Consumers Energy

A CMS Energy Company

Palisades Nuclear Plant
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August 10, 2000

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT
CONTAINMENT INSERVICE INSPECTION, TESTING AND AGING MANAGEMENT,
ISI SUMMARY - REFOUT 15

Attached is the inservice inspection summary report for containment exterior examinations, submitted in accordance with ASME Section XI, 1992 Edition, IWA-6240(b). This report, for examinations which are performed during on-line periods, shall be submitted within 90 days after completion of examinations. The Summer 2000 exterior examinations were completed June 1, 2000.

SUMMARY OF COMMITMENTS

This letter contains no new commitments and no revisions to existing commitments.

Nathan L. Haskell
Director, Licensing and Performance Assessment

CC Administrator, Region III, USNRC
Project Manager, NRR, USNRC
NRC Resident Inspector - Palisades

Attachment

A047

ATTACHMENT

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

August 10, 2000

Containment Inservice Inspection
Testing and Aging Management
ISI Summary - Refout 15

24 Pages

PALISADES NUCLEAR PLANT

PALISADES NUCLEAR PLANT

CONTAINMENT INSERVICE INSPECTION,

TESTING AND AGING MANAGEMENT,

ISI SUMMARY - REFOUT 15

UTILITY: Consumers Energy

PLANT: Palisades Nuclear Plant

AUTHOR: _____, 7.12.2000
GESchrader, PE, Program Sponsor Date

TECHNICAL REVIEWER _____, 7/12/2000
THNewton, System Engineer Date

MANAGER APPROVAL _____, 7/24/2000
JKFord, Engineering, Programs Date

June 7, 2000

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1999 CONTAINMENT INSERVICE INSPECTION, TESTING AND AGING MANAGEMENT REPORT, ISI SUMMARY - REFOUT 15

Submitted in accordance with ASME Boiler and Pressure Vessel Code, Section XI, Article IWA-6000, 1992 Edition, 92 Addenda

1. Date: November 1999 through June 2000

2. Company Headquarters: Consumers Energy Company
212 West Michigan Avenue
Jackson, Michigan 49201

3. Plant: Palisades Nuclear Plant
27780 Blue Star Memorial Highway
Covert, Michigan 49043

4. Unit No: One

5. Commercial Service Date: December 31, 1971

6. Major Component Inspected:

Component	Manufacturer	Equipment Number
Exterior Concrete	Bechtel	N-54A

7. Completion Date of Examination: June 1, 2000

8. Code Inspector: KLBlake

9. Authorized Inspection Agency: FMIC
Johnston, R.I.

10. Abstract: See attached report

1.0 PURPOSE

In accordance with Code of Federal Regulation 10CFR50.55a, Palisades is required to implement ASME Section XI, 1992 Edition, 1992 Addenda, Subsection IWE and IWL by September 9, 2001. This requirement is met for the containment metal liner by implementation of inspection program B as described in IWE-2412. This requirement is met for containment concrete and unbonded post-tensioning system by meeting IWL-2410 and IWL-2420.

This report provides a summary of examinations, inspections and corrective actions related to the Summer 2000 containment exterior visual examinations. All activities were performed in accordance with the rules and requirements specified in ASME Section XI, Subsection IWL as modified by 10CFR50.55a(g)(4)(v)(C). In addition, historical examination and inspection summaries for the containment liner, concrete and unbonded post-tensioning system are included for completeness.

In accordance with ASME Section XI, 1992 Edition, IWA-6240(b), "The inservice inspection summary report shall be submitted within 90 calendar days of the completion of each refueling outage." For containment exterior examinations, which are performed during on-line periods, this report shall be submitted within 90 days after completion of examinations. The Responsible Engineer shall complete a Containment Inservice Inspection, Testing and Aging Management, surveillance report. The Summer 2000 exterior examinations were completed June 1, 2000.

