WOLF CREEK
NUCLEAR OPERATING CORPORATION

Stephen E. Hedges
Site Vice President

March 11, 2010

WO 10-0010

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: Docket No. 50-482: Revision 23 of the Wolf Creek Updated Safety Analysis Report

Gentlemen:

Pursuant to the updating requirements of 10 CFR 50.71(e), Wolf Creek Nuclear Operating Corporation (WCNOC) is providing its Updated Safety Analysis Report (USAR), Revision 23. This submittal satisfies the Final Safety Analysis Report (FSAR) updating requirements of the aforementioned regulation.

Attachment I to this letter provides information relative to changes in regulatory commitments. This information is provided in accordance with the guidance of Nuclear Energy Institute (NEI) 99-04, "Guidelines for Managing NRC Commitments," Revision 0, July 1999.

Attachment II to this letter describes specific technical changes that have been processed since issuance of the Updated Safety Analysis Report (USAR), Revision 22. In addition to these technical changes, several editorial changes have been made and are included in Revision 23.

Attachment III to this letter provides a discussion of changes made in Revisions 37 through 39 of the Technical Requirements Manual (TRM).

Enclosure I to this letter provides the CD-ROM submittal of the Wolf Creek Updated Safety Analysis Report (USAR), Revision 23. This submittal satisfies the Final Safety Analysis Report updating requirement of 10 CFR 50.71(e)(4). Chapter 2: Site Characteristics, Chapter 3: Design of Structures, Components, Equipment and Systems, Chapter 8: Electric Power, and Chapter 12: Radiation Protection, are considered sensitive unclassified information and therefore warrant withholding under 10 CFR 2.390.

Enclosure II to this letter provides a CD-ROM containing the station-controlled drawings that are considered incorporated by reference into the USAR. Per the guidance of Nuclear Energy Institute (NEI) document NEI 98-03, Revision 1, "Guidelines for Updating FSARs," the USAR figures that are identical to controlled drawings were relocated from the USAR in Revision 17. Enclosure II is considered sensitive unclassified information and therefore warrants withholding under 10 CFR 2.390.

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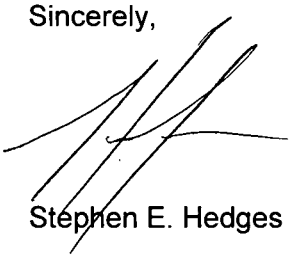
Enclosure III to this letter provides a CD-ROM containing the Updated Safety Analysis Report Fire Hazards Analysis and Quality Program Manual, which are incorporated by reference into the USAR. The Updated Safety Analysis Report Fire Hazards Analysis is considered sensitive unclassified information and therefore warrants withholding under 10 CFR 2.390.

Enclosure IV to this letter provides those changes made to the Wolf Creek Generating Station (WCGS), Unit 1 Technical Requirements Manual (Revisions 37 through 39) and includes a List of Effective Pages. The WCGS TRM is incorporated by reference into the USAR.

There are no commitments contained in this letter.

If you have any questions concerning this matter, please contact me at (620) 364-4190, or Mr. Richard Flannigan, Manager Regulatory Affairs at (620) 364-4117.

Sincerely,



Stephen E. Hedges

SEH/rlt

Attachment I – Commitment Changes
Attachment II – USAR Change Requests
Attachment III – Revisions to the Technical Requirements Manual (TRM)

Enclosure I – Updated Safety Analysis Report
Enclosure II – Updated Safety Analysis Report Controlled Drawings
Enclosure III – Updated Safety Analysis Report Fire Hazards Analysis and Quality Program Manual
Enclosure IV - TRM Replacement Pages

cc: E. E. Collins (NRC), w/a, w/e
G. B. Miller (NRC, w/a, w/e
B. K. Singal (NRC), w/a, w/e
Senior Resident Inspector (NRC), w/a, wo/e

STATE OF KANSAS)
) SS
COUNTY OF COFFEY)

Stephen E. Hedges, of lawful age, being first duly sworn upon oath says that he is Site Vice President of Wolf Creek Nuclear Operating Corporation; that he has read the foregoing document and knows the contents thereof; that he has executed the same for and on behalf of said Corporation with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By _____
Stephen E. Hedges
Site Vice President

SUBSCRIBED and sworn to before me this 11th day of March, 2010.

RHONDA L. TIEMEYER
NOTARY PUBLIC
OFFICIAL SEAL
STATE OF KANSAS
MY COMMISSION EXPIRES
January 11, 2014

Rhonda L. Tiemeyer
Notary Public

Expiration Date January 11, 2014

Commitment Changes

Commitment No. 1997-072 from Letter ET 97-0044, dated April 23, 1997

Commitment Description: Procedure AP 15C-002, revision 8, "Procedure Use and Adherence," will be revised to include a definition for literal compliance to better aid personnel in the field. The Plant Safety Review Committee (PSRC) Chairman Manager Integrated Plant Scheduling (IPS) is responsible for incorporating this definition into the procedure. This action will be complete by May 8, 1997.

Change to Commitment: Procedure AP 15C-002 currently has Regulatory Commitment Management System (RCMS) #1997-072 as a commitment tied to the definition of "literal compliance". INPO 06-002 and INPO 09-004 both have definitions for procedure adherence that closly resembles the definition of literal compliance currently in procedure AP 15C-002. Condition Report (CR) 18893 has identified that procedure AP 15C-002 needs to align the definition of adherence to be consistent with the latest INPO documents. With the updated definition of "adherence" it would not be necessary to have the definition for "literal compliance" maintained.

Justification: The original commitment was made as part of the response to NRC violations. In each case the corrective actions focused on maintenance of current procedures.

Per NRC Inspection Manual 9900, Operations – Procedural Adherence, states "...the concept of verbatim compliance may not be practically achievable for all procedures since it implies that procedures are perfect. Frequently, confusion develops regarding NRC inspections of licensee adherence to procedures. The term "verbatim compliance" is part of this confusion. The NRC position on the issue of procedural adherence requires an understanding of the types of scenarios in which procedures are used. The NRC expects licensees to adhere to procedures and to have established policies that effectively control procedural adherence and procedural change processes. The NRC expects that the combination of an individual's training, and the proper use of written procedures consistent with the licensee's procedural adherence policy will be sufficient to successfully complete a task. If procedural deficiencies are identified, it is expected that changes to the procedure will be effected before continuing with the procedure."

Procedure AP 15C-002 currently has RCMS #1997-072 as a commitment tied to the definition of "literal compliance". INPO 06-002 and INPO 09-004 both have definitions for procedure adherence that closly resemble the definition of literal compliance currently in Procedure AP 15C-002. CR 18893 has identified that procedure AP 15C-002 needs to align the definition of adherence to be consistent with the latest INPO documents. With the updated definition of "adherence" it would not be necessary to have the definition for "literal compliance" maintained.

The current definition in procedure AP 15C-002 for "literal compliance" reads as follows:

Literal Compliance: Read, respond and comply with procedures as they are written, understanding the direction given and taking into consideration personnel, equipment and nuclear safety. If the procedure cannot be followed as written, or challenges personnel, equipment or nuclear safety, then stop the activity, place the equipment in a safe condition and refer to your supervisor.

The new definition that will be added to procedure AP 15C-002 reads as follows:

Procedure adherence means understanding a procedure's purpose, scope, and intent and following its direction. The user performs all actions as written in the sequence specified by the procedure. However, if the procedure cannot be used as written, then the activity is stopped and the issue is resolved before the user continues.

Review of the commitment change in accordance with NEI 99-04, rev 0, "Guidelines for Managing NRC Commitment Changes," found that that the NRC used this commitment in closing violation 9704-02 and found in Inspection Report 97-11 (letter number 97-01354) that these actions were reasonable and complete. Because the NRC used these actions as the basis for closure of the violation this commitment change is included in the annual report.

Commitment No. None, Contained in Letter ET 97-0112, dated September 17, 1997

Commitment Description: Letter ET 97-0112 states in part that "The Gamma-Metrics wide range nuetron flux monitors are not subject to Technical Specification 3/4.9.2 but would be available to provide backup indication in the event one or both of the Westinghouse source range neutron flux monitors becomes inoperable."

Change to Commitment: The change to Technical Specification Bases B 3.9.3, Nuclear Instrumentation, (Revision 24) to allow the use of the Gamma Metrics as an alternative to the Westinghouse nuclear instrumentation as a means for monitoring the core reactivity conditions is considered a change to this commitment.

Justification: The Engineering Disposition for Performance Improvement Request (PIR) 2004-1625 discusses that the Gamma-Metrics monitors would be expected to be a better source of indication with regard to core reactivity changes and as such does not impact the ability of an SSC to perform its safety function.

Review of the commitment in accordance with NEI 99-04 concluded that, as discussed in letter 97-01664, the NRC relied on this statement (commitment) in that it was the NRC's understanding that the Gamma-Metrics system will not be used as a backup if one train of normal source range indication is lost. The change to Bases 3.9.3 is a change from this understanding therefore the NRC should be notified of this change in commitment in the annual report.

USAR Change Request	Description

09-002 **REVISE THE USAR TO CHANGE NOTE ON FIGURE 6.2.4-1, PAGES 18, 29, 30 AND 31 OF 74 FROM "PRIOR TO THE CHARGING PUMPS COMPLETING THEIR SAFETY FUNCTION" TO "AFTER THE CHARGING PUMPS COMPLETE THEIR SAFETY FUNCTION."**

Figure:	6.2.4-1	Sheet:	31	Figure:	6.2.4-1	Sheet:	30
Figure:	6.2.4-1	Sheet:	29	Figure:	6.2.4-1	Sheet:	18

09-003 **REVISE THE USAR TO CHANGE TABLE 9.5A-1, SHEET 27, FROM 8 HOURS TO 3 HOURS FOR CONTROL AND AUXILIARY BUILDING ROOFS. THIS CHANGE CORRECTS A TYPOGRAPHICAL ERROR PUT IN THE USAR UNDER USAR CHANGE REQUEST (CR) 89-076.**

TABLE 9.5A-1, SHEET 53, REVISE HOSE STATION DISCUSSION TO REFLECT THAT EITHER A COMBINATION SPRAY/STRAIGHT STREAM NOZZLE OR A SPRAY NOZZLE IS PROVIDED FOR INTERIOR HOSE STATIONS.

Table:	9.5A-1	Sheet:	53	Table:	9.5A-1	Sheet:	27

09-005 **REVISE THE USAR TO CHANGE THE LAST SENTENCE OF SECTION 12.3.2.2.8 TO READ: "RADIATION CONTROL AREA BOUNDARIES ESTABLISHED OUTSIDE THE RESTRICTED AREA ARE MAINTAINED LESS THAN OR EQUAL TO 0.6 MREM/HR."**

WITHIN THE RESTRICTED AREA, PERSONNEL ARE CONSIDERED OCCUPATIONAL WORKERS AND ARE LIMITED TO 500 MREM/YR FOR UNMONITORED WORKERS. WORKERS OUTSIDE THE RESTRICTED AREA ARE CONSIDERED MEMBERS OF THE PUBLIC AND ARE RESTRICTED TO 100 MREM/YR (0.6 MR/HR).

Page: 12.3-14

USAR Change Request **Description**

09-006 **REVISE THE USAR TO MODIFY NOTE 17 IN TABLE 3.11(B)-2, SHEET 6, AND ADD: "FOR ALL CONDITIONS EXCEPT DURING LOSS OF OFFSITE POWER, WHEN THE A/C UNITS ARE SUPPLIED BY EMERGENCY DIESEL GENERATOR POWER, THE TEMPERATURE IN ENGINEERED SAFETY FEATURE (ESF) SWITCHGEAR ROOMS 3301 AND 3302 MAY INCREASE ABOVE 90 DEGREES F, BUT WILL BE LESS THAN 92 DEGREES F."**

Table: 3.11(B)-2 Sheet: 6

09-007 **REVISE THE USAR TO MODIFY SAFETY EVALUATION TEN ON PAGE 6.2-51 TO REMOVE MAGNESIUM AS A MATERIAL THAT MAY REACT WITH SODIUM HYDROXIDE AND RELEASE HYDROGEN.**

Page: 6.2-51

09-008 **REVISE THE USAR TO INCLUDE A DESCRIPTION OF THE STEAM GENERATOR BLOWDOWN BYPASS DISCHARGE PIPING. THE BYPASS PIPING WILL ALLOW THE OPTION TO BYPASS THE STEAM GENERATOR BLOWDOWN SURGE TANK AND DISCHARGE PUMPS.**

Page: 10.4-41 Page: 10.4-40 Page: 10.4-38

09-009 **REVISE THE USAR TO CORRECT AN IDENTIFIED MISCALCULATION IN THE DETERMINATION OF THE MAXIMUM ROD CLUSTER CONTROL ASSEMBLY DRIVING ROD BUCKLING LOAD. THE ERROR WAS PRESENT IN WCAP-9198, REV. 0. ERROR IDENTIFIED BY WESTINGHOUSE ADVISORY LETTER NSAL-04-6.**

Page: 9.1-71 Page: 9.1-57 Page: 9.1-56

09-010 **REVISE THE USAR TO CHANGE SECTION 5.2.6 REFERENCE 10 FROM WCAP-14040-NP-A (REVISION 2) TO WCAP-14040-A (REVISION 4). THIS CHANGE IS DUE TO REVISING THE PRESSURE/TEMPERATURE LIMIT CURVES.**

Page: 5.2-44

USAR Change Request **Description**

09-011 **REVISE THE USAR TO UPDATE PAGE 13.1-16 WITH RICK GARDNER'S BIOGRAPHY. RICK IS NOW THE MANAGER QUALITY.**

Page: 13.1-16

09-013 **REVISE THE USAR TO ADJUST THE WATER VOLUMES TRANSFERRED TO CONTAINMENT DURING INJECTION, EMERGENCY CORE COOLING SYSTEM (ECCS) AND CORE COOLING SYSTEM (CSS) SWITCHOVER FROM INJECTION TO RECIRCULATION PHASE FOLLOWING A LOSS OF COOLANT / MAIN STEAM LINE BREAK (LOCA/MSLB).**

Page:	6.3-9		Page:	6.3-8	
Page:	6.3-6				
Table:	6.2.2-6a	Sheet: 2	Table:	6.3-12	
Table:	6.3-11		Table:	6.2.2-6a	Sheet: 1
Table:	6.2.2-6		Table:	6.2.2-3	Sheet: 2
Table:	3.6-6	Sheet: 2			
Figure:	6.3-7				

09-014 **REVISE THE USAR TO INCREASE THE MAXIMUM NORMAL AND DESIGN BASIS ACCIDENT (DBA) TEMPERATURES FOR ROOM 1207 DUE TO CONSIDERATION OF STEAM IN FLOOR DRAIN WHEN THE TURBINE DRIVEN AUXILIARY FEEDWATER PUMP IS RUNNING. ADDED ROOM 1206 TO TABLE ALSO. CHANGE AFFECTS 3.11(B)-21, TABLES 3.11(B)-1 AND 3.11(B) -2.**

Page:	3.11(B)-21					
Table:	3.11(B)-2	Sheet:	6	Table:	3.11(B)-2	Sheet: 2
Table:	3.11(B)-1	Sheet:	6	Table:	3.11(B)-1	Sheet: 2

09-015 **REVISE THE USAR TO CHANGE THE FLAME TEST REQUIREMENTS OF IEEE 383-1974 TO ALLOW CABLE WHICH MEETS THE REQUIREMENTS OF UL 1666 (3RD EDITION) TO BE USED AS LONG AS THE CABLE QUALIFIED TO UL 1666 IS UTILIZED IN NON-SAFETY RELATED APPLICATIONS ONLY.**

Page: 8.3-36

USAR Change Request	Description

09-016 **REVISE THE USAR TO STATE THAT WOLF CREEK NUCLEAR OPERATING CORPORATION (WCNOC) NOW COMPLIES WITH 10 CFR 26, SUBPART I. THIS CHANGE REFLECTS THE NEW FATIGUE RULE, EFFECTIVE 10-1-2009.**

Page:	1.3-1			Page:	18.1-9		
Table:	1.3-4	Sheet:	11	Table:	1.3-4	Sheet:	10
Table:	1.3-4	Sheet:	9	Table:	1.3-4	Sheet:	26
Table:	1.3-4	Sheet:	8				

09-017 **REVISE THE USAR TO REFLECT THE NEW SET OF DOUBLE ENCAPSULATED SECONDARY SOURCE ASSEMBLIES AS DOCUMENTED IN CHANGE PACKAGE (CP) 012828. THE USAR IS CORRECTED TO REFLECT TYPE 308 STAINLESS STEEL, IN ADDITION TO TYPE 3.4 STAINLESS STEEL, AS A POTENTIAL MATERIAL USED IN THE MANUFACTURE OF THIMBLE PLUGGING DEVICES. THE INITIAL CORE DELIVERY OF THIMBLE PLUGGING DEVICES ALLOWED THE USE OF EITHER MATERIAL IN THE MANUFACTURE OF THIMBLE PLUG RODLETS.**

Page:	4.2-24	Page:	4.2-23

09-018 **REVISE THE USAR TO DELETE NOTE ON TABLES 6.2.2-6 AND 6.2.2.6A. THESE NOTES WERE NOT INCLUDED FOR DELETION IN USAR CHANGE REQUEST (CR) 2008-012, WHICH RESCINDED THE APPROVAL TO USE TRANSCO THERMAL-WRAP INSULATION INSIDE THE CONTAINMENT BUILDING.**

Table:	6.2.2-6a	Sheet:	2	Table:	6.2.2-6

09-019 **REVISE THE USAR TO CHANGE THE MINIMUM ROOM TEMPERATURES BASED ON A BORIC ACID SOLUBILITY CURVE IN SECTION 3.11(B). MINIMUM ENVIRONMENTAL QUALITY SUMMARY DOCUMENT (EQSD)-IV ROOM TEMPERATURES ARE ALSO REVISED TO BE CONSISTENT WITH THE BORIC ACID SOLUBILITY CURVE.**

