42	2	Q/R	QO-5	SO-2	-
CV-0120	A	PCS	M201/F-7	P20	2	Q/R	QO-5		-
CV-0121	A	PCS	M201/F-7	P20	2	Q/R	QO-5		-
CV-2083	A	CVC	M202/G-6	P44	2	Q/R	QO-5		-
CV-2009	A	CVC	M202/G-6	P36	2	Q/R	QO-5	SO-2	-
CV-3001	B	ESS	M203/H-2	P30	2	Q	QO-5	-	-
CV-3002	B	ESS	M203/G-2	P31	2	Q	QO-5	-	-
MOV-3015	B	ESS	M204/D-2	P35	1	Q		-	-
MOV-3016	B	ESS	M204/D-2	P35	1	Q		-	-
CV-3029	B	ESS	M204/C-2	P53	2	Q		-	-
CV-3030	B	ESS	M204/C-3	P54	2	Q		-	-
SV-0824	B	SWS	M208/B-5	P13	3	Q		-	-
SV-0847	B	SWS	M208/B-4	P12	3	Q		-	-
CV-0911	A	CCS	M209/A-6	P15	2	Q/R	QO-5	SO-2	-
CV-0910	A	CCS	M209/E-5	P14	2	Q/R	QO-5	SO-2	-
CV-0940	A	CCS	M209/A-5	P15	2	Q/R	QO-5	SO-2	-
CV-1001	A	RWS	M210/G-7	P37	2	Q/R	QO-5	SO-2	-
CV-1002	A	RWS	M210/G-7	P47	2	Q/R	QO-5	SO-2	-
CV-1004	A	RWS	M210/E-5	P41	2	Q/R	QO-5	SO-2	-
CV-1064	A	RWS	M210/G-1	P25	2	Q/R	QO-5	SO-2	-
CV-1036	A	RWS	M210/E-1	P49	2	Q/R	QO-5	SO-2	-
CV-1037	A	RWS	M210/E-1	P67	2	Q/R	QO-5	SO-2	-
CV-1044	A	RWS	M210/E-2	P69	2	Q/R	QO-5	SO-2	-
CV-1007	A	RWS	M210/F-7	P47	2	Q/R	QO-5	SO-2	-
CV-1038	A	RWS	M210/E-1	P49	2	Q/R	QO-5	SO-2	-
CV-1045	A	RWS	M210/E-2	P69	2	Q/R	QO-5	SO-2	-
CV-1065	A	RWS	M210/G-1	P25	2	Q/R	QO-5	SO-2	-

TABLE 2

TITLE: INSERVICE TESTING OF PLANT VALVES									
VALVE	SEC XI CAT.	SYSTEM/P&ID			ASME CODE CLASS	SCHED FREQ	PLANT PROCEDURE		
							EXERCISE	LK TEST	MAINT.
		<u>CONTAINMENT ISOLATION, (Contd)</u>							
CV-1101	A	RWS	M211/H-7	P46	2	Q/R	QO-5	SO-2	-
CV-1103	A	RWS	M211/D-7	P52	2	Q/R	QO-5	SO-2	-
CV-1104	A	RWS	M211/D-7	P52	2	Q/R	QO-5	SO-2	-
CV-1102	A	RWS	M211/H-7	P46	2	Q/R	QO-5	SO-2	-
CV-1211	B	CAS	M212/D-2	P65	2	Q	QO-5	-	-
CV-1501	A	VAS	M215/G-2	P38	2	Q/R	QO-5	SO-2	-
CV-1503	A	VAS	M215/H-2	P39	2	Q/R	QO-5	SO-2	-
CV-1502	A	VAS	M215/G-3	P38	2	Q/R	QO-5	SO-2	-
CV-1806	A	VAS	M218/E-3	P4	2	Q/R	QO-5	SO-2	-
CV-1808	A	VAS	M218/D-1	P1	2	Q/R	QO-5	SO-2	-
CV-1814	A	VAS	M218/D-2	P68	2	Q/R	QO-5	SO-2	-
CV-1803	A	VAS	M218/F-3	P4	2	Q/R	QO-5	SO-2	-
CV-1805	A	VAS	M218/E-3	P4	2	Q/R	QO-5	SO-2	-
CV-1807	A	VAS	M218/E-1	P1	2	Q/R	QO-5	SO-2	-
CV-1813	A	VAS	M218/E-2	P68	2	Q/R	QO-5	SO-2	-
CV-1911	A	PCS	M219/E-7	P40	2	Q/R	QO-5	SO-2	-
CV-1910	A	PCS	M219/E-7	P40	2	Q/R	QO-5	SO-2	-
CV-0939	A	SCS	M221/G-2	P11	2	Q/R	QO-5	SO-2	-
CV-1358	A	MGS	M222/H-5	P26	2	Q/R	QO-5	SO-2	-
CV-0738	A	MSS	M226/D-7	P55	2	Q/R	QO-5		-
CV-0771	A	MSS	M226/G-7	P5	2	Q/R	QO-5		-
CV-0770	A	MSS	M226/F-7	P6	2	Q/R	QO-5		-
CV-0739	A	MSS	M226/E-8	P16	2	Q/R	QO-5		-
CV-0768	A	MSS	M226/F-8	P5	2	Q/R	QO-5		-
CV-0767	A	MSS	M226/F-8	P6	2	Q/R	QO-5		-

TABLE 2

TITLE:		INSERVICE TESTING OF PLANT VALVES					
VALVE	SEC XI CAT.	SYSTEM/P&ID.	ASME CODE CLASS	SCHED FREQ.	PLANT PROCEDURE		
					EXERCISE	LK TEST	MAINT.
		<u>BOUNDARY VALVES</u>					
MOV-2087	B	CVC	M202/E-6	2	Q	-	-
MOV-2169	B	CVC	M202/D-2	2	Q	-	-
MOV-2170	B	CVC	M202/D-3	2	Q	-	-
MOV-2140	B	CVC	M202/C-5	2	Q	-	-
CV-2130	B	CVC	M202/E-2	2	Q	-	-
CV-2155	B	CVC	M202/D-5	2	Q	-	-
CV-2136	B	CVC	M202/E-3	2	Q	-	-
MOV-3009	B	ESS	M203/E-3	1	Q	QO-5	-
MOV-3064	B	ESS	M203/C-3	1	Q	QO-5	-
MOV-3010	B	ESS	M203/B-3	1	Q	QO-5	-
MOV-3007	B	ESS	M203/F-3	1	Q	QO-5	-
MOV-3062	B	ESS	M203/A-3	1	Q	QO-5	-
MOV-3008	B	ESS	M203/E-3	1	Q	QO-5	-
MOV-3011	B	ESS	M203/C-3	1	Q	QO-5	-
MOV-3066	B	ESS	M203/D-3	1	Q	QO-5	-
MOV-3012	B	ESS	M203/B-3	1	Q	QO-5	-
MOV-3068	B	ESS	M203/E-3	1	Q	QO-5	-
MOV-3014	B	ESS	M203/A-3	1	Q	QO-5	-
CV-3042	B	ESS	M203/D-7	1	Q	-	-
CV-3046	B	ESS	M203/D-6	1	Q	-	-
MOV-3013	B	ESS	M203/B-3	1	Q	QO-5	-
CV-3069	B	ESS	M203/C-8	3	Q	-	-
CV-3047	B	ESS	M203/D-5	1	Q	-	-
CV-3038	B	ESS	M203/D-4	1	Q	-	-
CV-0501	B	MSS	M205/E-8	2	Q	-	-
CV-0510	B	MSS	M205/E-7	2	Q	-	-

TABLE 2

TITLE:		INSERVICE TESTING OF PLANT VALVES						
VALVE	SEC XI CAT.	SYSTEM/P&ID		ASME CODE CLASS	SCHED FREQ	PLANT PROCEDURE		
						EXERCISE	LK TEST	MAINT.
		<u>BOUNDARY VALVES (Contd)</u>						
CV-0736A	B	FWS	M207/E-8	2	Q	-	-	-
CV-0737A	B	FWS	M207/E-8	2	Q	-	-	-
CV-0878	B	SWS	M208/C-3	3	Q	-	-	-
CV-0825	B	SWS	M208/C-4	3	Q	-	-	-
CV-0938	B	CCS	M209/G-3	3	Q	-	-	-
CV-0950	B	CCS	M209/C-5	3	Q	-	-	-
CV-0913	B	CCS	M209/D-3	3	Q	-	-	-
CV-0937	B	CCS	M209/G-3	3	Q	-	-	-
CV-1049	B	RWS	M210/B-3	D*	Q	-	-	-
CV-1051	B	RWS	M210/A-3	D*	Q	-	-	-
CV-1113	A	RWS	M211/H-5	3	Q/R	-	-	-
CV-1123	B	RWS	M211/H-3	3	Q	-	-	-
CV-1359	B	SWS	M213/E-8	3	Q	-	-	-