2.0 EXAMINATION AND INSPECTION SCOPE FOR SUMMER 2000

The examination and inspection scope for Summer 2000 is summarized in the following tables:

2.1 Examination Category L-A, Concrete

Examination Category	Item Number	Reference I.D.	Drawing/ Stress Iso.	Examination	Examination Procedure	Data Sheet Number	Date Completed	Comments
E-A	L-1.11	Concrete Surfaces, 25-85 degrees	Ref.Dr. C-56 ISO. C-1	VT-3	NDT-VT-07	DAC2 DAC1 DAC1 DAC1 DAC1	03May00 10May00 16May00 24May00 31May00	CPAL001422 Acceptable
E-A	L-1.11	Concrete Surfaces, 85-145 degrees	Ref.Dr. C-56 ISO. C-1	VT-3	NDT-VT-07	DAC1	22May00	CPAL001422 Acceptable
E-A	L-1.11	Concrete Surfaces, 145-205 degrees	Ref.Dr. C-56 ISO. C-1	VT-3	NDT-VT-07	DAC1	10May00	CPAL001422 Acceptable
E-A	L-1.11	Concrete Surfaces, 205-265 degrees	Ref.Dr. C-56 ISO. C-1	VT-3	NDT-VT-07	DAC2 DAC3 DAC1 DAC1	05May00 05May00 31May00 31May00	CPAL001422 Acceptable
E-A	L-1.11	Concrete Surfaces, 265-325 degrees	Ref.Dr. C-56 ISO. C-1	VT-3	NDT-VT-07	DAC1 DAC1 DAC1	05May00 09May00 30May00	CPAL001422 Acceptable
E-A	L-1.11	Concrete Surfaces, 325-25 degrees	Ref.Dr. C-56 ISO. C-1	VT-3	NDT-VT-07	DAC1 DAC2 DAC3 DLH1 DAC1 DAC1	05May00 10May00 10May00 11May00 23May00 25May00	CPAL001422 Acceptable
E-A	L-1.11	Concrete Surfaces, Dome	Ref.Dr. C-56 ISO. C-1	VT-3	NDT-VT-07	DAC1	18May00	CPAL001422 Acceptable
E-A	L-1.11	Concrete Surfaces, Tendon Access Tunnel	Ref. Dr. C-56	VT-3	NDT-VT-07	DAC1	03May00	CPAL001422 Acceptable

3.0 EXAMINATION AND INSPECTION RESULTS AND CORRECTIVE ACTIONS

3.1 Examination Category L-A, Concrete Surfaces

Examination Results and Corrective Actions:

Attachment 3 contains pertinent information from Condition Report C-PAL-00-01422 and a table containing the various inspection findings. Associated with each finding is the conclusion of the Responsible Engineer regarding the effect of the finding on containment degradation and operability. This attachment serves as the engineering evaluation described in IWL-3300.

4.0 HISTORICAL EXAMINATION AND INSPECTION SUMMARIES

For completeness, examination and inspection summaries are included for containment liner, containment concrete and unbonded post-tensioning system examinations.

4.1 Containment Liner Examinations, Preservice to Present

4.1.1 Preservice Examination

Preservice examinations for containment are documented in Palisades FSAR 5.8.8, Containment Structure Testing and 5.8.8.4, "Structural Integrity Test."

4.1.2 An initial Containment Liner Plate and Penetration Surveillance Program is documented in FSAR 5.8.8.5. The liner plate and penetration surveillance program was established to satisfy the requirements of the Plant Technical Specifications. Surveillances were conducted before the pressurization phase of the structural integrity test (PPSIT) on approximately March 22, 1970, after the PPSIT, one year after initial start-up and one-and-one-half years after initial start-up. It was concluded that the liner plate system and penetration assemblies were performing as predicted. Therefore, the surveillance program was terminated.

4.1.3 Steam Generator Replacement Construction Opening

Details pertaining the steam generator construction opening are described in Palisades' FSAR 5.8.9.

4.1.4 10CFR50, Appendix J, Visual Examination

Prior to and following each Integrated Leak Rate Test required by Federal Regulation 10CFR50, Appendix J, the Palisades containment liner plate is subjected to visual examination. This examination has been performed three times each 10-year interval and is conducted by plant engineers and test personnel.

4.2 Containment Reinforcing Concrete Examinations, Preservice to Present

4.2.1 Preservice

Preservice examination for containment is documented in Palisades FSAR 5.8.8, Containment Structure Testing.

4.2.2 FSAR 5.8.8.6, "End Anchorage Concrete Surveillance"

The end anchorage concrete surveillance program was established to satisfy the requirements of the Plant Technical Specifications. Observations were made before, during and after the PPSIT. Subsequent observations were made February 12, 1971 and June 7, 1971. It was concluded that the end anchorage concrete was sound and free of significant cracking. Therefore, the surveillance program was terminated.

