Entergy

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September 13, 2007

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

SUBJECT: License Amendment Request (LAR 2007-12)
RF14 Surveillance Frequency Extension Request
River Bend Station, Unit 1
Docket No. 50-458
License No. NPF-47

RBG-46736
RBF1-07-0160

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, Entergy Operations, Inc. (Entergy) hereby requests the following amendment for River Bend Station, Unit 1 (RBS). The proposed amendment adds a license condition for a one-time extension of a limited number of Technical Specification (TS) Surveillance Requirements (SR) to account for the effects of a refueling outage (RF14) which will be delayed from late 2007 until early 2008.

The affected surveillances involve the 18-month hydrogen mixing system flow test and the 18-month Channel Calibration and Logic System Functional tests for one channel of a particular reactor water level instrument system. The reactor water level instrument channel provides an automatic signal to the following functions: Main Steam Line Isolation, Primary Containment and Drywell Isolation, Reactor Water Cleanup System Isolation, Secondary Containment and Fuel Building Isolation, and the Control Room Fresh Air System.

Moving the RF14 outage date is intended to improve overall plant safety and reliability. The delayed RF14 start date allows for on-line maintenance on key plant systems in the fall of 2007 and for planning of radiation source term dose reduction activites in RF14. On-line maintenance activities include significant improvements to plant's circulating water cooling towers and feedwater system. The radiation source term dose reduction activities being planned for RF14 are estimated to reduce radiation dose by approximately 185 person REM and improve the ability to perform other maintenance.

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The possibility of delaying the start of RF14 was identified in early August 2007, and it was immediately recognized that an extension to the ILRT surveillance would be needed if RF14 was delayed. Additional Surveillance Test Procedures (STP) scheduled to be performed prior to the expected RF14 start date were identified and reviewed to determine if options were available other than requesting NRC approval for an interval extension. Of the initial list of approximately 25 items, the two STP's in this submittal were identified as needing NRC approval to extend the surveillance intervals. The decision to request the extensions was based upon avoiding plant configurations or activities that were inappropriate during plant operation. In particular, the surveillance for the hydrogen mixing system would require a configuration that creates a drywell bypass path. The surveillance for the reactor water level instrumentation would increase the potential for a plant transient. Therefore, the extension was deemed more prudent than performing the surveillances on-line.

These surveillances are scheduled to be performed during a COLD SHUTDOWN of sufficient duration should one occur prior to RF14.

The proposed change has been evaluated in accordance with 10 CFR 50.91(a)(1) using criteria in 10 CFR 50.92(c) and it has been determined that this change involves no significant hazards consideration. The bases for these determinations are included in the attached submittal.

The proposed change does not include any new commitments.

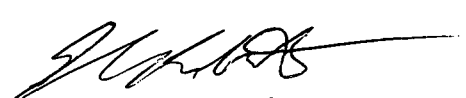
The NRC has approved surveillance extensions for delayed refueling outages at other plants, including Kewaunee in 2006 and Cooper in 2004.

The surveillances associated with the reactor water level instrument channel are currently required to be performed by November 26, 2007, and the surveillance for hydrogen mixing system flow test is currently required to be performed by December 30, 2007. Therefore, Entergy requests approval of the proposed amendment by November 22, 2007, to avoid a shutdown to perform the surveillances. Once approved, the amendment shall be implemented within 30 days. Although this request is neither exigent nor emergency, your prompt review is requested.

If you have any questions or require additional information, please contact Ron Byrd at 601-368-5792.

I declare under penalty of perjury that the foregoing is true and correct. Executed on September 13, 2007.

Sincerely,



Director, Nuclear Safety Assurance
River Bend Station - Unit 1

JCR/RWB

Attachments:
1. Analysis of Proposed Technical Specification Change
2. Proposed Technical Specification Changes (mark-up)

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Attachment 1

RBG-46736

Analysis of Proposed Technical Specification Change

1.0 DESCRIPTION

This evaluation supports a request to amend Operating License NPF-47 for River Bend Station, Unit 1 (RBS).

The proposed change will add a License Condition that allows Technical Specifications (TS) surveillance intervals to be extended on a one-time basis for the 14th Fuel Cycle. The affected surveillances involve the 18-month hydrogen mixing system flow test and the 18-month Channel Calibration and Logic System Functional tests for one channel of a particular reactor water level instrument system. The reactor water level instrument channel provides an automatic signal to the following functions: Main Steam Line Isolation, Primary Containment and Drywell Isolation, Reactor Water Cleanup System Isolation, Secondary Containment and Fuel Building Isolation, and the Control Room Fresh Air System.