TABLE 2

TITLE: INSERVICE TESTING OF PLANT VALVES								
VALVE	SEC XII CAT.	SYSTEM/P&ID		ASME CODE CLASS	SCHED FREQ	PLANT PROCEDURE		
						EXERCISE	LK TEST	MAINT.
		<u>RELIEF VALVES</u>						
RV-1039	C	PCS	M201/G-4	1	F	-	-	M-PCS-11
RV-1040	C	PCS	M201/G-4	1	F	-	-	M-PCS-11
RV-1041	C	PCS	M201/G-3	1	F	-	-	M-PCS-11
RV-2006	C	CVC	M202/G-8	2	F	-	-	
RV-2013	C	CVC	M-202/H-4	2	F	-	-	
RV-2079	C	CVC	M202 E-6	2	F	-	-	
RV-2080	C	CVC	M202/E-6	2	F	-	-	
RV-2090	C	CVC	M202/C-6	2	F	-	-	M-CVC-2
RV-2092	C	CVC	M202/C-7	2	F	-	-	M-CVC-2
RV-2096	C	CVC	M202/B-6	2	F	-	-	M-CVC-2
RV-2098	C	CVC	M202/B-7	2	F	-	-	M-CVC-2
RV-2102	C	CVC	M202/A-6	2	F	-	-	M-CVC-2
RV-2104	C	CVC	M202/A-7	2	F	-	-	M-CVC-2
RV-2203	C	CVC	M202/F-6	2	F	-	-	
RV-2230	C	CVC	M202/D-3	2	F	-	-	
RV-2231	C	CVC	M202/C-2	2	F	-	-	
RV-2232	C	CVC	M202/C-3	2	F	-	-	
RV-2233	C	CVC	M202/C-3	2	F	-	-	
RV-2234	C	CVC	M202/D-3	2	F	-	-	
RV-2235	C	CVC	M202/D-2	2	F	-	-	
RV-2236	C	CVC	M202/D-4	2	F	-	-	
RV-2237	C	CVC	M202/D-4	2	F	-	-	
RV-2238	C	CVC	M202/D-4	2	F	-	-	
RV-2239	C	CVC	M202/D-5	2	F	-	-	
RV-2240	C	CVC	M202/D-5	2	F	-	-	
RV-2255	C	CVC	M202/D-6	2	F	-	-	
RV-3113	C	ESS	M203/F-7	2	F	-	-	

TABLE 2

TITLE: INSERVICE TESTING OF PLANT VALVES								
VALVE	SEC XI CAT.	SYSTEM/P&ID		ASME CODE CLASS	SCHED FREQ	PLANT PROCEDURE		
						EXERCISE	LK TEST	MAINT.
<u>RELIEF VALVES (Contd)</u>								
RV-3128	C	ESS	M203/F-6	2	F	-	-	
RV-3143	C	ESS	M203/F-5	2	F	-	-	
RV-3158	C	ESS	M203/F-4	2	F	-	-	
RV-3161	C	ESS	M203/D-7	3	F	-	-	
RV-3162	C	ESS	M203/D-1	2	F	-	-	
RV-3165	C	ESS	M203/F-1	2	F	-	-	
RV-3264	C	ESS	M203/F-1	2	F	-	-	
RV-0401	C	ESS	M204/D-1	1	F	-	-	
RV-0438	C	ESS	M204/H-1	3	F	-	-	
RV-3164	C	ESS	M204/E-2	2	F	-	-	
RV-0457	C	ESS	M204/H-2	3	F	-	-	
RV-3267	C	ESS	M204/B-5	2	F	-	-	
RV-3266	C	ESS	M204/C-6	2	F	-	-	
RV-0402	C	ESS	M204/G-7	2	F	-	-	
RV-0403	C	ESS	M204/D-7	2	F	-	-	
RV-0521	C	MSS	M205/C-8	3	F	-	-	
RV-0602	C	MSS	M206/G-8	*	F	-	-	
RV-0606	C	MSS	M206/G-5	*	F	-	-	
RV-0701	C	MSS	M207/H-7	2	F	-	-	M-MSS-14
RV-0702	C	MSS	M207/H-7	2	F	-	-	M-MSS-14
RV-0703	C	MSS	M207/H-8	2	F	-	-	M-MSS-14
RV-0704	C	MSS	M207/H-8	2	F	-	-	M-MSS-14
RV-0705	C	MSS	M207/H-8	2	F	-	-	M-MSS-14
RV-0706	C	MSS	M207/H-8	2	F	-	-	M-MSS-14
RV-0707	C	MSS	M207/H-7	2	F	-	-	M-MSS-14
RV-0708	C	MSS	M207/H-7	2	F	-	-	M-MSS-14
RV-0709	C	MSS	M207/H-7	2	F	-	-	M-MSS-14

TABLE 2

TITLE:		INSERVICE TESTING OF PLANT VALVES					
VALVE	SEC XI CAT.	SYSTEM/P&ID	ASME CODE CLASS	SCHED FREQ	PLANT PROCEDURE		
					EXERCISE	LK TEST	MAINT.
		<u>RELIEF VALVES (Contd)</u>					
RV-0710	C	MSS M207/H-7	2	F	-	-	M-MSS-14
RV-0711	C	MSS M207/H-7	2	F	-	-	M-MSS-14
RV-0712	C	MSS M207/H-7	2	F	-	-	M-MSS-14
RV-0713	C	MSS M207/H-8	2	F	-	-	M-MSS-14
RV-0714	C	MSS M207/H-8	2	F	-	-	M-MSS-14
RV-0715	C	MSS M207/H-8	2	F	-	-	M-MSS-14
RV-0716	C	MSS M207/H-8	2	F	-	-	M-MSS-14
RV-0717	C	MSS M207/H-8	2	F	-	-	M-MSS-14
RV-0718	C	MSS M207/H-8	2	F	-	-	M-MSS-14
RV-0719	C	MSS M207/H-7	2	F	-	-	M-MSS-14
RV-0720	C	MSS M207/H-7	2	F	-	-	M-MSS-14
RV-0721	C	MSS M207/H-7	2	F	-	-	M-MSS-14
RV-0722	C	MSS M207/H-7	2	F	-	-	M-MSS-14
RV-0723	C	MSS M207/H-8	2	F	-	-	M-MSS-14
RV-0724	C	MSS M207/H-8	2	F	-	-	M-MSS-14
RV-0783	C	MSS M207/B-8	3	F	-	-	
RV-0915	C	CCS M209/G-1	3	F	-	-	
RV-0939	C	CCS M209/F-6	3	F	-	-	
RV-0954	C	CCS M209/H-5	3	F	-	-	
RV-0955	C	CCS M209/G-5	3	F	-	-	
RV-0956	C	CCS M209/G-6	3	F	-	-	
RV-1008	C	RWS M210/C-7	3	F	-	-	
RV-1068	C	RWS M210/H-6	3	F	-	-	
RV-1069	C	RWS M210/G-8	3	F	-	-	
RV-1111	C	RWS M211/G-6	3	F	-	-	
RV-1114	C	RWS M211/G-5	3	F	-	-	
RV-1115	C	RWS M211/F-5	3	F	-	-	

