Enclosure 13
Case Study 9: River Bend Shutdown as an Alternative to Other Actions
Meeting Summary of the January 27 & 28 Meeting with NRC/TSTF
Dated March 9, 2009

Day 2

Case Study 9: River Bend Shutdown as an Alternative to Other Actions

History of the Issue

At the River Bend station on October 31, 2005, a blown control power fuse caused a reactor recirculation flow control valve to drift open. The operator's response resulted in a jet pump flow mismatch greater than the Technical Specification limit.

The River Bend Specification 3.4.1 Actions are:

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Recirculation loop jet pump flow mismatch not within limits.	A.1 Shutdown one recirculation loop.	2 hours
B. THERMAL POWER > 77.6% RTP during single loop operation.	B.1 Reduce THERMAL POWER to ≤ 77.6% RTP.	1 hour

(continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Requirements B.3, B.4, or B.5 of the LCO not met.	C.1 Satisfy the requirements of the LCO.	24 hours
D. Required actions and associated completion times of conditions A, B, or C not met. OR No recirculation loops in operation.	D.1 Be in Mode 3.	12 hours

The operators entered Condition A but did not shut down one recirculation loop. Two hours later the operators entered Condition D. Four and one-half hours after entering Condition A, the flow mismatch was corrected and the Conditions were exited.

The River Bend Actions do not appear in the Improved Standard Technical Specifications (ISTS). The ISTS 3.4.1 Actions are modified by a Reviewer's Note that references four Topical Reports that provide resolution for the stability Technical Specifications. The River Bend

Actions are based on NEDO-32339, Revision 1 "Reactor Stability Long-Term Solution, Enhanced Option I-A."

On February 13, 2006, in Inspection Report 05000458/2005005 (ADAMS Accession Number ML060450209), the NRC identified a noncited violation of TS 3.4.1.A for the failure of River Bend Station personnel to shut down one reactor recirculation loop within 2 hours of entering the Condition. The discussion of the event from the Inspection Report is in Attachment A.

The Inspection Report stated:

"Analysis: The licensee's failure to restore compliance with TS LCO 3.4.1 or complete the required action of TS 3.4.1.A.1 to shut down one RR loop within 2 hours was a performance deficiency. [....] The significance of this finding could not be evaluated using MC 0609, "Significance Determination Process." Based on management review, the finding was determined to be of very low safety significance based on the short duration of the flow mismatch, 4.5 hours, and the low likelihood of a LOCA during that time. The cause of this finding is related to the crosscutting element of human performance in that operators failed to implement TS requirements.

Enforcement: TS LCO 3.4.1 states that two RR loops shall be in operation with matched flows when the reactor is in Modes 1 or 2. If RR loop jet pump flow mismatch is not less than or equal to 5 percent of rated core flow when operating at greater than or equal to 70 percent of rated core flow (Condition 3.4.1.A), then the licensee must shut down one RR loop (Required Action A.1) within 2 hours (Completion Time). Contrary to the above, on October 31 , 2005, 2 hours after RR loop jet pump flow mismatch was greater than 5 percent of rated core flow, the licensee exited TS 3.4.1.A.1 without shutting down one RR loop or restoring the jet pump flow mismatch to less than 5 percent. Because the finding is of very low safety significance and has been entered into the licensee's corrective action program as CR-RBS-2006-00274, this violation is being treated as an NCV in accordance with Section IV.A of the NRC Enforcement Policy and is identified as NCV 05000458/2005005-02: Failure to complete TS required actions within allowed completion time."

On March 24, 2006, Entergy responded to the noncited violation (ADAMS Accession Number ML060870059). The response is in Attachment B. Entergy denied that a violation existed. The response is summarized by the statement, "The NRC Enforcement Manual and previous enforcement precedence concludes that, no violation exists unless al actions are not completed within all applicable completion times. In this instance, RBS met the LCO requirements prior to the Required Completion time of Action 'D'. Therefore, Entergy respectfully requests that the NRC reconsider their conclusion and find that no violation of TS3.4.1 occurred."

The response made the following point:

"Entergy's central concern is ensuring a consistent approach to implementing Technical Specification Action Statements. If this non-cited violation's concepts were generically applied to other Technical Specifications, it would result in limiting the appropriate use of prudent operator judgment and conservative decision making imbedded in the basis and mechanics of

Technical Specifications; thereby changing previously accepted practices and principles used to comply with Technical Specifications."

The response quoted 10 CFR 50.36, "Technical Specifications," Technical Specification Example 1.3-6 and LCO 3.0.2, the NRC's reportability guidance (NUREG-1022) to support their position. Entergy also pointed out a similar set of Actions in which the Bases explicitly states that if it is not desired to take the Required Action, then the Condition for not meeting the Required Action should be entered. The response also referenced the NRC Enforcement Manual (NUREG/BR 0195) which states that a violation does not exist based solely on the failure to restore the equipment to operable status within the required completion time. In Chapter 8, the Enforcement Manual explains that a violation occurs only when the LCO is not met and all necessary actions have not been completed within all applicable completion times.

In Entergy's response, they referenced a 1996 enforcement instance in which an apparent violation was cited for an emergency diesel generator inoperable for greater than 72 hours. Entergy disagreed based on the premise that the Technical Specifications are not violated until all Required Actions and Completion Times allowed by the Technical Specifications are not met. The NRC agreed and no violation was cited. Applying that logic to the event under consideration, Entergy stated that a violation of the Technical Specifications would not have occurred unless the plant was not in Mode 3 within 14 hours of entering Condition A (2 hours for Condition A and 12 hours for Condition D).

