Tennessee Valley Authority
1101 Market Street, LP 3R
Chattanooga, Tennessee 37402-2801

R. M. Krich
Vice President
Nuclear Licensing

April 20, 2010

10 CFR 50.4
10 CFR 50.71(e)

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Watts Bar Nuclear Plant, Unit 1
Facility Operating License No. NPF-90
NRC Docket No. 50-390

Subject: **Changes Made to the Technical Requirements Manual**

The purpose of this letter is to provide the NRC with copies of the changes that have been made to the Watts Bar Nuclear Plant (WBN), Unit 1, Technical Requirements Manual (TRM), through Revision 45. This information is provided in accordance with WBN, Unit 1 TRM Section 5.1, "Technical Requirements Control Program," and 10 CFR 50.71(e). These changes have been implemented at WBN, Unit 1, during the period since the last update of the TRM on September 22, 2008 and meet the criteria described within the TRM control program for which prior NRC approval is not required. The updates to the TRM are provided in the enclosures listed below.

Enclosure 1 - WBN, Unit 1, Technical Requirements Manual - Table of Contents
Enclosure 2 - WBN, Unit 1, Technical Requirements Manual - Changed Pages

WBN, Unit 1's TRM is incorporated by reference into the Updated Final Safety Analysis Report (UFSAR). Due to this, this letter certifies that the content of this update accurately presents the changes made since the previous submittal.

There are no regulatory commitments associated with this submittal. Please direct any questions concerning this matter to Kevin Casey, Senior Project Manager at (423) 751-8523.

D030

NRR

I certify that the foregoing is true and correct.

Respectfully,

R. M. Krich

Enclosures:
1. WBN, Unit 1, Technical Requirements Manual - Table of Contents
2. WBN, Unit 1, Technical Requirements Manual - Changed Pages

cc (Enclosures):

NRC Regional Administrator - Region II
NRC Senior Resident Inspector - Watts Bar Nuclear Plant

Enclosure 1

WBN, Unit 1, Technical Requirements Manual - Table of Contents

TECHNICAL REQUIREMENTS

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LIST OF MISCELLANEOUS REPORTS AND PROGRAMS

Core Operating Limits Report

LIST OF ACRONYMS

Acronym	Title
ABGTS	Auxiliary Building Gas Treatment System
ACRP	Auxiliary Control Room Panel
ASME	American Society of Mechanical Engineers
AFD	Axial Flux Difference
AFW	Auxiliary Feedwater System
ARO	All Rods Out
ARFS	Air Return Fan System
ARV	Atmospheric Relief Valve
BOC	Beginning of Cycle
CCS	Component Cooling Water System
CFR	Code of Federal Regulations
COLR	Core Operating Limits Report
CREVS	Control Room Emergency Ventilation System
CSS	Containment Spray System
CST	Condensate Storage Tank
DNB	Departure from Nucleate Boiling
ECCS	Emergency Core Cooling System
EFPD	Effective Full-Power Days
EGTS	Emergency Gas Treatment System
EOC	End of Cycle
ERCW	Essential Raw Cooling Water
ESF	Engineered Safety Feature
ESFAS	Engineered Safety Features Actuation System
HEPA	High Efficiency Particulate Air
HVAC	Heating, Ventilating, and Air-Conditioning
LCC	Lower Compartment Cooler
LCO	Limiting Condition For Operation
MFIV	Main Feedwater Isolation Valve
MFRV	Main Feedwater Regulation Valve
MSIV	Main Steam Line Isolation Valve
MSSV	Main Steam Safety Valve
MTC	Moderator Temperature Coefficient
NMS	Neutron Monitoring System
ODCM	Offsite Dose Calculation Manual
PCP	Process Control Program
PIV	Pressure Isolation Valve
PORV	Power-Operated Relief Valve
PTLR	Pressure and Temperature Limits Report
QPTR	Quadrant Power Tilt Ratio
RAOC	Relaxed Axial Offset Control
RCCA	Rod Cluster Control Assembly
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
RHR	Residual Heat Removal
RTP	Rated Thermal Power
RTS	Reactor Trip System
RWST	Refueling Water Storage Tank
SG	Steam Generator
SI	Safety Injection
SL	Safety Limit
SR	Surveillance Requirement
UHS	Ultimate Heat Sink

TECHNICAL REQUIREMENTS

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LIST OF EFFECTIVE PAGES - REVISION LISTING