TABLE 2

TITLE:		INSERVICE TESTING OF PLANT VALVES						
VALVE	SEC XI CAT.	SYSTEM/P&ID		ASME CODE CLASS	SCHED FREQ	PLANT PROCEDURE		
						EXERCISE	LK TEST	MAINT.
			<u>RELIEF VALVES (Contd)</u>					
RV-1119	C	RWS	M211/G-3	3	F	-	-	
RV-1120	C	RWS	M211/G-4	3	F	-	-	
RV-1121	C	RWS	M211/G-4	3	F	-	-	
RV-1160	C	RWS	M211/G-2	3	F	-	-	
RV-1161	C	RWS	M211/G-2	3	F	-	-	
RV-1162	C	RWS	M211/G-1	3	F	-	-	
RV-1163	C	RWS	M211/E-5	3	F	-	-	
RV-1164	C	RWS	M211/E-5	3	F	-	-	
RV-1478	C	EPS	M214/G-2	3	F	-	-	
RV-1479	C	EPS	M214/F-5	3	F	-	-	
RV-1480	C	EPS	M214/F-4	3	F	-	-	
RV-1476	C	EPS	M214/H-4	3	F	-	-	
RV-2107	C	SCS	M221/G-3	3	F	-	-	
RV-2101	C	SCS	M221/H-6	3	F	-	-	
RV-2112	C	SCS	M221/H-6	3	F	-	-	
RV-2103	C	SCS	M221/H-5	3	F	-	-	
RV-2105	C	SCS	M221/G-6	3	F	-	-	
RV-2106	C	SCS	M221/G-5	3	F	-	-	
RV-2111	C	SCS	M221/G-6	3	F	-	-	
RV-2108	C	SCS	M221/E-6	3	F	-	-	
RV-2109	C	SFP	M221/D-7	3	F	-	-	
RV2402	C	MGS	M224/B-6	3	F	-	-	
RV-2404	C	MGS	M224/B-5	3	F	-	-	

TABLE 2

TITLE: INSERVICE TESTING OF PLANT VALVES								
VALVE	SEC XI CAT.	SYSTEM/P&ID		ASME CODE CLASS	SCHED FREQ	PLANT PROCEDURE		
						EXERCISE	LK TEST	MAINT.
		<u>RELIEF VALVES (Contd)</u>						
RV-0441	C	CAS	M225/G-8	2	F	-	-	
RV-3030A	C	CAS	M225/G-6	2	F	-	-	
RV-3030B	C	CAS	M225/G-6	2	F	-	-	
RV-3031A	C	CAS	M225/H-6	2	F	-	-	
RV-3031B	C	CAS	M225/H-6	2	F	-	-	
RV-3029A	C	CAS	M225/G-3	2	F	-	-	
RV-3029B	C	CAS	M225/G-3	2	F	-	-	
RV-3057A	C	CAS	M225/H-3	2	F	-	-	
RV-3057B	C	CAS	M225/H-3	2	F	-	-	
RV-0439	C	CAS	M225/G-1	2	F	-	-	
RV-6003	C	MSS	M226/G-7	*	F	-	-	
RV-6004	C	MSS	M226/G-6	*	F	-	-	
RV-5011	C	RWS	M650/E-8	3	F	-	-	
RV-5015	C	RWS	M650/E-5	3	F	-	-	
RV-5021	C	RWS	M650/E-6	3	F	-	-	
RV-5009	C	RWS	M650/C-6	3	F	-	-	
RV-5010	C	RWS	M650/C-6	3	F	-	-	
RV-5020	C	RWS	M650/D-6	3	F	-	-	
RV-5019	C	RWS	M650/A-5	3	F	-	-	
RV-5006	C	RWS	M650/E-2	3	F	-	-	
RV-5013	C	RWS	M650/A-6	3	F	-	-	
RV-5105	C	RWS	M651/G-2	3	F	-	-	
RV-5116	C	RWS	M651/A-8	3	F	-	-	
RV-5117	C	RWS	M651/A-8	3	F	-	-	
RV-5138	C	RWS	M651/E-5	3	F	-	-	
RV-5139	C	RWS	M651/A-7	3	F	-	-	

TABLE 2

TITLE:		INSERVICE TESTING OF PLANT VALVES						
VALVE	SEC XI CAT.	SYSTEM/P&ID		ASME CODE CLASS	SCHED FREQ	PLANT PROCEDURE		
						EXERCISE	LK TEST	MAINT.
		<u>RELIEF VALVES (Contd)</u>						
RV-5140	C	RWS	M651/E-2	3	F	-	-	
RV-5141	C	RWS	M651/E-4	3	F	-	-	
RV-5106	C	RWS	M651/F-2	3	F	-	-	
RV-74	C	RWS	Radwaste Evap M59A	3	F	-	-	
RV-75	C	RWS	Radwaste Evap M59A	3	F	-	-	
RV-74	C	RWS	Radwaste Evap M59B	3	F	-	-	
RV-75	C	RWS	Radwaste Evap M59B	3	F	-	-	
RV-5203	C	DMW	M652/F-7	3	F	-	-	
RV-5204	C	UWS	M652/B-6	3	F	-	-	
RV-5206	C	UWS	M652/C-6	3	F	-	-	
RV-5208A	C	DMW	M652/E-6	3	F	-	-	
RV-5208B	C	DMW	M652/E-6	3	F	-	-	
RV-9001	C	RWS	M657/G-6	3	F	-	-	
RV-1053	C	RWS	M657/D-6	3	F	-	-	
RV-9002	C	RWS	M657/E-3	3	F	-	-	

TABLE 2

TITLE: INSERVICE TESTING OF PLANT VALVES									
VALVE	SEC XI CAT.	SYSTEM/P&ID			ASME CODE CLASS	SCHED FREQ	PLANT PROCEDURE		
							EXERCISE	LK TEST	MAINT.
			<u>CHECK VALVES **</u>						
V0155B	AC	PMW	M201/G-7	P42	2	Q/R	SO-2	-	
3101ES	BC	ESS	M203/C-8		1	Q	RO-33	-	
3116ES	BC	ESS	M203/B-8		1	Q	RO-33	-	
3131ES	BC	ESS	M203/B-8		1	Q	RO-33	-	
3146ES	BC	ESS	M203/A-8		1	Q	RO-33	-	
3102ES	BC	ESS	M203/D-7		1	Q	RO-33	-	
3117ES	BC	ESS	M203/D-6		1	Q	RO-33	-	
3132ES	BC	ESS	M203/D-5		1	Q	RO-33	-	
3147ES	BC	ESS	M203/D-4		1	Q	RO-33	-	
0910CC	AC	CCS	M209/E-5	P14	2	Q/R	SO-2	-	
1½"N276Y	AC	RWS	M210/G-7	P37	2	Q/R	SO-2	-	
3"N238M2R	AC	RWS	M210/H-5	P41	2	Q/R	SO-2	-	
3"N238M2R	AC	RWS	M210/E-1	P67	2	Q/R	SO-2	-	
4"-257	AC	VAS	M215/H-3	P39	2	Q/R	SO-2	-	
1½"-223	AC	SCS	M221/G-2	P11	2	Q/R	SO-2	-	
1"-223	AC	MGS	M222/H-5	P26	2	Q/R	SO-2	-	

TABLE 2

TITLE:		INSERVICE TESTING OF PLANT VALVES							
VALVE	SEC XI CAT.	SYSTEM/P&ID			ASME CODE CLASS	SCHED FREQ	PLANT PROCEDURE		
							EXERCISE	LK TEST	MAINT.
<u>RUPTURE DISCS</u>									
RUD-0162	D	PCS	M201/G-6		3	None			
RD-76	D	RWS	Radwaste Evap. M59A		3	None			
RD-76	D	RWS	Radwaste Evap. M59B		3	None			
<u>CATEGORY E VALVES</u>									
3234ES	E	ESS	M204/G-8	P33	2	None			
3236ES	E	ESS	M204/G-7	P33	2	None			
3237ES	E	ESS	M204/G-7	P33	2	None			
122CA	E	CAS	M212/B-2	P10	2	None			
4"N29M2DR	E	V AS	M218/E-2	P4	2	None			
4"N29M2DR	E	VAS	M218/E-2	P4	2	None			
118SFP	E	SFP	M221/C-3	P72	2	None			
117SFP	E	SFP	M221/C-3	P72	2	None			
120SFP	E	SFP	M221/C-3	P64	2	None			
121SFP	E	SFP	M221/C-3	P64	2	None			
P-1	E	ILRT	N/A	P27	2	None			
P-2	E	ILRT	N/A	P27	2	None			
P-3	E	ILRT	N/A	P27	2	None			
604VA	E	ILRT	N/A	P27	2	None			
605VA	E	ILRT	N/A	P27	2	None			
* Quality Group D Or unclassified valves.									
** Category A Valves within these groups tested at Containment Penetration ILRT Pressure vice full system functional d/p per Tech. Specs.									