On June 22, 2006, the NRC responded to Entergy's denial of the noncited violation (ADAMS Accession Number ML061790189). The response is in Attachment C. The NRC rejected Entergy's denial and concluded that a violation had occurred. The NRC stated:

"Our review found that the NRC Enforcement Manual, Section 8.1.1.b, provides guidance on how to cite a violation for equipment inoperability. The guidance assumes that a licensee, upon entering an LCO required action, takes the necessary steps to complete the required TS action within the allotted completion time. If, for some reason (e.g., equipment malfunction or inaccessible equipment), a licensee attempts, but is unable, to complete the required action in the allotted completion time, the licensee would then enter the next appropriate TS required action. However, in response to the flow mismatch, River Bend Station personnel made a conscious decision not to take action to shut down one recirculation loop within the 2-hour completion time but, instead, at the end of the 2-hour period, entered Required Action D in lieu of completing Required Action A.1. *The guidance in the Enforcement Manual was not intended to apply to a situation in which the licensee chooses not to meet the required action in the required completion time.*" (emphasis added)

Regarding the previous apparent violation referenced in the Entergy response, the NRC stated:

"The current disputed noncited violation differs from this example in that River Bend Station personnel made no attempt to correct the flow mismatch or shut down one recirculation loop during the 2-hour completion time, despite the fact that it was within their capability to do so. Two hours after entering Required Action A.1, the flow balance was not restored and operators chose to enter Condition D. Personnel elected not to take the actions described in Required

Action A.1, as opposed to the above scenario in which the licensee was unable to restore operability of the emergency diesel generator within 72 hours."

Regarding the discussion of Example 1.3-6 in the Entergy response, the NRC stated:

"There is no implication that a choice exists to move from Condition A to Condition B. TS actions which offer a choice are designated by an 'or' statement. In this example, the actions listed in Condition A.1 or Condition A.2 are required to be completed. If they cannot be completed, then the actions of Condition B must be completed. The noncited violation concerns LCO 3.4.1 required actions in Conditions A and D. Unlike Example 1.3-6, there is no 'or' connecter in LCO 3.4.1. Upon discovery that a specified condition exists, required actions must be completed."

Regarding the precedence of the NRC's upholding the violation, the NRC stated:

"You stated that Entergy's overarching concern is the potential for precedence setting if the NRC upholds this violation in that licensees would not be able to follow time tested principles used to implement TS actions and that upholding the violation would be a significant shift in industry and regulatory practice. As discussed above, proper implementation of TS requires licensee's to implement the required actions when LCOs are not satisfied. This is a fundamental concept of TS implementation and compliance. In addition, a licensee has the option to request an exigent TS change or enforcement discretion if compliance with TS would involve an unnecessary plant transient. In this case, TS 3.4.1, Required Action A.1, was required to be completed within 2 hours of the flow mismatch. The bases for this action, and the 2-hour completion time, were described in the Bases for TS 3.4.1. Required Action A.1 was an action that was within the operators' ability to complete within 2 hours. Additionally, operators could have taken actions to restore the recirculation loop jet pump flow mismatch within TS limits and restore compliance with TS 3.4.1.A. In this case, operators incorrectly determined that these actions were not required. The NRC's position is that upholding the violation is consistent with the principles and precedence regarding the proper implementation of TS." (emphasis added)

Problem Statement

The NRC's stated position that each Technical Specification Required Action must be followed if it is within the operator's ability to do so. This is a usurpation of licensed operator authority and judgment in preference for rote obedience to standard actions.

The industry is taking no position on the particular River Bend event or the NRC's enforcement action. However, the industry objects to the generically applicable statements made in the NRC's response to the Entergy denial of the noncited violation.

Analysis of the Issue

Consider an example of how the NRC's position will change the current application of Technical Specifications. If a containment isolation valve actuator is inoperable, the Technical Specifications require the penetration to be isolated within 4 hours. If the Required Action and associated Completion Time is not met, the plant is required to be in Mode 3 within 12 hours.

Assume the penetration is associated with a system required for plant operation, such as instrument air or cooling water, and isolation of the penetration would result in a plant trip.

Under the historical application of Technical Specifications, the operator would not isolate the penetration and would utilize the 4 hours to repair the actuator. If the actuator is not restored to Operable status within 4 hours, the Condition for "Required Action and associated Completion Time not met" (also known as the default action) would be entered and a plant shutdown would be initiated such that the plant will be in Mode 3 within 12 hours of entering the default Condition.

Under the NRC's new direction, the operator is required to isolate the penetration within 4 hours if it is physically possible to do so, regardless of the safety consequences. The NRC's stated alternative is to request and have granted a Notice of Enforcement Discretion within the 4 hour Completion Time in order to not isolate the penetration.

The lack of application for NOEDs for this type of common situation and the NRC's lack of questioning of licensees for failing to submit an NOED request or the NRC's issuance of violations supports the industry's position that this is a new NRC position that is in conflict with historical application of Technical Specifications by licensees and the NRC.

The Entergy denial letter in Attachment B clearly and accurately presents the regulatory basis for the existing utilization of Technical Specifications by licensees. However, it is worthwhile to emphasis the two most fundamental references that support the existing Technical Specification rules of usage.

10 CFR 50.36 states, "Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor *or follow any remedial action permitted by the technical specifications* until the condition can be met." (emphasis added).