Table:	3.11(B)-1	Sheet:	6	Table:	3.11(B)-1	Sheet:	3
Table:	3.11(B)-1	Sheet:	2	Table:	3.11(B)-1	Sheet:	1

USAR Change Request	Description
09-020	**REVISE THE USAR TO INCLUDE TEMPORARY MODIFICATION (TMO) 09-005-XX, IN THE USAR. THIS TMO IS FOR THE INSTALLATION OF TEMPORARY SUMP PUMPS IN THE ESSENTIAL SERVICE WATER ELECTRICAL MANHOLES. THE TEMPORARY PUMPS WILL REMAIN INSTALLED UNTIL PERMANENT PUMPS ARE PUT IN PLACE.** Page: 3.4-3 Table: 3.4-2
09-021	**REVISE THE USAR TO CHANGE "IN-PLANT" TRAINING TO "ON-THE-JOB" TRAINING IN THE FIRST SENTENCE OF SECTION 13.2.2.1.** Page: 13.2-8
09-022	**REVISE THE USAR TO ADD A PERMANENT TESTING LINE FOR THE CONTAINMENT SPRAY PUMPS. THE NEW LINE ALLOWS FOR 100% FLOW TESTING.** Page: 6.2-55 Page: 6.2-47
09-023	**REVISE THE USAR TO CHANGE THE NUMBER OF CONTAINMENT HOOP TENDONS FROM 135 TO 165 DUE TO TECHNICAL REQUIREMENT MANUAL (TRM) CHANGE, REVISION 26.** Page: 3.8-3
09-024	**REVISE THE USAR TO ADD SCAFFOLD THAT IS INSTALLED IN THE PLANT FOR LONG-TERM USE.** Page: 1.7-1 Table: 1.7-4

USAR Change Request **Description**

09-025 **REVISE THE USAR TO INCORPORATE THE ADVANCED LOGIC SYSTEM BASED MAIN STEAM FEEDWATER ISOLATION SYSTEM (MSFIS) CONTROLS.**

Page: 7.3-28 Page: 7.3-27 Page: 7.3-26 Page: 7.3-29

Page: 7.3-30 Page: 7.3-31 Page: 7.3-58

Table: 1.7-1 Sheet: 2

09-026 **REVISE THE USAR TO MODIFY TABLE 9.5E-1 (SHEET 25), COMPARISON TO 10 CFR 50 APPENDIX R SECTION III.L, ALTERNATIVE AND DEDICATED SHUTDOWN CAPABILITY, TO RETURN THE DESCRIPTION TO THAT PROVIDED PRIOR TO USAR CHANGE REQUEST (CR) 2008-009. USAR CR 2008-009 INCORPORATED CHANGE PACKAGE 012821, WHICH WAS AN ANALYSIS THAT DEMONSTRATED THE PERFORMANCE OF CRITERIA III.L.1 ARE SATISFIED WITH TH EXCEPTION OF MAINTAINING REACTOR PROCESS VARIABLES WITHIN THOSE PREDICTED FOR A LOSS OF NORMAL AC POWER. WCNOC DETERMINED THIS WAS ACCEPTABLE AS LONG AS A CONTROL ROOM FIRE WOULD NOT RESULT IN THE PLANT REACHING AN UNRECOVERABLE CONDITION. THE NRC HAS DETERMINED THAT IMPLEMENTATION OF CHANGE PACKAGE 012821 SHOULD HAVE RECEIVED NRC APPROVAL PRIOR TO IMPLEMENTATION.**

Table: 9.5E-1 Sheet: 26 Table: 9.5E-1 Sheet: 25

09-028 **REVISE THE USAR TO ALLOW THE USE OF GRADE 7 AS AN ALTERNATIVE TO GRADE 2H NUTS.**

Page: 10.3-12

Table: 5.2-3 Sheet 2

USAR Change Request **Description**

10-001 **REVISE THE USAR TO ADD FOUR NEW CHECK VALVES TO THE FEEDWATER SYSTEM. THE VALVES PREVENT THE APPLICABLE STEAM GENERATOR FROM THE LOSS OF WORKING FLUID INVENTORY DURING A DESIGN BASIS ACCIDENT.**

Page:	10.4-26	Page:	10.4-23	Page:	10.3-12		
Table:	3.6-3	Sheet:	8A	Table:	3.6-3	Sheet:	7A
Table:	3.6-3	Sheet:	6A	Table:	3.6-3	Sheet:	5A
Table:	3.6-3	Sheet:	8B	Table:	3.6-3	Sheet:	7B
Table:	3.6-3	Sheet:	6B	Table:	3.6-3	Sheet:	5B
Table:	3.11(B)-3	Sheet:	9	Table:	3.11(B)-3	Sheet:	10
Table:	3.11(B)-3	Sheet:	11	Table:	3.11(B)-3	Sheet:	12
Table:	3.11(B)-3	Sheet:	13	Table:	3.11(B)-3	Sheet:	14
Table:	3.11(B)-3	Sheet:	15				
Figure:	6.2.4-1	Sheet:	8	Figure:	6.2.4-1	Sheet:	7
Figure:	6.2.4-1	Sheet:	6	Figure:	6.2.4-1	Sheet:	5

10-002 **REVISE THE USAR TO ALLOW ALL 4 SEISMIC LATERAL SNUBBERS ON GIRDERS 1 AND 2 BE RETRACTED 3/4" MAXIMUM DURING ALL PLANT MODES. THE POLAR CRANE LIFTING CAPACITY HAS BEEN INCREASED TO 260 TONS DURING OUTAGES.**

Page:	9.1-70	Page:	9.1-69	Page:	9.1-68
Page:	9.1-64	Page:	9.1-63	Page:	9.1-62
Page:	9.1-61	Page:	9.1-60	Page:	9.1-58
Page:	9.1-57	Page:	9.1-55	Page:	9.1-54
Page:	9.1-53	Page:	9.1-38	Page:	9.1-65
Page:	9.1-66	Page:	9.1-67	Page:	9.1-71

Table:	9.1-11		Table:	9.1-10	
Table:	9.1-9		Table:	9.1-7	Sheet: 2
Table:	3.7(B)-1				
Figure:	9.1-26		Figure:	9.1-25	
Figure:	9.1-24		Figure:	9.1-23	
Figure:	9.1-20		Figure:	9.1-18	

USAR Change Request **Description**

10-003 **REVISE THE USAR TO REFLECT THE REVISION OF THE PRESSURE TEMPERATURE LIMITS REPORT WHICH WAS UPDATED AND ISSUED IN FEBRUARY 2009.**

Page: 5.2-44 Page: 5.2-9

10-004 **REVISE THE USAR TO CORRECT THE NUMBER OF PORTAL MONITORS IN USE AS INDICATED IN TABLE 12.5-2. CURRENTLY THE TABLE INDICATES THERE ARE 3 AND THE CORRECT NUMBER IS 7.**

Table: 12.5-2

10-005 **REVISE THE USAR TO REFLECT REGULATORY GUIDE (RG) 1.78, REV. 1, TABLE 1, IS USED FOR TOXICITY LIMITS OF HAZARDOUS CHEMICALS. RG 1.196, REV. 0, RECOMMENDATIONS ARE MET FOR CONFIGURATION CONTROL AND PREVENTIVE MAINTENANCE OF THE CONTROL ROOM ENVELOPE. RG 1.197, REV. 0, RECOMMENDATIONS ARE MET FOR DEMONSTRATING CONTROL ROOM INTEGRITY AT NUCLEAR POWER REACTORS WITH THE EXCEPTION OF SECTION C.1 AND C.2.**

Page:	3A-63			Page:	3A-62		
Page:	3A-33						
Table:	6.4-1	Sheet:	5	Table:	6.4-1	Sheet:	4
Table:	6.4-1	Sheet:	3	Table:	6.4-1	Sheet:	2

10-006 **REVISE THE USAR TO CLARIFY SECTION 9.5.7.2.1 TO CORRECT THE VOLUME LISTED FOR REMAINING GALLONS OF OIL WHEN THE OIL LEVEL IS AT THE ADD OIL LEVEL.**

Page: 9.5-67

USAR Change Request **Description**

10-007 **REVISE THE USAR, PAGE 9.3-39, TO INCLUDE THE INSTALLATION OF TEMPORARY MODIFICATION ORDER (TMO) 07-012-BG, WHICH INSTALLED HEAT TRACE ON NORMAL AND EMERGENCY BORATION LINES IN ROOM 1113 SINCE THE TEMPERATURE IN THE ROOM CAN DROP BELOW 65 DEGREES, WHICH IS THE SOLUBILITY LIMIT FOR BORIC ACID AT 7700 PPM.**

Page: 9.3-39

10-008 **REVISE THE USAR TO REFLECT THE INSTALLATION OF TEMPORARY MODIFICATION ORDER (TMO) 09-001-GL-01 WHICH LOWERS THE FLOW THROUGH THE NORMAL CHARGING PUMP ROOM COOLER AND SETS THE THERMOSTAT AT A TEMPERATURE WHICH ALLOWS EXTENDED FAN RUN TIMES. THIS TMO PREVENTS FREQUENT CYCLING OF THE ROOM COOLER FAN.**

Page: 9.4-41

Table: 9.4-8 Sheet: 5

10-009 **REVISE THE USAR, SECTION A3.1.1 TO REFLECT REVISION OF THE PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR). AT THE TIME OF ISSUANCE OF THE RENEWED LICENSE, THE PTLR WAS VALID ONLY TO 20 EFPY. THE CURRENT PTLR IS VALID UP TO 54 EFPY.**

Page: 18A-28

USAR Change Request **Description**

10-010 **REVISE THE USAR TO REFLECT EDITORIAL CHANGES. THIS INCLUDES, BUT IS NOT LIMITED TO, SPELLING AND FORMAT CORRECTIONS AND PREVIOUSLY APPROVED USAR CHANGES THAT WERE INCORRECTLY INCORPORATED.**

Page:	4.3-3	Page:	4.3-17	Page:	4.3-19
Page:	4.3-21	Page:	4.3-22	Page:	4.3-20
Page:	6.2-37	Page:	6.2-38	Page:	6.2-39
Page:	9.4-24	Page:	11.2-12	Page:	11.2-13
Page:	11.2-14	Page:	11.2-15	Page:	11.2-16
Page:	13.1-8	Page:	15.4-15	Page:	18A-2
Table:	1.3-4 Sheet: 25	Table:	1.3-4 Sheet: 29		
Table:	3.6-3 Sheet: 33	Table:	3.9(B)-16 Sheet: 36		
Table:	6.1-9	Table:	6.2.1-58		
Table:	15.6-2	Table:	15.6-3		
Table:	15.6-5	Table:	15.6-6		
Table:	15.6-6 Sheet: 2	Table:	15.6-6 Sheet: 3		
Figure:	5.2-2	Figure:	11.1A-2 Sheet: 2		
Figure:	11.1A-2 Sheet: 3	Figure:	11.1A-2 Sheet: 4		

10-011 **REVISE THE USAR TO RELECT THE REMOVAL OF THE HYDRAULIC ACTUATED MAIN STEAM ISOLATION VALVES (MSIV) AND MAIN FEEDWATER ISOLATION VALVES (MFIV) AND REPLACEMENT WITH SYSTEM MEDIUM ACTUATED MSIVs AND MFIVs DURING REFUEL 16.**

Page: 10.4-33

REVISIONS TO THE TECHNICAL REQUIREMENTS MANUAL

1. Technical Requirement (TR) 3.7.22, "Area Temperature Monitoring," and associated Bases, TR 3.7.23, "Class 1E Electrical Equipment Air Conditioning (A/C)," and associated Bases, and TR 3.7.24, "Electrical Penetration Room Coolers," were revised based on the evaluation in Condition Report (CR) 2008-004302. TR 3.7.22 and associated Bases were revised to delete the Maximum Temperature Limit in Table TR 3.7.22-1 based on an investigation that determined that there is no sound engineering basis for the addition of the 30°F to the allowable limit. TR 3.7.23 and associated Bases were revised to require initiation of a Condition Report if the Required Actions and associated Completion Time are not met in lieu of declaring the equipment inoperable. The action to initiate a Condition Report and determine if the equipment in the affected area(s) is degraded or non-conforming is appropriate with only one A/C train out of service. Since TR 3.7.22 and TR 3.7.24 are specifically related to the environmental qualification of equipment, the Applicability of these Technical Requirements was revised to "at all times" since the environmental qualification is not MODE dependent. References to Performance Improvement Requests were revised to Condition Reports for consistency with procedure AP 28A-100, "Condition Reports." Table Technical Requirement Bases (TRB) 3.7.24-1 was revised to delete the reference to Technical Specification (TS) 3.6.8, "Hydrogen Recombiners," since the Technical Specification was deleted by Amendment No. 157.

2. Various TRs and TR Bases were revised to change "Performance Improvement Request (PIR)" to "Condition Report." The changes are being made based on procedure AP 28A-100, "Condition Reports." Changes in the corrective action program resulted in Condition Reports being the entry point into the corrective action program with some Condition Reports being PIR Conditions.

3. TR 3.7.20, "Snubbers," and associated Bases were revised to be consistent with Technical Specification Task Force (TSTF)-IG-05-03, "Implementation Guidance for TSTF-372, Revision 4, "Addition of LCO 3.0.8, Inoperability of Snubber"," to allow either using Limiting Condition for Operation (LCO) 3.0.8 or declaring the system inoperable.

   Under the current TR 3.7.20, if snubbers are removed from systems that are out of service then there are no actions to be taken per the Technical Requirement Manual (TRM) and LCO 3.0.8 is not applicable.

   During the implementation of Amendment No. 173 it was determined that WCNOC would continue with the current philosophy regarding snubber testing and that the testing would be done during a refueling outage when the affected system(s) were out of service. During the implementation of Amendment No. 173, which added new LCO 3.0.8, there were discussions regarding the approach to be taken in the TRM. The approach being:

   TS LCO 3.0.8 is an allowance to not have to declare the supported system inoperable if certain conditions are met. Entering the system specification in lieu of using LCO 3.0.8 is always an option. Revision 32 to the TR requires that upon declaring a snubber inoperable (the assumption being that the snubber is on a system required to be OPERABLE and that the snubber is required for OPERABILITY or it is indeterminate if the snubber is required for OPERABILITY) then the system is declared inoperable. At this point a determination would be made regarding the use of LCO 3.0.8. If the conditions of

LCO 3.0.8 are appropriate and LCO 3.0.8 is utilized, then the system could be declared OPERABLE while utilizing LCO 3.0.8.

The TR Bases wording that states: "Individual snubbers may be removed from service for functional testing within the limits established herein without violating these requirements, although Required Actions and Completion Times still apply," appears to be a holdover from the original conversion of the TRM in 1999 and this wording should have been changed with Revision 32.

The above approach of declaring the system inoperable and then determining applicability of the LCO 3.0.8 is overly conservative and TR 3.7.20 is revised consistent with TSTF-IG-05-03, "Implementation Guidance for TSTF-372, Revision 4, Addition of LCO 3.0.8, Inoperability of Snubber," to allow either using LCO 3.0.8 or declaring the system inoperable.

TSTF-372 and the associated NRC Safety Evaluation only considered the loss of the ability of a snubber to respond to a seismic event. However, some snubbers have design functions other than response to a seismic event. The inability to perform these non-seismic design functions were not considered or justified in TSTF-372. Therefore, when a snubber is to be rendered nonfunctional for testing or maintenance or is discovered to not be functional, the design function of the snubber must be determined in order to determine if LCO 3.0.8 may be used.

4. TRM page 3.7-22, 3.7-23, and 3.7-24 were revised to correct the TR heading from "Sealed Source Contamination, TR 3.7.21" to "Area Temperature Monitoring, TR 3.7.22." During word processing for Revision 37, the headings were inadvertently changed when revisions to TR 3.7.22 were made. This change is an editorial change only.

5. TRM page 3.7-26 was revised to correct the Required Action for Condition C. The Required Action is currently specified as "B.1" when it should be "C.1". This change is an editorial change only.

6. TRM Bases page B 3.1.8-2 was revised to correct a typographical error. In TSR 3.1.8.2, the second paragraph, first sentence, "will" should be "with". This change is an editorial change only.

7. CR 15283 identified that the electronic version of the TRM Bases page B 3.6.1-1 incorrectly specified the number of hoop tendons in the dome portion of the containment and the page revision was incorrect. The hard copy was correct. Revision 26 (DRR 06-0050) revised TRM Bases page B 3.6.1-1 to correct the Background discussion that indicated there are 135 tendons from the circumferential (hoop) tendons – the correct number is 165. During the document release for Revision 26, the electronic version of the TRM did not include this change. This change is an editorial change only.

8. CR 13865 evaluated an incident involving a failure to maintain the required minimum Control Room staffing composition for licensed operators during a shift change. Technical Specification 5.2.2.b allows crew composition to be one less than the minimum requirement for an unexpected absence (sickness, family emergency, etc.) for up to 2 hours for an "on-duty" crewmember. TR 5.2.1, "Unit Staff," and Table TR 5.2.1-1, "Minimum Shift Crew Composition," was revised to include all the required shift

manning/minimum crew composition information. The intent of this revision is to provide consistent guidance with procedure AP 21-003, "Operations."