Revisions	Issued	SUBJECT
Revision 0	09-30-95	Initial Issue
Revision 1	12-06-95	Submerged Component Circuit Protection
Revision 2	01-04-96	Area Temperature Monitoring - Change in MSSV Limit
Revision 3	02-28-96	Turbine Driven AFW Pump Suction Requirement
Revision 4	08-18-97	Time-frame for Snubber Visual Exams
Revision 5	08-29-97	Performance of Snubber Functional Tests at Power
Revision 6	09-08-97	Revised Actions for Turbine Overspeed Protection
Revision 7	09-12-97	Change OPΔT/OTΔT Response Time
Revision 8	09-22-97	Clarification of Surveillance Frequency for Position Indication System
Revision 9	10-10-97	Revised Boron Concentration for Borated Water Sources
Revision 10	12-17-98	ICS Inlet Door Position Monitoring - Channel Check
Revision 11	01-08-99	Computer-Based Analysis for Loose Parts Monitoring
Revision 12	01-15-99	Removal of Process Control Program from TRM
Revision 13	03-30-99	Deletion of Power Range Neutron Flux High Negative Rate Reactor Trip Function
Revision 14	04-07-99	Submerged Component Circuit Protection
Revision 15	04-07-99	Submerged Component Circuit Protection
Revision 16	04-13-99	Submerged Component Circuit Protection
Revision 17	05-25-99	Flood Protection Plan
Revision 18	08-03-99	Submerged Component Circuit Protection
Revision 19	10-12-99	Upgrade Seismic Monitoring Instruments
Revision 20	03/13/00	Added Notes to Address Instrument Error for Various Parameters
Revision 21	04/13/00	COLR, Cycle 3, Rev 2
Revision 22	07/07/00	Elimination of Response Time Testing

LIST OF EFFECTIVE PAGES - REVISION LISTING

Revisions	Issued	SUBJECT
Revision 23	01/22/01	Plant Calorimetric (LEFM)
Revision 24	03/19/01	TRM Change Control Program per 50.59 Rule
Revision 25	05/15/01	Change in Preventive Maintenance Frequency for Molded Case Circuit Breakers
Revision 26	05/29/01	Change CVI Response Time from 5 to 6 Seconds
Revision 27	01/31/02	Change pH value in the borated water sources due to TS change for ice weight reduction
Revision 28	02/05/02	Refueling machine upgrade under DCN D-50991-A
Revision 29	02/26/02	Added an additional action to TR 3.7.3 to perform an engineering evaluation of inoperable snubber's impact on the operability of a supported system.
Revision 30	06/05/02	Updated TR 3.3.5.1 to reflect implementation of the TIPTOP program in a Technical Instruction (TI).
Revision 31	10/31/02	Correct RTP to 3459 MWt (PER 02-9519-000)
Revision 32	09/17/03	Editorial correction to Bases for TSR 3.1.5.3.
Revision 33	10/14/03	Updated TRs 3.1.5 and 3.1.6 and their respective bases to incorporate boron concentration changes in accordance with change packages WBN-TS-02-14 and WBN-TS-03-017.
Revision 34	05/14/04	Revised Item 5, "Source Range, Neutron Flux" function of Table 3.3.1-1 to provide an acceptable response time of less than or equal 0.5 seconds. (Reference TS Amendment 52.)
Revision 35	04/06/05	Revised Table 3.3.2-1, "Engineered Safety Features Actuation systems Response Times," to revise containment spray response time and to add an asterisk note to notation 13 of the table via Change Package WBN-TS-04-16.
Revision 36	09/25/06	Revised the response time for Containment Spray in Table 3.3.2-1 and the RT_{NDT} values in the Bases for TR 3.7.1. Both changes result from the replacement of the steam generators.
Revision 37	11/08/06	Revised TR 3.1.5 and 3.1.6 and the Bases for these TRs to update the boron concentration limits of the RWST and the BAT.

