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RBG-47135

April 11, 2011

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

SUBJECT: License Amendment Request 2011-06, Adoption Of Technical Specification Task Force Traveler TSTF-514, Revision 3, "Revise BWR Operability Requirements and Actions For RCS Leakage Instrumentation"
River Bend Station – Unit 1
Docket No. 50-458
License No. NPF-47

RBF1-11-0062
File Code: G9.5

Dear Sir or Madam,

In accordance with the provisions of Section 50.90 of Title 10 of the Code of Federal Regulations (10 CFR), Entergy Operations, Inc. (Entergy) is submitting a request for an amendment to the Technical Specifications (TS) for River Bend Station – Unit 1.

The proposed amendment would revise the TS to define a new time limit for restoring inoperable reactor coolant system (RCS) leakage detection instrumentation to operable status; establish alternate methods of monitoring RCS leakage when one or more required monitors are inoperable; and make TS Bases changes which reflect the proposed changes and more accurately reflect the contents of the facility design basis related to operability of the RCS leakage detection instrumentation.

These changes are consistent with NRC-approved Revision 3 to TSTF Improved Standard Technical Specification (STS) Change Traveler TSTF-514, "Revise BWR Operability Requirements and Actions for RCS Leakage Instrumentation." The availability of this TS improvement was announced in the Federal Register on December 17, 2010, (75 FR 79048) as part of the consolidated line item improvement process (CLIIP).

- Attachment 1 provides an evaluation of the proposed changes.
- Attachment 2 provides markup pages of existing TS to show the proposed changes.
- Attachment 3 provides markup pages of the existing TS Bases to show the proposed changes
- Attachment 4 provides revised (clean) TS pages.

A001
NRR

Entergy requests approval of the proposed license amendment by April 11, 2012 , with the amendment being implemented within 60 days.

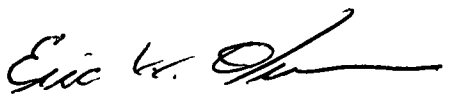
In accordance with 10 CFR 50.91(a)(1), "Notice for Public Comment," the analysis about the issue of no significant hazards consideration using the standards in 10 CFR 50.92 is being provided to the Commission in accordance with the distribution requirements in 10 CFR 50.4.

In accordance with 10 CFR 50.91(b)(1), "State Consultation," a copy of this application and its reasoned analysis about no significant hazards considerations is being provided to the designated Louisiana Official.

If you should have any questions about this submittal, please contact David Lorfing, at 225-381-4157. This document contains no commitments.

I declare under penalty of perjury that the foregoing is correct and true. Executed on April 11, 2011.

Sincerely,



Eric W. Olson
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Attachments: (As stated)

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ATTACHMENT 1
RBG-47135

EVALUATION OF PROPOSED CHANGES

License Amendment Request for Adoption of TSTF-514, Revision 3, "Revise BWR Operability Requirements and Actions for RCS Leakage Instrumentation"

1.0 DESCRIPTION

The proposed amendment would revise the Technical Specifications (TS) to define a new time limit for restoring inoperable Reactor Coolant System (RCS) leakage detection instrumentation to operable status, establish alternate methods of monitoring RCS leakage when one or more required monitors are inoperable, and make conforming TS Bases changes. These changes are consistent with NRC-approved Revision 3 to Technical Specification Task Force (TSTF) Standard Technical Specification (STS) Change Traveler TSTF-514, "Revise BWR Operability Requirements and Actions for RCS Leakage Instrumentation." The availability of this TS improvement was announced in the *Federal Register* on December 17, 2010, (75 FR 79048) as part of the consolidated line item improvement process (CLIIP).

2.0 PROPOSED CHANGES

The proposed changes revise and add a new Condition D to TS 3.4.7, "RCS Leakage Detection Instrumentation," and revise the associated bases. New Condition D is applicable when the drywell atmosphere gaseous radiation monitor is the only operable TS-required instrument monitoring RCS leakage (i.e., TS-required particulate, sump, and drywell air cooler condensate flow monitors are inoperable). New Condition D Required Actions require monitoring RCS leakage by obtaining and analyzing grab samples of the drywell atmosphere every 12 hours; monitoring RCS leakage using administrative means every 12 hours; and taking action to restore monitoring capability using another monitor within 7 days.