ISTS LCO 3.0.1 states, "LCOs shall be met during the MODES or other specified conditions in the Applicability, except as provided in LCO 3.0.2, LCO 3.0.7, and LCO 3.0.8." ISTS LCO 3.0.2 states, "Upon discovery of a failure to meet an LCO, the *Required Actions* of the *associated Conditions* shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6." (emphasis added)

In short, the regulations state that any remedial action permitted by the Technical Specifications should be followed when an LCO is not met and the Technical Specifications state that the Required Actions and associated Conditions shall be met. The default Condition ("Required Action and associated Completion Time not met") is a "remedial action permitted by the technical specifications" and is one of the "Required Actions of the associated Conditions" to be followed when an LCO is not met. There is no regulatory basis for the NRC's position that any particular Required Action must be completed in lieu of following any other Required Action as long as the Technical Specification requirements are followed. The NRC's reinterpretation of Technical Specification rules of usage is arbitrary and unsupported.

Analysis of the River Bend NRC Violation for Voluntarily Not Following A Required Action

History of the Issue

At the River Bend station on October 31, 2005, a blown control power fuse caused a reactor recirculation flow control valve to drift open. The operator's response resulted in a jet pump flow mismatch greater than the Technical Specification limit.

The River Bend Specification 3.4.1 Actions are:

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Recirculation loop jet pump flow mismatch not within limits.	A.1 Shutdown one recirculation loop.	2 hours
B. THERMAL POWER > 77.6% RTP during single loop operation.	B.1 Reduce THERMAL POWER to ≤ 77.6% RTP.	1 hour

(continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Requirements B.3, B.4, or B.5 of the LCO not met.	C.1 Satisfy the requirements of the LCO.	24 hours
D. Required actions and associated completion times of conditions A, B, or C not met. OR No recirculation loops in operation.	D.1 Be in Mode 3.	12 hours

The operators entered Condition A but did not shut down one recirculation loop. Two hours later the operators entered Condition D. Four and one-half hours after entering Condition A, the flow mismatch was corrected and the Conditions were exited.

The River Bend Actions do not appear in the Improved Standard Technical Specifications (ISTS). The ISTS 3.4.1 Actions are modified by a Reviewer's Note that references four Topical Reports that provide resolution for the stability Technical Specifications. The River Bend Actions are based on NEDO-32339, Revision 1 "Reactor Stability Long-Term Solution, Enhanced Option I-A."

Analysis of the River Bend NRC Violation for Voluntarily Not Following A Required Action

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The Inspection Report stated:

> "Analysis: The licensee's failure to restore compliance with TS LCO 3.4.1 or complete the required action of TS 3.4.1.A.1 to shut down one RR loop within 2 hours was a performance deficiency. [....] The significance of this finding could not be evaluated using MC 0609, "Significance Determination Process." Based on management review, the finding was determined to be of very low safety significance based on the short duration of the flow mismatch, 4.5 hours, and the low likelihood of a LOCA during that time. The cause of this finding is related to the crosscutting element of human performance in that operators failed to implement TS requirements.
>
> Enforcement: TS LCO 3.4.1 states that two RR loops shall be in operation with matched flows when the reactor is in Modes 1 or 2. If RR loop jet pump flow mismatch is not less than or equal to 5 percent of rated core flow when operating at greater than or equal to 70 percent of rated core flow (Condition 3.4.1.A), then the licensee must shut down one RR loop (Required Action A.1) within 2 hours (Completion Time). Contrary to the above, on October 31., 2005, 2 hours after RR loop jet pump flow mismatch was greater than 5 percent of rated core flow, the licensee exited TS 3.4.1.A.1 without shutting down one RR loop or restoring the jet pump flow mismatch to less than 5 percent. Because the finding is of very low safety significance and has been entered into the licensee's corrective action program as CR-RBS-2006-00274, this violation is being treated as an NCV in accordance with Section IV.A of the NRC Enforcement Policy and is identified as NCV 05000458/2005005-02: Failure to complete TS required actions within allowed completion time."

On March 24, 2006, Entergy responded to the noncited violation (ADAMS Accession Number ML060870059). The response is in Attachment B. Entergy denied that a violation existed. The response is summarized by the statement, "The NRC Enforcement Manual and previous enforcement precedence concludes that, no violation exists unless al actions are not completed within all applicable completion times. In this instance, RBS met the LCO requirements prior to the Required Completion time of Action 'D'. Therefore, Entergy respectfully requests that the NRC reconsider their conclusion and find that no violation of TS3.4.1 occurred."

The response made the following point:

> "Entergy's central concern is ensuring a consistent approach to implementing Technical Specification Action Statements. If this non-cited violation's concepts were generically applied to other Technical Specifications, it would result in limiting the appropriate use of prudent operator judgment and conservative decision making imbedded in the basis and mechanics of Technical Specifications; thereby changing previously accepted practices and principles used to comply with Technical Specifications."

Analysis of the River Bend NRC Violation for Voluntarily Not Following A Required Action

The response quoted 10 CFR 50.36, "Technical Specifications," Technical Specification Example 1.3-6 and LCO 3.0.2, the NRC's reportability guidance (NUREG-1022) to support their position. Entergy also pointed out a similar set of Actions in which the Bases explicitly states that if it is not desired to take the Required Action, then the Condition for not meeting the Required Action should be entered. The response also referenced the NRC Enforcement Manual (NUREG/BR 0195) which states that a violation does not exist based solely on the failure to restore the equipment to operable status within the required completion time. In Chapter 8, the Enforcement Manual explains that a violation occurs only when the LCO is not met and all necessary actions have not been completed within all applicable completion times.