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REVISION LISTING

Revisions	Issued	SUBJECT
Revision 38	11/29/06	Updated the TRM to be consistent with Tech Spec Amendment 55. TRM Revision 38 modified the requirements for mode change limitations in TR 3.0.4 and TSR 3.0.4 by incorporating changes similar to those outlined in TSTF-359, Revision 9. (TS-06-24)
Revision 39	04/16/07	Updated the TRM to be consistent with Tech Spec Amendment 42. TRM Revision 39 modified the requirements of TSR 3.0.3 by incorporating changes similar to those outlined in TSTF-358. (TS-07-03)
Revision 40	05/24/07	Updated the TRM and Bases to remove the various requirements for the submittal of reports to the NRC. (TS-07-06)
Revision 41	05/25/07	Revision 41 updates the Bases of TR 3.1.3, 3.1.4 and 3.4.5 to be consistent with Technical Specification Amendment 66. This amendment replaces the references to Section XI of the ASME Boiler and Pressure Vessel Code with the ASME Operation and Maintenance Code for Inservice Testing (IST) activities and removes reference to "applicable supports" from the IST program.
Revision 42	03/20/2008	Revision 42 updates Figure 3.1.6 to remove the 240 TPBAR Limit.
Revision 43	07/17/2008	Revision 43 removes a reporting requirement from TR 3.7.4, "Sealed Source Contamination." The revision also updates the Bases for TR 3.7.4.
Revision 44	10/10/2008	Revision 44 updates Table 3.3.1-1 to be consistent with the changes approved by NRC as Tech Spec Amendment 68.
Revision 45	02/23/2009	Added TR 3.3.8, "Hydrogen Monitors," and the Bases for TR 3.3.8. This change is based on Technical Specification (TS) Amendment 72 which removed the Hydrogen Monitors (Function 13 of LCO 3.3.3) from the TS.

Enclosure 2

WBN, Unit 1, Technical Requirements Manual - Changed Pages

Table 3.3.1-1 (Page 1 of 2)

Reactor Trip System Instrumentation Response Times

FUNCTIONAL UNIT		RESPONSE TIME
1.	Manual Reactor Trip	N.A.
2.	Power Range, Neutron Flux	
	a. High	≤ 0.5 second[1]
	b. Low	≤ 0.5 second[1]
3.	Power Range, Neutron Flux	
	a. High Positive Rate	N.A.
	b. High Negative Rate	Deleted
4.	Intermediate Range, Neutron Flux	N.A.
5.	Source Range, Neutron Flux	≤ 0.5 seconds[1]
6.	Overtemperature ΔT	≤ 8 seconds[1]
7.	Overpower ΔT	≤ 8 seconds[1]
8.	Pressurizer Pressure	
	a. Low	≤ 2 seconds
	b. High	≤ 2 seconds
9.	Pressurizer Water Level—High	N.A.

(continued)

(1) Neutron detectors are exempt from response time testing. Response time of the neutron flux signal portion of the channel shall be measured from the detector output or input of first electronic component in channel.

Table 3.3.1-1 (Page 2 of 2)

Reactor Trip System Instrumentation Response Times

FUNCTIONAL UNIT		RESPONSE TIME
10.	Reactor Coolant Flow - Low	≤ 1.2 seconds
11.	Undervoltage-Reactor Coolant Pumps	≤ 1.5 seconds[2]
12.	Underfrequency-Reactor Coolant Pumps	≤ 0.6 second[3]
13.	Steam Generator Water Level-Low-Low	≤ 2 seconds[4]
14.	Turbine Trip	
	a. Low Fluid Oil Pressure	N.A.
	b. Turbine Stop Valve Closure	N.A.
15.	Safety Injection Input from ESF	N.A.
16.	Reactor Trip System Interlocks	N.A.
17.	Reactor Trip Breakers	N.A.
18.	Reactor Trip Breaker UV and ST	N.A.
19.	Automatic Trip and Interlock Logic	N.A.

(2) Includes sensor delay time, adjustable time delay, logic and breaker trip times, gripper release (150 msec.) and EMF decay time (250 msec.).

(3) Includes sensor delay time, adjustable time delay, logic and breaker trip times and gripper release time (150 msec.).

(4) With Trip Time Delay (TTD) = 0 seconds.

TECHNICAL SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
TSR 3.3.7.1	Verify availability of the LEFM using the self-diagnostics feature indicated by the LEFM Normal/Alert/Fail status indication, as displayed on the plant computer system, is not in Fail status.	Prior to performance of SR 3.3.1.2.