4.2.3 Steam Generator Replacement Construction Opening

Details pertaining to the steam generator construction opening are described in Palisades' FSAR 5.8.9.

4.2.4 10CFR50, Appendix J, Visual Examination

Prior to and following each Integrated Leak Rate Test required by Federal Regulation 10CFR50, Appendix J, the Palisades containment reinforcing concrete is subjected to visual examination. This examination has been performed three times and is conducted by plant engineers and test personnel.

4.3 Containment Post Tensioning System, Preservice to 25-Year Surveillance

4.3.1 Preservice Examination

Preservice examination for containment post tensioning system is documented in Palisades' FSAR 5.8.8.3, "Prestressing System Surveillance."

4.3.2 1, 3 and 5 through 20-Year Surveillances

Historical summary for containment 1, 3, 5 and 10 through 20-Year Post Tensioning System surveillances are documented in Palisades' FSAR 5.8.8.3.5, "Historical Summary."

4.3.3 25-Year Surveillance

Consumers Energy Company submitted the Palisades' 25-Year tendon surveillance report on December 18, 1997, with a supplemental submittal on February 23, 1998. Additionally, information was submitted September 25, 1998 in response to the NRC's July 27,1998 request.

5.0 ASSESSMENT OF POTENTIAL DEGRADATION MECHANISMS

For completeness, potential degradation mechanisms are described for containment liner and containment concrete examinations.

5.1 Containment Metal Liner

5.1.1 Pitting Thinning

Surveillance Examinations to-date have not identified this degradation mechanism at Palisades.

5.1.2 Corrosion Thinning (Atmospheric, Embedment, Crevice, Differential Aeration, Galvanic, Microbiologically Induced, Chemical)

Atmospheric corrosion was discovered during the 1999 Refueling Outage. Minor corrosion was noted at the 590 foot elevation moisture barrier and at various locations where Structural Integrity Test strain gauges remained attached to the liner plate. Corrosion occurred at unprotected carbon steel surfaces. Areas of occurrence were characterized by visual evidence of redish brown discoloration. Corrosion was minor and liner plate nominal wall thickness was not significantly affected.

5.1.3 Mechanical Damage, Wear Erosion or Abrasion

Surveillance Examinations to-date have not identified this degradation mechanism at Palisades.

5.1.4 Galvanic Corrosion Thinning

Surveillance Examinations to-date have not identified this degradation mechanism at Palisades.

5.1.5 Cracking (Stress Corrosion, Cyclic Fatigue)

Surveillance Examinations to-date have not identified this degradation mechanism at Palisades.

5.2 Containment Reinforcing Concrete

5.2.1 Chemical Attack of Concrete

Surveillance Examinations to-date have not identified this degradation mechanism at Palisades.

5.2.2 Freeze-Thaw

Surveillance Examinations to-date have not identified this degradation mechanism at Palisades.

5.2.3 Differential Settlement

Surveillance Examinations to-date have not identified this degradation mechanism at Palisades.

5.2.4 Aggregate Reactions

Surveillance Examinations to-date have not identified this degradation mechanism at Palisades.

5.2.5 Leaching of Calcium Hydroxide (Efflorescence)

Occurrence of efflorescence is documented in C-PAL-00-01422 and was found during the Summer 2000 containment exterior examination. This occurrence did not affect containment operability.

5.2.6 Mechanical Damage, Wear Erosion or Abrasion

Surveillance Examinations to-date have not identified this degradation mechanism at Palisades.

5.2.7 Tendon Grease Loss

Tendon grease loss through concrete and from tendon grease caps is documented in C-PAL-00-01422 and was discovered during the Summer 2000, containment exterior examinations. Grease leakage through concrete is due to the spiral wound configuration of tendon sheathing. Grease may leak through sheathing and find a path through concrete pour joints or shrinkage cracks and escape to the environment. Leakage through grease cap foam gaskets occurs periodically. To date no tendon has failed grease leakage criteria due to grease cap leakage. None of the occurrences to date affect containment operability.

5.3 Containment Post Tensioning System

5.3.1 Tendon Wire Corrosion

Surveillance Examinations to-date have not identified this degradation mechanism at Palisades.