In Entergy's response, they referenced a 1996 enforcement instance in which an apparent violation was cited for an emergency diesel generator inoperable for greater than 72 hours. Entergy disagreed based on the premise that the Technical Specifications are not violated until all Required Actions and Completion Times allowed by the Technical Specifications are not met. The NRC agreed and no violation was cited. Applying that logic to the event under consideration, Entergy stated that a violation of the Technical Specifications would not have occurred unless the plant was not in Mode 3 within 14 hours of entering Condition A (2 hours for Condition A and 12 hours for Condition D).

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Regarding the previous apparent violation referenced in the Entergy response, the NRC stated:

> "The current disputed noncited violation differs from this example in that River Bend Station personnel made no attempt to correct the flow mismatch or shut down one recirculation loop during the 2-hour completion time, despite the fact that it was within their capability to do so. Two hours after entering Required Action A.1, the flow balance was not restored and operators chose to enter Condition D. Personnel elected not to take the actions described in Required Action A.1, as opposed to the above scenario in which the licensee was unable to restore operability of the emergency diesel generator within 72 hours."

Analysis of the River Bend NRC Violation for Voluntarily Not Following A Required Action

Regarding the discussion of Example 1.3-6 in the Entergy response, the NRC stated:

> "There is no implication that a choice exists to move from Condition A to Condition B. TS actions which offer a choice are designated by an 'or' statement. In this example, the actions listed in Condition A.1 or Condition A.2 are required to be completed. If they cannot be completed, then the actions of Condition B must be completed. The noncited violation concerns LCO 3.4.1 required actions in Conditions A and D. Unlike Example 1.3-6, there is no 'or' connecter in LCO 3.4.1. Upon discovery that a specified condition exists, required actions must be completed."

Regarding the precedence of the NRC's upholding the violation, the NRC stated:

> "You stated that Entergy's overarching concern is the potential for precedence setting if the NRC upholds this violation in that licensees would not be able to follow time tested principles used to implement TS actions and that upholding the violation would be a significant shift in industry and regulatory practice. As discussed above, proper implementation of TS requires licensee's to implement the required actions when LCOs are not satisfied. This is a fundamental concept of TS implementation and compliance. In addition, a licensee has the option to request an exigent TS change or enforcement discretion if compliance with TS would involve an unnecessary plant transient. In this case, TS 3.4.1, Required Action A.1, was required to be completed within 2 hours of the flow mismatch. The bases for this action, and the 2-hour completion time, were described in the Bases for TS 3.4.1. *Required Action A.1 was an action that was within the operators' ability to complete within 2 hours.* Additionally, operators could have taken actions to restore the recirculation loop jet pump flow mismatch within TS limits and restore compliance with TS 3.4.1.A. *In this case, operators incorrectly determined that these actions were not required. The NRC's position is that upholding the violation is consistent with the principles and precedence regarding the proper implementation of TS."* (emphasis added)

Problem Statement

The NRC's stated position that each Technical Specification Required Action must be followed if it is within the operator's ability to do so. This is a usurpation of licensed operator authority and judgment in preference for rote obedience to standard actions.

The industry is taking no position on the particular River Bend event or the NRC's enforcement action. However, the industry objects to the generically applicable statements made in the NRC's response to the Entergy denial of the noncited violation.

Analysis of the Issue

Consider an example of how the NRC's position will change the current application of Technical Specifications. If a containment isolation valve actuator is inoperable, the Technical Specifications require the penetration to be isolated within 4 hours. If the Required Action and associated Completion Time is not met, the plant is required to be in Mode 3 within 12 hours. Assume the penetration is associated with a system required for plant operation, such as instrument air or cooling water, and isolation of the penetration would result in a plant trip.

- Under the historical application of Technical Specifications, the operator would not isolate the penetration and would utilize the 4 hours to repair the actuator. If the actuator is not restored to Operable status within 4 hours, the Condition for "Required Action and associated Completion Time not met" (also known as the default action) would be entered and a plant shutdown would be initiated such that the plant will be in Mode 3 within 12 hours of entering the default Condition.

- Under the NRC's new direction, the operator is required to isolate the penetration within 4 hours if it is physically possible to do so, regardless of the safety consequences. The NRC's stated alternative is to request and have granted a Notice of Enforcement Discretion within the 4 hour Completion Time in order to not isolate the penetration.

The lack of application for NOEDs for this type of common situation and the NRC's lack of questioning of licensees for failing to submit an NOED request or the NRC's issuance of violations supports the industry's position that this is a new NRC position that is in conflict with historical application of Technical Specifications by licensees and the NRC.

The Entergy denial letter in Attachment B clearly and accurately presents the regulatory basis for the existing utilization of Technical Specifications by licensees. However, it is worthwhile to emphasis the two most fundamental references that support the existing Technical Specification rules of usage.

- 10 CFR 50.36 states, "Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor *or follow any remedial action permitted by the technical specifications* until the condition can be met." (emphasis added).

- ISTS LCO 3.0.1 states, "LCOs shall be met during the MODES or other specified conditions in the Applicability, except as provided in LCO 3.0.2, LCO 3.0.7, and LCO 3.0.8." ISTS LCO 3.0.2 states, "Upon discovery of a failure to meet an LCO, the *Required Actions* of the *associated Conditions* shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6." (emphasis added)

In short, the regulations state that any remedial action permitted by the Technical Specifications should be followed when an LCO is not met and the Technical Specifications state that the Required Actions and associated Conditions shall be met. The default Condition ("Required Action and associated Completion Time not met") is a "remedial action permitted by the technical specifications" and is one of the "Required Actions of the associated Conditions" to be followed when an LCO is not met. There is no regulatory basis for the NRC's position that any particular Required Action must be completed in lieu of following any other Required Action as long as the Technical Specification requirements are followed. The NRC's reinterpretation of Technical Specification rules of usage is arbitrary and unsupported.