9. Page B 3.3.18-2, TR Section, was revised by adding the following statement: "The capability to isolate steam generator blowdown is not required for radiation monitor OPERABILITY as this TR is to ensure the monitor is capable of detecting and monitoring primary to secondary LEAKAGE." TR 3.3.18 and associated Bases was implemented (TRM Revision 14, DRR 02-1459) to address concerns added in PIR 2002-2308 for the implementation of TR-104788, EPRI "PWR Primary-to-Secondary Leak Guidelines." Section 3.2.2 of TR-104788 indicates that a radiation monitor can be considered OPERABLE if it is directly correlated to gpd leakage, can be monitored and will produce an alarm in the main control room, and can detect leak rates greater than 30 gpd at existing RCS activity levels. CR 17211 identified a concern that the TR 3.3.18 Bases Background and USAR Section 11.5.2 indicates that the applicable radiation monitors also function to isolate steam generator blowdown and the TR Bases does clearly indicate that this function is not required for OPERABILITY. (CR 17211)

10. TR 3.3.11, "Seismic Instrumentation," and associated TR Bases were revised to reflect the replacement of the existing seismic instrumentation with SYSCOM instrumentation. The modification 1) reduces or eliminates false triggering of the system, 2) relocates SGAE003 outside of the shield wall, and 3) eliminates seven mechanical triaxial Peak Recording Accelographs and one electro-mechanical Response Spectrum Recorder. The replacement instrumentation conforms to the guidance in Regulatory Guide 1.12, Revision 2. The voluntary implementation of Regulatory Guide 1.12, Rev. 2 is made in combination with the methods in Regulatory Guide 1.166 and Regulatory Guide 1.167 (Reference Section D of Regulatory Guide 1.12).

Subject
Enclosed is the CD-ROM submittal of the Wolf Creek Updated Safety Analysis Report (USAR), Revision 23. In accordance with 10 CFR 2.390, USAR Chapters 2, 3, 8 and 12 contain sensitive unclassified information and therefore warrant withholding.

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Document Components:
The CD-ROM labeled "Wolf Creek Updated Safety Analysis Report" contains the following files:

001_USAR.pdf	2.58 MB, sensitive unclassified information
002_NUSARC01.pdf	676 KB, publicly available
003_NUSARC02.pdf	31.8 MB, sensitive unclassified information
004_NUSARC02FIGURES.pdf	28.8 MB, sensitive unclassified information
005_NUSARC03.pdf	20.5 MB, sensitive unclassified information
006_NUSARC04.pdf	2.59 MB, publicly available
007_NUSARC05.pdf	1.49 MB, publicly available
008_NUSARC06.pdf	16.6 MB, publicly available
009_NUSARC07.pdf	1.89 MB, publicly available
010_NUSARC08.pdf	1.06 MB, sensitive unclassified information
011_NUSARC09.pdf	15.7 MB, publicly available
012_NUSARC10.pdf	871 KB, publicly available
013_NUSARC11.pdf	1.05 MB, publicly available
014_NUSARC12.pdf	730 KB, sensitive unclassified information
015_NUSARC13.pdf	360 KB, publicly available
016_NUSARC14.pdf	368 KB, publicly available
017_NUSARC15.pdf	3.97 MB, publicly available
018_NUSARC16.pdf	58 KB, publicly available
019_NUSARC17.pdf	92 KB, publicly available
020_NUSARC18.pdf	1.15 MB, publicly available
021_NUSARNRCQ.pdf	308 KB, publicly available
022_USAR Rev. 23-LOEP.pdf	446 KB, publicly available

Subject
Enclosed is the CD-ROM submittal of the station-controlled drawings that are considered incorporated by reference into the Wolf Creek Updated Safety Analysis Report (USAR). In accordance with 10 CFR 2.390, this enclosure is considered sensitive unclassified information and therefore warrants withholding.

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Document Components:
The CD-ROM labeled "Updated Safety Analysis Report Controlled Figure Drawings Only" contains the following files:

001_Chapter 1.pdf	19.7 MB, sensitive unclassified information
002_Chapter 2.pdf	2.51 MB, sensitive unclassified information
003_Chapter 5.pdf	3.05 MB, sensitive unclassified information
004_Chapter 6.pdf	3.98 MB, sensitive unclassified information
005_Chapter 7.pdf	1.74 MB, sensitive unclassified information
006_Chapter 8.pdf	3.92 MB, sensitive unclassified information
007_Chapter 9.pdf	40.7 MB, sensitive unclassified information
008_Chapter 10.pdf	17.8 MB, sensitive unclassified information
009_Chapter 11.pdf	3.41 MB, sensitive unclassified information
010_Chapter 12.pdf	2.30 MB, sensitive unclassified information
011_Chapter 18.pdf	227 KB, sensitive unclassified information
012_Index Removed Figure List.pdf	91 KB, sensitive unclassified information

Subject
Enclosed is the CD-ROM submittal of the station Fire Hazards Analysis and Quality Program Manual that are considered incorporated by reference into the Wolf Creek Updated Safety Analysis Report (USAR). In accordance with 10 CFR 2.390, the Updated Safety Analysis Report Fire Hazards Analysis is considered sensitive unclassified information and therefore warrants withholding.

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Document Components:
The CD-ROM labeled "Updated Safety Analysis Report Fire Hazards Analysis and Quality Program Manual" contains the following files:

001_Quality Program Manual.pdf	277 KB, publicly available
002_E-1F9900.pdf	2.45 MB, sensitive unclassified information
003_WIP-E-1F9900-002-B-1.pdf	800 KB, sensitive unclassified information
004_WIP-E-1F9900-003-A-1.pdf	265 KB, sensitive unclassified information
005_E-1F9905.pdf	1.19 MB, sensitive unclassified information
006_E-1F9910.pdf	40.1 MB, sensitive unclassified information
007_WIP-E-1F9910-001-B01.pdf	71.0 KB, sensitive unclassified information
008_WIP-E-1F9910-003-A-1.pdf	1.56 MB, sensitive unclassified information
009_XX-E-013-Rev. 1.pdf	2.01 MB, sensitive unclassified information
010_XX-E-013-Rev.1-CN001.pdf	247 KB, sensitive unclassified information
011_XX-E-013-Rev.1-CN002.pdf	292 KB, sensitive unclassified information
012_XX-E-013-Rev.1-CN003.pdf	157 KB, sensitive unclassified information
013_XX-E-013-Rev.1-CN004.pdf	379 KB, sensitive unclassified information
014_XX-E-013-Rev.1-CN005.pdf	371 KB, sensitive unclassified information
015_XX-E-013-Rev.1-CN006.pdf	227 KB, sensitive unclassified information
016_XX-E-013-Rev.1-CN007.pdf	170 KB, sensitive unclassified information
017_XX-E-013-Rev.1-CN008.pdf	429 KB, sensitive unclassified information
018_XX-E-013-Rev.1-CN009.pdf	309 KB, sensitive unclassified information
019_XX-E-013-Rev.1-CN010.pdf	451 KB, sensitive unclassified information
020_XX-E-013-Rev.1-CN011.pdf	298 KB, sensitive unclassified information
021_XX-E-013-Rev.1-CN012.pdf	474 KB, sensitive unclassified information
022_XX-E-013- Rev.1-CN013.pdf	1.24 MB, sensitive unclassified information
023_M-663-00017A W03 CS to B1-98.pdf	44.0 MB, sensitive unclassified information
024_M-663-00017A W03 B1-99 to B2-40.pdf	42.4 MB, sensitive unclassified information
025_M-663-00017A W03 B2-41 to B6-2.pdf	50.9 MB, sensitive unclassified information
026_M-663-00017A W03 B6-3 to B8-3.pdf	47.7 MB, sensitive unclassified information
027_M-663-00017A W03 B8-4 to B8-147.pdf	49.4 MB, sensitive unclassified information
028_M-663-00017A W03 B8-148 to B13-25.pdf	40.4 MB, sensitive unclassified information
029_M-663-00017A W03 B13-26 to G1A-63.pdf	47.2 MB, sensitive unclassified information
030_M-663-00017A W03 G1A-64 to G2B-61.pdf	48.7 MB, sensitive unclassified information
031_M-663-00017A W03 G2B-62 to G3D-50.pdf	34.7 MB, sensitive unclassified information
032_M-663-00017A W03 ATT G4 to ATT H.pdf	36.3 MB, sensitive unclassified information

Enclosure IV to WO 10-0010

TRM Replacement Pages

REVISION: 39

TECHNICAL REQUIREMENTS MANUAL

Wolf Creek Generating Station, Unit 1

Summary of Revision 39:

Released:
DC12 10/28/2009

1. TR 3.3.11, "Seismic Instrumentation," and associated TR Bases are revised to reflect the replacement of the existing seismic instrumentation with SYSCOM instrumentation. The modification 1) reduces or eliminates false triggering of the system, 2) relocates SGAE003 ouside of the shield wall, and 3) eliminates seven mechanical triaxial Peak Recording Accelographs and one electro-mechanical Response Spectrum Recorder. The replacement instrumentation conforms to the guidance in Regulatory Guide 1.12, Revision 2. The voluntary implementation of Regulatory Guide 1.12, Rev. 2 is made in combination with the methods in Regulatory Guide 1.166 and Regulatory Guide 1.167 (Reference Section D of Regulatory Guide 1.12).

TECHNICAL REQUIREMENTS

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time not met.	D.1 Initiate Condition Report.	Immediately

TECHNICAL SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
TSR 3.1.9.1	Verify the boron solution temperature for the : a. RWST ≥ 37 °F and ≤ 100°F; and b. Required boric acid storage tank(s) (BATs) ≥ 65 °F.	24 hours
TSR 3.1.9.2	Verify the boron solution volume for the: a. RWST ≥ 394,000 gallons; and b. Combined BAT volume ≥ 17,658 gallons.	7 days
TSR 3.1.9.3	Verify the boron solution concentration for the: a. RWST is ≥ 2400 ppm; and b. Required BAT(s) are > 7000 ppm and < 7700 ppm.	7 days

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. ----------NOTE---------- Not applicable to Unit Vent - High Range Noble Gas Monitor, Containment Pressure - Extended Range, or Containment Hydrogen Concentration Level Functions. ---------- One or more Functions with required channel(s) inoperable.	C.1 Restore required channel(s) to OPERABLE status.	7 days
D. Unit Vent - High Range Noble Gas Monitor with required channel inoperable.	D.1 Initiate an alternate method for monitoring the appropriate parameters. AND D.2 Restore required channel to OPERABLE status.	72 hours 7 days
E. Two hydrogen analyzer channels inoperable.	E.1 Restore one hydrogen analyzer channel to OPERABLE status.	72 hours
F. Required Action and associated Completion Time not met.	F.1 Initiate Condition Report.	Immediately

3.3 INSTRUMENTATION

3.3.11 Seismic Instrumentation

TR 3.3.11 The seismic monitoring instrumentation shown in Table TR 3.3.11-1 shall be OPERABLE.

APPLICABILITY: At all times.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each instrument and sensor location.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. ----------NOTE---------- Separate Condition entry is allowed for each seismic monitoring instrument. ---------- One or more required seismic monitoring instruments inoperable.	A.1 Restore required seismic monitoring instruments to OPERABLE status.	30 days
B. Required Action and associated Completion Time not met.	B.1 Initiate Condition Report.	Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. One or more required seismic monitoring instruments inoperable due to actuation during a seismic event ≥ 0.02g.	C.1	Evaluate data retrieved from actuated free-field instrumentation.	4 hours
	AND		
	C.2	----------NOTE---------- The CHANNEL OPERATIONAL TEST conducted after a seismic event shall be supplemented by the instrument evaluation described in Section 4.3 of NRC Regulatory Guide 1.166. ----------	
		Perform a CHANNEL OPERATIONAL TEST on actuated free-field instrumentation.	4 hours
	AND		
	C.3	Evaluate data retrieved from remaining actuated instrumentation.	10 days
	AND		

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.4 ----------NOTE---------- The CHANNEL OPERATIONAL TEST conducted after a seismic event shall be supplemented by the instrument evaluation described in Section 4.3 of NRC Regulatory Guide 1.166. ---------- Perform a CHANNEL OPERATIONAL TEST on remaining actuated instrumentation.	10 days

TECHNICAL SURVEILLANCE REQUIREMENTS

----------NOTE----------
Refer to Table TR 3.3.11-1 to determine which TSRs apply for each seismic monitoring instrument.

SURVEILLANCE		FREQUENCY
TSR 3.3.11.1	Perform CHANNEL CHECK.	31 days
TSR 3.3.11.2	Perform COT.	184 days
TSR 3.3.11.3	Not used.	

(continued)

TECHNICAL SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
TSR 3.3.11.4	----------NOTE---------- Verification of setpoint not required. ---------- Perform COT.	184 days
TSR 3.3.11.5	Perform CHANNEL CALIBRATION.	18 months

Table TR 3.3.11-1
Seismic Monitoring Instrumentation

INSTRUMENTS AND SENSER LOCATIONS			MEASUREMENT RANGE			REQUIRED CHANNELS	TECHNICAL SURVEILLANCE REQUIREMENTS
1.	Deleted.						
2.	Triaxial Time History and Response Spectrum Recording System, Monitoring the Following Motion Recorders (Active)						
	a.	Ctmt. Base Slab (SGAE0001)	± 2.0g			1	TSR 3.3.11.1 TSR 3.3.11.4 TSR 3.3.11.5
	b.	Ctmt. Oper. Floor (SGAE0002)	± 2.0g			1	TSR 3.3.11.1 TSR 3.3.11.4 TSR 3.3.11.5
	c.	Reactor Bldg. Area 1 (SGAE0003)	± 2.0g			1	TSR 3.3.11.1 TSR 3.3.11.4 TSR 3.3.11.5
	d.	Aux. Bldg. Base Slab (SGAE0004)	± 2.0g			1	TSR 3.3.11.1 TSR 3.3.11.4 TSR 3.3.11.5
	e.	Aux. Bldg. Control Room Air Filter (SGAE0005)	± 2.0g			1	TSR 3.3.11.1 TSR 3.3.11.4 TSR 3.3.11.5
	f.	Free Field (SGAR0001)	± 2.0g			1	TSR 3.3.11.1 TSR 3.3.11.2 TSR 3.3.11.5
3.	Deleted.						
4.	Network Control Center		ACCELERATION LEVEL				
			North	East	Vertical		
	a.	OBE Free Field	0.06g	0.06g	0.06g	1	TSR 3.3.11.1 TSR 3.3.11.2 TSR 3.3.11.5
	b.	SSE Free Field	0.15g	0.15g	0.16g	1	TSR 3.3.11.1 TSR 3.3.11.2 TSR 3.3.11.5
	c.	Seismic Trigger[1]	0.02g	0.02g	0.02g	1	TSR 3.3.11.1 TSR 3.3.11.2 TSR 3.3.11.5

(1) The Seismic Trigger is a function of SGAR0001 and SGAE0001.

3.3 INSTRUMENTATION

3.3.12 Meteorological Instrumentation

TR 3.3.12 The meteorological monitoring instrumentation for each Function shown in Table TR 3.3.12-1 shall be OPERABLE.

APPLICABILITY: At all times.

ACTIONS

---NOTE---
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one required channel inoperable.	A.1 Restore required channel(s) to OPERABLE status.	7 days
B. Required Action and associated Completion Time not met.	B.1 Initiate Condition Report.	Immediately

TECHNICAL SURVEILLANCE REQUIREMENTS

----------NOTE----------
TSR 3.3.12.1 and TSR 3.3.12.2 apply to each Function in Table TR 3.3.12-1.

SURVEILLANCE		FREQUENCY
TSR 3.3.12.1	Perform CHANNEL CHECK.	24 hours
TSR 3.3.12.2	Perform CHANNEL CALIBRATION.	184 days

Table TR 3.3.12-1
Meteorological Monitoring Instrumentation

	FUNCTION	LOCATION	REQUIRED CHANNELS
1.	Wind Speed	Nominal Elev. 10m	1
2.	Wind Speed	Nominal Elev. 60m	1
3.	Wind Direction	Nominal Elev. 10m	1
4.	Wind Direction	Nominal Elev. 60m	1
5.	Air Temperature - ΔT	Nominal Elev. 10m-60m	1

3.3 INSTRUMENTATION

3.3.13 Loose Parts Monitoring System

TR 3.3.13 The Loose Parts Monitoring System shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each collection region.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more collection regions with one required channel inoperable.	A.1 Restore required channel to OPERABLE status.	30 days
B. Required Action and associated Completion Time not met.	B.1 Initiate Performance Improvement Request.	Immediately

TECHNICAL SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
TSR 3.3.13.1	Perform CHANNEL CHECK.	24 hours

(continued)

TECHNICAL SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
TSR 3.3.13.2	----------NOTE---------- Verification of setpoint is not required. ---------- Perform COT.	31 days
TSR 3.3.13.3	Perform CHANNEL CALIBRATION.	18 months

3.3 INSTRUMENTATION

3.3.14 Turbine Overspeed Protection

TR 3.3.14 One Turbine Overspeed Protection System shall be OPERABLE

APPLICABILITY: MODE 1,
MODE 2 and 3, except when all main steam isolation valves and associated bypass valves in the closed position and all other steam flow paths to the turbine isolated.

ACTIONS

---NOTE---
Separate Condition entry allowed for each steam line.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One or more steam lines with one valve inoperable.	A.1	Close at least one valve in the affected steam line.	78 hours
	OR		
	A.2	Isolate turbine from the steam supply.	78 hours
B. Turbine Overspeed Protection System inoperable for reasons other than Condition A.	B.1	Isolate turbine from the steam supply.	6 hours

TECHNICAL SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
TSR 3.3.14.1	----------NOTE---------- Not required to be performed until 78 hours after the turbine is in operation. --- Observe movement of each of the following valves through at least one complete cycle from the running position: a. Four high pressure turbine stop valves, b. Four high pressure main turbine governor valves, c. Six low pressure turbine reheat stop valves, and d. Six low pressure turbine reheat intercept valves.	92 days
TSR 3.3.14.2	Perform CHANNEL CALIBRATION.	18 months
TSR 3.3.14.3	Disassemble one valve from each category listed in TSR 3.3.14.1 and perform a visual and surface inspection of valve seats, disks and stems and verifying no unacceptable flaws or corrosion.	40 months

3.3 INSTRUMENTATION

3.3.15 Source Range Neutron Flux

TR 3.3.15 Two channels for the Source Range Neutron Flux function shall be OPERABLE.