Additionally, the TS Bases, which summarize the reasons for the specifications, are revised to clarify the specified safety function for each required instrument in Limiting Condition for Operation (LCO) Bases, delete discussion from the TS Bases that could be construed to alter the meaning of TS operability requirements, and reflect the changes made to TS 3.4.7.

Entergy is not proposing deviations from the TS changes described in TSTF-514, Revision 3, or the NRC staff's model safety evaluation (SE) published in the *Federal Register* on December 17, 2010, (75 FR 79048) as part of the CLIIP Notice of Availability.

Two editorial changes are being made that differ from TSTF-514 to correct errors in the markup:

- In new Condition D of TS 3.4.7, the logical connector "AND" after Required Action D.1 should be left-justified, not indented.

- In the new paragraph of the LCO section of the Bases that begins "An increase in humidity....", the last sentence refers to containment air coolers. It should refer to drywell air coolers instead.

3.0 BACKGROUND

NRC Information Notice (IN) 2005-24, "Nonconservatism in Leakage Detection Sensitivity," dated August 3, 2005, informed addressees that the reactor coolant activity assumptions for primary containment atmosphere gaseous radioactivity monitors may be non-conservative. This means the monitors may not be able to detect a one gallon per minute leak within one hour. Some licensees, in response to IN 2005-24, have taken action to remove the gaseous radioactivity monitor from the TS list of required monitors. However, industry experience has shown that the primary containment atmosphere gaseous radiation monitor is often the first monitor to indicate an increase in RCS leak rate. As a result, the TSTF and the NRC staff met on April 29, 2008, and April 14, 2009, to develop an alternative approach to address the issue identified in IN 2005-24. The agreed solution is to retain the primary containment atmosphere gaseous radiation monitor in the LCO list of required equipment, revise the specified safety function of the gas monitor to specify the required instrument sensitivity level, to revise the Actions requiring additional monitoring, and provide less time before a plant shutdown is required when the primary containment atmosphere gaseous radiation monitor is the only operable monitor.

4.0 TECHNICAL ANALYSIS

Entergy has reviewed TSTF-514, Revision 3, and the model SE published on December 17, 2010 (75 FR 79048) as part of the CLIIP Notice of Availability. Entergy has concluded that the technical bases presented in TSTF-514, Revision 3, and the model SE prepared by the NRC staff are applicable to River Bend Station (RBS).

The RBS current licensing basis complies with the requirements of General Design Criteria (GDC) 30 of 10 CFR 50, Appendix A, which requires means for detecting and to the extent practical, identifying the location of the source of RCS leakage. The RCS leakage detection systems required by LCO 3.4.7 are:

a. Drywell and pedestal floor drain sump monitoring
b. One channel of either drywell atmospheric particulate or atmospheric gaseous monitoring,
c. Drywell air cooler condensate flow rate monitoring.

The nuclear boiler leak detection system consists of temperature, pressure, sump level, flow, airborne gaseous and particulate fission product sensors, and process radiation sensors with associated instrumentation used to indicate and alarm leakage from the RCS and, in certain cases, to initiate signals used for automatic closure of isolation valves to shut off leakage external to the containment. The system is designed to be in conformance with Regulatory Guide 1.45, Revision 0, and Reference Section IEEE 279. Pertinent references to the Updated Safety Analysis Report are listed in Section 7.0 below.

The administrative means of monitoring include diverse alternative mechanisms from which appropriate indicators may be selected based on plant conditions. Entergy will utilize the following method or methods considering the current plant conditions and historical or expected sources of unidentified leakage: drywell pressure, drywell

historical or expected sources of unidentified leakage: drywell pressure, drywell temperature, reactor recirculation system pump upper seal pressure, drywell air cooler outlet temperatures, and main steam safety relief valve tailpipe temperature and flow.

There are diverse alternative methods for determining that RCS leakage has not increased, from which appropriate indicators may be selected based on plant conditions. Entergy will utilize the following method or methods considering the current plant conditions and historical or expected sources of unidentified leakage: drywell pressure, drywell temperature, reactor recirculation system pump upper seal pressure, drywell air cooler outlet temperatures, and main steam safety relief valve tailpipe temperature and flow. Actions to verify that these indications have not increased since the required monitors became inoperable and analyze drywell atmospheric grab samples are sufficient to alert the operating staff to an unexpected increase in RCS leakage.