Analysis of the River Bend NRC Violation for Voluntarily Not Following A Required Action

The following options are available to resolve this issue and to restore unquestioned use of the existing Technical Specification usage rules:

1. Convince the NRC to reverse their position.

2. Ignore the NRC's letter to Entergy and continue with the existing practice.

3. Revise the Required Actions throughout the Technical Specifications to add the option to restore compliance with the LCO as an alternative to any specified Required Actions.

4. Revise the Chapter 1.0 or Section 3.0 usage rules to explicitly state that the operator has the authority to decide to not take a Required Action provided that the requirements of the Technical Specifications are followed.

Each option is considered below.

Option 1 - Convince the NRC to reverse their position

In the NRC's response to Entergy's denial of the noncited violation, they stated, "Upon receipt of your letter, NRC staff, including members of the Office of Nuclear Reactor Regulation and the Office of Enforcement, initiated a review of the circumstances and documents related to this issue, including your bases for concluding that a violation did not occur. Based on this review, the NRC concluded that the violation, as documented in NRC Integrated Inspection Report 05000458/2005005, occurred as described." Entergy management also contacted NRC management, but was not able to convince the NRC to change their position.

Given the that the NRC has documented their position and the NRC organizations and management that were involved in the decision, it is unlikely that we would be successful in convincing the NRC to alter their interpretation of Technical Specification usage.

Option 2 - Ignore the NRC's letter to Entergy and continue with the existing practice.

An argument can be made that the NRC's response to Entergy's letter is only applicable to Entergy and has no generic applicability to other licensees. However, the NRC has used the position given in the response to Entergy with other licensees; notably, a Perry license amendment request. There is also antidotal evidence that the position the NRC took with Entergy has been noticed by other licensees and has resulted in questions or even changes in operation.

The NRC responded to Entergy in June of 2006. There has been no noticeable increase in requests for a Notice of Enforcement Discretion or in NRC violations for failing to perform Required Actions. The NRC has not published any generic correspondence informing licensees of a new NRC position. Therefore, it can be argued that the issue has resolved itself and can be safety ignored.

Option 3 - Revise the Required Actions throughout the Technical Specifications to add the option to restore compliance with the LCO as an alternative to any specified Required Actions.

The NRC stated that the option to restore compliance with the LCO instead of shutting down the recirculation loop was not available because restoration was not an explicitly stated Required Action joined with an "OR" to the action to shutdown the recirculation loop. The Technical Specifications could be revised to provide this option in all cases.

For example, for every Condition constructed like this:

A. One train inoperable.	A.1	Close and isolate the train. *(e.g., Take a remedial action other than restoration).*	XX hours

Revise it to provide the option to restore compliance with the LCO:

A. One train inoperable.	A.1	Close and isolate the train. One train inoperable	XX hours
	OR		
	A.2	Restore the train to OPERABLE status.	XX hours

During the development of the ISTS, the NRC removed all Required Actions which required restoration of compliance with the LCO unless it was the only Required Action or the Required Action was needed for clarity. This option would be contradictory to that decision. As described in TSTF-GG-05-01, "Writer's Guide for Plant Specific Technical Specifications." Section 4.1.6, "Actions Content," Paragraph "g" states, "A Required Action which requires restoration, such that the Condition is no longer met, is considered superfluous. It is only included if it would be the only Required Action for the Condition or it is needed for presentation clarity."

This option would be overly burdensome and would complicate the presentation and usage of the Technical Specifications.

Option 4 - Revise the Chapter 1.0 or Section 3.0 usage rules to explicitly state that the operator has the authority to decide to not take a Required Action provided that the requirements of the Technical Specifications are followed.

In order for Option 4 to be successful, it is necessary to justify to the NRC that it is appropriate for licensees to choose to not take Required Actions. In effect, this is Option 1 with the added benefit of obtaining an NRC Safety Evaluation documenting the change. However, their remains the difficulty of convincing the NRC to change their position on the issue.

Option 4a

Compliance with Required Actions is described in LCO 3.0.2, which states,

> "Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6.
>
> If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required, unless otherwise stated."

As discussed above, LCO 3.0.2 the industry and the NRC disagree on whether LCO 3.0.2 allows an operator to choose to not follow a specific Required Action provided that the requirements of the Technical Specifications are followed. Therefore, the first choice for clarifying the issue is to clarify LCO 3.0.2. A proposed modification is;

> "Upon discovery of a failure to meet an LCO, the ACTIONS shall be followed, except as provided in LCO 3.0.5 and LCO 3.0.6.
>
> If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), following the ACTIONS is not required, unless otherwise stated."

Section 1.1 of the Technical Specifications defines ACTIONS as "ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times."

The change is consistent with the existing Bases, which state, "LCO 3.0.2 establishes that upon discovery of a failure to meet an LCO, the associated ACTIONS shall be met."

This change to the Technical Specifications and the Bases would clarify that as long as the ACTIONS are followed (e.g., all the Conditions, Required Actions, and Completion Times), the Specification is met. It would eliminate the wording that can be interpreted to focus on each Required Action.

The LCO 3.0.2 Bases can be revised to be consistent with the wording change.

> "LCO 3.0.2 establishes that upon discovery of a failure to meet an LCO, the associated ACTIONS shall be met. The Completion Time of each Required Action for an ACTIONS Condition is applicable from the point in time that an ACTIONS Condition is

entered. The ACTIONS ~~Required Actions~~ establish those remedial measures that must be taken ~~within specified Completion Times~~ when the requirements of an LCO are not met. This Specification establishes that:

a. Completion of the LCO's ACTIONS ~~Required Actions within the specified Completion Times~~ constitutes compliance with a Specification and

b. Completion of the LCO's ACTIONS ~~Required Actions~~ is not required when an LCO is met ~~within the specified Completion Time~~, unless otherwise specified.