APPLICABILITY: MODES 3, 4, and 5 with the Rod Control System not capable of rod withdrawal and all control rods fully inserted.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One Source Range Neutron Flux channel inoperable.	A.1 Restore channel to OPERABLE status.	48 hours
B. Required Action and associated Completion Time not met.	B.1 Suspend operations involving positive reactivity changes.	1 hour
C. Both Source Range Neutron Flux channels inoperable.	C.1 Suspend operations involving positive reactivity changes. AND C.2 Verify SDM within the limits in the COLR.	Immediately 1 hour AND Once per 12 hours thereafter

TECHNICAL SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
TSR 3.3.15.1	Perform CHANNEL CHECK.	12 hours
TSR 3.3.15.2	----------NOTE---------- Not required to be performed for source range instrumentation prior to entering MODE 3 from MODE 2 until four hours after entry into MODE 3. ---------- Perform COT.	184 days
TSR 3.3.15.3	----------NOTE---------- Neutron detectors may be excluded from CHANNEL CALIBRATION. ---------- Perform CHANNEL CALIBRATION.	18 months

3.3 INSTRUMENTATION

3.3.16 Explosive Gas Monitoring Instrumentation

TR 3.3.16 The Waste Gas Holdup System explosive gas monitoring instrumentation channels in Table TR 3.3.16-1 shall be OPERABLE with Alarm/Trip setpoints set to ensure the limits of TR 3.10.2 are not exceeded.

APPLICABILITY: During Waste Gas Holdup System operation.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each channel.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more explosive monitoring instrumentation channels with Alarm/Trip setpoint less conservative than required.	A.1 Declare affected channel(s) inoperable.	Immediately
B. Required Hydrogen Monitor channel inoperable.	B.1 Suspend oxygen supply to the recombiner.	Immediately
C. Required Outlet Oxygen Monitor channel inoperable.	C.1 Analyze grab samples during addition of waste gas.	Once per 24 hours
D. Required Action and associated Completion Time Condition B or C not met.	D.1 Suspend operation of Waste Gas Holdup System.	Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Both required Oxygen Monitor channels inoperable. OR Inlet Oxygen Monitor channel and Inlet Hydrogen Monitor channel inoperable.	E.1 Suspend oxygen supply to the recombiner. AND E.2 Analyze grab sample during additions of waste gas.	Immediately Once per 4 hours during degassing operations OR Once per 24 hours during other operations
F. Required Action and associated Completion Time of Condition E not met.	F.1 Suspend operation of Waste Gas Holdup System.	Immediately
G. One or more required Waste Gas Holdup System explosive gas monitoring instrumentation channels inoperable for > 30 days.	G.1 Prepare and submit a Special Report to the NRC explaining why the inoperability was not corrected in a timely manner.	60 days

TECHNICAL SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
TSR 3.3.16.1	Perform CHANNEL CHECK.	24 hours
TSR 3.3.16.2	Perform COT.	31 days

(continued)

TECHNICAL SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
TSR 3.3.16.3	Perform CHANNEL CALIBRATION.	92 days

Table TR 3.3.16-1
Explosive Gas Monitoring Instrumentation

INSTRUMENT	REQUIRED CHANNELS [b]	TECHNICAL SURVEILLANCE REQUIREMENTS
1. Hydrogen Monitor [a]	1	TSR 3.3.16.1 TSR 3.3.16.2 TSR 3.3.16.3
2. Inlet Oxygen Monitor	1	TSR 3.3.16.1 TSR 3.3.16.2 TSR 3.3.16.3
3. Outlet Oxygen Monitor	1	TSR 3.3.16.1 TSR 3.3.16.2 TSR 3.3.16.3

(a) Either the Inlet Hydrogen Monitor or the Outlet Hydrogen Monitor.
(b) The number of required channels is on a per recombiner basis.

3.3 INSTRUMENTATION

3.3.17 Reactivity Control and Power Distribution Alarms

TR 3.3.17 The following annunciator alarms shall be OPERABLE:

a. AXIAL FLUX DIFFERENCE (AFD);

b. Rod Insertion Limit;

c. Rod Position Deviation; and

d. QUADRANT POWER TILT RATIO (QPTR).

APPLICABILITY: According to Table TR 3.3.17-1.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each alarm.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. AFD Alarm is inoperable.	A.1 Perform Technical Specification Surveillance Requirement (SR) 3.2.3.1.	Once per hour
B. Rod Insertion Limit Alarm inoperable.	B.1 Perform Technical Specification SR 3.1.6.2.	Once per 4 hours
C. Rod Position Deviation Alarm inoperable.	C.1 Perform Technical Specification SR 3.1.4.1.	Once per 4 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. QPTR Alarm inoperable.	D.1 Perform Technical Specification SR 3.2.4.1 or SR 3.2.4.2 as applicable.	Once per 12 hours during steady state operations
E. Required Action and associated Completion Time not met.	E.1 Initiate Condition Report.	Immediately

TECHNICAL SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
Not applicable.	

Table TR 3.3.17-1 (page 1 of 1)
Reactivity Control and Power Distribution Alarms

	FUNCTION	ANNUCIATOR WINDOW	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS
A.	AXIAL FLUX DIFFERENCE Alarm	00-079D	1[(b)]
B.	Rod Insertion Limit Alarm	00-081C or 00-081D	1, 2[(a)]
C.	Rod Position Deviation Alarm	00-079C	1, 2
D.	QUADRANT POWER TILT RATIO Alarm	(00-078B and 00-078C) or 00-079C	1[(c)]

(a) With $k_{eff} \geq 1.0$.

(b) With THERMAL POWER ≥ 50% RTP.

(c) With THERMAL POWER > 50% RTP.

3.3 INSTRUMENTATION

3.3.18 Primary to Secondary LEAKAGE Detection Instrumentation

TR 3.3.18 The Primary to Secondary LEAKAGE Detection Instrumentation for each Function in Table TR 3.3.18-1 shall be OPERABLE.

APPLICABILITY: According to Table TR 3.3.18-1.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Required Condenser Air Discharge channel inoperable in MODE 1 or 2 with primary to secondary LEAKAGE < 5 gpd.	A.1	----------NOTE---------- Not required until 5 days of MODE 1 or 2 operation following a shutdown. ----------	
		Restore required channel to OPERABLE status.	48 hours
	AND		
	A.2.1	Analyze grab samples.	--------NOTE-------- In MODE 1 or 2 during startup, a Completion Time of Once per 12 hours applies ---------- Once per 24 hours
	OR		
	A.2.2	Monitor for primary to secondary LEAKAGE with a temporary radiation monitor.	--------NOTE-------- In MODE 1 or 2 during startup, a Completion Time of Once per 12 hours applies ---------- Once per 24 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. One or more required Functions inoperable in MODE 1, 2, or 3 with primary to secondary LEAKAGE ≥ 5 gpd and < 75 gpd.	B.1	Initiate action to restore required Functions to OPERABLE status.	Immediately
C. Two or more required Functions inoperable in MODE 1, 2, or 3 with primary to secondary LEAKAGE ≥ 5 gpd and < 30 gpd.	C.1 OR C.2	Analyze grab samples. Monitor for primary to secondary LEAKAGE with a temporary radiation monitor.	Once per 12 hours Once per 12 hours
D. Two or more required Functions inoperable in MODE 1, 2, or 3 with primary to secondary LEAKAGE ≥ 30 gpd and < 75 gpd.	D.1 OR D.2	Analyze grab samples. Monitor for primary to secondary LEAKAGE with a temporary radiation monitor.	Once per 4 hours Once per 4 hours
E. Required Action and associated Completion Time of Condition A, B, C, or D not met.	E.1	Initiate Condition Report.	Immediately
F. Two or more required Functions inoperable in MODE 1, 2, or 3 with primary to secondary LEAKAGE ≥ 75 gpd.	F.1 AND F.2	Be in MODE 3. Be in MODE 4.	6 hours 12 hours

TECHNICAL SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
TSR 3.3.18.1	Perform CHANNEL CALIBRATION.	18 months

Table TR 3.3.18-1 (page 1 of 1)
Primary to Secondary LEAKAGE Detection Instrumentation

	FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	TECHNICAL SURVEILLANCE REQUIREMENTS
1.	Condenser Air Discharge Monitor (GE RE-92)	1, 2, 3[(a)]	1	TSR 3.3.18.1
2.	Steam Generator Blowdown Process Radiation Monitor (BM RE-25)	1[(a)], 2[(a)], 3[(a)]	1	TSR 3.3.18.1
3.	Steam Generator Liquid Radiation Monitor (SJ RE-02)	1[(a)], 2[(a)], 3[(a)]	1	TSR 3.3.18.1

(a) Primary to secondary LEAKAGE ≥ 5 gpd.

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.3 Pressurizer Pressure/Temperature (P/T) Limits

TR 3.4.3 The pressurizer heatup rates, cooldown rates and spray water temperature differential shall be within limits.

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. ----------NOTE---------- Required Action A.2 must be completed whenever Condition A is entered. ---------- Pressurizer temperature not within limits.	A.1 Restore temperature to within limits. AND A.2 Determine pressurizer is acceptable for continued operation.	30 minutes 72 hours
B. Required Action and associated Completion Time not met.	B.1 Initiate Condition Report.	Immediately

TECHNICAL SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
TSR 3.4.3.1	----------NOTE---------- Only required to be performed during pressurizer heatup. ---------- Verify pressurizer heatup rate does not exceed 100°F in any 1-hour period.	30 minutes

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.18 RCS Vents

TR 3.4.18 One reactor vessel head vent path, consisting of two valves in series, shall be OPERABLE and closed.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Required reactor vessel head vent path inoperable in MODES 1 and 2.	A.1	Initiate action to maintain vent path closed with power removed from all valve actuators.	Immediately
	AND		
	A.2	Restore vent path to OPERABLE status.	30 days
B. Required reactor vessel head vent path inoperable in MODES 3 and 4.	B.1	Restore vent path to OPERABLE status.	30 days
C. Required Action and associated Completion Time not met.	C.1	Initiate Condition Report.	Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action A.1 or B.1 and associated Completion Time not met. OR Engineering evaluation results indicate containment inoperable.	C.1 Declare containment inoperable.	Immediately
D. Required Action A.2 or B.2 and associated Completion Time not met.	D.1 Initiate Condition Report.	Immediately

TECHNICAL SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
TSR 3.6.1.1	Verify, for a representative sample, the containment vessel tendons meet the following structural integrity requirements in accordance with the Containment Tendon Surveillance Program: a. Prestressing forces are within limits; b. Detensioning, inspection, and retensioning of required tendons do not indicate abnormal degradation; and c. Sheathing filler grease is within limits.	In accordance with Containment Tendon Surveillance Program

(continued)

3.7 PLANT SYSTEMS

3.7.7 Component Cooling Water (CCW) System Instrumentation

TR 3.7.7 One channel per required CCW train for each CCW System instrument Function listed below shall be OPERABLE:

a. Surge tank low level; and

b. Radwaste Building loop high flow.

APPLICABILITY: MODES 1, 2, 3, and 4 when non-essential loads are supplied by associated CCW train.

ACTIONS

---NOTE---
Separate Condition entry is allowed for each channel.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required channel(s) inoperable.	A.1 Restore required channel(s) to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Initiate Condition Report.	Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition A or B not met. OR Service Water System inoperable and not capable of supplying either ESW System trains.	D.1 Initiate Condition Report.	Immediately

TECHNICAL SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
Not applicable.	

3.7 PLANT SYSTEMS

3.7.19 Steam Generator (SG) Pressure and Temperature (P/T) Limits

TR 3.7.19 The pressure of the primary and secondary coolants in each required SG shall be ≤ 200 psig.

APPLICABILITY: Whenever the temperature of primary or secondary coolant in associated SG is ≤ 70°F and the primary or secondary systems are capable of being pressurized.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. ---------NOTE---------- Required Action A.2 must be completed whenever this Condition is entered. ---------- Requirements of TR not met.	A.1 Restore required SG pressure to within limits. AND A.2 Determine structural integrity of the SG is acceptable for continued operation.	30 minutes Prior to entering MODE 4
B. Required Action and associated Completion Time not met.	B.1 Initiate Condition Report.	Immediately

TECHNICAL SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
TSR 3.7.19.1	Verify the primary and secondary coolant pressure in each required SG is ≤ 200 psig.	1 hour

3.7 PLANT SYSTEMS

3.7.20 Snubbers

TR 3.7.20 All required snubbers shall be OPERABLE or capable of performing its associated support function, and no system, or portion thereof, has experienced an unexpected, potentially damaging transient.

APPLICABILITY: MODES 1, 2, 3, and 4,
MODES 5 and 6 for snubbers located on systems required OPERABLE.

ACTIONS

----------NOTE----------

1. Separate Condition entry is allowed for each affected system.

2. Removal of a snubber from attached system does not result in the snubber becoming inoperable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required snubbers removed from attached system. <u>OR</u> One or more required snubbers inoperable or not capable of performing its support function while in place.	A.1 Refer to Technical Specification LCO 3.0.8, as applicable, and associated Required Actions.	Immediately
B. One or more required snubbers inoperable.	B.1 Perform an engineering evaluation per section 5 of Table TR 3.7.20-4 on the attached component.	72 hours

(continued)

ACTION (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. A system, or portion thereof, has experienced an unexpected, potentially damaging snubber transient.	C.1 Perform an inspection of required snubbers affected by transient in accordance with Table TR 3.7.20-1.	Within 6 months following the event
D. Required Action and associated Completion Time of Condition B or Condition C not met.	D.1 Declare attached system inoperable.	Immediately

TECHNICAL SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
TSR 3.7.20.1	Perform visual inspections of each required snubber in accordance with Table TR 3.7.20-2.	In accordance with Table TR 3.7.20-3
TSR 3.7.20.2	----------NOTE---------- This surveillance shall not be performed in MODES 1 and 2. ---------- Perform a functional test on a representative sample of each type of snubber in accordance with Table TR 3.7.20-4.	18 months
TSR 3.7.20.3	Verify that the service life of mechanical snubbers is not exceeded.	In accordance with Snubber Service Life Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.3 Initiate Condition Report to submit an NRC Special Report within next 12 months.	24 hours

TECHNICAL SURVEILLANCE REQUIREMENTS

----------NOTES----------

1. Tests for leakage and/or contamination shall be performed by the licensee or other persons specifically authorized by the NRC or an Agreement State.

2. The test method shall have a detection sensitivity of ≤ 0.005 μCi per test sample.

SURVEILLANCE		FREQUENCY
TSR 3.7.21.1	----------NOTE---------- Startup sources and fission detectors previously subjected to core flux are excluded. --- Perform leakage and/or contamination testing for each sealed source that is in use containing radioactive material with a half-life > 30 days and in any form other than gas, excluding H_3.	184 days

(continued)

3.7 PLANT SYSTEMS

3.7.22 Area Temperature Monitoring

TR 3.7.22 Area temperatures specified in Table TR 3.7.22-1 shall be within allowable temperature limit.

APPLICABILITY: At all times.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each temperature area.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required area temperatures not within allowable limit.	A.1 Initiate Condition Report. AND A.2 Restore area temperature(s) to within allowable limit.	Immediately 8 hours

TECHNICAL SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
TSR 3.7.22.1	Verify the required area temperatures specified in Table TR 3.7.22-1 are within allowable limit.	12 hours

Table TR 3.7.22-1 (page 1 of 2)
Area Temperature Monitoring

	AREA	ALLOWABLE TEMPERATURE (°F)
1.	Essential Service Water Pump Room A	≤ 119
2.	Essential Service Water Pump Room B	≤ 119
3.	Auxiliary Feedwater Pump Room A	≤ 119
4.	Auxiliary Feedwater Pump Room B	≤ 119
5.	Turbine Driven Auxiliary Feedwater Pump Room	≤ 147
6.	Engineered Safety Feature Switchgear Room I	≤ 87
7.	Engineered Safety Feature Switchgear Room II	≤ 87
8.	Switchgear Room No. 1	≤ 87
9.	Switchgear Room No. 3	≤ 87
10.	Switchgear Room No. 2	≤ 87
11.	Switchgear Room No. 4	≤ 87
12.	Battery Room No. 1	≤ 87
13.	Battery Room No. 3	≤ 87
14.	Battery Room No. 2	≤ 87
15.	Battery Room No. 4	≤ 87
16.	Residual Heat Removal Pump Room A	≤ 119
17.	Residual Heat Removal Pump Room B	≤ 119
18.	Containment Spray Pump Room A	≤ 119
19.	Containment Spray Pump Room B	≤ 119
20.	Safety Injection Pump Room A	≤ 119
21.	Safety Injection Pump Room B	≤ 119

(continued)

Table TR 3.7.22-1 (page 2 of 2)
Area Temperature Monitoring

	AREA	ALLOWABLE TEMPERATURE (°F)
22.	Centrifugal Charging Pump Room A	≤ 119
23.	Centrifugal Charging Pump Room B	≤ 119
24.	Electrical Penetration Room A	≤ 101
25.	Electrical Penetration Room B	≤ 101
26.	Component Cooling Water Room A	≤ 119
27.	Component Cooling Water Room B	≤ 119
28.	Diesel Generator Room A	≤ 119
29.	Diesel Generator Room B	≤ 119
30.	Control Room	≤ 84

3.7 PLANT SYSTEMS

3.7.23 Class 1E Electrical Equipment Air-Conditioning (A/C)

TR 3.7.23 Two Class 1E Electrical Equipment A/C trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One Class 1E Electrical Equipment A/C train inoperable.	A.1	Establish compensatory measures to the affected train.	2 hours
	AND		
	A.2	Perform TSR 3.7.22.1 for the affected rooms.	4 hours
	AND		
	A.3	Restore Class 1E Electrical Equipment A/C train to OPERABLE status.	7 days
B. Required Actions A.1 or A.2 and associated Completion Time of Condition A not met.	B.1	Initiate Condition Report.	Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Two Class 1E Electrical Equipment A/C trains inoperable. OR Required Action A.3 and associated Completion Time of Condition A not met.	C.1 Declare affected equipment inoperable.	Immediately

TECHNICAL SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
TSR 3.7.23.1	Verify each Class 1E Electrical Equipment A/C train has the capability to remove the assumed heat load.	18 months

3.7 PLANT SYSTEMS

3.7.24 Electrical Penetration Room Coolers

TR 3.7.24 One electrical penetration room cooler shall be OPERABLE for each electrical penetration room.