2.0 PROPOSED CHANGE

The proposed change will extend these TS surveillance intervals on a one-time basis to account for the effects of a delayed refueling outage. Specifically, Entergy proposes to add the following license condition to paragraph 2.C. of NPF-47.

(19) Temporary Surveillance Interval Extensions

During the 14th fuel cycle, in lieu of the Technical Specification (TS) specified frequencies, the maximum allowed surveillance test interval for SR 3.6.3.3.2, Primary Containment/Drywell Hydrogen Mixing System, will be 23.5 months and the maximum allowed surveillance test interval for the following surveillance requirements will be 24.5 months

TS Function	Surveillance Requirements
TS Table 3.3.6.1-1 Function 1.a, Main Steam Line Isolation, Reactor Vessel Water Level - Low, Low, Low Level 1, Channel A	SR 3.3.6.1.5, Channel Calibration and SR 3.3.6.1.6, Logic System Functional Test
TS Table 3.3.6.1-1 Function 2.a, Primary Containment and Drywell Isolation, Reactor Vessel Water Level-Low Low, Level 2, Channel A	SR 3.3.6.1.5, Channel Calibration and SR 3.3.6.1.6, Logic System Functional Test
TS Table 3.3.6.1-1 Function 4.i, Reactor Water Cleanup (RWCU) System Isolation, Reactor Vessel Water Level-Low Low, Level 2, Channel A	SR 3.3.6.1.5, Channel Calibration and SR 3.3.6.1.6, Logic System Functional Test

TS Function	Surveillance Requirements
TS Table 3.3.6.2-1 Function 1, Secondary Containment and Fuel Building Isolation, Reactor Vessel Water Level-Low Low, Level 2, Channel A	SR 3.3.6.2.4, Channel Calibration and SR 3.3.6.2.5, Logic System Functional Test
TS Table 3.3.7.1 Function 1, Control Room Fresh Air System Instrumentation, Reactor Vessel Water Level-Low Low, Level 2, Channel A	SR 3.3.7.1.4, Channel Calibration and SR 3.3.7.1.5, Logic System Functional Test

There are no proposed changes to the TS or BASES.

3.0 BACKGROUND

These surveillances are scheduled to be performed during plant shutdown so as to avoid the potential for causing a plant transient or to limit drywell bypass openings during plant operation. The subject surveillances were planned to be performed at the next refueling outage originally scheduled for the fall of 2007. However, the refueling outage has been delayed until early 2008 to allow for maintenance on key plant systems while on-line in the fall of 2007 and for planning of radiation source term dose reduction activities in RF14. Entergy believes that performing these surveillances on-line is inappropriate and is therefore requesting that an extension to the surveillance intervals be granted by a License Amendment.

Surveillance Requirement (SR) 3.0.1 states that failure to perform a surveillance within the specified frequency shall be failure to meet the LCO, except as provided in SR 3.0.3. Therefore, once the surveillance is not completed within the specified frequency (i.e., within 18 months plus the 25% extension allowed by LCO 3.0.2), the associated LCOs would have to be considered not met and the plant would have to comply with the TS Actions.

There are two surveillance test procedures affected by the delayed refueling outage. One test procedure affects a hydrogen mixing system surveillance (SR 3.6.3.3.2). The other test procedure affects one channel of a particular reactor water level instrument system, but since the instruments provide multiple functions, multiple SRs are impacted by the test. The particular surveillances and functions affected are discussed below.

3.1 Hydrogen Mixing System Surveillance

The Primary Containment/Drywell Hydrogen Mixing System is part of the combustible gas control system which is designed to monitor and control the concentration of hydrogen which may be released in the drywell and containment as a result of a postulated accident. Subsystems are provided for the drywell and containment to measure the hydrogen concentrations (hydrogen analyzer), to mix the atmospheres (hydrogen mixing), and to

reduce hydrogen concentrations without relying on purging to the environment (hydrogen recombiners). In addition, a backup containment hydrogen purge system is provided to aid in long-term, post-LOCA cleanup. A hydrogen igniter system has also been provided to mitigate degraded core hydrogen generation events.

The initiation of the hydrogen mixing system, the recombiners, and igniters is based on manual actuation from the main control room.

The Primary Containment/Drywell Hydrogen Mixing System is designed to uniformly mix the drywell atmosphere with the containment atmosphere in the long term after a LOCA. The system is an Engineered Safety Feature and is designed to operate following a loss of coolant accident (LOCA) in post accident environments without loss of function. The system has two independent subsystems, each consisting of a hydrogen mixing fan and associated valves, controls, and piping.

Additional information is contained in USAR Chapter 6, Section 6.2.5.