5.3.2 Tendon Relaxation

The lift-off forces for tested tendons are reviewed at each surveillance. With some exceptions, lift-off forces are above the lower bound values (i.e, the prescribed lower limits) established for each group. Some tendons have tested below their respective prescribed lower limit, but above 95% of this limit. The force and elongation for each affected tendon were analyzed. The analysis indicates that there is some non-linearity in the force/elongation relation. This is caused by a binding of the tendon and would not have any effect on the performance of the tendons.

Subsection 7.1.6 of RG 1.35, Revision 3, implies that the trend of the pre-stress loss should be determined, if the loss is larger than expected. In order to determine the trend, it is necessary to perform a regression analysis of the tendon lift-off forces for all the tendons in a group, from all the surveillances conducted to date after the structural integrity test. Palisades has performed a regression analysis which

indicates the average lift-off force curve for each group. The results of the analysis indicate that for each of the groups the pre-stressing forces will not be less than the minimum required before the next scheduled surveillance. The NRC has recommended that the analysis for each group of tendons use individual lift-off forces verses averages. In accordance with NRC Commitment Number 2010924 documented on Action Item Report A-CMT-99-047, Palisades will evaluate performance of a regression analysis using individual lift-off forces by December 31, 2000.

5.3.3 Tendon Grease Loss

From the data on grease removed and grease replaced there appeared to be some voids in the tendon sheaths. From the grease stains which exist on the outside of the containment wall at various locations, it appears that there has been some leakage from tendon sheathing and grease can gaskets. Concrete leaks occur at construction joints or shrinkage cracks. Gasket leakage appears to have resulted from ambient temperature changes after greasing operations. These situations are not unique to Palisades. During the steam generator replacement in 1990 and 1991, 52 tendons were removed from the containment opening, were examined and found to have adequate grease coverage with no evidence of corrosion. The effects of grease voids on containment structural integrity appear to be insignificant.

5.3.4 Strain Aging

Surveillance Examinations to-date have not identified this degradation mechanism at Palisades.

5.3.5 Water Infiltration

As documented in Palisades submittal to the NRC entitled, Tendon Surveillance Report (TAC NO. M84017), dated October 28, 1994, water infiltration has been documented at Palisades. The grease in tendons D2-23 and V-20 had an absorbed water content of 15.5% and 10.2%, respectively. In addition, small quantities of free water were found in three additional grease cans. The concern is that water in contact with

the anchorage may cause stress corrosion of the anchor head or tendon wire, or hydrogen embrittlement of the anchorage. However, examinations of the anchorages in the surveillance scope did not show any visible corrosion or cracking of any of the anchorage components. On the basis of this information, it is concluded that the presence of water in the grease is limited to a few tendons, and its effect appears to be insufficient to cause corrosion or cracking of the anchorage components.

6.0 SUMMARY

The Containment Inservice Inspection, Testing and Aging Management Program demonstrates that the Palisades containment continues to be operable and capable of fulfilling all designed operating and accident functions.

7.0 APPENDIX

7.1 Definitions and Acronyms

Action Item Record (AIR) - As described in Palisades Administrative Procedure 3.02, an action item record is used to track NRC commitments and other actions where formal tracking is desired.

Condition Report (CR) - Condition Reports (CRs) identify undesirable conditions or conditions adverse to quality at Palisades.

Inspection - As used in this report, an inspection is an observation, other than Code examinations, performed by engineers, operators or maintenance persons.

Operating Experience (OE) - Operating experience is industry information received from the Institute of Nuclear Power Operators (INPO), the NRC, utilities, NSSS suppliers, and international participants in the form of various reports which are disseminated to nuclear power plants via the Nuclear Network system.

NRC Commitment - As described in Palisades Administrative Procedure 3.02, NRC commitments are agreements to perform certain actions to address specific NRC concerns.

Pressurization Phase of the Structural Integrity Test (PPSIT) - The pressurization phase of the structural integrity test (PPSIT) was conducted between March 23 and March 31, 1970.

Structural Integrity Test (SIT) - In accordance with the requirements contained in 10CFR50, Appendix J, Containment Buildings are required to undergo a series of preoperational and postoperational surveillance tests to demonstrate its structural and leaktight integrity and operability. These tests include the structural integrity test (SIT), the integrated leak rate tests (ILRT), and prestressing tendon surveillance. The pre-operational structural integrity test (SIT) for Palisades was performed during the period of March 23, 1970 through March 31, 1970 to monitor the response of the Containment Building to pressurization.