5.0 Regulatory Safety Analysis

5.1 No Significant Hazards Consideration Determination

Entergy has evaluated the proposed changes to the TS using the criteria in 10 CFR 50.92 and has determined that the proposed changes do not involve a significant hazards consideration. An analysis of the issue of no significant hazards consideration is presented below:

Description of Amendment Request: The proposed amendment would revise TS 3.4.7, "RCS Leakage Detection Instrumentation" Conditions and Required Actions and the licensing basis for the drywell atmospheric gaseous radiation monitor, as well as make associated TS Bases changes for TS 3.4.7.

The basis for a proposed no significant hazards consideration determination is as follows. As required by 10 CFR 50.91(a), the Entergy analysis of the issue of no significant hazards consideration using the standards in 10 CFR 50.92 is presented below:

1: Does the Proposed Change Involve a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated?

Response: No.

The proposed change clarifies the operability requirements for the RCS leakage detection instrumentation and reduces the time allowed for the plant to operate when the only TS-required operable RCS leakage detection instrumentation monitor is the drywell atmospheric gaseous radiation monitor. The monitoring of RCS leakage is not a precursor to any accident previously evaluated. The monitoring of RCS leakage is not used to mitigate the consequences of any accident previously evaluated. Therefore, it is concluded that this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Response: No.

The proposed change clarifies the operability requirements for the RCS leakage detection instrumentation and reduces the time allowed for the plant to operate when the only TS-required operable RCS leakage detection instrumentation monitor is the drywell atmospheric gaseous radiation monitor. The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. Therefore, it is concluded that 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 change clarifies the operability requirements for the RCS leakage detection instrumentation and reduces the time allowed for the plant to operate when the only TS-required operable RCS leakage detection instrumentation monitor is the drywell atmospheric gaseous radiation monitor. Reducing the amount of time the plant is allowed to operate with only the drywell atmospheric gaseous radiation monitor operable increases the margin of safety by increasing the likelihood that an increase in RCS leakage will be detected before it potentially results in gross failure. Therefore, it is concluded that the proposed change does not involve a significant reduction in a margin of safety.

Based upon the above analysis, Entergy concludes that the requested change does not involve a significant hazards consideration, as set forth in 10 CFR 50.92(c), "Issuance of Amendment."

5.2 Applicable Regulatory Requirements/Criteria

A description of the proposed TS change and its relationship to applicable regulatory requirements were published in the *Federal Register* Notice of Availability on December 17, 2010 (75 FR 70948). Entergy has reviewed the NRC staff's model SE referenced in the CLIIP Notice of Availability and concluded that the regulatory evaluation section is applicable to River Bend Station.

The RBS current licensing basis complies with the requirements of General Design Criteria (GDC) 30 of 10 CFR 50, Appendix A, which requires means for detecting and to the extent practical, identifying the location of the source of RCS leakage. The system is designed to be in conformance with Regulatory Guide 1.45, Revision 0, and Reference Section IEEE 279. Pertinent references to the Updated Safety Analysis Report are listed in Section 7.0 below.

6.0 Environmental Consideration

The proposed change would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR Part 20, and

would change an inspection or surveillance requirement. However, the proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10CFR51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed change.

7.0 References

1. TSTF-514, Revision 3, "Revise BWR Operability Requirements and Actions for RCS Leakage Instrumentation"

2. River Bend Station, Unit 1 Technical Specifications 3.4.7, RCS Leakage Detection Instrumentation

3. River Bend Station, Unit 1 Technical Specifications B 3.4.7, RCS Leakage Detection Instrumentation

4. USAR 5.2.5.1, Leakage Detection Methods

5. USAR 5.2.5.2, Leak Detection Instrumentation and Monitoring

6. Model Application for Plant-Specific Adoption of TSTF-514, Revision 3, "Revise BWR Operability Requirements and Actions for RCS Leakage Instrumentation"

7. Model Safety Evaluation for Plant-Specific Adoption of Technical specifications Task Force Traveler TSTF-514, Revision 3, "Revise BWR Operability Requirements and Actions for RCS Leakage Instrumentation"