Surveillance Test Procedure (STP) -254-0601, "Containment/Drywell H2 Mixing System Flow Test," was last performed February 12, 2006. This STP verifies the Containment/Drywell H2 Mixing System flow rate is greater than or equal to 600 cfm as required by RBS Technical Specification SR 3.6.3.3.2. The surveillance interval plus the allowed extension (i.e., within 18 months plus the 25% extension allowed by LCO 3.0.2) will be exhausted on December 30, 2007. This SR is currently performed during a plant shutdown as discussed in section 4.1 below.

In 2003, the NRC revised 10 CFR 50.44, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors," to eliminate certain requirements associated with a design basis LOCA hydrogen release. However, the requirement for ensuring a mixed atmosphere was retained in the rule (10 CFR 50.44(b)(1)). The proposed one-time extension of the hydrogen mixing system surveillance will not alter the design or operation of the combustible gas control systems including the Primary Containment/Drywell Hydrogen Mixing System. The request is limited to an extension of the required surveillance which verifies the system flow rate.

3.2 Reactor Water Level Instrumentation Surveillances

Surveillance Test Procedure, STP-051-4201, "NSSSS-Reactor Vessel Water Level – Low Low Level 2, Low Low Low Level 1 Channel Calibration Test and Logic System Functional Test," was last performed on January 8, 2006. The STP only affects the "A" channel of a four channel instrumentation system and must be performed by November 26, 2007, to meet the specified TS frequency requirements (i.e., within 18 months plus the 25% extension allowed by LCO 3.0.2). The remaining three channels do not require an extension.

Portions of this STP are scheduled to be performed during plant shutdown so as to avoid the potential for causing a plant transient. While this STP can be performed on-line there are multiple reactor water level instruments associated with a common reactor level reference tap. If some or all of these instruments were actuated, they could cause a half-trip signal to the associated actuation logic, including the Reactor Protection System (RPS) and Emergency Core Cooling System (ECCS) actuation logic.

If performed on-line Entergy would expect to bypass or render inoperable a number of other functions to avoid possible actuations of other functions which are associated with this reactor vessel water level instrumentation tap point. Instrumentation associated with this tap point, in addition to those functions tested by this STP, that may be bypassed or rendered inoperable includes;

Reactor Protection System (RPS) SCRAM signals on reactor level,
Reactor Recirculation System-Pump trip signals,
Emergency Core Cooling System (ECCS) for the Low Pressure Core Injection (LPCI) "A" subsystem and Low Pressure Core Spray subsystem,
Emergency Core Cooling System (ECCS) for the Automatic Depressurization System (ADS), and
Primary Containment and Drywell Isolations for the Residual Heat Removal (RHR) system.

The STP was planned to be performed during the next refueling outage previously scheduled in the fall of 2007. However the refueling outage has been delayed until early 2008.

SR 3.0.1 states that failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO, except as provided in SR 3.0.3. Therefore, once the surveillance is considered late, the affected channel would have to be placed in a tripped condition to comply with the TS Actions.

If the affected channel was placed in the tripped condition as required by the TS Actions, a single failure of the redundant instrument channel could cause a plant transient such as a complete isolation of all MSIVs. Operating for over a month with the channel in trip increases the potential for a plant transient. Because of the increased potential for a plant transient, Entergy believes it is in the best interest to avoid performing the STP on-line or continuing operation with the channel placed in the tripped condition.

This STP performs Channel Calibrations and Logic System Functional Tests for reactor water level transmitter B21-LTN081A and associated trip units B21-ESN681A and B21-ESN682A. Trip unit B21-ESN681A actuates on reactor vessel water level Low Low Low, Level 1 whereas trip unit B21-ESN682A actuates on reactor vessel water level Low Low, Level 2. The required TS functions affected by the STP are Primary Containment and Drywell Isolation Instrumentation, Secondary Containment and Fuel Building Isolation Instrumentation, and Control Room Fresh Air (CRFA) System Instrumentation. The following table provides specific information on each affected TS function and associated TS surveillance requirements.

TS FUNCTION	Affected Surveillance Requirements
TS Table 3.3.6.1-1 Function 1.a, Main Steam Line Isolation, Reactor Vessel Water Level - Low Low Low, Level 1	SR 3.3.6.1.5, Channel Calibration SR 3.3.6.1.6, Logic System Functional Test
TS Table 3.3.6.1-1 Function 2.a, Primary Containment and Drywell Isolation, Reactor Vessel Water Level - Low Low, Level 2	SR 3.3.6.1.5, Channel Calibration SR 3.3.6.1.6, Logic System Functional Test
TS Table 3.3.6.1-1 Function 4.i, Reactor Water Cleanup (RWCU) System Isolation, Reactor Vessel Water Level - Low Low, Level 2	SR 3.3.6.1.5, Channel Calibration SR 3.3.6.1.6, Logic System Functional Test
TS Table 3.3.6.2-1 Function 1, Secondary Containment and Fuel Building Isolation, Reactor Vessel Water Level - Low Low, Level 2	SR 3.3.6.2.4, Channel Calibration SR 3.3.6.2.5, Logic System Functional Test
TS Table 3.3.7.1 Function 1, Control Room Fresh Air System Instrumentation, Reactor Vessel Water Level - Low Low, Level 2	SR 3.3.7.1.4, Channel Calibration SR 3.3.7.1.5, Logic System Functional Test