APPLICABILITY: At all times.

ACTIONS

---NOTE---
Separate Condition entry is allowed for each electrical penetration room cooler.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One electrical penetration room cooler inoperable and not capable of providing cooling.	A.1	De-energize the fan motor of the associated room cooler.	2 hours
	AND		
	A.2	Perform TSR 3.7.22.1 for the affected electrical penetration room.	4 hours AND Once per 4 hours thereafter when most recently obtained room temperature exceeds 90°F
B. Required Action and associated Completion Time of Condition A not met.	B.1	Initiate Condition Report.	Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One electrical penetration room cooler inoperable in MODE 1, 2, 3, and 4.	C.1 Restore electrical penetration room cooler to OPERABLE status.	7 days
D. One electrical penetration room cooler inoperable in MODE 5 and 6.	D.1 Restore electrical penetration room cooler to OPERABLE status.	30 days
E. Required Actions and associated Completion Time of Condition C or D not met.	E.1 Initiate Condition Report.	Immediately

TECHNCIAL SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
Not applicable.	

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued)	A.1.2.2	Verify the inoperable circuit breaker or protective device racked out, locked open, or removed.	Once per 7 days
	AND		
	A.2	Declare the affected system or component inoperable.	72 hours
B. Required Action and associated Completion Time not met.	B.1	Initiate Condition Report.	Immediately

TECHNICAL SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
TSR 3.8.11.1	Perform CHANNEL CALIBRATION of associated protective relays for ≥ 10% of the 13.8 kV circuit breakers.	18 months

(continued)

3.10 EXPLOSIVE GAS AND STORAGE TANK RADIOACTIVITY MONITORING

3.10.2 Waste Gas Holdup System - Explosive Gas Mixture

TR 3.10.2 The concentration of oxygen in the Waste Gas Holdup System shall be limited to ≤ 3% by volume whenever the hydrogen concentration is > 4% by volume.

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Concentration of oxygen in the Waste Gas Holdup System > 3% by volume but ≤ 4% by volume.	A.1 Restore oxygen concentration to within limit.	48 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate Condition Report.	Immediately
C. Concentration of oxygen in the Waste Gas Holdup System > 4% by volume. AND Concentration of hydrogen > 4% by volume.	C.1 Suspend additions of waste gas to the system. AND C.2 Initiate action to reduce the oxygen concentration to ≤ 4% by volume.	Immediately Immediately

3.10 EXPLOSIVE GAS AND STORAGE TANK RADIOACTIVITY MONITORING

3.10.3 Gas Storage Tanks

TR 3.10.3 The quantity of radioactivity contained in each gas storage tank shall be within limit.

APPLICABILITY: At all times.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each tank.

CONDITION	REQUIRED ACTION	COMPLETION TIME
----------NOTE---------- Required Action A.3 must be completed whenever Condition A is entered. ----------	A.1 Suspend addition of radioactive material to the tank. AND	Immediately
A. One or more gas storage tank(s) not within limits.	A.2 Restore gas storage tank(s) to within limit. AND	48 hours
	A.3 Initiate Condition Report (CR) to describe the events leading to exceeding limits for inclusion in the next Radioactive Effluent Release Report pursuant to Technical Specification 5.6.3.	24 hours
B. Required Action and associated Completion Time not met.	B.1 Initiate CR.	Immediately

TR 5.0 ADMINISTRATIVE CONTROLS

TR 5.2 Organization

5.2.1 Unit Staff

The unit staff organization shall include the following:

a. Each on duty shift shall be composed of at least the minimum shift crew composition shown in Table TR 5.2.1-1. The shift crew composition may be one less than the minimum requirements of Table TR 5.2.1-1 for a period of time not to exceed two hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements. This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming crew member being late or absent.

b. A site Fire Brigade of at least 5 members shall be maintained onsite at all times, with an allowance to accommodate an unexpected absence(s) not to exceed 2 hours, provided immediate action is taken to fill the position(s). This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crew member being late or absent. The Fire Brigade shall not include the Shift Manager, and the two other members of the minimum shift crew necessary for safe shutdown of the Unit and any personnel required for other essential function during a fire emergency.

Table TR 5.2.1-1 (page 1 of 1)
Minimum Shift Crew Composition

	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
POSITION	MODE 1, 2, 3, or 4	MODE 5 or 6
SM	1	1[(b)]
CRS	1	None
RO	2	1
NSO	4	1
STA	1[(a)]	None
CHM	1	None
HP	1	1
OFN KC-016	1	None

SM	Shift Manager with a Senior Operator license on Unit 1
CRS	Control Room Supervisor with a Senior Operator license on Unit 1
RO	Individual with an Operator license on Unit 1
NSO	Nuclear Station Operator
STA	Shift Technical Advisor (Shift Engineer)
CHM	Chemistry Personnel
HP	Health Physics Personnel
OFN KC-016	Fire Event Personnel

(a) This position shall be manned in MODES 1, 2, 3, and 4 unless the Shift Manager or the individual with a Senior Operator license meets the qualifications as required by Technical Specification 5.2.2f.

(b) One individual with a Senior Operator license, either Shift Manager or Control Room Supervisor.

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Note 1 The page number is listed on the center of the bottom of each page.

Note 2 The revision number is listed in the lower right hand corner of each page. The Revision number will be page specific.

Note 3 The change document will be the document requesting the change. Therefore, the change document should be a DRR number in accordance with AP 26A-002.

Note 4 The date effective or implemented is the date the Technical Requirement pages are to be issued by Document Control.

BASES

TR 3.0.3 (continued)

This TR delineates the actions to be taken when plant and/or system operation cannot be maintained within the limits as defined by the TR and its ACTIONS. Entering TR 3.0.3 is not intended to be used as an operational convenience that permits routine voluntary removal of redundant systems or components from service in lieu of other evaluated alternatives which would not result in the inoperability of redundant systems or components being inoperable.

If compensatory actions have been taken as a result of TR 3.0.3 entry which have or will result in either a unit shutdown or a reduction of power, these compensatory actions may be terminated, TR 3.0.3 may be exited, and power operation may be allowed to resume, as permitted, as a response to any of the following circumstances:

a. The TR is now met.

b. A Condition exists for which the Required Actions have now been performed.

c. ACTIONS exist that do not have expired Completion Times. (These Completion Times are applicable from the point in time that the Condition is initially entered and not from the time TR 3.0.3 is exited.)

Compensatory actions other than those which result in either a shutdown or reduction of power, shall be followed to the extent required by governing procedure or as directed by plant management. The unit shall be placed in a safe condition as determined by plant management.

TR 3.0.3 is applicable in all MODES of operation, and is applicable to all TRs.

Unlike Technical Specification LCO 3.0.3, entry into TR 3.0.3 does not require plant shutdown. Plant shutdown is only required by the TR when the Required Actions within the TR specifically require plant shutdown based upon a pre-defined condition(s). The shutdown of the plant is always an option that can be chosen upon entry into TR 3.0.3.

Corrective actions shall be immediately initiated in accordance with the corrective action program and corrective action(s) taken as a result of entry into TR 3.0.3 are documented in a Condition Report.

BASES

APPLICABILITY

This TR is applicable in MODES 3, 4, and 5 when performing rod drop time testing of shutdown and control rods. Also see TR 3.0.7.

ACTIONS

A.1

With DRPI inoperable and either (i) more than one shutdown or control bank not fully inserted or (ii) DRPI/group step demand position for the withdrawn bank not verified to be in agreement within the previous 24 hours, the reactor trip breakers must be opened immediately. This action places all rods in a condition for which DRPI System OPERABILITY is not required (Refer to the Applicability Bases of TR 3.1.7).

The immediate Completion Time is consistent with the required times for actions to be performed without delay and in a controlled manner.

TECHNICAL SURVEILLANCE REQUIREMENTS

TSR 3.1.8.1

The DRPI System is verified to be in agreement with the Demand Position Indication System for rods not full inserted once per 24 hours, except when DRPI is deengergized. This provides reasonable assurance that after the DRPI System has been de-energized, rods dropped, and DRPI re-energized, an accurate indication of rod positions will displayed.

The 24 hour Frequency is based on engineering judgment and has been shown to be acceptable through operating experience.

TSR 3.1.8.2

This Surveillance verifies that only one control bank or one shutdown bank is withdrawn at a time during the performance of rod drop testing. The DRPI System or the Demand Position Indication is used to perform this verification.

Alternatively, the RCS boron concentration is verified to be greater than that required to maintain k_{eff} equal to 0.99 with all rod banks fully withdrawn. This ensures that the core will remain sufficiently subcritical to preclude MODE 2 entry for any rod bank configuration.

The 24 hour Frequency is based on engineering judgment and has been shown to be acceptable through operating experience.

REFERENCES

None.

BASES

ACTIONS (continued)

D.1

If the inoperable boration injection subsystem(s) cannot be returned to OPERABLE status within the associated Completion Time, Required Action D.1 requires initiation of a Condition Report (CR) immediately. As part of the initiation of the CR, action shall be implemented in a timely manner to place the unit in a safe condition as determined by plant management. The CR should provide an accurate description of the problem, the Required Action and associated Completion Time not complied with. The intent of this Required Action is to utilize the corrective action program to assure prompt attention and adequate management over sight to minimize the additional time the subsystem is inoperable.

TECHNICAL SURVEILLANCE REQUIREMENTS

TSR 3.1.9.1

This TSR requires verification that the boron solution temperature of the RWST is $\geq$ 37°F and each required BAT has a boron solution temperature of $\geq$ 65°F. This ensures that the concentration of boric acid in the RWST and each required BAT is not allowed to precipitate due to cooling. The upper RWST temperature limit ensures that a high RWST boron solution temperature does not adversely impact the OPERABILITY of the boration injection subsystem and is consistent with the requirements specified in Technical Specification 3.5.4, "Refueling Water Storage Tank." An upper temperature limit is not specified for the BATs since the temperature of these boration sources are dependent upon ambient temperature and ambient temperature is not expected to adversely impact the OPERABILITY of the required boration subsystems.

The Frequency of 24 hours for performance of the surveillance has been shown to be acceptable through operating experience and is consistent with the Technical Specification surveillance Frequency for verifying the RWST boron solution temperature.

TSR 3.1.9.2

This surveillance requires verification that the RWST boron solution volume is at least 394,000 gallons and the combined boron solution volume of the BATs is at least 17,658 gallons. The minimum boron solution volume, along with the boron solution concentration requirements, ensures cold shutdown boron weight is available for injection (i.e., SDM equivalent to 1.3% $\Delta k/k$ at 200°F). The boron solution volume limit of the RWST is equivalent to the volume requirement specified in Technical Specification 3.5.4 and ensures 83,754 gallons are available to inject the required cold shutdown boron weight including any

BASES

ACTIONS (continued)

D.1 and D.2

Condition D applies when the Unit Vent - High Range Noble Gas Monitor channel is inoperable. Required Action D.1 requires the initiation of an alternate method of monitoring be initiated within 72 hours of the unit vent – high range noble gas monitor (GTRE0021B) becoming inoperable. This monitor consists of three separate monitoring channels; the low range channel (#214), the mid range channel (#215), and the high range channel (#216). These three channels are designed with overlapping ranges and collectively meet the regulatory requirements for this monitor. There are two preplanned alternate methods; 1) grab samples of the unit vent activity, and 2) data from field monitoring. Channel #214 can be used to monitor the unit vent if one or both channel(s), #215 and #216, become inoperable when the activity is in the low range. If channel #214 becomes inoperable, manual grab samples from the unit vent or field monitoring can be used as the alternate method (Ref. 6). The 72 hour Completion Time is reasonable based on operating experience. Required Action D.2 requires the restoration of the channel to OPERABLE within 7 days. The Completion Time of 7 days is based on the relatively low probability of an event requiring PAM instrument operation and the availability of alternate means to obtain the required information.

E.1

Condition E applies when two hydrogen analyzer channels are inoperable. Required Action E.1 requires restoring one hydrogen analyzer channel to OPERABLE status within 72 hours. The 72 hour Completion Time is reasonable based on the unlikely event that a LOCA (which would cause core damage) would occur during this time.

F.1

In the event that the Required Actions and associated Completion Times are not met, Required Action F.1 requires initiation of a Condition Report (CR) immediately to address why the accident monitoring instrumentation was not restored to OPERABLE status within the Completion Time. As part of the initiation of the CR, action shall be implemented in a timely manner to place the unit in a safe condition as determined by plant management. The CR should provide an accurate description of the problem, the Required Action and associated completion time not complied with. The intent of this Required Action is to utilize the corrective action program to assure prompt attention and adequate management oversight to minimize the additional time the instrumentation is inoperable.

B 3.3 INSTRUMENTATION

TR B 3.3.11 Seismic Instrumentation

BASES

BACKGROUND

The seismic instrumentation consists of one (1) triaxial motion recorder located at ground level in the free field and five (5) triaxial motion recorders located in Seismic Category 1 structures throughout the plant.

The motion recorders are self-contained, triaxial, strong motion measuring and recording instruments, which can detect and record the complete time history of a seismic event, including the pre-event, event and post event seismic activity. The instruments communicate with a Network Control Center (NCC) mounted in a dedicated cabinet in the control room. The NCC provides for automatic data retrieval. A laptop computer, also located in the cabinet, processes the data received and displays the event in different formats, including the time-history acceleration values for each location, for each axis; computes the response spectra for each location for each axis and computes the time-hisotry of the Cumulative Absolute Velocity (CAV) for each location, for each axis.

The seismic instrumentation is used to promptly determine the seismic response of nuclear power plant features which are important to safety. This is required to permit comparison of the measured response to that used in the design basis for the unit to determine if plant shutdown is required pursuant to Appendix A of 10 CFR Part 100 (Ref. 1).

APPLICABLE SAFETY ANALYSES

The OPERABILITY of the seismic instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and to determine the impact on those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the unit to determine if plant equipment inspection is required pursuant to Appendix A of 10 CFR part 100 prior to restart. Seismic risks which appear as dominant sequences in PRAs occur for very severe earthquakes with magnitudes which are a factor of two or three above the Safe Shutdown Earthquake and Design Basis Earthquake. The Seismic Instrumentation System was not designed to function or to provide comparative information for such severe earthquakes. This instrumentation is more pertinent to determining the ability to restart the plant after seismic events which are not risk contributors, and is therefore not of prime importance in risk dominant sequences.

BASES

TR

OPERABILITY of the seismic monitoring instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and initiate evaluation of the seismic response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the plant. This comparison permits evaluation of seismic effects on structures and equipment and forms the basis for remodeling, detailed analyses, and physical inspection. This instrumentation is consistent with the recommendations of Regulatory Guide 1.12 (Ref. 2) as specified in USAR Section 3.7(B) (Ref. 3).

If a seismic event of $\geq$ 0.02g ground acceleration occurs, then the seismic monitoring instrumentation is considered inoperable until Required Actions of Condition C are completed.

APPLICABILITY

The seismic monitoring instrumentation is required to be OPERABLE at all times to ensure sufficient instrumentation capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the plant.

ACTIONS

A.1

With one or more of the required seismic monitoring instruments listed in Table TR 3.3.11-1 inoperable, restore the instrument to OPERABLE status in 30 days. The Completion Time of 30 days to perform Required Action A.1 is reasonable and based upon engineering judgment.

A Note is added to Condition A to clarify the application of Completion Time rules. Condition A may be entered independently for each instrument and sensor location listed on Table TR 3.3.11-1. The Completion Time(s) of the inoperable instruments and sensor location will be tracked separately for each instrument starting from the time the Condition was entered for that instrument.

B.1

In the event that the Required Action and associated Completion Time of Condition A is not met, Required Action B.1 requires initiation of a Condition Report (CR) immediately to address why the seismic

BASES

ACTIONS (continued)

B.1

monitoring instrument was not restored to OPERABLE status within the Completion Time. As part of the initiation of the CR, action shall be implemented in a timely manner to place the unit in a safe condition as determined by plant management. The CR should provide an accurate description of the problem, the Required Action and associated Completion Time not complied with. The intent of this Required Action is to utilize the corrective action program to assure prompt attention and adequate management oversight to minimize the additional time the instrument is inoperable.

C.1, C.2, C.3, and C.4

With one or more seismic monitoring instruments inoperable due to actuation during a seismic event with greater than or equal to 0.02g ground acceleration, the Required Actions listed under Condition C must be completed.

Required Actions C.1 and C.2 require the evaluation of data from the actuated free-field instrumentation (SGAR0001) and the performance of a CHANNEL OPERATIONAL TEST on the instrumentation (SGAR0001). The data from the free-field instrumentation is evaluated to determine whether the operating basis earthquake (OBE) criteria was exceeded. The evaluation consists of a check of the response spectrum and cumulative absolute velocity (CAV) and a check on the OPERABILITY of the instrumentation. A Competion Time of 4 hours for Required Actions C.1 and C.2 is based on Reference 4. If the response spectrum check and the CAV check (performed or calculated in accordance with Regulatory Positions 4.1 and 4.2 of Regulatory Guide 1.166) were exceeded, the OBE was exceeded and a plant shutdown should be initiated if it is not already in progress or completed

Walk down inspections should be performed in accordance with Regulatory Position 2 of Regulatory Guide 1.166 within 8 hours of the earthquake occurrence. If damage is discovered, a plant shutdown should be initiated if it is not already in progress or completed. (Ref. 4).