TR 3.3 INSTRUMENTATION

TR 3.3.8 Hydrogen Monitors

TR 3.3.8 Two Hydrogen Monitors shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One Hydrogen Monitor inoperable.	A.1 Restore required channel to OPERABLE status.	30 days
B. Required Action and associated Completion Time of Condition A not met.	B.1 Document in accordance with the Corrective Action Program.	In accordance with the Corrective Action Program.
C. Two hydrogen monitors inoperable.	C.1 Restore one hydrogen monitor to OPERABLE status.	72 hours
D. Required Action and associated Completion Time of Condition C not met.	D.1 Be in MODE 3. AND D.2 Be in MODE 4.	6 hours 12 hours

TECHNICAL SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
TSR 3.3.8.1	Perform CHANNEL CHECK.	31 days
TSR 3.3.8.2	Perform COT.	31 days
TSR 3.3.8.3	Perform CHANNEL CALIBRATION.	18 months

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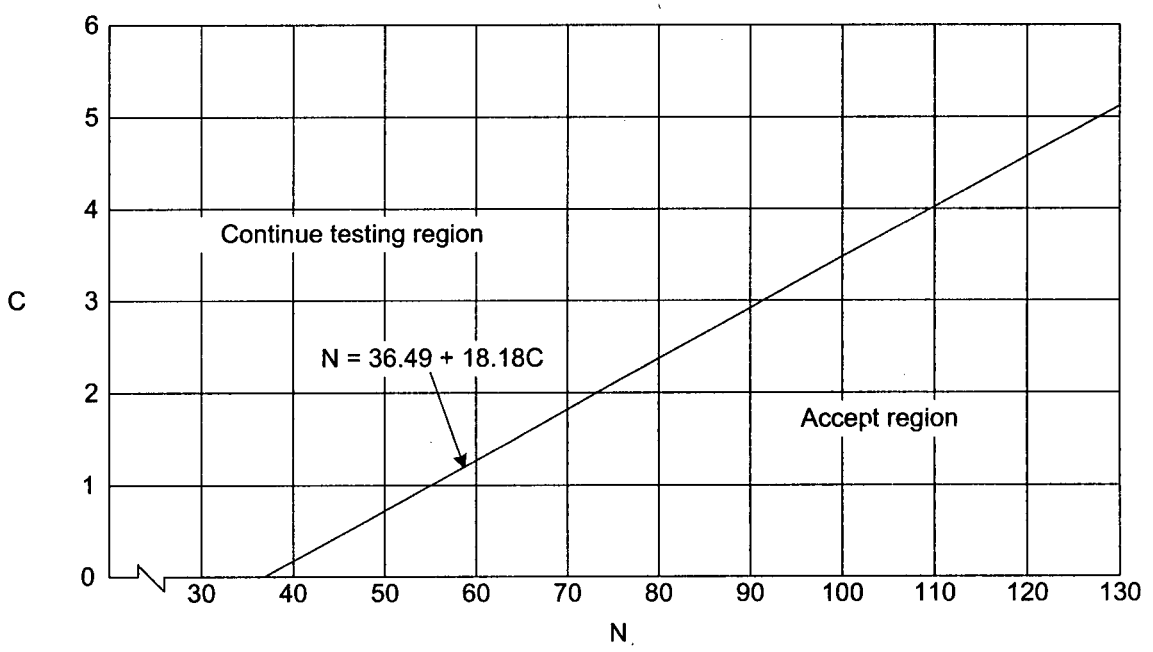

N = Total number of snubbers tested

C = Number of snubbers which do not meet functional test acceptance criteria

FIGURE 3.7.3-1

Sample Plan B for Snubber Functional Test

TR 3.7 PLANT SYSTEMS

TR 3.7.4 Sealed Source Contamination

TR 3.7.4 The removable contamination shall be < 0.005 microcuries for each sealed source containing radioactive material > 100 microcuries of beta and/or gamma emitting material or > 5 microcuries of alpha emitting material.

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Sealed source contamination not within limit.	----------NOTE---------- TR 3.0.3 is not applicable. ----------		
	A.1	Remove sealed source from use.	Immediately
	AND		
	A.2.1	Decontaminate and repair sealed source.	Prior to returning the sealed source to use.
		OR	
	A.2.2	Dispose of sealed source in accordance with NRC regulations.	In accordance with NRC regulations.

B 3.3 INSTRUMENTATION

B 3.3.8 Hydrogen Monitors

BASES

BACKGROUND

Hydrogen Monitors are provided to detect high hydrogen concentration conditions that represent a potential for containment breach from a hydrogen explosion. This variable is also important in verifying the adequacy of post-accident mitigating actions. Hydrogen concentration may also be used to determine whether or not the Hydrogen Ignitors should be started or other action taken. Containment hydrogen instrumentation consists of two trains on separate power supplies with a range of 0-10% (by volume) hydrogen concentration.