4.0 TECHNICAL ANALYSIS

Entergy has evaluated the effect of extending the surveillance intervals on a one-time basis and has concluded that the extensions are acceptable. The basis for this conclusion is provided below.

4.1 Hydrogen Mixing System Surveillance

As noted above, this request is limited to an extension of the system flow test of about one month past the current allowance of TS SR 3.0.2.

There are two surveillances for this system:

> SR 3.6.3.3.1 is a functional test of the Primary Containment/Drywell Hydrogen Mixing System. The test is performed during a COLD SHUTDOWN if not performed within the previous 92 days.
>
> SR 3.6.3.3.2 verifies each division of the Primary Containment/Drywell Hydrogen Mixing System is capable of flowing greater than 600 cfm. This test is performed during cold shutdown conditions.

This request is limited to SR 3.6.3.3.2.

The normal surveillance test interval for SR 3.6.3.3.2, is 18-months. For scheduling purposes, Entergy uses 550 days as the surveillance interval. Using the maximum TS SR 3.0.2 allowed extension of 25 percent of the surveillance interval, the 18-month surveillance requirement must be completed within 22.5 months (i.e., within 687 days) of its last performance. The surveillance interval plus the allowed extension will be exhausted on December 30, 2007.

Both the system functional test and system flow test are performed during cold shutdown conditions. While the opening of a single Primary Containment/Drywell Hydrogen Mixing System inlet path is within the drywell bypass limits, as identified in USAR section 6.2.5.2.1, these tests are performed during shutdown conditions to limit drywell bypass openings during operation. The associated isolation valves receive an automatic isolation signal but as described in the BASES for this system these valves have not been demonstrated capable of closing during accident conditions in the drywell. The BASES for SR 3.6.3.3.1, functional test, also identifies this test is performed during COLD SHUTDOWN to limit drywell bypass openings during operation.

As a consequence of the delayed refueling outage, the surveillance will exceed the maximum allowed interval prior to the plant being placed in a condition that allows its performance. Therefore, Entergy requests an extension to the maximum allowed surveillance test interval for SR 3.6.3.3.2 of up to a maximum of 23.5 months or January 31, 2008.

A review of the past four SR results was conducted beginning with the performance in October 2001. Each Division has successfully demonstrated the minimum flow with the last test results being 746 cfm for Division I and 765 cfm for Division II. In addition there has been no discernable declining trend for either Division.

The Primary Containment/Drywell Hydrogen Mixing System consists of two independent 100% capacity trains located in containment. Each train consists of one hydrogen mixing fan and associated piping, valves, and instrumentation.

The flow test of SR 3.6.3.3.2 initiates a train by opening the associated isolation valves and starting the fan. With the system in operation the flow rate of the system is measured.

The functional test of SR 3.6.3.3.1 is a similar configuration to the flow test with the operation of the valves monitored to verify correct operation. While no flow measurements are taken the fan is started and confirmed to be operating. The functional tests were last performed

during the period of May 28 to June 7, 2007, confirming functional operation of the system including the fans and valves. Both Divisions were found acceptable.

There are no outstanding maintenance or operating experience issues that affect performance of the system or that would adversely affect performance with an extended test interval.

The Hydrogen Control System contains additional systems to ensure defense in depth. In addition to the redundant Primary Containment/Drywell Hydrogen Mixing System there are Hydrogen Recombiners and the redundant Hydrogen Control (Igniter) System as discussed in USAR section 6.2.5.2.5.

The hydrogen igniter system consists of 2 independent divisions of igniters and associated electric control and distribution systems. The hydrogen igniters are located in both the Drywell and Containment. Each subsystem provides a diverse method of addressing the hydrogen control issue identified by 10CFR50.44. This system does not depend on the hydrogen mixing system to perform the design function.

4.2 Reactor Water Level (RWL) Instrumentation Surveillance

Entergy is requesting one-time surveillance interval extensions of about two months for the "A" channel of a four channel reactor vessel water level instrumentation logic system. The reactor vessel water level signals for the affected functions are initiated from four level transmitters that sense the difference between the pressure due to a constant column of water (reference leg) and the pressure due to the actual water level (variable leg) in the vessel. The level transmitters provide signals to two associated trip units that actuate the above listed mitigation functions. The instrumentation devices affected by the surveillance extension are reactor water level transmitter B21-LTN081A and associated trip units B21-ESN681A and B21-ESN682A.