Within 10 days of the actuation, an evaluation of the data and a CHANNEL OPERATIONAL TEST must be performed on the remaining actuated monitoring instrumentation. The Completion Time of 10 days to perform Required Action C.4 is reasonable and is based on engineering judgment.

BASES

ACTIONS

C.1, C.2, C.3, and C.4 (continued)

Required Action C.2 and C.4 are modified by a Note that the CHANNEL OPERATIONAL TEST conducted after a seismic event shall be supplemented by the instrument evaluation described in Section 4.3 of NRC Regulatory Guide 1.166.

TECHNICAL SURVEILLANCE REQUIREMENTS

The TSRs for each seismic monitoring instrument are identified by the TSRs column of Table TR 3.3.11-1.

A Note has been added to the TSRs to clarify that Table TR 3.3.11-1 determines which TSRs apply to which seismic monitoring instruments.

TSR 3.3.11.1

Performance of a CHANNEL CHECK on the seismic instrumentation once every 31 days ensures that a gross failure of instrumentation has not occurred. A CHANNEL CHECK is a comparison of the parameter indicated on one channel to a similar parameter on other channels. It is based on the assumption that instrument channels monitoring the same parameter should read approximately the same value. Significant deviations between the instrument channels could be an indication of excessive instrument drift in one of the channels or of even something more serious. CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying that the instrumentation continues to operate properly between each CHANNEL CALIBRATION. Agreement criteria are determined by the plant staff based on a combination of the channel instrument uncertainties, including indication and readability. If a channel is outside the match criteria, it may be an indication that the sensor or the signal-processing equipment has drifted outside its limit.

The Surveillance Frequency of 31 days is based on operating experience related to channel OPERABILITY and drift, which demonstrates that failure of more than one channel of a given function in any 31-day interval is a rare event. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels, which occur during normal operational use of the displays associated with this TR's required channels.

BASES

TECHNICAL SURVEILLANCE REQUIREMENTS (continued)

TSR 3.3.11.2

A CHANNEL OPERATIONAL TEST (COT) is performed every 184 days on each required instrument to ensure the entire channel will perform the intended function. A COT is the comparison of the response of the instrumentation, including all components of the instrument, except the sensor, to a known signal. The Frequency of 184 days is based upon the known reliability of the monitoring instrumentation and has been shown to be acceptable through operating experience.

TSR 3.3.11.3

Not used.

TSR 3.3.11.4

A COT is performed every 184 days or each required instrument to ensure the channel will perform the intended function. The Frequency of 184 days is based upon the known reliability of the monitoring instrumentation and has been shown to be acceptable through operating experience. The TSR is modified by a Note that excludes verification of setpoints during the COT. The instrumentation tested have no setpoints associated with them.

TSR 3.3.11.5

A CHANNEL CALIBRATION is a complete check of the instrument loop and the sensor by comparing the response of the instrument to a known input on the sensor. This test verifies the capability of the seismic instrumentation to correctly determine the magnitude of a seismic event and evaluate the response of those features important to safety. The Frequency of 18 months is based upon operating experience and consistency with the typical industry refueling cycle.

REFERENCES

1. 10 CFR 100, Appendix A.
2. Regulatory Guide 1.12, Revision 2, March 1997.
3. USAR, Section 3.7(B).
4. Regulatory Guide 1.166, March 1997.

BASES

ACTIONS (continued)

B.1

In the event that the Required Action and associated Completion Time are not met, Required Action B.1 requires initiation of a Condition Report (CR) immediately to address why the meteorological instrument was not restored to OPERABLE status within the Completion Time. As part of the initiation of the CR, action shall be implemented in a timely manner to place the unit in a safe condition as determined by plant management. The CR should provide an accurate description of the problem, the Required Action and associated Completion Time not complied with. The intent of this Required Action is to utilize the corrective action program to assure prompt attention and adequate management oversight to minimize the additional time the instrument is inoperable. Restoration of the inoperable instrumentation should occur in a prompt manner to assure at least a 90% data recovery (Ref. 3).

TECHNICAL SURVEILLANCE REQUIREMENTS

TSR 3.3.12.1

Performance of a CHANNEL CHECK on the meteorological instrumentation once every 24 hours ensures that a gross failure of instrumentation has not occurred. A CHANNEL CHECK is a comparison of the parameter indicated on one channel to a similar parameter on other channels. It is based on the assumption that instrument channels monitoring the same parameter should read approximately the same value. Significant deviations between the instrument channels could be an indication of excessive instrument drift in one of the channels or of even something more serious. CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying that the instrumentation continues to operate properly between each CHANNEL CALIBRATION.

Agreement criteria are determined by the plant staff based on a combination of the channel instrument uncertainties, including indication and readability. If a channel is outside the match criteria, it may be an indication that the sensor or the signal-processing equipment has drifted outside its limit.

The Frequency of 24 hours is based on operating experience related to channel OPERABILITY and drift, which demonstrates that failure of more than one channel of a given function in any 24 hour interval is a rare event. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels, which occur during normal operational use of the displays associated with this TR's required channels.

BASES

TR

The Loose Parts Monitoring System is required to be OPERABLE and is considered OPERABLE with one channel associated with each of the six collection regions OPERABLE. This is necessary to ensure that sufficient capability is available to detect loose metallic parts within the RCS to avoid or mitigate potential damage to the RCS components. This requirement is provided in order to comply with the requirements of Regulatory Guide 1.133 (Ref. 2).

APPLICABILITY

TR 3.3.13 is required to be met in MODES 1 and 2. These MODES of Applicability are consistent with the recommendations of Regulatory Guide 1.133 (Ref. 2).

ACTIONS

A Note is added in the ACTIONS to clarify the application of Completion Time rules. The Conditions of this Requirement may be entered independently for each of the six collection regions. The Completion Time(s) for the inoperable collection regions will be tracked separately for each region starting from the time the Condition was entered for that region.

A.1

When all of the channels associated with a single collection region in the Loose Parts Monitoring System are inoperable, at least one channel must be restored to OPERABLE status within 30 days. This Condition, Required Action, and Completion Time are consistent with the recommendations in Regulatory Guide 1.133 (Ref. 2).

B.1

In the event that the Required Action and associated Completion Time are not met, Required Action B.1 requires initiation of a Condition Report (CR) immediately to address why the loose part monitoring channel was not restored to OPERABLE status within the Completion Time. As part of the initiation of the CR, action shall be implemented in a timely manner to place the unit in a safe condition as determined by plant management. The CR should provide an accurate description of the problem, the Required Action and associated Completion Time not complied with. The intent of this Required Action is to utilize the corrective action program to

BASES

BACKGROUND (continued)

The Condenser Air Discharge Monitor (GE RE-92) is provided to detect, indicate, and alarm gaseous activity in the Condenser Air Removal System exhaust. The monitor closes the steam generator blowdown isolation valves on high radiation to prevent discharge of radioactive fluid and to limit radioactive contamination of the blowdown demineralizers. (Reference 2.)

The Steam Generator Blowdown Process Radiation Monitor (BM RE-25) continuously monitors the fluid entering the steam generator blowdown filters to detect, alarm, and indicate excessive radioactivity levels in the blowdown system. This monitor acts to terminate blowdown from the steam generators to prevent discharge of radioactive fluid and to limit radioactive contamination of the blowdown deminerlizers. (Reference 3).

The Steam Generator Liquid Radiation Monitor (SJ RE-02) continuously monitors the blowdown from the steam generators, either individually or collectively, to detect, indicate, and alarm primary to secondary system leaks in the steam generators. This monitor closes the steam generator blowdown isolation valves on high radiation to prevent the discharge of radioactive fluid and to limit radioactive contamination of the blowdown demineralizers. (Reference 4).

APPLICABLE SAFETY ANALYSES

The safety analyses for events resulting in steam discharge to the atmosphere assume a 1 gpm primary to secondary LEAKAGE as an initial condition. Primary to secondary LEAKAGE is a factor in the dose release outside containment resulting from a steam line break accident. Other accidents or transients involving secondary steam release to the atmosphere, include the steam generator tube rupture. The leakage contaminates the secondary fluid.

TR

This TR requires the radiation monitors used to detect and monitor steam generator primary to secondary LEAKAGE be OPERABLE when needed for detection and monitoring. A radiation monitor is OPERABLE if it is directly correlated to gpd leakage, can be monitored, will produce an alarm in the control room, and can detect leak rates greater than 30 gpd at existing Reactor Coolant System (RCS) activity levels. The capability to isolate steam generator blowdown is not required for radiation monitor OPERABILITY as this TR is to ensure the monitor is capable of detecting and monitoring primary to secondary LEAKAGE.

During normal operation, process radiation monitors and radiochemical grab sampling provide indication of primary to secondary LEAKAGE.

BASES

ACTIONS

D.1 (continued)

radiation monitor may be installed on the condenser air discharge or other location that is known to provide a reliable indication of primary to secondary LEAKAGE. The temporary radiation monitor can be used as an OPERABLE primary to secondary LEAKAGE detection monitor. A temporary radiation monitor is OPERABLE if it is directly correlated to gpd leakage, can be monitored, and can detect leak rates > 30 gpd at existing RCS activity. Monitoring for primary to secondary LEAKAGE by grab samples or a temporary radiation monitor is performed once per 4 hours. The 4 hour Completion Time is adequate based on the guidance in Reference 1.

Once a leak is detected, it is important to have at least two of the primary to secondary leak detection monitors OPERABLE. Continuous monitoring of the level and rate of change of radioactivity in the secondary

plant is extremely important. Having at least two monitors available will provide at least two indications for comparison and provide a backup in case one monitor should become inoperable for any reason. The Steam Generator Blowdown Process Radiation Monitor (BM RE-025) is the preferred monitor to maintain OPERABLE since the Steam Generator Liquid Radiation Monitor (SJ RE-02) indication is delayed by approximately 30 minutes due to transport time.

E.1

In the event that the Required Action and associated Completion Time of Condition A, B, C, or D are not met, Required Action B.1 requires initiation of a Condition Report (CR) immediately to address why the actions were not completed within the specified Completion Time.

As part of the initiation of the CR, action shall be implemented in a timely manner to place the unit in a safe condition as determined by plant management. The CR should provide an accurate description of the problem, the Required Action and associated Completion Time not complied with. The intent of this Required Action is to utilize the corrective action program to assure prompt attention and adequate management oversight to minimize the additional time that the LEAKAGE detection instrumentation is inoperable.

BASES

ACTIONS

A.1 and A.2 (continued)

In addition to restoring operation to within limits, an engineering evaluation of the structural integrity of the pressurizer is required within 72 hours to determine if operation may continue. This may require event-specific stress analyses or inspections. WCAP-14717 (Ref. 6) provides guidance for engineering evaluation of transients. A favorable evaluation must be completed before continuing operation. The Completion Time of 72 hours is consistent with that allowed in Technical Specification 3.4.3, "RCS Pressure and Temperature Limits."

A Note is provided to clarify that Required Action A.2 must be completed whenever this Condition is entered. The Note emphasizes the need to perform the engineering evaluation of the effects of the excursion outside the allowable limits. Restoration to within limits is insufficient without the evaluation of the structural integrity of the pressure boundary of the pressurizer.

B.1

In the event that the Required Action and associated Completion Time are not met, Required Action B.1 requires initiation of a Condition Report (CR) immediately to address why the pressurizer pressure/temperature limit was not restored to OPERABLE status within the Completion Time. As part of the initiation of the CR, action shall be implemented in a timely manner to place the unit in a safe condition as determined by plant management. The CR should provide an accurate description of the problem, the Required Action and associated Completion Time not complied with. The intent of this Required Action is to utilize the corrective action program to assure prompt attention and adequate management oversight to minimize the additional time pressurizer temperature is not within limits.

TECHNICAL SURVEILLANCE REQUIREMENTS

TSR 3.4.3.1

This TSR verifies the rate of heatup is within limit. The 30 minute Frequency is considered reasonable based on the instrumentation available in the control room to monitor the status of the RCS. The TSR has been modified by a Note which requires the TSR to be performed only during pressurizer heatup.

BASES

ACTIONS (continued)

C.1

In the event that the Required Action and associated Completion Time are not met, Required Action C.1 requires initiation of a Condition Report (CR) immediately to address why the reactor vessel head vent path was not restored to OPERABLE status within the Completion Time. As part of the initiation of the CR, action shall be implemented in a timely manner to place the unit in a safe condition as determined by plant management. The CR should provide an accurate description of the problem, the Required Action and associated Completion Time not complied with. The intent of this Required Action is to utilize the corrective action program to assure prompt attention and adequate management oversight to minimize the additional time the reactor vessel head vent path is inoperable

TECHNICAL SURVEILLANCE REQUIREMENTS

TSR 3.4.18.1, TSR 3.4.18.2, and TSR 3.4.18.3

Every 18 months it is necessary to verify that each of the two vent paths are OPERABLE. This verification consists of checking the upstream manual isolation valve and ensuring that the valve is locked in the open position. Further, the two control valves are operated from the control room, typically in accordance with Inservice Testing Program, through one complete cycle of full travel. Lastly, the test includes a verification of flow through each of the two vent paths upon the establishment of a desired flow path.

A Note has been added to both TSR 3.4.18.2 and TSR 3.4.18.3, which stipulates that these surveillance shall not be performed in MODES 1, 2, 3, or 4. This is to reduce the probability of equipment malfunction during system conditions where the RCS pressure could result in a substantial loss of coolant through a failed open series of valves.

REFERENCES

1. NUREG-0737, "Clarification of TMI Action Plan Requirements," Item II.B.1, November 1980.

2. USAR, Section 18.2.1.2.

3. USAR, Section 18.2.1.1, Clarification A.8.

4. WCAP-11618, "MERITS Program-Phase II, Task 5, Criteria Application," including Addendum 1, dated April, 1989.

B 3.6 CONTAINMENT SYSTEMS

TR B 3.6.1 Containment Vessel Structural Integrity

BASES

BACKGROUND

The containment consists of a prestressed, reinforced concrete, cylindrical structure with a hemispherical dome. The Post-tensioning System used for the shell and dome of the containment employs tendons. Each tendon consists of 170 one quarter-inch high strength steel wires and anchoring components. The prestressing load is transferred, by cold formed button heads on the ends of the individual wires through stressing washers, to steel bearing plates embedded in the structure. The ultimate strength of each tendon is approximately 1000 tons. The unbonded tendons are installed in tendon ducts and tensioned in a predetermined sequence. The tendon ducts consist of galvanized, spiral wrapped, semi-rigid corrugated steel tubing. After tensioning, a petroleum based corrosion inhibitor is pumped into the duct.

The Post-tensioning System is divided into two tendon groups. One group consists of 86 inverted U-shaped tendons which extend through the full height of the cylindrical wall over the dome. They are anchored at the bottom of the base slab through the ceiling of the tendon access gallery. The other tendon group consists of 165 tendons forming the circumferential (hoop) tendons. Three buttresses located 120 degrees apart extend the full vertical height of the containment. The hoop tendons are anchored to one buttress, extend through the next, and are anchored to the third buttress. Thus, each hoop tendon extends around 240 degrees of the containment building (Ref. 1).

The containment OPERABILITY requirements are provided in Technical Specifications 3.6.1, "Containment," 5.5.6, "Containment Tendon Surveillance Program," and 5.5.16, "Containment Leakage Rate Testing Program," (Refs. 2 and 3). Reference 4 describes further details on the performance of containment tendon surveillances.

Technical Specification 5.5.6 requires the Containment Tendon Surveillance Program, and its inspection frequencies and acceptance criteria, to be in accordance with Section XI, Subsection IWL (Ref. 5) of the ASME Boiler and Pressure Vessel Code and applicable addenda as required by 10 CFR 50.55a, except where an exemption or relief has been authorized by the NRC. Section XI requires the preparation of a Containment Inservice Inspection Program Plan (Ref. 7) that identifies the applicable Edition and Addenda of Section XI and integrates Section XI requirements, regulatory requirements, commitments, and relief or exemption requests, if any.

BASES

ACTIONS

C.1

If Required Action A.1 or B.1 and associated Completion Time are not met or if the engineering evaluation indicates the containment is inoperable, the containment must be immediately declared inoperable and the ACTIONS of Technical Specification 3.6.1 must be performed. The immediate Completion Time is consistent for actions to be performed without delay and in a controlled manner.

D.1

If Required Action A.2 or B.2 cannot be performed within the associated Completion Time, Required Action D.1 requires initiation of a Condition Report (CR) immediately. The CR should provide an accurate description of the problem, the Required Action and associated Completion Time not complied with. The intent of this Required Action is to utilize the corrective action program to assure prompt attention and adequate management oversight to minimize the additional time the ASME Form OAR-1 is not submitted to the NRC.

TECHNICAL SURVEILLANCE REQUIREMENTS

TSR 3.6.1.1

The structural integrity of the tendons shall be demonstrated by:

a. Determining that a representative sample as specified in the Containment Tendon Surveillance Program have prestressing forces within the predicted limits established for each tendon. Failure to meet the acceptance criteria specified in the Containment Tendon Surveillance Program during the measuring of prestressing forces is considered to be containment vessel abnormal degradation.

b. Performing tendon detensioning, inspections, and material tests on required tendons as specified in the Containment Tendon Surveillance Program. Failure to meet the acceptance criteria specified in the Containment Tendon Surveillance Program during detensioning, inspection or retensioning is abnormal degradation of the containment structure.