There are two basic types of ACTIONS ~~Required Actions~~. The first type of ACTION ~~Required Action~~ specifies a time limit in which the LCO must be met. This time limit is the Completion Time to restore an inoperable system or component to OPERABLE status or to restore variables to within specified limits. If this type of ACTION ~~Required Action~~ is not completed ~~within the specified Completion Time~~, a shutdown may be required to place the unit in a MODE or condition in which the Specification is not applicable. (Whether stated as an ACTION ~~Required Action~~ or not, correction of the entered Condition is an action that may always be considered upon entering ACTIONS.) The second type of ACTION ~~Required Action~~ specifies the remedial measures that permit continued operation of the unit that is not further restricted by the Completion Time. In this case, compliance with the ACTIONS ~~Required Actions~~ provides an acceptable level of safety for continued operation.

Completing the ACTIONS ~~Required Actions~~ is not required when an LCO is met or is no longer applicable, unless otherwise stated in the individual Specifications.

Choosing to not perform a Required Action within the associated Completion Time is not a violation of the Technical Specifications provided that the LCO's ACTIONS are followed, or as allowed by LCO 3.0.5 or LCO 3.0.6. Choosing to not perform a Required Action must be done in a manner that does not compromise safety

The nature of some Required Actions of some Conditions necessitates that, once the Condition is entered, the Required Actions must be completed even though the associated Conditions no longer exist. The individual LCO's ACTIONS specify the Required Actions where this is the case. An example of this is in LCO 3.4.10, "RCS Pressure and Temperature (P/T) Limits."

The Completion Times of the Required Actions are also applicable when a system or component is removed from service intentionally. The reasons for intentionally relying on the ACTIONS include, but are not limited to, performance of Surveillances, preventive maintenance, corrective maintenance, or investigation of operational problems. Entering ACTIONS for these reasons must be done in a manner that does not compromise safety. Intentional entry into ACTIONS should not be made for operational convenience. Additionally, if intentional entry into ACTIONS would result in redundant equipment being inoperable, alternatives should be used instead. Doing so limits the time both subsystems/divisions of a safety function are inoperable and limits the time conditions exist which may result in LCO 3.0.3 being entered. Individual Specifications

may specify a time limit for performing an SR when equipment is removed from service or bypassed for testing. In this case, the Completion Times of the Required Actions are applicable when this time limit expires, if the equipment remains removed from service or bypassed.

When a change in MODE or other specified condition is required to comply with ACTIONS ~~Required Actions~~, the unit may enter a MODE or other specified condition in which another Specification becomes applicable. In this case, the Completion Times of the associated Required Actions would apply from the point in time that the new Specification becomes applicable, and the ACTIONS Condition(s) are entered."

Option 4b

The second option to clarify the application of Required Actions is to modify Section 1.3, "Completion Times," by adding an new Example.

The proposed Example 1.3-8 states:

EXAMPLE 1.3-8

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One channel inoperable.	A.1 Place channel in trip.	24 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours

Required Action A.1 specifies a remedial measure that permits continued operation of the unit that is not further restricted by the Completion Time. Whether stated as a Required Action or not, correction of the entered Condition is an action that may always be taken. While Condition A does not have an explicit Required Action to restore compliance with the LCO, LCO 3.0.2 allows activities to restore compliance with the LCO to be taken instead of placing the channel in trip. LCO 3.0.2 also allows voluntarily not performing the Required Action and entering Condition B at the expiration of the Completion Time. If the channel is not restored to OPERABLE status or placed in trip within 24 hours, Condition B is entered. If Required Action A.1 is met after Condition B is entered, Condition B is exited and operation may continue in accordance with Condition A.

In addition, the "Description," section of Section 1.3 contains the statement, "Required Actions must be completed prior to the expiration of the specified Completion Time." This statement is replaced with, "If the Required Actions are not completed within the specified Completion Time, the Condition for not performing the Required Action within the associated Completion Time (or LCO 3.0.3 if no such Condition exists) is entered."

This option is not the preferred approach. Section 1.3 describes Completion Times. The added example describes the use of Required Actions, not Completion Times, and may lead to confusion.

Conclusion

The difficulty of this issue is that the regulations and the Technical Specifications are not explicit regarding whether licensees have the option to not perform a Required Action provided that the Technical Specifications, as a whole, are followed. Both the industry and the NRC can point to Technical Specification and Bases wording, NRC documents, and historical events to support their positions. In the absence of guidance, NRC preference - backed by the ability to issue violations to licensees - prevails.

The most difficult problem in resolving the issue convince the NRC that there is a problem that needs a resolution other than the resolution that the NRC has already provided.