Trip unit B21-ESN681A actuates on reactor vessel water level Low Low Low, Level 1 to provide the A channel isolation signal to the main steam lines and main steam line drain valves. Trip unit B21-ESN682A actuates on reactor vessel water level Low Low, Level 2 to provide the A channel isolation signal to primary containment and drywell isolation valves and the secondary containment and fuel building isolation valves. The Low Low, Level 2 signal also starts the Standby Gas Treatment System (SGTS) and the Control Room Fresh Air (CRFA) system. These isolation functions are provided to limit fission product release during and following postulated Design Basis Accidents (DBAs), such that offsite radiation exposures are maintained within the requirements of 10 CFR 50.67. The function of the CRFA System is to provide a radiologically controlled environment to ensure the habitability of the control room for the safety of control room operators under all plant conditions.

The short interval extension from 22.5 months to 24.5 months for the subject surveillances are evaluated based upon the following:

1 The TS requires other more frequent surveillances that provide assurance that the instrumentation system remains operable.
2 The affected channel has demonstrated consistent reliability during previous surveillances and there are no outstanding maintenance or operating experience

issues that affect performance of the system or that would affect performance with an extended test interval.

3 The current instrument settings and acceptance limits have been calculated assuming that the surveillance intervals are 30 months, which bounds the requested extension to 24.5 months.

4 Adequate defense-in-depth is provided through redundancy and diversity of the instrumentation system design. The instrumentation logic for each of the above functions is designed with sufficient defense-in-depth such that a failure of a single channel will not prevent the function from occurring nor cause an inadvertent actuation of the function. Additionally, there are other diverse methods of automatically isolating the affected systems to limit the release of radioactive material to the environment in the event of a Design Basis Accident (DBA). Also each of the functions can be actuated manually from the Control Room.

These considerations are discussed in more detail in the following sections.

4.2.1 Testing and Reliability of the Affected RWL Channel Instruments

The TS require other more frequent surveillances that help to ensure that the instrumentation system is operable between performance of the 18-month Calibration and the 18-month Logic System Functional Test. SR 3.3.6.1.2, SR 3.3.6.1.3, SR 3.3.6.2.2, SR 3.3.6.2.3, SR 3.3.7.1.2, and SR 3.3.7.1.3 require Channel Functional Tests and trip unit calibrations of the instrument system on a 92 day frequency. This includes a calibration of trip units B21-ESN681A and B21-ESN682A if necessary. A review of the last six performances of these surveillances shows that they were performed successfully and that the trip unit setpoints were within calibration tolerances.

In addition, the TS requires a Channel Check of the instrumentation to be performed on a 12 hour frequency (SR 3.3.6.1.1, SR 3.3.6.2.1, and SR 3.3.7.1.1). A Channel Check is typically 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. The Channel Check is performed once every 12 hours primarily to ensure that a gross failure of instrumentation has not occurred. Abnormal instrument readings can also be indicative of instrument problems occurring prior to gross failure, such as a channel transmitter not indicating water level as accurately as other channels. The surveillance procedure for the channel checks requires any abnormal readings to be identified and reported to the Operations Shift Manager or Control Room Supervisor.

The last three performances of the 18 month Channel Calibrations and Logic System Functional Tests for these functions were reviewed and found to be performed satisfactorily with the instrument loop setpoints within calibration tolerances. The maximum drift of the loop setpoint values between these surveillances, the longest interval being 19 months, was less than 0.3 inches water column. Since there is a four inch margin between the nominal trip setpoint and the TS allowable value, the expected setpoint drift for the extended interval to 24.5 months is insignificant. In addition, there are no outstanding maintenance or operating experience issues that affect performance of the system or that would adversely affect performance with an extended test interval.

4.2.2 RWL Instrument Setpoint Calculations

No new calculations were needed to determine the effect of the extended surveillance interval. The current instrument settings and acceptance limits were calculated based upon a 24 month operating cycle although RBS currently operates on a nominal 18 month cycle. That is, the calculations assume that the surveillance intervals are 30 months apart (24 months plus a 25% allowed extension). This bounds the requested extension to 24.5 months.