LEGEND

TESTING REQUIREMENTS

Q	Quarterly Operating
Q/R	Quarter Operating & During Refueling Outages
F	Five Years

The Palisades Pump & Valve Testing Program for the 20-month interval beginning June 30, 1978 is summarized below:

- I. Applicable Code: ASME B&PV Code, Section XI, 1974 edition with addenda through summer 1975.
- II. Period of Applicability: 6/30/78 through February 28, 1980.
- III. PUMP TEST PROGRAM

The Palisades Inservice Pump Test Program is summarized in Table I. This Table includes the pump's name and number, safety class, P&ID, procedure used to test the pump, and the parameters measured.

All pumps tested under this program are tested monthly, except during cold shutdown, when they are tested within one week after plant startup.

Pump testing is performed per the above referenced code, with the following exceptions:

1. Plant system designs do not include provisions for measuring the suction pressures of any of the pumps included in this program (as required by Table IWP 3100-1 of reference 3). Suction pressures will be calculated, as applicable, by taking the differences between each pump suction and its associated expansion tank level, plus expansion tank pressure.
2. Plant system designs do not include provisions of measuring differential pressures of any pumps included in this program. Therefore, where applicable, differential pressure will be calculated by taking the difference between the discharge pressure and the suction pressure calculated in (1) above.
3. The design of the service water pumps does not permit the measurement of bearing temperatures or monitoring of pump lubrication since the pump is submerged in water.
4. The design of the charging pumps does not permit measurement of bearing temperatures since the bearings are inaccessible unless the pumps are disassembled, and crankcase oil temperature is not representative of bearing temperatures because of the installed oil coolers.
5. The design of the concentrated Boric acid pumps does not permit direct measurement of bearing temperatures. A representative temperature will be obtained by measuring the surface contact temperatures of the bearing housings. Since there are no installed oil coolers, these temperatures are responsive to oil temperatures which are, in turn, responsive to bearing temperatures.
6. If a result of a pump test falls in the required action range, an evaluation of the deviation will be completed to determine if the pump is capable of fulfilling its function. Only after it is determined that the pump is unable to fulfill its function will corrective action be taken as described in Article IWP 3230(c) of the above Code.

IV. VALVE TEST PROGRAM

The Palisades Inservice Valve Test Program is summarized in Table II. The Table includes the following:

- Valve Number
- Safety Class
- P&ID Coordinate Location
- Valve ASME Section XI Category
- Valve Size
- Type
- Actuator Type
- Normal Position
- Safety Position
- Active or Passive
- Test Requirements (frequency)
- Relief Requested?
- Testing Alternatives
- Test Procedure

The valves included in the Valve Test Program were selected in accordance with the NRC letter dated January 13, 1978 and the following guidelines.

- 1.) Those valves which are required to function to safely shutdown the Plant, in the event of an accident.
- 2.) Those valves which are required to operate to mitigate the consequences of an accident.
- 3.) Those valves which are required to function to prevent the unintentional release of radioactive fluids or gases to the outside atmosphere.
- 4.) Valves affording a safety related overpressurization function.

All remaining valves are considered installed for operating convenience of maintenance, and are therefore not included in the Valve Test Program.

The valves included in Table II are tested per the requirements of the above referenced code, with the following exceptions:

- 1.) The following normally open valves will be tested during cold shutdown but not more often than once every three months:
 - a. CV 0910, 0910 CC, CV 9011, and CV 9040: Component Cooling Containment Isolation Valves. Cycling these valves during operation would result in the interruption of cooling water flow to the primary coolant pump seals and let down heat exchanger. This may result in damage to the pump seals, which would place the Plant in an unsafe mode of operation.
 - b. MOV 2087 (Volume Control Tank discharge) and CV 2009 (Letdown Containment Isolation Valve): Cycling of these valves during operation would isolate letdown flow, which is an abnormal mode of operation.

PUMP AND VALVE PROGRAM

EXTENT OF COVERAGE

TABLE 1.

INSERVICE PUMP TEST PROGRAM SUMMARY

<u>PUMP</u>	<u>SAFETY CLASS</u>	<u>P & ID</u>	<u>TEST PROCEDURE</u>	<u>TESTABLE PARAMETERS</u>
Service Water	P-7 A, B & C 3	M-213	MO-16	P _D , V, Im
Aux Feed (Constant speed)	P-8A 3	M-207	MO-24	P _D , V, Im, T _b
(Variable speed)	P-8B 3	M-207	MO-24	P _D , V, N, T _b
Boric Acid	P-56 A & B 2	M-202	MO-21	P _D , V, T _b
Charging (Variable Speed)	P-55A 2	M-202	MO-20	Q, V, N
(Constant Speed)	P-55B & C 2	M-202	MO-20	Q, V,
Component Cooling	P-52A, B, & C 3	M-209	MO-18	P _D , V, T _b , Im
Containment Spray	P-54A, B & C 2	M-204	MO-19	Q, V, T _b
LPSI	P-67 A & B 2	M-204	MO-23	P _D , Q, V, T _b
HPSI	P-66 A, B & C 2	M-204	MO-22	P _D , Q, V, T _b

P_D - Discharge Pressure
 V - Vibration
 Im - Motor Current
 T_b - Bearing Temperature
 N - Speed
 Q - Flow rate

NOTE: Differential pressure is calculated by taking the difference between the discharge pressure and suction pressure. Suction pressure is calculated, per exception #2.

INSERVICE TESTING OF PUMPS AND VALVES

EXTENT OF COVERAGE


VALVE NUMBER	CLASS	COORDINATES	VALVE CATAGORY					SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	P&ID NO. <u>M-201</u> SYSTEM: <u>Primary Coolant</u> <u>System</u>		Consumers Power	
			A	B	C	D	E										PROCEDURE	REMARKS		
CV-0120	2	F-7	X					1/2	GA	AO	C	C	P	QO,LT			QO-5,RO-32		<div>PALISADES NUCLEAR PLANT ENGINEERING MANUAL</div> <div>TITLE: INSERVICE TESTING OF PLANT VALVES TABLE II</div> <div>PROC NO EM-09-02 PAGE 11 OF 38 REVISION 3 DATE 2-28-78</div>	
CV-0121	2	F-7	X					1/2	GA	AO	C	C	P	QO,LT			QO-5,RO-32			
1129PC	2	F-7				X		1/2	GL	M	LC	-	-	-			---			
CV-0155	2	G-7	X					2	GL	AO	C	C	P	QO,LT			QO-5,RO-32			
VO115B	2	G-7	X		X			2	CK	SA	C	C	A	QO,LT			QO-5,RO-32			
1126PC	2	G-7				X		1	GL	M	LC	-	-	-			---			
RV1039	1	G-4			X			6	RV	SA	-	-	-	F			PCS-M-11			
RV-1040	1	G-4			X			6	RV	SA	-	-	-	F			PCS-M-11			
RV-1041	1	G-3			X			6	RV	SA	-	-	-	F			PCS-M-11			
RUD0162	3	G-6				X			RUD	SA	-	-	-	-			---			

TABLE II

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PAGE NO: P&ID NO: <u>M-202</u> SYSTEM: <u>Chemical & Volume Control System</u> (Charging, Letdown & B.Acid)	
			A	B	C	D	E										PROCEDURE	COMMENTS
CV-2009	2	H-6	X					2	GL	AO,M	O	C	A	CS,LT	X		QO-6,RO-32	
Test Conn.	2	H-6					X	1	GL	M	LC			-			---	
CV-2083	2	G-6	X					3/4	GL	AO,M	O	C	A	CS,LT	X		QO-6	
RV-2090	2	C-6			X			1/2	RV	SA				F			M-MSM-17	
RV-2092	2	C-7			X			1½	RV	SA				F			M-MSM-17	
RV-2096	2	B-6			X			1/2	RV	SA				F			M-MSM-17	
RV-2098	2	B-7			X			3/4	RV	SA				F			M-MSM-17	
RV-2102	2	A-6			X			1/2	RV	SA				F			M-MSM-17	
RV-2104	2	A-7			X			3/4	RV	SA				F			M-MSM-17	