Attachment A

Excerpt from Inspection Report 05000458/2005005

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

February 13, 2006

Paul D. Hinnenkamp
Vice President - Operations
Entergy Operations, Inc.
River Bend Station
5485 US Highway 61N
St. Francisville, Louisiana 70775

SUBJECT: RIVER BEND STATION - NRC INTEGRATED INSPECTION REPORT 05000458/2005005

Dear Mr. Hinnenkamp:

On December 31, 2005, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your River Bend Station. The enclosed integrated inspection report documents the inspection findings which were discussed with you and other members of your staff on January 4, 2006.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, two NRC identified findings and one self-revealing finding were evaluated under the risk significance determination process as having very low safety significance (Green). The NRC has also determined that violations are associated with these findings. However, because these violations were of very low safety significance and were entered into your corrective action program, the NRC is treating these violations as noncited violations, consistent with Section VI.A.1 of the NRC's Enforcement Policy. If you contest the violations or the significance of the violations, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011-4005; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the River Bend Station facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

/RA/

Kriss M. Kennedy, Chief
Project Branch C
Division of Reactor Projects

Docket: 50-458
License: NPF-47

Enclosures:
NRC Inspection Report 05000458/2005005
w/Attachment: Supplemental Information

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SUMMARY OF FINDINGS

IR 05000458/2005005; 10/01/2005 - 12/31/2005; River Bend Station; Licensed Operator Requalification, Operator Performance During Nonroutine Plant Evolutions, Permanent Plant Modifications.

The report covered a 3-month period of routine baseline inspections by resident inspectors and announced baseline inspections by regional emergency planning, operations, and radiation protection inspectors. Three Green noncited violations were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Initiating Events

- Green. The NRC identified a noncited violation of Technical Specification 3.4.1.A for the licensee's failure to shut down one reactor recirculation loop within 2 hours of determining that jet pump loop flow mismatch was greater than 5 percent while operating at greater than 70 percent of rated core flow. On October 31, 2005, the Reactor Recirculation Flow Control Valve B hydraulic power unit tripped because of a blown control power fuse, causing Flow Control Valve B to drift open. Operators throttled closed Flow Control Valve A to maintain reactor power at 100 percent, resulting in a jet pump loop flow mismatch of approximately 8.2 percent. The flow mismatch existed for 4.5 hours. The licensee entered this into their corrective action program as Condition Report CR-RBS-2006-00274.

  The finding was more than minor because, if left uncorrected, it would become a more significant safety concern. Matched recirculation loop flows is an assumption used in the accident analysis for a loss of coolant accident resulting from a loop break. A flow mismatch could result in core response that is more severe than assumed in the accident analysis. The significance of this finding could not be evaluated using MC 0609, "Significance Determination Process." Based on management review, the finding was determined to be of very low safety significance based on the short duration of the flow mismatch, 4.5 hours, and the low likelihood of a loss of coolant accident during that time. The cause of this finding is related to the crosscutting element of human performance in that operators failed to implement Technical Specification requirements (Section 1R14).

Cornerstone: Mitigating Systems

- Green. A self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control, was identified for the licensee's failure to address the worst case conditions in the sizing calculation for the reactor core isolation cooling turbine exhaust

manager and members of plant management team present in the control room at the time. The following documents were reviewed by the inspectors as part of this inspection:

- Main Control Room Logs, October 31, 2005
- CR-RBS-2005-03748, During Filter RCS-FLTR2B replacement, technicians bumped an electrical cable, causing a trip of the reactor recirculation flow control Valve B hydraulic power unit
- W0 00075986, Replace grounded connection to Pressure Switch RCS-PDS90B
- SOP-0003, Reactor Recirculation System, Revision 35
- TS limiting condition for operation (LCO) 3.4.1 and applicable Bases

i. Findings

Introduction: The inspectors identified a Green noncited violation of TS Action 3.4.1.A.1 for the licensee's failure to restore compliance with LCO 3.4.1 or shut down one RR loop within 2 hours of determining that RR loop jet pump flow mismatch was greater than 5 percent while operating at greater than 70 percent of rated core flow.

Description: On October 31, 2005, at 2:54 p.m., the RR FCV B HPU tripped. As a result, RR FCV B began to drift open. The operators took action to limit or stop the gradual opening of RR FCV B. As RR FCV B continued to open, operators throttled closed RR FCV A to maintain reactor power less than 100 percent.

At 3:06 p.m., the operators entered TS LCO Condition 3.4.1.A because the RR loop jet pump flow mismatch exceeded 5 percent with the plant operating at greater than 70 percent rated core flow. The highest flow mismatch was 8.2 percent. TS Action 3.4.1.A.1 required the licensee to shut down one recirculation loop with 2 hours.

The licensee issued a work request and began to troubleshoot the HPU trip. At the same time, operators requested that reactor engineers develop a reactivity control plan to insert control rods to lower reactor power. This would allow operators to reopen RR FCV A to reduce the RR jet pump loop flow mismatch to less than the required 5 percent.

At 4:24 p.m., the licensee determined that the cause for the HPU trip was a blown control power fuse. The fuse blew as a result of a grounded wire to a filter high differential pressure switch, which was bumped by maintenance technicians who were changing the filter cartridge. The inspectors asked the operators and licensee management if they intended to shut down one RR loop or perform the actions necessary to reduce the jet pump flow mismatch to less than 5 percent, as required by TS 3.4.1. The licensee responded that they did not want to maneuver the plant and change core conditions, which might exacerbate the existing condition of two leaking fuel bundles.

At 5:06 p.m., the operators exited TS Action 3.4.1.A without shutting down one RR loop or reducing jet pump loop flow mismatch to less than 5 percent. Instead they entered TS Action 3.4.1.D.1, which required that the reactor be placed in Mode 3 in 12 hours. When asked, the operators and licensee management stated that they could commence a plant shutdown within the next 6 hours and still meet the requirement to be in Mode 3 in 12 hours. They also stated that at the 6-hour point, they would commence the shutdown with the reactivity control plan to reduce reactor power by inserting control rods and open RR FCV A to reduce jet pump loop flow mismatch to less than 5 percent. If that was successful, they would then exit TS LCO 3.4.1.