Ultrasonic Test (UT) - In accordance with ASME Section XI, 1992 Edition, IWA-2230, UT examinations are conducted to detect the presence of discontinuities throughout the volume of material and may be conducted from either the inside or outside surface of a component.

Visual Examination VT-1 - In accordance with ASME Section XI, 1992 Edition, IWA-2211, VT-1 examinations are conducted to detect discontinuities and imperfections on the surfaces of components, including such conditions as cracks, wear, corrosion or erosion.

Visual Examination VT-2 - In accordance with ASME Section XI, 1992 Edition, IWA-2212, VT-2 examinations are conducted to detect evidence of leakage from pressure retaining components, with or without leakage collection systems, as required during the conduct of system pressure test. VT-2 examinations are conducted in accordance with IWA-5000. For direct examination, the Table IWA-2210-1 maximum examination distance shall apply to the distance from the eye to the surfaces being examined.

Visual Examination VT-3 - In accordance with ASME Section XI, 1992 Edition, IWA-2213, VT-3 examinations are conducted to determine the general mechanical and structural condition of components and their supports by verifying parameters such as clearances, settings, and physical displacements; such as loss of integrity at bolted or welded connections, loose or missing parts, debris, corrosion, wear, or erosion. VT-3 includes examination for conditions that could affect operability or functional adequacy of snubbers and constant load and spring type supports.

8.0 ATTACHMENTS

Attachment 1 , NIS-1 Form, "Owners Data Report for Inservice Inspection"

Attachment 2 , NIS-2 Form, "Owners Report for Repairs and Replacements" None

Attachment 3, Conditions Discovered During Containment Visual Examinations

FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS
As required by the Provisions of the ASME Code Rules

1. Owner Consumers Energy Co. 212 W. Michigan Ave. Jackson, MI 49201
(Name and Address of Owner)

2. Plant Palisades Nuclear Plant 27780 Blue Star Hwy. Covert, MI 49043
(Name and Address of Plant)

3. Plant Unit 1 4. Owner Certificate of Authorization (if required) n/a

5. Commercial Service Date 12/31/71 6. National Board Number for Unit n/a

7. Components Inspected

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
Containment Concrete	Bechtel Group, Inc.	n/a	n/a	n/a

Note: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

FORM NIS-1 (Back)

8. Examination Dates 5/1/00 to 5/31/00 9. Inspection Interval from 7/17/97 to 7/12/08

10. Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval. See "Containment Inservice Inspection, Testing and Aging Management, ISI Summary - REFOUT 15."

11. Abstract of Conditions Noted See "Containment Inservice Inspection, Testing and Aging Management, ISI Summary - REFOUT 15."

12. Abstract of Corrective Measures Recommended and Taken
See "Containment Inservice Inspection, Testing and Aging Management, ISI Summary - REFOUT 15."

We certify that the statements made in this report are correct and the examinations and corrective measures taken conform to the rules of the ASME Code, Section XI.

Certificate of Authorization No. (if applicable) n/a Expiration Date n/a

Date July 12, 2000 Signed Consumers Energy By [signature]
Owner

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by FMIC of Johnston, RI have inspected the components described in this Owner's Report during the period 12/15/99 to 7/11/2000, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[signature] Commissions Mi. 762 A,B,N,I,S,IS
Inspector's Signature National Board, State, Province, and Endorsements

Date 7-17 2000

(12/82)

Attachment 2 , NIS-2 Form, "Owners Report for Repairs and Replacements" - There were no repairs or replacements performed during this inspection. Therefore, no NIS-2 forms were generated.

Attachment 3

CONDITIONS DISCOVERED DURING CONTAINMENT VISUAL EXAMINATIONS

Reference: C-PAL-00-01422

Cause of Condition	Data Sheet/Date	R/R Required? Yes or No	Extent, Nature and Frequency of Additional Examinations	Basis for Acceptability in Un-repaired Condition
Grease Leakage, Tendon Cans	DAC 1/05-03-00 DAC 2/05-03-00 DAC 1/05-05-00 DAC 1/05-10-00 DAC 1/05-11-00 DAC 1/05-16-00 DAC 1/05-18-00 DAC 1/05-26-00	No No No No No No No No	General Visual method prior to 10CFR50, Appendix J, Integrated Leak Rate Test. Repair identified gaskets during 30-Year Tendon Surveillance.	Historical information documented in condition reports 95-00523, 96-00488 and 97-01328 indicates grease leakage has not affected corrosion protection function. See report section 5.2.7 and 5.3.3.
Grease Leakage, Concrete	DAC 1/05-22-00 DAC 1/05-25-00 DAC 1/06-01-00	No No No	General Visual method prior to 10CFR50, Appendix J, Integrated Leak Rate Test.	Historical information documented in condition reports 95-00523, 96-00488 and 97-01328 indicates grease leakage has not affected corrosion protection function. See report section 5.2.7 and 5.3.3.
Grease Stains	DAC 1/05-05-00 DAC 1/05-10-00 DAC 1/05-22-00 DAC 1/05-25-00 DAC 1/05-26-00	No No No No No	General Visual method prior to 10CFR50, Appendix J, Integrated Leak Rate Test.	This is a housekeeping issue, only.