ATTACHMENT 2
RBG-47135

MARKUP OF TECHNICAL SPECIFICATION PAGES

License Amendment Request for Adoption of TSTF-514, Revision 3, "Revise BWR Operability Requirements and Actions for RCS Leakage Instrumentation"

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Drywell air cooler condensate flow rate monitoring system inoperable.	----------NOTE---------- Not applicable when the required drywell atmospheric monitoring system is inoperable. ---------- C.1 Perform SR 3.4.7.1.	Once per 8 hours
D. Required drywell atmospheric monitoring system inoperable. AND Drywell air cooler condensate flow rate monitoring system inoperable.	D.1 Restore required drywell atmospheric monitoring system to OPERABLE status. OR D.2 Restore drywell air cooler condensate flow rate monitoring system to OPERABLE status.	30 days 30 days
E. Required Action and associated Completion Time of Condition A, B, C, or D not met.	E.1 Be in MODE 3. AND E.2 Be in MODE 4.	12 hours 36 hours
F. All required leakage detection systems inoperable.	F.1 Enter LCO 3.0.3.	Immediately

INSERT 1

Technical Specification Insert

INSERT 1

----------NOTE---------- Only applicable when the drywell atmospheric gaseous monitoring system is the only OPERABLE monitor. ---------- D. Drywell floor drain sump monitoring system inoperable. AND Drywell air cooler condensate flow rate monitoring system inoperable.	D.1 Analyze grab samples of the drywell atmosphere. AND D.2 Monitor RCS leakage by administrative means. AND D.3.1 Restore drywell floor drain sump monitoring system to OPERABLE status. OR D.3.2 Restore drywell air cooler condensate flow rate monitoring system to OPERABLE status.	Once per 12 hours Once per 12 hours 7 days 7 days

ATTACHMENT 3
RBG-47135

MARKUP OF TECHNICAL SPECIFICATION BASES PAGES

License Amendment Request for Adoption of TSTF-514, Revision 3, "Revise BWR Operability Requirements and Actions for RCS Leakage Instrumentation"

B 3.4 REACTOR COOLANT SYSTEM (RCS)

B 3.4.7 RCS Leakage Detection Instrumentation

BASES

BACKGROUND

GDC 30 of 10 CFR 50, Appendix A (Ref. 1), requires means for detecting and, to the extent practical, identifying the location of the source of RCS LEAKAGE. Regulatory Guide 1.45 (Ref. 2) describes acceptable methods for selecting leakage detection systems.

(REVISION 0)

Limits on LEAKAGE from the reactor coolant pressure boundary (RCPB) are required so that appropriate action can be taken before the integrity of the RCPB is impaired (Ref. 2). Leakage detection systems for the RCS are provided to alert the operators when leakage rates above normal background levels are detected and also to supply quantitative measurement of rates. The Bases for LCO 3.4.5, "RCS Operational LEAKAGE," discuss the limits on RCS LEAKAGE rates.

(INSERT 2)

Systems for separating the LEAKAGE of an identified source from an unidentified source are necessary to provide prompt and quantitative information to the operators to permit them to take immediate corrective action.

LEAKAGE from the RCPB inside the drywell is detected by at least one of three independently monitored variables, such as sump level changes and drywell gaseous and particulate radioactivity levels. The primary means of quantifying LEAKAGE in the drywell is the drywell and pedestal floor drain sump monitoring systems.

The drywell and pedestal floor drain sump monitoring systems monitor the LEAKAGE collected in the floor drain sump. This unidentified LEAKAGE consists of LEAKAGE from control rod drives, valve flanges or packings, floor drains, component cooling water, service water, and drywell air cooling unit condensate drains, and any LEAKAGE not collected in the drywell equipment drain sump. The drywell and pedestal floor drain sumps have transmitters that supply level indication in the main control room.