CONSUMER'S POWER



PALISADES NUCLEAR PLANT

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VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PAGE NO: P&ID NO: M-202 SYSTEM: Chemical & Volume Control System (Charging, Letdown, and Boric Acid)	
			A	B	C	D	E										PROCEDURE	COMMENTS
MO-2087	2	D-6	X					4	GA	MO,M	O	C	A	CS	X		QO-6	
MO-2169	2	D-2	X					4	GA	MO,M	C	O	A	CS			QO-6	
MO-2170	2	D-3	X					4	GA	MO,M	C	O	A	CS			QO-6	
2171CVC	2	C-5		X				4	CK	SA	C	O	A	CS			QO-7	
RV-2731	2	C-2		X				3	RV	SA				F			M-MSM-17	
RV-2732	2	C-3		X				3	RV	SA				F			M-MSM-17	
RV-2235	2	C-3		X				2	RV	SA				F			M-MSM-17	
CV-2130	2	E-2	X					2	GL	AO	O	C	A	QO			QO-5	
RV-2230	2	C-3		X				3	RV	SA				F			M-MSM-17	
CV-2136	2	E-3	X					2	GL	AO	O	C	A	QO			QO-5	
2167CVC	2	C-4					X	1½	GL	M	LC						---	
CV-2155	2	D-5	X					3	AGL	AO	C	C	P	QO			QO-5	
MO-2140	2	B-4	X					3	GA	MO,M	C	O	A	QO			QO-5	
2141CVC	2	B-5		X				3	CK	SA	C	O	A	CS			QO-7	
RV-2255	2	D-6		X					RV	SA				F			M-MSM-17	
2161CVC	2	C-5		X				3	CK	SA	C	O	A	CS			QO-7	

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VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PAGE NO: P&ID NO: M-203 SYSTEM: <u>Engineered Safe- guards System</u> - (HPSI -LPST- Cont.Spray, SI, & SD Cooling)	
			A	B	C	D	E	SIZE								PROCEDURE	COMMENTS
3101 ES	1	C-7			X			12	CK	SA	C	O	A	HS/CS		QO-8	
MO-3007	1	F-3	X					2	GL	MO	C	O	A	CS,PI		QO-6	
3102 ES	1	D-7			X			12	CK	SA	C	O	A	HS/CS		QO-8	
MO-3041	1	E-7					X	12	GA	MO	LO	O	P	--		---	
CV-3042	1	D-7	X					1	GL	AO	O	C	A	QO,PI		QO-5	
MO-3068	1	E-3	X					2	GL	MO	C	O	A	CS,PI		QO-6	
MO-3008	1	E-3	X					6	GL	MO	C	O	A	CS,PI		QO-6	
3116 ES	1	B-7			X			12	CK	SA	C	O	A	HS/CS		QO-8	
MO-3009	1	D-3	X					2	GL	MO	C	O	A	CS,PI		QO-6	
3117 ES	1	D-6			X			12	CK	SA	C	O	A	HS/CS		QO-8	
MO-3045	1	E-6					X	12	GA	MO	LO	O	P	--		----	
CV-3046	1	D-6	X					1	GL	AO	O	C	A	QO,PI		QO-5	
MO-3066	1	D-3	X					2	GL	MO	C	O	A	CS,PI		QO-6	
MO-3010	1	D-3	X					6	GL	MO	C	O	A	CS,PI		QO-6	
3131 ES	1	B-7			X			12	CK	SA	C	O	A	HS/CS		QO-8	
MO-3011	1	C-3	X					2	GL	MO	C	O	A	CS,PI		QO-6	
3132 ES	1	D-5			X			12	CK	SA	C	O	A	HS/CS		QO-8	
MO-3049	1	E-5					X	12	GA	MO	LO	O	P	---		---	
CV-3047	1	D-5	X					1	GL	AO	O	C	A	QO,PI		QO-5	
MO-3064	1	C-3	X					2	GL	MO	C	O	A	CS,PI		QO-6	
MO-3012	1	B-3	X					6	GL	MO	C	O	A	CS,PI		QO-6	
RV-3161	3	D-7			X			2	RV	SA				F		M-MSM-17	

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VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PAGE NO: _____ P&ID NO: <u>M-203</u> SYSTEM: <u>Engineered</u> <u>Safeguards System</u>	
			A	B	C	D	E										PROCEDURE	COMMENTS
3146 ES	1	A-7			X			12	CK	SA	C	O	A	HS/CS			QO-8	
MO-3013	1	B-3		X				2	GL	MO	C	O	A	CS,PI			QO-6	
3147 ES	1	E-4			X			12	CK	SA	C	O	A	HS/CS			QO-8	
MO-3052	1	E-4					X	12	GA	MO	LO	O	P	---			---	
CV-3038	1	D-4		X				1	GL	AO	O	C	A	QO,PI			QO-5	
MO-3062	1	A-3		X				2	GL	MO	C	O	A	CS,PI			QO-6	
MO-3014	1	A-3		X				6	GL	MO	C	O	A	CS,PI			QO-6	
RV-3113	2	F-7			X			1	RV	SA				F			M-MSM-17	
RV-3128	2	F-6			X			1	RV	SA				F			M-MSM-17	
RV-3143	2	F-5			X			1	RV	SA				F			M-MSM-17	
RV-3158	2	F-4			X			1	RV	SA				F			M-MSM-17	
CV-3069	3	C-8		X				2	GL	AC	O	C	A	QO,PI			QO-5	
RV-3162	2	D-1			X			1½	RV	SA				F			M-MSM-17	
RV-3164	2	F-1			X			½	RV	SA				F			M-MSM-17	
RV-3165	2	F-1			X			½	RV	SA				F			M-MSM-17	
CV-3001	2	H-2	X					6	GL	AC	C	C,O	A	QO			QO-5	
CV-3002	2	G-2	X					6	GL	AC	C	C,O	A	QO			QO-5	
TestConn	2	G-2					X	1	GL	M	LC			---			---	
TestConn	2	H-2					X	1	GL	M	LC			---			---	
3258 ES	2	H-2					X	8	GA	M	LO			---			---	
3227 ES	2	H-2	X				X	1	GL	M	LC			LT			RO-32	
3259ES	2	G-2					X	8	GA	M	LO			---			---	
3217ES	2	H-2	X				X	1	GL	M	LC			LT			RO-32	

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VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PAGE NO: _____ P&ID NO: M-204 SYSTEM: <u>Engineered</u> <u>Safeguards</u> <u>System</u>	
			A	B	C	D	E										PROCEDURE	COMMENTS
3234 ES	2	G-8	X				X	2	GA	M	LC				LT			RO-32
TestConn	2	G-8					X	1	GL	M	LC				---			---
3237 ES	2	G-7	X				X	2	GA	M	LC				LT			RO-32
3236 ES	2	H-6	X				X	1	GA	M	LC				LT			RO-32
3225 ES	2	F-7					X		GA	M	LC				---			---
CV-3029	2	C-2	X					24	GA	A	C	C,O	A	QO				QO-2
CV-3030	2	C-2	X					24	GA	A	C	C,O	A	QO				QO-2
3181 ES	2	C-2			X			24	CK	SA	C	C,O	A	QO				QO-2
3182 ES	2	C-2					X	1	GL	M	LC				---			---
3166 ES	2	C-2			X			24	CK	SA	C	C,O	A	QO				QO-2
3167ES	2	C-2					X	1	GL	M	LC				---			---
CV-3007	2	E-3		X				18	GA	A	O	C,O	A	QO				QO-2
CV-3031	2	E-3		X				18	GA	A	O	C,O	A	QO				QO-2
3239 ES	2	F-3			X			18	CK	SA	O	C,O	A	QO				QO-2
3240 ES	2	F-3			X			18	CK	SA	O	C,O	A	QO				QO-2
3334 ES	2	F-3					X	1	GL	M	LC				---			---
3335 ES	2	E-3					X	1	GL	M	LC				---			---
3352 ES	2	F-2					X	2	GA	M	LO				---			---
3353 ES	2	F-3					X	2	GA	M	LO				---			---
CV-0437A	2	F-2		X				2	GA	M,AO	C	O	A	CS	X	RO	Table 4.2.2 Tech.Spec.	
CV0437B	2	F-2		X				2	GA	M,AO	C	O	A	CS	X	RO	Table4.2.2 Tech.Spec.	
RV-0437	2	H-2			X			1	RV	SA				F			M-MSM-17	
CV-3027	2	H-3		X				6	GA	A	O			QO			QO-5	