BASES

ACTIONS (continued)

B.1

If the Required Action cannot be performed within the associated Completion Time, Required Action B.1 requires initiation of a Condition Report (CR) immediately. As part of the initiation of the CR, action shall be implemented in a timely manner to place the unit in a safe condition as determined by plant management. The CR should provide an accurate description of the problem, the Required Action and associated Completion Time not complied with. The intent of this Required Action is to utilize the corrective action program to assure prompt attention and adequate management oversight to minimize the additional time the channel is inoperable.

TECHNICAL SURVEILLANCE REQUIRMENTS

TSR 3.7.7.1

A CHANNEL OPERATIONAL TEST (COT) of the surge tank level and flow instrumentation circuits that provide automatic isolation of the non-safety-related portions of the system assures that the channel components are capable of performing their design functions upon the initiation of a simulated or actual actuation signal. The Frequency of 184 days is reasonable, based on plant-specific operating experience, instrument reliability, and satisfactory performance trend.

TSR 3.7.7.2

A CHANNEL CALIBRATION of surge tank level and flow instrumentation circuits, which provide automatic isolation of the non-safety-related portion of the system, assures that the channels will respond, within the required range and accuracy necessary for the continued OPERABILITY of the circuit. The CHANNEL CALIBRATION must include all devices up to and including the associated automatic valves to provide complete testing of the required function. The 18 month Frequency is based upon the need to perform this TSR during shutdown conditions which minimizes the possibility of creating a plant transient during operation.

BASES

ACTIONS (continued)

D.1

If Required Action A.1 or B.1 cannot be performed within the associated Completion Time, or the Service Water System is inoperable and not capable of supplying either ESW System train. Required Action C.1 requires initiation of a Condition Report (CR) immediately. As part of the initiation of the CR, action shall be implemented in a timely manner to place the unit in a safe condition as determined by plant management. The CR should provide an accurate description of the problem, the reason(s) why the Required Action and associated Completion Time could not be complied with. The intent of this Required Action is to utilize the corrective action program to assure prompt attention and adequate management oversight to minimize the time the Service Water System is inoperable.

TECHNICAL SURVEILLANCE REQUIREMENTS

None. The Service Water System pumps are proven OPERABLE by their use during normal station operation.

REFERENCES

1. USAR Section 9.2.1.1.

BASES

APPLICABILITY (continued)

of being pressurized. As such, the Applicability is limited to whenever the temperature of the primary or the secondary coolant of the associated SG is ≤ 70°F and the primary or secondary systems are capable of being pressurized. For the purposes of this TR, the primary and secondary systems are considered no longer capable of being pressurized following depressurization to atmospheric conditions with a vent path of ≥ 2 square inches (e.g., reactor vessel head removed for the primary system and SG manways removed for the secondary system.

ACTIONS

A.1 and A.2

Operation outside the SG P/T limits must be corrected so that the SG is returned to a condition that is sufficient to prevent brittle fracture.

The Completion Time reflects the urgency of restoring the parameters to within the analyzed range.

Besides restoring the SG pressure to within limits, an engineering evaluation is required to determine if SG operation is allowed. This evaluation must verify that the SG integrity is acceptable and must be completed before entering MODE 4. Several methods may be used, including comparison with pre-analyzed transients, new analyses, or inspection of the components.

Condition A is modified by a Note requiring Required Action A.2 be completed whenever the Condition is entered. The Note emphasizes the need to perform the evaluation of the effects of the excursion outside the allowable limits. Restoration alone per Required Action A.1 is insufficient because the higher pressure-induced stresses must be evaluated against the maximum allowable fracture toughness stress limits.

B.1

If the Required Actions cannot be performed within the associated Completion Time, Required Action B.1 requires initiation of a Condition Report (CR) immediately. As part of the initiation of the CR, action shall be implemented in a timely manner to place the unit in a safe condition as determined by plant management. The CR should provide as accurate description of the problem, the Required Action and associated Completion Time not complied with. The intent of this Required Action is to utilize the corrective action program to assure prompt attention and adequate management oversight to minimize the additional time the SG P/T limits are not met.

BASES

BACKGROUND (continued)

A list of individual snubbers with detailed information regarding the snubber's location, size and system(s) which it affects is available at the plant in accordance with Section 50.71(c) of 10 CFR Part 50. The accessibility of each snubber is determined and approved by the Plant Safety Review Committee. The determination is based upon the existing radiation levels and the expected time to perform a visual inspection in each snubber location as well as other factors associated with accessibility during plant operations (e.g., temperature, atmosphere, location etc.), and the recommendations of Regulatory Guides 8.8 and 8.10 (Refs. 7 and 8). The addition or deletion of any mechanical snubber is performed in accordance with Section 50.59 of 10 CFR Part 50.

The Snubber Service Life Program is administered through TR 5.5.5. The service life of a snubber is established via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (newly installed snubber, seal replaced, spring replaced, in high radiation area, in high temperature area, etc.). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life.

APPLICABLE SAFETY ANALYSES

Pipe and equipment supports, in general, are not directly considered in designing the accident sequences for theoretical hazard evaluations. Further, various Probabilistic Risk Assessment (PRA) studies have indicated that snubbers are not of prime importance in a risk significant sequence (Refs. 4 and 5). Therefore, the function of the snubbers is not essential in mitigating the consequences of a DBA or transient (Refs. 6 and 9).

TR

This TR requires that all snubbers utilized on safety related equipment be OPERABLE or capable of performing its associated support function, and no system, or portion there of, has experienced and unexpected, potentially damaging transient. Snubbers that are utilized on non-safety related systems, are also required to be OPERABLE if a failure could have an adverse effect on a safety related system.

APPLICABILITY

The OPERABILITY of required snubbers is required in MODES 1, 2, 3, and 4. For MODES 5 and 6, the OPERABILITY is limited to those snubbers located on systems which need to be OPERABLE in MODES 5 and 6.

BASES

ACTIONS

A Note has been added to the ACTIONS to clarify the application of Completion Time rules. The Conditions of this Technical Requirement may be entered independently for each affected system. The Completion Time(s) of the inoperable snubber will be tracked separately for each affected system starting from the time the Condition was entered for that system as a result of discovery of an inoperable snubber.

A second Note has been added to the ACTIONS indicating that removal of a snubber from the attached system does not result in the snubber becoming inoperable. Individual snubbers may be removed from service for functional testing within the limits established in Technical Specification (TS) LCO 3.0.8.

A.1

If one or more required snubbers is removed from the attached system or the required snubber is inoperable or not capable of performing its support function while in place, refer to TS LCO 3.0.8. When a snubber is to be rendered incapable of performing its related support function for testing or maintenance or is discovered to be inoperable or to not be functional, it must be determined whether any TS system(s) require the affected snubber(s) for system OPERABILITY, and whether the plant is in a MODE or specified condition in the Applicability that requires the supported TS system(s) to be OPERABLE.

Technical Specification LCO 3.0.8 provides an allowance under which systems are not considered to be inoperable solely due to one or more snubbers not capable of performing their associated support function(s). The system may be declared OPERABLE while utilizing TS LCO 3.0.8. The following are applicable for utilizing LCO 3.0.8:

a. Determine whether a TS system is rendered inoperable by a inoperable snubber.

(1) If it is determined that the supported TS system(s) do not require the snubber(s) to be OPERABLE in order to support OPERABILITY of the system(s) LCO 3.0.8 is not needed.

(2) If the LCO(s) associated with any supported TS system(s) are not currently applicable (i.e., the plant is not in a MODE or other specified condition in the Applicability of the LCO), LCO 3.0.8 is not needed.

(3) If the support TS system(s) are inoperable for reasons other than snubbers, LCO 3.0.8 cannot be used.

BASES

ACTIONS

A.1 (continued)

b. Determine the design basis of the inoperable snubber. When a snubber is to be rendered inoperable for testing or maintenance or is discovered to be inoperable, the design function of the snubber must be determined in order to determine if LCO 3.0.8 may be used.

(1) If the design function of the snubber is to react to only seismic loads, LCO 3.0.8 may be applied.

(2) If the design function of the snubber includes both seismic loads and non-seismic loads, any TS systems supported by the inoperable snubber must be able to remain OPERABLE if subjected to the non-seismic loads with the snubber removed. If the supported TS system will remain OPERABLE when subjected to non-seismic loads, LCO 3.0.8 may be applied.

(3) If the design function of the snubber includes only non-seismic loads, LCO 3.0.8 cannot be used.

c. When LCO 3.0.8.a is used, at least one train of the Auxiliary Feedwater (AFW) System not associated with the inoperable snubber must be OPERABLE.

d. When LCO 3.0.8.b is used, at least one train of the AFW System not associated with the inoperable snubber must be OPERABLE. If the inoperable snubber(s) supports all trains of the AFW System or if the AFW System becomes inoperable due to an emergent condition, some alternative means of core cooling must be available.

e. The LCO 3.0.8 requirement to assess and manage risk is met by programs to comply with the requirements of paragraph (a)(4) of the Maintenance Rule, 10 CFR 50.65, to assess and manage risk resulting from maintenance activities. LCO 3.0.8 should be considered with respect to other plant maintenance activities, and integrated into the existing Maintenance Rule process to the extent possible so that maintenance on any unaffected train or subsystem is properly controlled, and emergent issue properly addressed. The risk assessment need not be quantified, but may be a qualitative awareness of the vulnerability of systems and components when one or more snubbers are not able to perform their associated support function.

BASES

ACTIONS

A.1 (continued)

f. A record of the implementation of any applicable Tier 2 restrictions, and the associated plant configuration, shall be available on a recoverable basis for NRC inspection.

B.1

If one or more required snubbers is inoperable, perform an engineering evaluation per section 5 of Table TR 3.7.20-4.

The engineering evaluation is performed to:

a. Determine the cause of the failure

As a result of this evaluation, the need for testing other snubbers will be considered. The results from the testing will be used to consider expanded functional testing and cause examination with consideration of manufacturing and design deficiency.

b. Determine the impact on the supported component

This evaluation shall determine if the inoperable snubber has adversely affected the attached component.

The 72 hours is based on engineering experiences and is reasonable, considering the time it will take to identify the problem and take the proper corrective actions.

C.1

If the plant has experienced an unexpected, potentially damaging snubber transient, an inspection per Table TR 3.7.20-1 is performed on all snubbers attached to sections of systems that have experienced the transient. The potential impact of the transient is assessed by reviewing operating data and by visually inspecting the associated system. In addition to the visual inspection, the freedom-of-motion of the mechanical snubber(s) is verified per Table TR 3.7.20-1.

The Completion Time of 6 months has been assigned based upon industry practice.

BASES

ACTIONS (continued)

D.1

If Required Actions and associated Completion Times of Condition B or C are not met, the supported system or component is immediately declared inoperable.

TECHNICAL SURVEILLANCE REQUIREMENTS

Surveillance Testing is performed in accordance with the applicable requirements of ASME Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components" (Ref. 1).

NRC letter dated June 2, 2006 (Ref. 10), approved the proposed alternative to use TRM, Section 3.7.20, for snubber visual inspection and functional testing in lieu of the applicable ASME Code requirements specified in Section XI, Article IWF-5000 for the third 10-year inservice inspection interval. The NRC safety evaluation specifies that changes to the TRM snubber visual inspection and functional testing requirements shall be submitted to the NRC for authorization pursuant to 10 CFR 50.55a(a)(3) or as an exemption pursuant to 10 CFR 50.12.

Permanent or other exemptions from the surveillance program for individual snubbers may be granted by the Commission if a justifiable basis for exemption is presented and, if applicable, snubber life destructive testing was performed to qualify the snubber for the applicable design conditions at either the completion of their fabrication or at a subsequent date. Snubbers so exempted shall be listed in the list of individual snubbers indicating the extent of the exemptions.

In order to establish the inspection frequency for each type of snubber on a safety related system, it was assumed that the frequency of snubber failures and initiating events is constant with time and that the failure of any snubber could cause the system to be unprotected and to result in failure during an assumed initiating event. Inspections performed before that interval has elapsed may be used as a new reference point to determine the next inspection. However, the results of such early inspections performed before the original required time interval has elapsed (nominal time less 25%) may not be used to lengthen the required inspection interval. Any inspection whose results require a shorter inspection interval will override the previous schedule.

BASES

ACTIONS

A Note modifies the ACTIONS to clarify the application of Completion Time rules. The Conditions of this requirement may be entered independently for sealed source. The Completion Time(s) of the sealed source contamination not within limits will be tracked separately for each sealed source starting from the time the Condition was entered for that source.

A.1

With a sealed source having removable contamination in excess of the limits, the sealed source should be removed from use immediately. The immediate Completion Time reflects the importance of preventing the contamination from spreading.

A.2.1 and A.2.2

If the sealed source contamination is not within the specified limit and the sealed source has been removed from use, the sealed source must be decontaminated and repaired, otherwise, disposal of the sealed source is required. If the sealed source is to be decontaminated and repaired, it must be done prior to returning the sealed source to use. If disposal of the sealed source is to be done, it must be completed in accordance with NRC regulations.

A.3

A Condition Report (CR) must be initiated to ensure a Special Report is submitted to the NRC when the sealed source contamination is not within the specified limit. The Special Report should include a description of the type of contamination, level of contamination detected, and the corrective actions taken. The report should be submitted within 12 months. The 12 month time period allows the report to be submitted with other annual reports (e.g., Technical Specification 5.6.2, "Annual Radiological Environmental Operating Report"). The Completion Time of 24 hours provides reasonable time to initiate the CR.

Condition A is modified by a Note requiring Required Action A.3 be completed whenever the Condition is entered. The Note emphasizes the need to initiate the CR regardless of whether the removable contamination is removed and the source repaired or the sealed source is disposed in accordance with NRC regulations.

BASES

APPLICABLE SAFETY ANALYSES

Certain components, which have their service temperatures controlled by this requirement, are part of the primary success path and function to mitigate DBAs and transients. However, the OPERABILITY of these components is addressed in the relevant Technical Specifications that cover individual components. The service temperatures and the thermal aging, which are controlled by observing the requirements of this TR, are not inputs to the safety analysis. Further, Probabilistic Risk Assessment studies performed to date do not explicitly model the function of area temperature monitors. In addition, this particular requirement covers only service temperatures and thermal aging of these components, which are not considerations in designing the accident sequences for theoretical hazard evaluations (Ref. 3).

TR

This TR provides allowable temperature limits in the vicinity of major equipment. Temperature limits for each area are specified in Table TR 3.7.22-1. For the TR to be considered met, the temperature in each required area must be within the allowable temperature limit specified in Table TR 3.7.22-1. Exposure to excessive temperatures will degrade equipment which could result in the equipment being inoperable.

The temperature limits include an allowance for instrument error of ±3°F.

APPLICABILITY

Since the environmental qualification of equipment is not MODE dependent, the limits on temperature and time apply at all times.

ACTIONS

A Note modifies the ACTIONS to clarify the application of Completion Time rules. The Conditions of this requirement may be entered independently for each temperature area. The Completion Time(s) of the area temperatures not within limits will be tracked separately for each temperature area starting from the time the Condition was entered for that temperature area.

A.1 and A.2

Whenever the temperature in one or more areas exceeds the allowable temperature limits, a Condition Report (CR) should be initiated to document the condition and determine whether or not a degraded or nonconforming condition exists. If equipment in the affected area(s) is degraded or nonconforming, identify and apply compensatory measures

BASES

ACTIONS

A.1 and A.2 (continued)

as necessary. This includes determining the OPERABILITY of equipment in the affected are(s), as applicable, by evaluating the effects of the out-of-limit temperatures(s) on the equipment. The temperature in the affected area(s) must be restored to within the allowable value limit within 8 hours.. The Completion Time is considered reasonable to reduce any minor temperature increase to within the allowable limit and is based on operating experience.

TECHNICAL SURVEILLANCE REQUIREMENTS

TSR 3.7.22.1

The temperature in each area must be determined every 12 hours to ensure compliance with the allowable limits specified in Table TR 3.7.22-1. The Frequency is based on engineering judgement, reasonable time considering the time required for performing the surveillance, and the low probability for significant changes in the area temperatures between surveillance performances.

REFERENCES

1. 10CFR 50.49 "Environmental Qualification of Electric Equipment Important to Safety for Nuclear Power Plants."

2. 10 CFR 50 Appendix A, General Design Criteria 4,"Environmental and Dynamic Effects Design Bases."

3. WCAP-11618, "MERITS Program-Phase II, Task 5, Criteria Application," including Addendum 1 dated April 1989.

BASES

ACTIONS

A.1, A.2, and A.3 (continued)

With one Class 1E Electrical Equipment A/C train inoperable, action must be taken to restore OPERABLE status within 7 days. In this condition, and with the actions taken as specified in Required Action A.1, the remaining OPERABLE Class 1E Electrical Equipment A/C train is adequate to maintain the affected electrical equipment room temperatures within limits. However, the overall reliability of the cooling function is reduced and physical separation for the redundant electrical equipment is impaired. The 7-day Completion Time is based on the low probability of either (1) an event requiring electrical equipment operation to mitigate a DBA or (2) an event that challenges the physical separation criteria for the electrical equipment rooms and consideration that the remaining train can provide the required cooling function.

B.1

If Required Actions A.2 or A.3 and associated Completion Time for Condition A are not met, a Condition Report (CR) should be initiated immediately for addressing why the Required Actions were not performed and determining whether or not a degraded or nonconforming condition exists. If equipment in the affected area(s) is degraded or nonconforming, determine if the equipment in the affected area(s) is OPERABLE, as applicable, by evaluating the effects of the out-of-limit temperature(s) on the equipment. The immediate Completion Time is consistent for actions to be performed without delay and in a controlled manner.