Cause of Condition	Data Sheet/Date	R/R Required? Yes or No	Extent, Nature and Frequency of Additional Examinations	Basis for Acceptability in Un-repaired Condition
Missing Tendons	DAC 1/05-03-00	No	None	Missing tendons are documented in FSAR 5.8 and EM-09-12.
Concrete Spalling	DAC 1/05-11-00 DAC 1/05-22-00 DAC 1/05-25-00 DAC 1/06-01-00	No No No No	General Visual method prior to 10CFR50, Appendix J, Integrated Leak Rate Test.	Spalling affects surface concrete, only.
Concrete Cracking	DAC 1/05-10-00 DAC 1/05-22-00 DAC 1/05-25-00 DAC 1/06-01-00	No No No No	General Visual method prior to 10CFR50, Appendix J, Integrated Leak Rate Test.	Cracking affects cosmetic grouting or surface concrete, only.

Cause of Condition	Data Sheet/Date	R/R Required? Yes or No	Extent, Nature and Frequency of Additional Examinations	Basis for Acceptability in Un-repaired Condition
Construction Pipe Runs; Exposed wire; other embedments.	DAC 1/05-05-00 DAC 1/05-10-00 DAC 1/05-11-00 DAC 1/05-22-00 DAC 1/05-25-00 DAC 1/05-26-00 DAC 1/06-01-00 DAC 3/06-01-00	No No No No No No No No	General Visual method prior to 10CFR50, Appendix J, Integrated Leak Rate Test.	Each condition has existed since initial construction and has not resulted in conditions affecting containment structural integrity.
Concrete Pop-Outs	DAC 1/05-03-00 DAC 1/05-10-00 DAC 1/06-01-00	No No No	General Visual method prior to 10CFR50, Appendix J, Integrated Leak Rate Test.	Pop-outs affect surface concrete, only.
Concrete Mechanically Removed	DAC 1/05-05-00 DAC 1/05-10-00 DAC 1/05-26-00	No No No	None	Concrete removal affects cosmetic surface concrete, only.

Cause of Condition	Data Sheet/Date	R/R Required? Yes or No	Extent, Nature and Frequency of Additional Examinations	Basis for Acceptability in Un-repaired Condition
Exposed Rebar	DAC 1/05-03-00 DAC 1/05-11-00 DAC 1/05-22-00	No No No	General Visual method prior to 10CFR50, Appendix J, Integrated Leak Rate Test.	Minor surface rust is occurring at localized points. This does not affect rebar strength or containment structure.
Rust Staining	DAC 1/05-10-00 DAC 1/06-01-00	No No	General Visual method prior to 10CFR50, Appendix J, Integrated Leak Rate Test.	Minor surface rust is occurring at localized points. Source includes retired concrete sheathing vents and SIT penetrations. This does not affect containment structure.
Honeycomb	DAC 1/05-22-00 DAC 1/06-01-00	No No	General Visual method prior to 10CFR50, Appendix J, Integrated Leak Rate Test.	Condition affects surface concrete over a very limited area.

Cause of Condition	Data Sheet/Date	R/R Required? Yes or No	Extent, Nature and Frequency of Additional Examinations	Basis for Acceptability in Un-repaired Condition
Efflorescence	DAC 1/06-01-00	No	General Visual method prior to 10CFR50, Appendix J, Integrated Leak Rate Test.	Condition affects surface concrete over a very limited area.
Moisture Under Dome Coating	DAC 1/05-18-00	No	General Visual method prior to 10CFR50, Appendix J, Integrated Leak Rate Test.	Condition affects surface concrete over a very limited area. Moisture is not in contact with containment tendons.