(continued)

BASES

BACKGROUND (continued)

The primary detection methods for small unidentified leaks within the drywell include monitoring of drywell and pedestal floor drain sump fill rates, drywell cooler condensate flow rate increases, and airborne gaseous and particulate radioactivity increases. The sensitivity of the primary detection method of monitoring a floor drain sump for unidentified LEAKAGE within the drywell is 1 gpm within 1 hour. The sensitivity of the other primary method of detection is listed in the USAR (Ref. 7). These variables are continuously indicated and/or recorded in the main control room. If the unidentified LEAKAGE increases to a total of 5 gpm, the detecting instrumentation channel(s) trips and activates an alarm in the main control room. No isolation trip occurs. The drywell and pedestal floor drain sump fill rate and pump turn-on and off times are monitored by a programmable controller to activate an alarm in the main control room when the leak rate reaches a preset value. Both floor drain sumps have level transmitters that send 4-20 ma signals to the control room where the signal is monitored by a programmable controller and also sent to a recorder. The programmable controller checks the increase level every 15 minutes and calculates the leakage rate into each sump it monitors. It totals unidentified LEAKAGE and actuates an alarm if the total exceeds 5 gpm. The programmable controller totals unidentified and identified LEAKAGE and actuates an alarm if the total exceeds 25 gpm. It calculates the average total leakage for the last 24 hours and prints a report giving the leakage rate into each sump it monitors, showing the last four calculations to indicate a trend and printing the total unidentified LEAKAGE, total identified LEAKAGE, their sum, and the 24 hour average. The programmable controller will print this report any time an alarm value is exceeded. The printout can be ordered manually or can be automatic on a 1 or 8 hour basis.

The drywell atmospheric monitoring systems continuously monitor the drywell atmosphere for airborne particulate and gaseous radioactivity. A sudden increase of radioactivity, which may be attributed to RCPB steam or reactor water LEAKAGE, is annunciated in the control room. The drywell atmospheric particulate and gaseous radioactivity monitoring systems are not capable of quantifying leakage rates, but are sensitive enough to indicate increased LEAKAGE rates of 1 gpm within 1 hour. Larger changes in LEAKAGE rates are detected in proportionally shorter times (Ref. 3).

(continued)

BASES

BACKGROUND (continued)

Condensate from the drywell coolers is routed to the drywell and pedestal floor drain sump and is monitored by a flow transmitter that provides indication and alarms in the control room. This drywell air cooler condensate flow rate monitoring system serves as an added indicator, but not quantifier, of RCS unidentified LEAKAGE.

APPLICABLE SAFETY ANALYSES

A threat of significant compromise to the RCPB exists if the barrier contains a crack that is large enough to propagate rapidly. LEAKAGE rate limits are set low enough to detect the LEAKAGE emitted from a single crack in the RCPB (Refs. 4 and 5). Each of the leakage detection systems inside the drywell is designed with the capability of detecting LEAKAGE less than the established LEAKAGE rate limits.

Identification of the LEAKAGE allows the operators to evaluate the significance of the indicated LEAKAGE and, if necessary, shut down the reactor for further investigation and corrective action. The allowed LEAKAGE rates are well below the rates predicted for critical crack sizes (Ref. 6).

Therefore, these actions provide adequate response before a significant break in the RCPB can occur.

RCS leakage detection instrumentation satisfies Criterion 1 of the NRC Policy Statement.

LCO

INSERT 3

The drywell and pedestal floor drain sumps monitoring systems are required to quantify the unidentified LEAKAGE from the RCS. Thus, for the systems to be considered OPERABLE, the sump level monitoring portion of the systems must be OPERABLE. The other monitoring systems provide qualitative indication to the operators so closer examination of other detection systems will be made to determine the extent of any corrective action that may be required. With the leakage detection systems inoperable, monitoring for LEAKAGE in the RCPB is degraded.

APPLICABILITY

In MODES 1, 2, and 3, leakage detection systems are required to be OPERABLE to support LCO 3.4.5. This Applicability is consistent with that for LCO 3.4.5.

(continued)

BASES

ACTIONS C.1 (continued)

periodic information that is adequate to detect LEAKAGE and recognizes that other forms of leakage detection are available. However, this Required Action is modified by a Note that allows this action to be not applicable if the required drywell atmospheric monitoring system is inoperable. Consistent with SR 3.0.1, Surveillances are not required to be performed on inoperable equipment.

INSERT 4

D.1 and D.2

E

With both the gaseous and particulate drywell atmospheric monitor channels and the drywell air cooler condensate flow rate monitor inoperable, the only means of detecting LEAKAGE is the drywell floor drain sump monitoring system. This Condition does not provide the required diverse means of leakage detection. The Required Action is to restore either of the inoperable monitoring systems to OPERABLE status within 30 days to regain the intended leakage detection diversity. The 30 day Completion Time ensures that the plant will not be operated in a degraded configuration for a lengthy time period.