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VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PAGE NO: P&ID NO: <u>M-204</u> SYSTEM: <u>Engineered</u> <u>Safeguards</u> <u>System</u>		Consumers Power	
			A	B	C	D	E									PROCEDURE	COMMENTS		
CV-3056	2	H-3	X					6	GA	A	O	C	A	QO			QO-5	PALISADES NUCLEAR PLANT ENGINEERING MANUAL INSERVICE TESTING OF PLANT VALVES TABLE II	
CV-0438A	2	F-1	X					2	GA	AO	C	O	A	QO	X	RO	Table 4.13 Tech.Spec.		
CVC438B	2	F-1	X					2	GA	AO	C	O	A	QO	X	RO	Table 4.13 Tech.Spec. M-MSM-17		
RV-0438	2	H-2		X				1	RV	SA				F					
3184 ES	2	A-4					X	6	GA	M	LO			---			---		
3187 ES	2	A-5					X	3	GA	M	LO			---			---		
CV-3036	2	B-6					X	3	GA	AO	ELC	C,O	A	QO			QO-5		
CV-3037	2	B-5					X	3	GA	AC	ELO	O,C	A	QO			QO-5		
RV-3267	2	B-5		X				1/2	RV	SA				F			M-MSM-17		
3175 ES	2	F-4					X	6	GA	M	LO			---			---		
3188 ES	2	B-4					X	2	GL	M	LO			---			---		
3178 ES	2	G-5					X	3	GA	M	LO			---			---		
3179 ES	2	G-4					X	2	GL	M	LO			---			---		
CV-3059	2	C-5					X	4	GL	AC	ELO	Q,C	A	QO			QO-5		
3169 ES	2	G-4					X	6	GA	M	LO			---			---		
3172 ES	2	H-5					X	3	GA	M	LO			---			---		
RV-3266	2	C-6		X				1/2	RV	SA				F			M-MSM-17		
CV-3018	2	B-6					X	4	GA	AO	ELC	C,O	A	QO			QO-5		
3173 ES	2	H-4					X	2	GL	M	LO	-		---			---		
3198 ES	2	C-3					X	14	GA	M	LO	-		---			---		
3202 ES	2	C-5					X	10	GA	M	LO	-		---			---		
3203ES	2	C-4					X	3	GL	M	LO	-		---			---		
3190ES	2	E-4					X	14	GA	M	LC	-		---			---		
3199ES	2	C-4					X	14	GA	M	LC	-		---			---		

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VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PAGE NO: P&ID NO: M-204 SYSTEM: <u>Engineered</u> <u>Safeguards</u> <u>System</u>	
			A	B	C	D	E										PROCEDURE	COMMENTS
3205 ES	2	E-3					X	8	GA	M	LC			---			---	
3189 ES	2	D-3					X	14	GA	M	LO			---			---	
3193 ES	2	F-5					X	10	GA	M	LO			---			---	
3194 ES	2	F-4					X	3	GL	M	LO	O		---			---	
CV-3006	2	C-7					X	12	GL	AC	ELO	C	P	---			---	
CV-3025	2	D-7					X	10	GA	AO	ELC	C	P	---			---	
RV-0401	1	D-1		X				3/4	RV	SA				F			M-MSM-17	
MO-3015	1	D-1					X	12	GA	MO	ELC	C	P	---			QO-6	
MO-3016	1	D-2					X	12	GA	MO	ELC	C	P	---			QO-6	
RV-3164	2	D-2		X				1½	RV	SA				F			M-MSM-17	
CV-3055	2	D-6					X	12	GA	A	ELC	C	P				---	
CV-3212	2	D-6					X	10	GA	A	ELO						---	
CV-3223	2	G-6					X	10	GA	A	ELO						---	
CV-3224	2	F-7					X	10	GA	A	ELO						---	
CV-3213	2	E-7					X	10	GA	A	ELO						---	
RV-0402	2	G-7		X				3/4	RV	SA				F			M-MSM-17	
RV-0403	2	D-7		X				3/4	RV	SA				F			M-MSM-17	
MO-3072	2	B-7	X					2	GL	AC	C	O		QO-5			QO-5	
3400 ES	2	F-2		X				2	CK	SA				CS	X	RO		See Tech. Spec.
3401 ES	2	F-2		X				2	CK	SA				CS	X	RO		Table 4.2.2 "
3402 ES	2	F-2		X				2	CK	SA				CS	X	RO		" " "
3403 ES	2	F-2		X				2	CK	SA				CS	X	RO		" " "
3404 ES	2	G-1		X				2	CK	SA				CS	X	RO		" " "
3405 ES	2	G-1		X				2	CK	SA				CS	X	RO		" " "
3406 ES	2	F-1		X				1½	CK	SA				CS	X	RO		" " "
3407 ES		F-1		X				1½	CK	SA					X	RO		" " "

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VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PAGE NO: _____ P&ID NO: <u>M-205</u> SYSTEM: <u>Main Steam System</u>	
			A	B	C	D	E										PROCEDURE	COMMENTS
CV-0501	2	H-8	X	X			30	CK	A	O				CS			Q0-6	
CV-0510	2	H-7	X	X			30	CK	A	O				CS			Q0-6	
CV-0521	3	C-8	X				4	GA	A	C	O	A	Q0				Q0-5	
CV-5022B	2	C-8	X				4	GL	M,AO	C	O	A	Q0				Q0-5	
CV0522A	2	F-8	X				4	GL	M,AO	C	O	A	Q0				Q0-5	
RV-0521	3	C-8		X			3	RV	SA				F				M-MSM-17	



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VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PAGE NO: _____ P&ID NO: <u>M-207</u> SYSTEM: <u>Main Steam,</u> <u>Feed & Condensate</u>	
			A	B	C	D	E										PROCEDURE	COMMENTS
RV-0701	2	H-7			X			6	RV	SA				F			M-MSS-14	
RV-0702	2	H-7			X			6	RV	SA				F			M-MSS-14	
RV-0703	2	H-8			X			6	RV	SA				F			M-MSS-14	
RV-0704	2	H-8			X			6	RV	SA				F			M-MSS-14	
RV-0705	2	H-8			X			6	RV	SA				F			M-MSS-14	
RV-0706	2	H-8			X			6	RV	SA				F			M-MSS-14	
RV-0707	2	H-7			X			6	RV	SA				F			M-MSS-14	
RV-0708	2	H-7			X			6	RV	SA				F			M-MSS-14	
RV-0709	2	H-7			X			6	RV	SA				F			M-MSS-14	
RV-0710	2	H-7			X			6	RV	SA				F			M-MSS-14	
RV-0711	2	H-7			X			6	RV	SA				F			M-MSS-14	
RV-0712	2	H-7			X			6	RV	SA				F			M-MSS-14	
RV-0713	2	H-8			X			6	RV	SA				F			M-MSS-14	
RV-0714	2	H-8			X			6	RV	SA				F			M-MSS-14	
RV-0715	2	H-8			X			6	RV	SA				F			M-MSS-14	
RV-0716	2	H-8			X			6	RV	SA				F			M-MSS-14	
RV-0717	2	H-8			X			6	RV	SA				F			M-MSS-14	
RV-0718	2	H-8			X			6	RV	SA				F			M-MSS-14	
RV-0719	2	H-7			X			6	RV	SA				F			M-MSS-14	
RV-0720	2	H-7			X			6	RV	SA				F			M-MSS-14	

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SYSTEM: Main Steam,
Feed & Condensate

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PROCEDURE	COMMENTS
			A	B	C	D	E											
RV-0721	2	H-7			X			6	RV	SA				F			M-MSS-14	
RV-0722	2	H-7			X			6	RV	SA				F			M-MSS-14	
RV-0723	2	H-8			X			6	RV	SA				F			M-MSS-14	
RV-0724	2	H-8			X			6	RV	SA				F			M-MSS-14	
RV-0783	3	B-8			X			2½	RV	SA				F			M-MSS-17	
CV-0736	2	E-8		X				6	GL	AC	C	O	A	QO			MO-24	
CV-0736A	2	E-8		X				2	GL	AC	C	O	A	QO			QO-5	
CV-0737	2	D-8		X				6	GL	AC	C	O	A	QO			MO-24	
CV0737A	2	D-8		X				2	GL	AC	C	O	A	QO			QO-5	