The RBS methodology for calculating instrument setpoints is described in the Updated Safety Analysis Report (USAR) section 7.1.2.5 and in RBS Engineering Department Guide EDG-EE-003, "Methodology for the Generation of Instrument Loop Uncertainty & Setpoint calculations." As discussed in USAR section 7.1.2.5, the methodology used in determining NSSS safety system setpoints is documented in NEDC-31336P-A, General Electric Instrument Setpoint Methodology. This document was developed by the Instrument Setpoint Methodology Owners Group (ISMG) and approved by the Staff on February 9, 1993.

RBS Engineering Department Guide EDG-EE-003 establishes a calibration tolerance or "as-left" band above and/or below the desired output. Plant procedures require any as-found setpoints outside of the calibration tolerance band to be returned to within the band. The calibration tolerance band is typically equal to plus or minus the instrumentation accuracy.

The following tables provide summaries of calculation results performed for a 30 month calibration interval and comparisons to analytical and TS limits.

B21-ESN681A, Reactor Vessel Level – Low Low Low, Level 1				
Analytical Limit	**Calculated AV**	**Tech Spec AV**	**Calculated Nominal Trip Setpoint (NTSP)**	**Actual NTSP Setting**
-158.8 in.	≥ - 149.025 in.	≥ -147.0 in.	-146.025 in.	-143.0 in.
Loop Uncertainty	**Channel Drift**	**Total Loop Uncertainty**	**M&TE Accuracy**	**Maximum Loop Tolerance (As-Left Band)**
± 4.299 in.	± 4.303 in.	± 6.771 in.	± 0.446 in.	± 1.4 in.

B21-ESN682A, Reactor Vessel Level – Low Low, Level 2				
Analytical Limit	**Calculated Allowable Value (AV)**	**Tech Spec AV**	**Calculated NTSP**	**Actual NTSP Setting**
-53.8 in.	≥ - 49.47 in.	≥ -47.0 in.	-45.81 in.	-43.0 in.
Loop Uncertainty	**Channel Drift**	**Total Loop Uncertainty**	**M&TE Accuracy**	**Maximum Tolerance (As-Left Band)**
± 4.33 in.	± 4.644 in.	± 7.113 in.	± 0.444 in.	± 1.4 in.

As can be seen from the above tables, the calculated allowable values and the calculated nominal trip setpoints are conservative relative to the TS limits. Actual NTSPs in plant procedures provide margin to the calculated NTSP. In addition, calibration tolerance bands are established by plant procedures that are within the maximum tolerance used in the calculations.

4.2.3 Defense-in-Depth for Affected RWL Instrument Functions

Adequate defense-in-depth is provided through redundancy and diversity of the instrumentation system design. The instrumentation logic for each of the affected functions is designed with sufficient defense-in-depth such that a failure of a single channel will not prevent the function from occurring nor cause an inadvertent actuation of the function. This defense in depth ensures that safety is maintained. Additional details on these capabilities are described below for each affected function.

TS Table 3.3.6.1-1 Function 1.a, Main Steam Line Isolation, Reactor Vessel Water Level - Low Low Low, Level 1

Low reactor pressure vessel (RPV) water level indicates that the capability to cool the fuel may be threatened. Therefore, isolation of the MSIVs and other interfaces with the reactor vessel occurs to prevent offsite dose limits from being exceeded. The Reactor Vessel Water Level-Low Low Low, Level 1 function is one of the many functions capable of providing isolation signals. Other instrumentation provided for MSIV isolation includes: main steam line pressure – low, main steam line flow - high, condenser vacuum – low, and main steam line tunnel temperature – high.

The main steam line Level 1 isolation logic is one-out-of-two taken twice where upon actuation of channel A or C and channel B or D, all MSIVs close. The main steam line drain valve isolation logic is two-out-of-two where upon actuation of channels A and D, the outboard Main Steam Line Drains close. Upon actuation of channels B and C, the inboard Main Steam Line Drains close. Therefore, the failure of a single channel will not prevent the isolation function from being completed.

TS Table 3.3.6.1-1 Function 2.a, Primary Containment and Drywell Isolation, Reactor Vessel Water Level-Low Low, Level 2

Low RPV water level indicates the capability to cool the fuel may be threatened. The valves whose penetrations communicate with the primary containment are isolated to limit the release of fission products. The Reactor Vessel Water Level-Low Low, Level 2 Function associated with isolation is implicitly assumed in the analysis as these leakage paths are assumed to be isolated post LOCA. In addition, Function 2.a provides an isolation signal to certain drywell isolation valves. The isolation of the drywell isolation valves, in combination with other accident mitigation systems, functions to ensure that steam and water releases to the drywell are channeled to the suppression pool to maintain the pressure suppression function of the primary containment. The isolation also includes the actuation of the Standby Gas Treatment (SGT) System and the Control Room Fresh Air (CRFA) System.