F.1 and F.2

F

, OR E

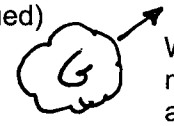
If any Required Action of Condition A, B, C, or D cannot be met within the associated Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions in an orderly manner and without challenging plant systems.

(continued)

BASES

ACTIONS (continued)

F.1



With all required monitors inoperable, no required automatic means of monitoring LEAKAGE are available, and immediate plant shutdown in accordance with LCO 3.0.3 is required.

SURVEILLANCE REQUIREMENTS

SR 3.4.7.1

This SR requires the performance of a CHANNEL CHECK of the required drywell atmospheric monitoring system. The check gives reasonable confidence that the channel is operating properly. The Frequency of 12 hours is based on instrument reliability and is reasonable for detecting off normal conditions.

SR 3.4.7.2

This SR requires the performance of a CHANNEL FUNCTIONAL TEST of the required RCS leakage detection instrumentation. The test ensures that the monitors can perform their function in the desired manner. The test also verifies the relative accuracy of the instrumentation. The Frequency of 31 days considers instrument reliability, and operating experience has shown it proper for detecting degradation.

SR 3.4.7.3

This SR requires the performance of a CHANNEL CALIBRATION of the required RCS leakage detection instrumentation channels. The calibration verifies the accuracy of the instrumentation, including the instruments located inside the drywell. The Frequency of 24 months is a typical refueling cycle and considers channel reliability.

(continued)

BASES (continued)

REFERENCES

1. 10 CFR 50, Appendix A, GDC 30.
2. Regulatory Guide 1.45, May 1973.
3. USAR, Section 5.2.5.2.
4. GEAP-5620, "Failure Behavior in ASTM A106B Pipes Containing Axial Through-Wall Flaws," April 1968.
5. NUREG-75/067, "Investigation and Evaluation of Cracking in Austenitic Stainless Steel Piping of Boiling Water Reactor Plants," October 1975.
6. USAR, Section 5.2.5.5.3.
7. USAR, Table 11.5-1.

Revision 0, "Reactor Coolant Pressure Boundary Leakage Detection Systems,"

Technical Specification Bases Inserts

INSERT 2

In addition to meeting the OPERABILITY requirements, the monitors are typically set to provide the most sensitive response without causing an excessive number of spurious alarms.

INSERT 3

This LCO requires instruments of diverse monitoring principles to be OPERABLE to provide confidence that small amounts of unidentified LEAKAGE are detected in time to allow actions to place the plant in a safe condition, when RCS LEAKAGE indicates possible RCPB degradation.

The LCO requires three instruments to be OPERABLE.

The drywell floor drain sump monitoring system is required to quantify the unidentified LEAKAGE rate from the RCS. Thus, for the system to be considered OPERABLE, the sump level monitoring portion of the system must be OPERABLE and capable of determining the leakage rate. The identification of an increase in unidentified LEAKAGE will be delayed by the time required for the unidentified LEAKAGE to travel to the drywell floor drain sump and it may take longer than one hour to detect a 1 gpm increase in unidentified LEAKAGE, depending on the origin and magnitude of the LEAKAGE. This sensitivity is acceptable for containment sump monitor OPERABILITY.

The reactor coolant contains radioactivity that, when released to the drywell, can be detected by the gaseous or particulate drywell atmospheric radioactivity monitor. Only one of the two detectors is required to be OPERABLE. Radioactivity detection systems are included for monitoring both particulate and gaseous activities because of their sensitivities and rapid responses to RCS LEAKAGE, but have recognized limitations. Reactor coolant radioactivity levels will be low during initial reactor startup and for a few weeks thereafter, until activated corrosion products have been formed and fission products appear from fuel element cladding contamination or cladding defects. If there are few fuel element cladding defects and low levels of activation products, it may not be possible for the gaseous or particulate drywell atmospheric radioactivity monitors to detect a 1 gpm increase within 1 hour during normal operation. However, the gaseous or particulate drywell atmospheric radioactivity monitor is OPERABLE when it is capable of detecting a 1 gpm increase in unidentified LEAKAGE within 1 hour given an RCS activity equivalent to that assumed in the design calculations for the monitors (Reference 3).