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PAGE NO: P&ID NO: <u>M-208</u> SYSTEM: <u>Service Water</u> <u>System</u>	
			A	B	C	D	E	SIZE								PROCEDURE	COMMENTS
CV-0825	3	C-4		X				3	GA	AC	C	O	A	QO		QO-5	
CV-0878	3	C-3		X				3	GA	AC	C	O	A	QO		QO-5	
CV-0823	3	D-4		X				3	B	AC	O	O	P	CS		QO-2	
CV-0826	3	C-4		X				3	B	AC	O	O	P	CS		QO-2	
0138SWS	3	B-4					X	3	GL	M	LO			---		---	
0137SWS	3	B-3					X	3	GL	M	LO			---		---	
CV-0864	3	A-6		X				8	B	AC	C	O	A	QO,PI		QO-5	
CV-0861	3	D-6		X				8	B	AC	C	O	A	QO,PI		QO-5	
CV-0873	3	A-7		X				8	B	AC	C	O	A	QO,PI		QO-5	
CV-0867	3	D-7		X				8	B	AC	C	O	A	QO,PI		QO-5	
CV-0874	3	B-5		X				16	B	AC	O	O	P	---		---	
CV-0847	3	B-4		X				16	B	AC	O	O	P	---		---	
CV-0884	3	F-2		X				6	B	AC	C	O	A	QO		QO-5	
CV-0885	3	E-2		X				6	B	AC	C	O	A	QO		QO-5	
0131SWS	3	F-1					X	6	GA	M	LO					---	
0132SWS	3	F-1					X	6	GA	M	LO					---	

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			A	B	C	D	E	SIZE								PROCEDURE	COMMENTS
CV-0910	2	E-5	X					10	B	AC,M	O	C	A	CS,LT	X		QO-6,RO-32
0910 CC	2	E-5	X					10	B	AC,M	O	C	A	CS,LT	X		QO-6,RO-32
TestConn	2	E-5					X	1	GL		LC		--				---
0712 CC	3	E-4					X	10	GA	M	LO		--				---
CV-0911	2	A-6	X					10	B	AC,M	O	C	A	CS,LT	X		QO-6,RO-32
CV-0940	2	A-5	X					10	B	AC,M	O	C	A	CS,LT	X		QO-6,RO-32
TestConn	2	A-5					X	1	GL	M	LC		--				---
0713 CC	3	A-5					X	10	GA	M	LO		--				---
RV-0915	3	G-1			X			2	RV	SA			F				M-MSM-17
CV-0944	3	E-1		X				10	B	AO,M	O	O	A	QO			QO-1
CV0944A	3	E-1		X				14	B	AO,M	O	C	A	QO			QO-5
CV0977B	3	E-1		X				10	B	AO,M	O	O	A	QO			QO-1
CV-0937	3	G-3		X				18	B	AC	C	O	A	QO			QO-5
CV-0938	3	G-3		X				18	B	AC	C	O	A	QO			QO-5
RV-0954	3	G-5			X				RV	SA			F				M-MSM-17
RV-0955	3	G-5			X				RV	SA			F				M-MSM-17
CV-0913	3	D-3		X				4	GA	AC	C	O	A	QO			QO-5
CV-0945	3	F-2		X				16	B	AC	O	O	P	QO			QO-2
CV-0946	3	F-2		X				16	B	AC	O	O	P	QO			QO-2
0914 CC	3	G-2					X	16	B	M	LO						---
0916 CC	3	F-2					X	16	B	M	LO						---

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P&ID NO: M-209
SYSTEM: Component Cooling
System

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PAGE NO: _____ P&ID NO: M-209 SYSTEM: <u>Component Cooling System</u>		
			A	B	C	D	E										PROCEDURE	COMMENTS	
0103 CC	3	H-5					X	12	B	M	LO							---	
0101 CC	3	G-5					X	12	B	M	LO							---	
0104 .CC	3	G-5					X	12	B	M	LO							---	
0102 CC	3	F-5					X	12	B	M	LO							---	
RV-0956	3	G-6			X			1	RV	SA				F				M-MSM-17	
RV-0939	3	F-6			X			1½	RV	SA				F				M-MSM-17	
CV-0950	3	C-5		X				4"	GA	AC	C	O	A	QO				QO-5	

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PAGE NO: P&ID NO: M-210 SYSTEM: Rad Waste - Liquid	
			A	B	C	D	E										PROCEDURE	COMMENTS
CV-1002	2	F-7	X					4	GL	AO	O	C	A	QO,LT			QO-5, RO-32	
CV-1007	2	F-7	X					4	GL	AO	O	C	A	QO,LT			QO-5, RO-32	
TestConn	2	F-7					X	1	GL	M	LC			---			---	
CV-1001	2	G-7	X					1½	GL	AO	C	C		QO,LT			QO-5, RO-32	
	2	G-7	X					1½	CK	SA	C	C		QO,LT			QO-5, RO-32	
TestConn	2	G-7					X	1	GL	M	LC			---			---	
CV-1004	2	H-5	X					3	GL	AO	O	C	A	QO,LT			QO-5, RO-32	
	2	H-5	X	X				3	CK	SA	O	C	A	QO,LT			QO-5, RO-32	
TestConn	2	H-5					X	1	GL	M	LC			---			---	
CV-1064	2	G-1	X					2	GL	AO	O	C	A	QO,LT			QO-5, RO-32	
CV-1065	2	G-1	X					2	GL	AO	O	C	A	QO,LT			QO-5, RO-32	
TestConn	2	G-1					X	1	GL	M	LC			---			---	
CV-1037	2	E-1	X					3	GL	AO	O	C	A	QO,LT			QO-5, RO-32	
	2	E-1	X					3	CK	SA	O	C	A	QO,LT			QO-5, RO-32	
TestConn	2	E-1					X	1	GL	M	LC			---			---	
CV-1036	2	E-2	X					6	GL	AO	O	C	A	QO,LT			QO-5, RO-32	
CV-1038	2	E-2	X					6	GL	AO	O	C	A	QO,LT			QO-5, RO-32	
TestConn	2	E-2					X	1	GL	M	LC			---			---	
CV-1044	2	D-2	X					4	GL	AO	O	C	A	QO,LT			QO-5, RO-32	
CV-1045	2	E-2	X					4	GL	AO	O	C	A	QO,LT			QO-5, RO-32	
TestConn	2	E-2					X	1	GL	M	LC			---			---	

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VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PAGE NO: P&ID NO: M-211 SYSTEM: Rad Waste - Gaseous	
			A	B	C	D	E										PROCEDURE	COMMENTS
CV-1101	2	H-7	X					4	GL	AO	O	C	A	QO,LT			QO-5, RO-32	
CV-1102	2	H-7	X					4	GL	AO	O	C	A	QO,LT			QO-5, RO-32	
TestConn	2	H-7					X	1	GL	M	LC			---			---	
CV-1103	2	D-7	X					4	GL	AO	C	C	P	QO,LT			QO-5, RO-32	
CV-1104	2	D-7	X					4	GL	AO	C	C	P	QO,LT			QO-5, RO-32	
TestConn	2	D-7					X	1	GL	M	LC			---			---	
RV-1111	3	G-6		X				1½	RV	S.				F			M-MSM-17	



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			A	B	C	D	E										
CV-1211	2	D-3						GL	AC	0	0	P	---			---	
2"263	2	D-3						CK	SA	0	0	P	---			---	
TestConn	2	D-3						GL	M	LC			---			---	
122 CAS	2	B-2						GA	M	LC			LT			RO-32	
2"263	2	B-2						CK	SA				QO,LT			RO-32, QO-5	
TestConn	2	B-2						GL	M	LC			---			---	



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PAGE NO:	M-213	PROCEDURE	COMMENTS
P&ID NO:			
SYSTEM:	Service Water System		
VALVE NUMBER	CV-1359	QO-5	
CLASS	3		
COORDINATES	E-7		
VALVE CATEGORY	A	X	
	B		
	C		
	D		
	E		
VALVE TYPE	B		
ACTUATOR TYPE	AO		
NORMAL POSITION	O		
SAFETY POSITION	O		
ACTIVE OR PASSIVE	P		
TESTING REQUIREMENTS	QO		
RELIEF REQUESTS			
TESTING ALTERNATIVES			