The containment isolation valve logic is two-out-of-two where actuation of channels A and D will isolate the outboard containment isolation valves and initiate "A" train components. Actuation of channels B and C will isolate the inboard containment isolation valves and initiate "B" train components. Therefore, the failure of a single channel will not prevent the isolation function from being completed.

TS Table 3.3.6.1-1 Function 4.i, Reactor Water Cleanup (RWCU) System Isolation, Reactor Vessel Water Level - Low Low, Level 2

Low RPV water level indicates the capability to cool the fuel may be threatened. Therefore, isolation of some reactor vessel interfaces occurs to isolate the potential sources of a break. The isolation of the RWCU System on Level 2 supports actions to ensure that fuel peak cladding temperature remains below the limits of 10 CFR 50.46. The Reactor Vessel Water Level - Low Low, Level 2 Function associated with RWCU isolation is not directly assumed in any transient or accident analysis, since bounding analyses are performed for large breaks such as main steam line breaks.

The isolation valve logic is two-out-of-two where actuation of channels A and D will isolate the outboard containment isolation valves. Actuation of channels B and C will isolate the inboard containment isolation valves. Therefore, the failure of a single channel will not prevent the isolation function from being completed.

TS Table 3.3.6.2-1 Function 1, Secondary Containment and Fuel Building Isolation, Reactor Vessel Water Level - Low Low, Level 2

Low RPV water level indicates that the capability to cool the fuel may be threatened. An isolation of the secondary containment and actuation of the SGT System are initiated in order to minimize the potential of an offsite dose release. The Reactor Vessel Water Level - Low Low, Level 2 function is one of the functions assumed to be OPERABLE and capable of providing isolation and initiation signals. Other instrumentation provided for secondary containment and fuel building isolation includes: drywell pressure-high, fuel building ventilation exhaust radiation – high, and manual initiation.

The isolation valve logic is two-out-of-two where actuation of channels A and D will isolate one division of isolation valves. Actuation of channels B and C will isolate the redundant

division of isolation valves. Therefore, the failure of a single channel will not prevent the secondary containment isolation function from being completed.

TS Table 3.3.7.1 Function 1, Control Room Fresh Air System Instrumentation, Reactor Vessel Water Level - Low Low, Level 2

Low RPV water level indicates that the capability to cool the fuel may be threatened. A low reactor vessel water level could indicate a LOCA, and will automatically initiate the CRFA System, since this could be a precursor to a potential radiation release and subsequent radiation exposure to control room personnel. The CRFA system will also automatically initiate on a drywell pressure – high signal or a control room local Intake ventilation high radiation level signal

The instrumentation logic for the Level 2 function is two-out-of-two where actuation of channels A and D will isolate the control room and initiate CRFA unit A. Actuation of channels B and C will isolate the control room and initiate CRFA unit B. Therefore, the failure of a single channel will not prevent the control room isolation or the initiation of the CRFA unit from being completed. This defense in depth ensures the safety function is maintained.

5.0 REGULATORY ANALYSIS

5.1 Applicable Regulatory Requirements/Criteria

The proposed changes have been evaluated to determine whether applicable regulations and requirements continue to be met.

Entergy has determined that the proposed changes do not require any exemptions or relief from regulatory requirements, other than the TS, and do not affect conformance with any General Design Criterion (GDC) differently than described in the Updated Final Safety Analysis Report (UFSAR.)

Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36 sets forth the regulatory requirements for the content of the TS. This regulation requires, in part, that the TS contain Surveillance Requirements (SRs). 10 CFR 50.36(c)(3), states that SRs to be included in the TS are those relating to test, calibration, or inspection which assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the LCO will be met. The proposed changes to the TS SRs are for a temporary extension of certain surveillance intervals which are not specified in the regulations.

5.2 No Significant Hazards Consideration

Entergy is proposing to extend certain TS surveillance intervals on a one-time basis to account for the effects of a delayed refueling outage. The affected surveillances involve the 18-month hydrogen mixing system flow test and the 18-month Channel Calibration and Logic System Functional tests for one channel of a particular reactor water level instrument system. The reactor water level instrument channel provides an automatic signal to the following functions: Main Steam Line Isolation, Primary Containment and Drywell Isolation, Reactor

Water Cleanup System Isolation, Secondary Containment and Fuel Building Isolation, and the Control Room Fresh Air System.

Entergy Operations, Inc. has evaluated whether or not a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The requested action is a one-time extension to the performance interval of certain TS surveillance requirements. The performance of the surveillances, or the failure to perform the surveillances, is not a precursor to an accident. Performing the surveillances or failing to perform the surveillances does not affect the probability of an accident. Therefore, the proposed delay in performance of the surveillance requirements in this amendment request does not increase the probability of an accident previously evaluated.