An increase in humidity of the drywell atmosphere could indicate the release of water vapor to the drywell. Drywell air cooler condensate flow rate is instrumented to detect when there is an increase above the normal value by 1 gpm. The time required to detect a 1 gpm increase above the normal value varies based on environmental and system conditions and may take longer than 1 hour. This sensitivity is acceptable for drywell air cooler condensate flow rate monitor OPERABILITY.

The LCO is satisfied when monitors of diverse measurement means are available. Thus, the drywell floor drain sump monitoring system, in combination with a gaseous or particulate drywell atmospheric radioactivity monitor and a drywell air cooler condensate flow rate monitoring system, provides an acceptable minimum.

INSERT 4

D.1, D.2, D.3.1, and D.3.2

With the drywell floor drain sump monitoring system and the drywell air cooler condensate flow rate monitoring system inoperable, the only means of detecting LEAKAGE is the drywell atmospheric gaseous radiation monitor. A Note clarifies this applicability of the Condition. The drywell atmospheric gaseous radiation monitor typically cannot detect a 1 gpm leak within one hour when RCS activity is low. In addition, this configuration does not provide the required diverse means of leakage detection. Indirect methods of monitoring RCS leakage must be implemented. Grab samples of the drywell atmosphere must be taken and analyzed and monitoring of RCS leakage by administrative means must be performed every 12 hours to provide alternate periodic information.

Administrative means of monitoring RCS leakage include monitoring and trending parameters that may indicate an increase in RCS leakage. There are diverse alternative mechanisms from which appropriate indicators may be selected based on plant conditions. It is not necessary to utilize all of these methods, but a method or methods should be selected considering the current plant conditions and historical or expected sources of unidentified leakage. The administrative methods are drywell pressure, drywell temperature, reactor recirculation system pump upper seal pressure, drywell air cooler outlet temperatures, and main steam safety relief valve tailpipe temperature and flow. These indications, coupled with the atmospheric grab samples, are sufficient to alert the operating staff to an unexpected increase in unidentified LEAKAGE.

The 12 hour interval is sufficient to detect increasing RCS leakage. The Required Action provides 7 days to restore another RCS leakage monitor to OPERABLE status to regain the intended leakage detection diversity. The 7 day Completion Time ensures that the plant will not be operated in a degraded configuration for a lengthy time period.

ATTACHMENT 4
RBG-47135

REVISED (CLEAN) TECHNICAL SPECIFICATION PAGES

License Amendment Request for Adoption of TSTF-514, Revision 3, "Revise BWR Operability Requirements and Actions for RCS Leakage Instrumentation"

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Drywell air cooler condensate flow rate monitoring system inoperable.	----------NOTE---------- Not applicable when the required drywell atmospheric monitoring system is inoperable. ---------- C.1 Perform SR 3.4.7.1.	Once per 8 hours
----------NOTE---------- Only applicable when the drywell atmospheric gaseous monitoring system is the only OPERABLE monitor. ---------- D. Drywell floor drain sump monitoring system inoperable. AND Drywell air cooler condensate flow rate monitoring system inoperable.	D.1 Analyze grab samples of the drywell atmosphere. AND D.2 Monitor RCS leakage by administrative means. AND D.3.1 Restore drywell floor drain sump monitoring system to OPERABLE status. OR D.3.2 Restore drywell air cooler condensate flow rate monitoring system to OPERABLE status.	Once per 12 hours Once per 12 hours 7 days 7 days
E. Required drywell atmospheric monitoring system inoperable. AND Drywell air cooler condensate flow rate monitoring system inoperable.	E.1 Restore required drywell atmospheric monitoring system to OPERABLE status. OR E.2 Restore drywell air cooler condensate flow rate monitoring system to OPERABLE status.	30 days 30 days
F. Required Action and associated Completion Time of Condition A, B, C, D, or E not met.	F.1 Be in MODE 3. AND F.2 Be in MODE 4.	12 hours 36 hours
G. All required leakage detection systems inoperable.	G.1 Enter LCO 3.0.3.	Immediately