C.1

If both trains of Class 1E Electrical Equipment A/C are inoperable in MODES 1, 2, 3, or 4, the Class 1E Electrical Equipment may not be capable of performing its intended function. Therefore, action must be taken immediately to declare the affected equipment inoperable. If Required Action A.3 and associated Completion Time for Condition A are not met, action must be taken immediately to declare the affected equipment inoperable. The immediate Completion Time is consistent for actions to be performed without delay and in a controlled manner.

BASES

TECHNICAL SURVEILLANCE REQUIRMENTS

TSR 3.7.23.1

This SR verifies that the heat removal capability of the Class 1E Electrical Equipment A/C trains is adequate to remove the heat load assumed in the affected rooms during design basis accidents for both trains. This SR consists of verifying the heat removal capability of the condenser heat exchanger (either through performance testing or inspection) and verification of unit air flow capacity. This may include tube cleaning, eddy current testing and visual inspections. Each train of Class 1E Electrical Equipment A/C can remove both trains assumed heat loads if no more than 10% of the condenser heat exchanger tubes are plugged. Verification of proper operation of the trains is ensured since the trains are normally operating continuously. The 18 month Frequency is appropriate since significant degradation of the Class 1E Electrical Equipment A/C is not expected over this time period.

REFERENCES

1. USAR, Section 9.4.1.2.3.
2. USAR, Section 3.11(B).4
3. Configuration Change Package (CCP) 07905, Rev. 02, "SGK05A or B Out of Service."

B 3.7 PLANT SYSTEMS

TR B 3.7.24 Electrical Penetration Room Coolers

BASES

BACKGROUND

The penetration room coolers provide a suitable ambient temperature for the safety related equipment located in the electrical penetration rooms. Room coolers SGL15A and SGL15B are located in rooms 1410 and 1409, respectively, on elevation 2026' of the Auxiliary Building.

Normally, safety related room coolers would not be taken out of service during normal plant operation, without also taking actions in accordance with existing Technical Specifications of the supported equipment. An evaluation (Ref. 1) has shown that loss of the penetration room coolers (SGL15A/B) will not degrade the performance of the supported equipment in the associated penetration room. Appendix C.9 to Part 9900 (Ref. 2), Technical Guidance, "Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality," provides guidance allowing licensees to make determinations as to which support equipment is required under various conditions.

APPLICABLE SAFETY ANALYSES

The engineering design function of the penetration room coolers is to provide a suitable ambient temperature for the safety related equipment located in the electrical penetration rooms. The maximum normal operating temperature for these rooms is identified in USAR Table 3.11(B)-1 (Ref. 3) as 104°F. The design basis accident (DBA) room temperature is 106°F per USAR Table 3.11(B)-2 (Ref. 3). The Area Temperature Monitoring Technical Requirements (TR 3.7.22) allowable temperature is ≤ 101°F. Typically, during normal plant operation, these rooms are found to stay at ambient temperatures in the range of 60°F to near 100°F.

TR

One electrical penetration room cooler is required to be OPERABLE in each electrical penetration room to ensure adequate cooling during normal operation.

An electrical penetration room cooler is considered to be OPERABLE when the individual components necessary to maintain its associated electrical penetration room temperatures within acceptable limits are OPERABLE.

BASES

TR (continued)

An electrical penetration room cooler can be capable of providing cooling even though it may be inoperable (e.g. Essential Service Water System is inoperable but service water is available to the room cooler). A cooler may also be considered capable of providing cooling if restoration can be made by an operator in the Control Room or a dedicated operator stationed locally for the purpose of restoring the cooler. Restoration must be uncomplicated, covered by written procedure, must not require diagnosis or repair, and must be part of a pre-job brief on the test.

APPLICABILITY

Since the environmental qualification of equipment is not MODE dependent, electrical penetration room cooler OPERABILITY addressed by this TR is required at all times.

ACTIONS

A Note modifies the ACTIONS to clarify the application of the Completion Time rules. The Conditions of this requirement may be entered independently for each electrical penetration room cooler. The Completion Times(s) of each electrical penetration room cooler will be tracked separately for each room cooler starting from the time the Condition was entered for that room cooler.

A.1

With an electrical penetration room cooler inoperable and not capable of providing cooling, action must be taken to de-energize the fan motor of the associated room cooler within 2 hours. De-energizing the motor reduces equipment heat gain to the room. The Completion Time of 2 hours to de-energize the fan motor is acceptable based on operating experience and the temperature in the affected rooms is not expected to significantly increase within this period of time.

A.2

With an electrical penetration room cooler inoperable and not capable of being restored to service, the temperature in the associated electrical penetration room must be monitored to determine if a degraded condition exists. Thus, Required Action A.2 requires an initial check on temperatures by completing TSR 3.7.22.1 within 4 hours and every 4 hours thereafter when the most recently obtained room temperature exceeds 90°F to ensure the equipment room remains within allowable

BASES

ACTIONS

A.2 (continued)

limits (101°F). If the electrical penetration room temperature remains ≤ 90°F, performance of TSR 3.7.22.1 every 12 hours is sufficient to ensure room temperature does not exceed 101°F. The initial Completion Time of 4 hours is acceptable based on the expected heat-up rate of the rooms.

B.1

If the Required Actions and associated Completion Time for Condition A are not met, a Condition Report (CR) should be initiated immediately for addressing why the Required Actions were not performed and determining whether or not a degraded or nonconforming condition exists. If equipment in the affected area(s) is degraded or nonconforming, determine if the equipment in the affected area(s) is OPERABLE, as applicable, by evaluating the effects of the out-of-limit temperature(s) on the equipment.. The immediate Completion is consistent for actions to be performed without delay and in a controlled manner.

Table TR B 3.7.24-1 provides a list of the Technical Specifications and Technical Requirements which are applicable if the Required Actions and associated Completion Times of Condition A are not taken or the compensatory actions cannot maintain adequate temperatures to ensure OPERABILITY.

C.1

When one electrical penetration room cooler is inoperable in MODE 1, 2, 3, or 4, action must be taken to restore the electrical penetration room cooler to OPERABLE status in 7 days. The 7-day Completion Time is based on the low probability of an event requiring the components in the electrical penetration rooms to operate to mitigate a DBA.

D.1

When one electrical penetration room cooler is inoperable in MODE 5 or 6, action must be taken to restore the electrical penetration room cooler to OPERABLE status in 30 days. The 30-day Completion Time is based on the heat input to the electrical penetration rooms from a design basis LOCA or main steam line break is of minimal significance.

BASES

ACTIONS (continued)

E.1

If Required Action C.1 or D.1 cannot be performed within the associated Completion Time, Required Action E.1 requires initiation of a Condition Report (CR) immediately. The CR should provide an accurate description of the problem, the Required Action and associated Completion Time not complied with. The intent of the Required Action is to utilize the corrective action program to assure prompt attention and adequate management oversight to minimize the time of technical requirement noncompliance and/or inoperability of the electrical penetration room cooler.

TECHNICAL SURVEILLANCE REQUIREMENTS

None.

REFERENCES

1. CCP-09816, Rev. 0, "Inoperable Electrical Penetration Room Cooler (SGL15A/B)."
2. NRC Regulatory Issue Summary 2005-20, Rev. 1, Revision to NRC Inspection Manual Part 9900 Technical Guidance, "Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety," April 16, 2008..
3. USAR Table 3.11(B).

TABLE TR B 3.7.24-1
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Technical Specification/Technical Requirement		Component
3.1.7	Rod Position Indication	DRPI Cables
3.3.1	RTS Instrumentation Functions 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 17, 18	Instrument Cables
3.3.2	ESFAS Instrumentation Functions 1.c, 2.c, 3.b.3, 4.c	Containment Pressure Transmitters
3.3.2	ESFAS Instrumentation Functions 1, 2, 3, 4, 5, 6, 8	Instrument Cables
3.3.3	Post Accident Monitoring Instrumentation	Containment Pressure Transmitters and Instrument Cables
3.3.4	Remote Shutdown Instrumentation	Instrument Cables
3.3.6	Containment Purge Isolation Instrumentation Functions 3, 4	Radiation Monitor Breaker and Instrument Cables
3.3.7	CREVS Actuation Instrumentation Functions 3, 4	Radiation Monitor Breaker and Instrument Cables
3.3.8	EES Actuation Instrumentation Function 3	GG RE-28 Breaker (B only)
3.4.9	Pressurizer	Pressurizer Heater Breakers
3.4.11	Pressurizer PORVs	PORV Block Valve Breakers and PORV Cables
3.4.15	RCS Leakage Detection Instrumentation	Sump Level Transmitter Breakers, Cables, Radiation Monitor Breakers
3.5.2	ECCS – Operating	RHR and SI Valve Breakers and Cables
3.5.3	ECCS - Shutdown	RHR and SI Valve Breakers and Cables
3.6.3	Containment Isolation Valves	Breakers and Cables
3.6.6	Containment Spray and Cooling Systems	Containment Spray Valve Breakers, Containment Cooler Breakers and Cables
3.6.7	Spray Additive System	Containment Spray Valve Breakers
3.7.5	AFW System	AFW Room Cooler and Valve Breakers (A only)
3.7.13	EES	Emergency Exhaust Fan Breaker (B only)

BASES

ACTIONS

A.1.1.1, A.1.1.2, A.1.2.1, A.1.2.2, and A.2 (continued)

with the use of a physical restraining lockout device. Use of a clearance order alone will not suffice for locking open the inoperable circuit breaker or protective device. (Ref. 3)

Since systems or components supplied by the affected circuit will no longer have power, they must be declared inoperable.

The 72 hour Completion Time takes into account the design of the electrical penetration for maximum fault current, the availability of backup circuit protection on the distribution system and the low probability of a DBA occurring during this period. This Completion Time is also considered reasonable to perform the necessary repairs or circuit alterations to restore or otherwise deenergize the affected circuit.

In order to assure that any electrical penetration which is not protected by an overcurrent device remains deenergized, it is necessary to periodically verify that its backup circuit breaker is tripped or that the inoperable circuit breaker or protective device is racked out, locked open, or removed. A Completion Time of once per 7 days is considered sufficient due to the infrequency of plant operations that could result in reenergizing a circuit that has been deenergized in this manner.

B.1

In the event that the Required Action and associated Completion Time are not met, Required Action B.1 requires initiation of a Condition Report (CR) immediately to address why the containment penetration over current protective devices was not restored to OPERABLE status within the Completion Time. As part of the initiation of the CR, action shall be implemented in a timely manner to place the unit in a safe condition as determined by plant management. The CR should provide an accurate description of the problem, the Required Action and associated Completion Time not complied with. The intent of this Required Action is to utilize the corrective action program to assure prompt attention and adequate management oversight to minimize the additional time the protective device is inoperable.

TECHNICAL SURVEILLANCE REQUIREMENTS

TSR 3.8.11.1

This Surveillance requires the performance of a CHANNEL CALIBRATION on a sample of at least 10% of all protective relays associated with high voltage (13.8 kV) containment penetration overcurrent devices. A CHANNEL CALIBRATION assures that the relays

BASES

ACTIONS

A Note has been added in the ACTIONS to clarify the application of Completion Time rules. The Conditions of this requirement may be entered independently for each tank listed in the TR. The Completion Time(s) associated with each tank outside of its requirements will be tracked separately for each tank starting from the time the Condition was entered for that tank.

A.1, A.2, and A.3

Once the quantity of radioactive material has been determined to be greater than the imposed limit, addition of radioactive material is required to be suspended immediately and the level reduced to within limits within 48 hours. The immediate Completion Time for the suspension of the addition of radioactive material to the tank is consistent with the required times for actions to be performed without delay and in a controlled manner. The 48 hour Completion Time for the restoration of the tanks radioactive content to within limits is based upon engineering judgment and is reasonable considering the time it will take to identify the problem and take the proper corrective actions.

Condition A is modified by a Note that requires that Required Action A.3 must be completed whenever Condition A is entered. The Note emphasizes the need to initiate a Condition Report (CR) regardless of whether the liquid holdup tank(s) is restored to within limits. The initiation of a CR ensures that the event will be included in the next Radioactive Effluent Release Report in accordance with Technical Specification 5.6.3.

B.1

In the event that the Required Action and associated Completion Time are not met, Required Action B.1 requires initiation of a CR immediately to address why the liquid holdup tank(s) was not restored to within limits within the Completion Time. As part of the initiation of the CR, action shall be implemented in a timely manner to place the unit in a safe condition as determined by plant management. The CR should provide an accurate description of the problem, the Required Action and associated Completion Time not complied with. The intent of this Required Action is to utilize the corrective action program to assure prompt attention and adequate management oversight to minimize the additional time the tank(s) are not within limits.

BASES

APPLICABILITY

Since the release of radioactivity is not MODE dependent, the oxygen and hydrogen content of the Waste Gas Holdup System addressed by this TR is required to be maintained within limits at all times.

ACTIONS

A.1

With the concentration of oxygen in the Waste Gas Holdup System > 3% by volume, but ≤ 4% by volume, actions shall be taken to restore the oxygen concentration to ≤ 3% within 48 hours. The 48 hour Completion Time for the restoration of the tanks oxygen concentration to within limits is based upon operating experience and is reasonable considering the time it will take to identify the problem and take the proper corrective actions.

B.1

In the event that the Required Action and associated Completion Time are not met, Required Action B.1 requires initiation of a Condition Report (CR) immediately to address why the Waste Gas Holdup System oxygen concentration was not restored to within limit within the Completion Time. As part of the initiation of the CR, action shall be implemented in a timely manner to place the unit in a safe condition as determined by plant management. The CR should provide an accurate description of the problem, the Required Action and associated completion time not complied with. The intent of this Required Action is to utilize the corrective action program to assure prompt attention and adequate management oversight to minimize the additional time the oxygen concentration is not within limit.

C.1 and C.2

With the concentration of oxygen in the Waste Gas Holdup System > 4% by volume and with the hydrogen concentration in the Waste Gas Holdup System also > 4% by volume, actions shall be taken to immediately suspend all additions of waste gas to the system and to immediately initiate actions to reduce the oxygen concentration to ≤ 4% by volume. The immediate Completion Time is consistent with the required times for actions to be performed without delay and in a controlled manner.

BASES

APPLICABLE SAFETY ANALYSES

The limitations imposed on the radioactive content of each gas storage tank governed by this TR are put in place so as to ensure that the public is not exposed to doses from gaseous effluents in excess of the requirements of 10CFR Part 20 to unrestricted areas. The total dose to the public ensures that the dose limitations of 40CFR Part 190 which have been incorporated in 10CFR Part 20 are met (Ref. 4).

These requirements are not important to dominant risk sequences as defined in Reference 4.

TR

TR 3.10.3 is provided to ensure that the radioactive material contained in each gas storage tank is less than 2.5×10^5 Curies of noble gases. (Calculated based on Xe-133 equivalent.)

APPLICABILITY

Radioactive content of the gas storage tanks addressed by this TR is required to be monitored and maintained within limits at all times.

ACTIONS

A Note has been added in the ACTIONS to clarify the application of Completion Time rules. The Conditions of this Requirement may be entered independently for each tank listed in the TR. The Completion Time(s) associated with each tank outside of its requirements will be tracked separately for each tank starting from the time the Condition was entered for that tank.

A.1, A.2, and A.3

Once the quantity of radioactive material is determined to be greater than the limit, addition of radioactive material is required to be suspended immediately and the level reduced to within limits within 48 hours. The immediate Completion Time for the suspension of the addition of radioactive material to the tank is consistent with the required times for actions to be performed without delay and in a controlled manner. The 48 hour Completion Time for the restoration of the tanks radioactive content to within limits is based upon operating experience and is reasonable considering the time it will take to identify the problem and take the proper corrective actions.

Condition A is modified by a Note that requires that Required Action A.3 must be completed whenever Condition A is entered. The Note emphasizes the need to initiate a Condition Report (CR) regardless of whether the gas storage tank(s) is restored to within limits.

BASES

ACTIONS

A.1, A.2, and A.3 (continued)

The initiation of a CR ensures that the event will be included in the next Radioactive Effluent release Report in accordance with Technical Specification 5.6.3.

B.1

In the event that the Required Action and associated Completion Time are not met, Required Action B.1 requires initiation of a CR immediately to address why the gas storage tank(s) was not restored to within limit within the Completion Time. As part of the initiation of the CR, action shall be implemented in a timely manner to place the unit in safe condition as determined by plant management. The CR should provide an accurate description of the problem, the Required Action and associated Completion Time not complied with. The intent of this Required Action is to utilize the corrective action program to assure prompt attention and adequate management oversight to minimize the additional time the tank(s) is not within the limit.

TECHNICAL SURVEILLANCE REQUIREMENTS

TSR 3.10.3.1

Demonstrating that the quantity of radioactive material in each tank is within limits at a Frequency of within 7 days following additions and once per 7 days during additions provides adequate assurance that concentrations in excess of the limits will be detected in sufficient time to take corrective action.

The use of Xe-133 equivalent for the curie limit is based on Xe-133 being the predominant moble gas accumulated is the reactor coolant and transferred to the gas storage tanks and is therefore used as the isotope source term.

A Note has been added to allow the exception of the performance of this surveillance as a result of swapping the contents of one gas storage tank to another when the tank being swapped contains less than 2.0×10^5 curies (which is less than the 2.5×10^5 limit). This is acceptable based upon Reference 5, which calculates the maximum increase in curie content as a result of swapping the contents from one tank to the other considering the volume of piping between tanks.

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B 3.1.10-4	17	DRR 04-0452	5/26/04
TAB – B 3.3 INSTRUMENTATION			
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B 3.3.18-5	26	DRR 06-0050	2/28/06
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Note 2 The revision number is listed in the lower right hand corner of each page. The Revision number will be page specific.

Note 3 The change document will be the document requesting the change. Therefore, the change document should be a DRR number in accordance with AP 26A-002.

Note 4 The date effective or implemented is the date the Technical Requirement Bases pages are issued by Document Control.