A delay in performing the surveillances does not result in a system being unable to perform its required function. Additionally, the defense in depth of the system design provides additional confidence that the safety function is maintained. In the case of this one-time extension request, the relatively short period of additional time that the systems and components will be in service before the next performance of the surveillance will not affect the ability of those systems to operate as designed. Therefore, the system required to mitigate accidents will remain capable of performing their required function. No new failure modes have been introduced because of this action and the consequences remain consistent with previously evaluated accidents. Therefore, the proposed delay in performance of the surveillance requirement in this amendment request does not involve a significant increase in the consequences of an accident.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed amendment does not involve a physical alteration of any system, structure, or component (SSC) or a change in the way any SSC is operated. The surveillance intervals of the level instrumentation are currently evaluated for 30 months which bounds the requested interval extension. The proposed amendment does not involve operation of any SSCs in a manner or configuration different from those previously recognized or evaluated. No new failure mechanisms will be introduced by the one-time surveillance requirement deferrals being requested.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The proposed amendment is a one-time extension of the performance interval of certain TS surveillance requirements. Extending the surveillance requirements does not involve a modification of any TS Limiting Conditions for Operation. Extending the surveillance requirements do not involve a change to any limit on accident consequences specified in the license or regulations. Extending the surveillance requirements does not involve a change to how accidents are mitigated or a significant increase in the consequences of an accident. Extending the surveillance requirements does not involve a change in a methodology used to evaluate consequences of an accident. Extending these surveillance requirements does not involve a change in any operating procedure or process. The surveillance intervals of the level instrumentation are currently evaluated for 30 months which bounds the requested interval extension.

The components involved in this request have exhibited reliable operation based on the results of the most recent performances of their 18-month surveillance requirements and the associated functional surveillances.

Based on the limited additional period of time that the systems and components will be in service before the surveillance is next performed, as well as the operating experience that these surveillances are typically successful when performed, it is reasonable to conclude that the margin of safety associated with the surveillance requirement will not be affected by the requested extension.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, Entergy concludes that the proposed amendment(s) present no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

5.3 Environmental Consideration

The proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed Amendment.

6.0 PRECEDENCE

The NRC approved a similar request to extend certain TS surveillances on a one-time basis due to the effects of a delayed outage for the Kewaunee Power Station by issuance of Amendment No. 187 dated July 12, 2006 (TAC No. MC9782, ADAMS Accession No. ML061640286).

The NRC also approved a similar request to extend certain TS surveillances on a one-time basis due to the effects of a delayed outage for the Cooper Nuclear Station by issuance of Amendment No. 205 dated July 14, 2004 (TAC No. MC1914, ADAMS Accession No. ML041960078).

The Entergy request for a license amendment is similar to the Kewaunee and Cooper requests but is more limited in scope.

Attachment 2

RBG-46736

Proposed License Condition Changes (mark-up)

INSERT for License No. NPF-47
(New page 6b)

– 6b –

(19) Temporary Surveillance Interval Extensions

During the 14th fuel cycle, in lieu of the Technical Specification (TS) specified frequencies, the maximum allowed surveillance test interval for SR 3.6.3.3.2 will be 23.5 months and the maximum allowed surveillance test interval for the following surveillance requirements will be 24.5 months

TS Function	Surveillance Requirements
TS Table 3.3.6.1-1 Function 1.a, Main Steam Line Isolation, Reactor Vessel Water Level - Low Low Low, Level 1, Channel A	SR 3.3.6.1.5, Channel Calibration and SR 3.3.6.1.6, Logic System Functional Test
TS Table 3.3.6.1-1 Function 2.a, Primary Containment and Drywell Isolation, Reactor Vessel Water Level - Low Low, Level 2, Channel A	SR 3.3.6.1.5, Channel Calibration and SR 3.3.6.1.6, Logic System Functional Test
TS Table 3.3.6.1-1 Function 4.i, Reactor Water Cleanup (RWCU) System Isolation, Reactor Vessel Water Level - Low Low, Level 2, Channel A	SR 3.3.6.1.5, Channel Calibration and SR 3.3.6.1.6, Logic System Functional Test
TS Table 3.3.6.2-1 Function 1, Secondary Containment and Fuel Building Isolation, Reactor Vessel Water Level - Low Low, Level 2, Channel A	SR 3.3.6.2.4, Channel Calibration and SR 3.3.6.2.5, Logic System Functional Test
TS Table 3.3.7.1 Function 1, Control Room Fresh Air System Instrumentation, Reactor Vessel Water Level - Low Low, Level 2, Channel A	SR 3.3.7.1.4, Channel Calibration and SR 3.3.7.1.5, Logic System Functional Test