By rule change in 2003, 10 CFR 50.44 (Ref. 1) no longer defined a design basis Loss of Coolant Accident (LOCA) hydrogen release, and eliminated the requirements for hydrogen control systems to mitigate such a release. The installation of Hydrogen Recombiners and/or vent and purge systems required by 50.44(b)(3) prior to revision in 2003 was intended to address the limited quantity and rate of hydrogen generation that was postulated from a design basis LOCA. The Commission found that this hydrogen release was not risk significant because the design-basis LOCA hydrogen release did not contribute to the conditional probability of a large release up to approximately 24 hours after the onset of core damage. In addition, these systems were ineffective at mitigating hydrogen releases from risk significant accident sequences that could threaten Reactor Building integrity. The Improved Standard Technical Specifications (ISTS) at the time stated that Hydrogen Recombiners met 10 CFR 50.36(c)(2)(ii) Criterion 3 (accident mitigation). As stated in the rule change, since Hydrogen Recombiners are no longer required to respond to a LOCA, the Hydrogen Recombiners no longer meet Criterion 3 or any of the other criteria for retention in the Technical Specifications (TSs). Therefore, the new rule states that the requirements related to Hydrogen Recombiners currently in the ISTS no longer meet the criteria of 10 CFR 50.36(c)(2)(ii) for retention in the TSs and may be eliminated.

With the elimination of the design-basis LOCA hydrogen release, the Hydrogen Monitors are also no longer required to mitigate design basis accidents and, therefore, the Hydrogen Monitors do not meet the definition of a safety-related component as defined in 10 CFR 50.2 (Ref. 2). Regulatory Guide (RG) 1.97 (Ref. 3) Category 1 instrumentation is intended for key variables that most directly indicate the accomplishment of a safety function for design basis accident events. The Hydrogen Monitors no longer meet the definition of Category 1 in RG 1.97. As part of the rulemaking to revise 50.44 the Commission found that Category 3, as defined in RG 1.97, is an appropriate categorization for the Hydrogen Monitors because the monitors are required to

(continued)

BASES

BACKGROUND (continued)

diagnose beyond design basis accidents. Hydrogen monitoring is not the primary means of indicating a significant abnormal degradation of the reactor coolant pressure boundary and has been found to not be risk-significant. Therefore, the rule making stated that hydrogen monitoring equipment requirements no longer meet the criteria of 50.36(c)(2)(ii) for retention in TSs and, therefore, may be removed from the TSs.

APPLICABLE SAFETY ANALYSES

As stated in the BACKGROUND section, the Hydrogen Monitors are no longer required for mitigation of design basis accidents. Based on this, the Hydrogen Monitors do not meet the definition of a safety-related component. However, the elimination of Hydrogen Recombiners in accordance with Technical Specification Task Force (TSTF)-447, Rev. 1 (Ref. 4), was contingent on each licensee maintaining the capability to monitor hydrogen concentrations in the Reactor Building during beyond design basis accidents. This TR maintains that commitment (Ref. 5).

TR

Two Hydrogen Monitors are required to be OPERABLE to ensure that the necessary equipment will be available to monitor the hydrogen concentration within containment during significant beyond design-basis accident conditions (Ref. 5).

APPLICABILITY

The Hydrogen Monitors are required to be OPERABLE in MODES 1, 2 and 3. In MODES 4, 5, and 6, unit conditions are such that the likelihood of an event that would require Hydrogen Monitors is low; therefore, the monitors are not required to be OPERABLE in these MODES.

ACTIONS

A.1

Condition A applies when one Hydrogen Monitor is inoperable. Required Action A.1 requires restoring the inoperable channel to OPERABLE status within 30 days. The 30 day Completion Time is based on operating experience and takes into account the remaining OPERABLE Hydrogen Monitor, the passive nature of the instrument (no critical automatic action is assumed to occur from these instruments), and the low probability of a beyond design basis event occurring during the 30 day Completion Time.

(continued)

BASES

ACTIONS (continued)

B.1

Condition B applies when the Required Action and associated Completion Time for Condition A are not met. This Required Action specifies that the failure to comply with the 30 day Completion Time must be documented in the Corrective Action Program so that the impact of the inoperable equipment with regard to continued plant operation may be evaluated. Consideration should be given to alternate means, such as core damage assessments performed under the Severe Accident Management Guidelines during the extended period the one Hydrogen Monitor is inoperable. During normal operations the probability of occurrence of a beyond design basis accident is low and therefore, continued plant operation should not be significantly impacted. However, the actions required to restore the inoperable monitor should be pursued in a manner that is commensurate with the component's importance to safety.