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PAGE NO: P&ID NO: <u>M-215/M-214</u> SYSTEM: <u>Heating System</u> <u>Diesel System</u>	
			A	B	C	D	E										PROCEDURE	COMMENTS
CV-1503	2	H-3	X					4	GA	AO	C	C	P	QO,LT			QO-5,R0-32	
0257	2	H-3	X		X			4	CK	SA	C	C	P	QO,LT			QO-5,R0-32	
TestConn	2	H-3					X	1	GL	M	LC			---			---	
CV-1501	2	G-3	X					2	GA	AO	C	C	P	QO,LT			QO-5,R0-32	
CV-1502	2	G-3	X					2	GA	AO	C	C	P	QO,LT			QO-5,R0-32	
TestConn	2	G-3					X	1	GL	M	LC			---			---	
RV-1478	3	G-2			X				RV	SA							M-MSM-17	
RV-1479	3	F-5			X				RV	SA							M-MSM-17	
RV-1480	3	F-4			X				RV	SA							M-MSM-17	
RV-1489	3	F-5			X				RV	SA							M-MSM-17	
RV-1490	3	F-4			X				RV	SA							M-MSM-17	
RV-1488	3	G-2			X				RV	SA							M-MSM-17	



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			A	B	C	D	E										PROCEDURE	COMMENTS
CV-1803	2	E-3	X					12	B	AO	C	C	P	LT			RO-32	
CV-1805	2	E-3	X					48	B	AO	C	C	P	LT			RO-32	
CV-1806	2	E-3	X					48	B	AO	C	C	P	LT			RO-32	
TestConn	2	E-3					X	4	GA	M	LC			LT			RO-32	
TestConn	2	E-3					X	4	GA	M	LC			LT			RO-32	
TestConn	2	E-3					X	1	GL	M	LC			---			---	
TestConn	2	E-3					X	1	GL	M	LC			---			---	
CV-1807	2	E-1	X					48	B	AO	C	C	P	LT			RO-32	
CV-1808	2	D-1	X					48	B	AO	C	C	P	LT			RO-32	
TestConn	2	D-1					X	1	GL	M	LC			---			---	
CV-1813	2	E-2	X					12	B	AO	C	C	P	LT			RO-32	
CV-1814	2	D-2	X					12	B	AO	C	C	P	LT			RO-32	
TestConn	2	D-2					X	1		M	LC			--			---	

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VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PROCEDURE	COMMENTS
			A	B	C	D	E										
CV-1919	2	E-7	X					GL	AO	O	C	A	QO,LT			QO-5, RO-32	
CV-1911	2	E-7	X					GL	AO	O	C	A	QO,LT			QO-5, RO-32	
TestConn	2	E-7					X	GL	M	IC			---			---	

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PAGE NO: P&ID NO: M-221 SYSTEM: Spent Fuel Pool & Shield Cooling	
			A	B	C	D	E									PROCEDURE	COMMENTS
CV-0939	2	G-2	X					1½	GA	AO	O	C	A	QO,LT		QO-5,RO-32	
0223SFP	2	G-2	X	X				1½	CK	SA	O	C	A	QO,LT		QO-5,RO-32	
TestConn	2	G-2					X	1	GL	M	LC			---		---	
0117SFP	2	C-3	X				X	6	GA	M	LC			LT		RO-32	
0118SFP	2	C-3	X				X	6	GA	M	LC			LT		RO-32	
TestConn	2	C-3					X	1	GL	M	LC			---		---	
0121SFP	2	C-3	X				X	8	GA	M	LC			LT		RO-32	
0120SFP	2	C-3	X				X	8	GA	M	LC			LT		RO-32	
TestConn	2	C-3					X	1	GL	M	LC			---		---	
RV-2109		C-7		X					RV	SA						M-MSM-17	

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		PALISADES NUCLEAR PLANT		38		0F		33		2-28-78		3	
PAGE NO: _____ P&ID NO: M-222 SYSTEM: Misc. Gas Supply System		PROCEDURE		COMMENTS		TESTING ALTERNATIVES		RELIEF REQUESTS		TESTING REQUIREMENTS		ACTIVE OR PASSIVE	
SAFETY POSITION		NORMAL POSITION		ACTUATOR TYPE		VALVE TYPE		SIZE		E		VALVE CATEGORY	
COORDINATES		CLASS		VALVE NUMBER		CV-1358 0223MGS TestCom 2		H5 H6 H5		X X X		2 2 2	

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TESTING REQUIREMENTS		ACTIVE OR PASSIVE		SAFETY POSITION	
NORMAL POSITION		ACTUATOR TYPE		VALVE TYPE	
SIZE		VALVE CATEGORY		COORDINATES	
CLASS		VALVE NUMBER		CLASS	
SV2402L SV2402A		2 2		D-7 D-7	
X X		X X		X X	
1/4 1/4		GL GL		SV SV	
C C		C C		C C	
P P		P P		C C	
QO QO		QO QO		C C	
QO-5 QO-5		QO-5 QO-5		C C	
PROCEDURE		COMMENTS		CLASS	

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	SAFETY POSITION	ACTIVE OR PASSIVE	TESTING REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVES	PAGE NO: _____ P&ID NO: <u>M-225</u> SYSTEM: <u>High Pressure</u> <u>Air System</u> <u>ILRT Penet.</u>		
			A	B	C	D	E										PROCEDURE	COMMENTS	
RV-0441	2	G-8			X			1/2	RV	SA								M-MSM-17	
RV-0439	2	G-1			X			1/2	RV	SA								M-MSM-17	
P-1	2	P-27					X											ILRT Penet.	
P-2	2	P-27					X											ILRT Penet	
P-3	2	P-27					X											ILRT Penet.	
604VA	2	P-27					X											ILRT Penet.	
605VA	2	P-27					X											ILRT Penet.	



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			A	B	C	D	E										PROCEDURE	COMMENTS
CV-0704	3	E-5	X					6	GA	AO	O	C	A	LT				
CV-0767	2	F-8		X				2	AGL	AO	O	C	A	QO			QO-5	
CV-0771	2	F-8		X				2	AGL	AO	O	C	A	QO			QO-5	
TestConn	2	F-8				X		1	GL	M	LC			---			---	
CV-0768	2	F-8		X				2	AGL	AO	O	C	A	QO			QO-5	
CV-0770	2	F-8		X				2	AGL	AO	O	C	A	QO			QO-5	
TestConn	2	F-8				X		1	GL	M	LC			---			---	
CV-0739	2	E-8		X				2	AGL	AO	O	C	A	QO			QO-5	
CV-0738	2	D-7		X				2	AGL	AO	O	C	A	QO			QO-5	



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LEGEND

VALVE TYPE

GA Gate
GL Globe
RV Relief
AGL Angle
B Butterfly
RUD Rupture Disc

TESTING REQUIREMENTS

QO Quarterly Operating
CS Cold Shutdown
LT Leak Test
F Five Years
PI Remote Position Indication
Verified Every Refueling
HS/CS Hot or Cold Shutdown
RO 18 months - Shutdowns

ACTUATOR TYPE

AO Air to Open
AC Air to Close
M Manual
SA System Actuated
MO Motor Operated

POSITION, SAFETY POSITION

O Open
C Closed
LO Locked Open
LC Locked Closed
EL Electrically Locked



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BULK POWER OPERATIONS
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FIGURE 3

PALISADES PLANT

MAINTENANCE ORDER NO. _____

RELIEF VALVE TEST DATA

VALVE NO.			
System			
Procedure			
P&ID			
References			
Required Setpoint	<u>±</u>	<u>±</u>	<u>±</u>
Source			
As-Found Setpoint			
Final Setpoint			
PERFORMED BY:			
Date			
Calibration Equipment			
Gauge S/N			
Cal. Due Date			

REMARKS: _____

DR Number (If reqrd) _____

Reviewed For Completeness. DR prepared if as-found setpoint out of required tolerance.

Maint. Supervisor _____ Date _____

Forward completed data sheet and DR (If applicable) to Technical Superintendent.

Evaluated in accordance with EM-09-02.

Tech. Supt./Proj.Eng. _____

Date _____

Evaluation Remarks: (Include further action required including MO numbers): _____

Return data sheet to Maintenance for permanent filing with MO.