C.1

Condition C applies when two Hydrogen Monitors are inoperable. Required Action C.1 requires the restoration of one hydrogen monitor channel to OPERABLE status within 72 hours.

D.1

Condition D applies when the Required Action and associated Completion Time of Condition C is not met and requires that the plant must be brought to a MODE where the requirements of this TR do not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and MODE 4 within 12 hours.

The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

TECHNICAL SURVEILLANCE REQUIREMENTS

SR 3.3.3.1

Performance of the CHANNEL CHECK once every 31 days ensures that a gross instrumentation failure has not occurred. A CHANNEL CHECK is normally 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

(continued)

BASES

TECHNICAL SURVEILLANCE REQUIREMENTS (continued)

monitoring the same parameter should read approximately the same value. Significant deviations between the two instrument channels could be an indication of excessive instrument drift in one of the channels or of something even more serious. A CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying the instrumentation continues to operate properly between each CHANNEL CALIBRATION.

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

The Frequency of 31 days is based on operating experience that demonstrates that channel failure is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of the displays associated with the LCO required channels.

SR 3.3.3.2

A COT is performed on each Hydrogen Monitor every 31 days to ensure the channel will perform the intended function. The 31 day Frequency is based on the known reliability of the Hydrogen Monitors, and has been shown to be acceptable through operating experience.

For this SR, a COT is satisfied by performance of a calibration check of the analyzer with zero, span, and at least one known gas and verification of alarm display functions. System flows shall be verified against target values and reagent and calibration gas supplies should be checked.

SR 3.3.3.3

A CHANNEL CALIBRATION is performed every 18 months, or approximately at every refueling. CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies that the channel responds to measured parameter with the necessary range and accuracy. The Frequency is based on operating experience and consistency with the typical industry refueling cycle.

(continued)

BASES

REFERENCES

1. 10 CFR 50.44, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors," October 16, 2003.

2. 10 CFR 50.2, "Definition of Safety Related Structures, Systems, and Components."

3. Regulatory Guide 1.97, Revision 2, December 1980, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident."

4. TSTF-447, Revision 1, "Elimination of Hydrogen Recombiners and Change to Hydrogen and Oxygen Monitors."

5. Commitment (NCO080031001) made in TVA's letter dated September 4, 2008, to maintain a hydrogen monitoring system capable of diagnosing beyond design basis accidents.

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BASES (continued)

ACTIONS

Since this TR is applicable at all times, the Required Actions have been modified by a Note stating that the provisions of TR 3.0.3 do not apply.

A.1

With a sealed source having removable contamination in excess of the limits, the sealed source should be withdrawn 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.

TECHNICAL SURVEILLANCE REQUIREMENTS

Notes have been added to this section stating that the licensee or other persons specifically authorized by the NRC shall perform the TSRs, and that the test methods used shall have a detection sensitivity of greater than or equal to 0.005 microcurie per test sample.

TSR 3.7.4.1

This surveillance determines every 6 months that the removable contamination is less than 0.005 microcuries for each sealed source. The 6-month Frequency is frequent enough to identify a leaking or contaminated sealed source without having extensive spreading of contamination.

This surveillance is modified by several Notes. The Notes state that this TSR is only applicable to sources in use, to sources with half-lives of more than 30 days, and to sources in any form other than gas. Also, this TSR is not applicable to startup sources and fission detectors previously subjected to core flux.

(continued)

BASES

TECHNICAL SURVEILLANCE REQUIREMENTS (continued)

TSR 3.7.4.2

This surveillance determines within 6 months prior to use or transfer to another licensee that the removable contamination is less than 0.005 microcuries for each sealed source and fission detector. This Frequency is adequate to identify a leaking or contaminated sealed source or fission detector to avoid extensive contamination.

This surveillance is modified by two Notes. The first Note states that this TSR is only applicable to sealed sources not in use. The second Note states that sealed sources and fission detectors transferred without a certificate indicating the last test date shall be tested prior to being placed in use.

TSR 3.7.4.3

This surveillance determines that the removable contamination is less than 0.005 microcuries for each startup source and fission detector. This test should be performed on each startup source and incore fission detector within 31 days prior to being installed in the core or being subjected to core flux. It also should be performed following any repairs or maintenance to the source. This Frequency ensures that the startup source or fission detector is not leaking or contaminated over the specified limit.

This Surveillance is modified by a Note stating this TSR only applies to startup sources and incore fission detectors that are not in use.

(continued)