Subsequently, the repairs were completed to the pressure switch wire, the control power fuse was replaced, and RR FCV B HPU was restarted. Following a one-hour warmup, the RR FCV B HPU was returned to service. RR jet pump loop flow was reduced below 5 percent and the licensee exited TS LCO 3.4.1. at 7:36 p.m., 4.5 hours after entry into TS LCO Condition 3.4.1.A.

The inspectors determined that: (1) when the cause of the trip of RR FCV B HPU was determined to be the grounded pressure switch wire, the licensee knew that the time to make the repairs and return the HPU to service would exceed the 2-hour completion time of TS Action 3.4.1.A.1; and (2) the licensee was capable of restoring RR jet pump loop flow mismatch to less than 5 percent or shutting down one RR loop within the 2-hour completion time of TS Action 3.4.1.A.1.

Analysis: The licensee's failure to restore compliance with TS LCO 3.4.1 or complete the required action of TS 3.4.1.A.1 to shut down one RR loop within 2 hours was a performance deficiency. The finding was more than minor because, if left uncorrected, it would become a more significant safety concern. According to TS LCO 3.4.1 Bases, the operation of the RR pumps is an initial condition assumed for the design basis loss-of-coolant accident (LOCA). During a LOCA caused by a RR loop break, the intact RR loop is assumed to provide coolant flow during the first few seconds of the accident. The initial core flow decrease is rapid because the RR pump in the broken loop ceases to pump water through the vessel almost immediately. The pump in the intact loop coasts down more slowly. This pump coast down governs the core flow response for the next several seconds until the jet pump suctions are uncovered. The analyses assume that both RR loops are operating at the same flow prior to the LOCA. However, if the LOCA analysis is reviewed for an initial jet pump flow mismatch with the break assumed to be in the loop with the higher flow, the flow coast down and core response are potentially more severe, since the intact loop starts at a lower flow rate.

The significance of this finding could not be evaluated using MC 0609, "Significance Determination Process." Based on management review, the finding was determined to be of very low safety significance based on the short duration of the flow mismatch, 4.5 hours, and the low likelihood of a LOCA during that time. The cause of this finding is related to the crosscutting element of human performance in that operators failed to implement TS requirements.

Enforcement: TS LCO 3.4.1 states that two RR loops shall be in operation with matched flows when the reactor is in Modes 1 or 2. If RR loop jet pump flow mismatch

is not less than or equal to 5 percent of rated core flow when operating at greater than or equal to 70 percent of rated core flow (Condition 3.4.1.A), then the licensee must shut down one RR loop (Required Action A.1) within 2 hours (Completion Time). Contrary to the above, on October 31 , 2005, 2 hours after RR loop jet pump flow mismatch was greater than 5 percent of rated core flow, the licensee exited TS 3.4.1.A.1 without shutting down one RR loop or restoring the jet pump flow mismatch to less than 5 percent. Because the finding is of very low safety significance and has been entered into the licensee's corrective action program as CR-RBS-2006-00274, this violation is being treated as an NCV in accordance with Section IV.A of the NRC Enforcement Policy and is identified as NCV 05000458/2005005-02: Failure to complete TS required actions within allowed completion time.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed selected operability determinations on the basis of potential risk importance. The selected samples are addressed in the condition reports (CRs) listed below. The inspectors assessed: (1) the accuracy of the evaluations, (2) the use and control of compensatory measures if needed, and (3) compliance with TS, the Technical Requirements Manual, the USAR, and other associated design-basis documents. The inspectors' review included a verification that the operability determinations were made as specified by Entergy Procedure EN-OP-104, "Operability Determinations," Revision 1. The operability evaluations reviewed were associated with:

- CR-RBS-2004-1270, Check valves in primary Containment 113' elevation airlock not included in the in-service testing program, reviewed on October 11, 2005

- CR-RBS-2005-3563, Check valves in primary Containment 113' elevation airlock not included in the in-service testing procedure, reviewed on October 19, 2005

- CR-RBS-2005-3568, In-service test program changed for primary containment 113' elevation airlock without changing in-service test procedure, reviewed on October 19, 2005

- CR-RBS-2005-04251, -04252, Safety-related Inverter ENB-INV01B1 frequency and safety-related instrument Bus VBS-PNL01B voltage out of specification high, reviewed on December 27, 2005

The inspectors completed two inspection samples.

f. Findings

No findings of significance were identified.

Attachment B

Entergy Denial of Noncited Violation

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Rick J. King
Director, Nuclear Safety Assurance

March 24, 2006

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

Subject: Response to Non-cited Violation in IR 50-458/2005-005
River Bend Station - Unit License No. NPF-47 Docket No. 50-458

File Nos.: G9.5, G15.4.1

RBG-46550

RBF1-06-0062

Ladies and Gentlemen:

Entergy Operations, Inc. (EOI) River Bend Station (RBS) is providing a response on March 24, 2006, as discussed with Mr. Wayne Walker of your staff. The response addresses a Green Non-cited Violation in Inspection Report 50-458/2005-005 pursuant to the provisions of 10 CFR 2.201. Specifically, the Non-cited Violation concerned River Bend Station's implementation of Technical Specification (TS) Limiting Condition for Operation (LCO) 3.4.1.A, Condition 'A', Required Action A.1. The inspection report concluded that a Green Non-cited Violation of TS Action 3.4.1.A.1 occurred when the station failed to restore compliance with LCO 3.4.1 or shutdown one Reactor Recirculation Loop within 2 hours of determining that Reactor Recirculation Loop Flow mismatch was greater than 5% at power with greater than 70% rated core flow. Entergy's position is that no violation existed.

The NRC Enforcement Manual and previous enforcement precedence concludes that, no violation exists unless all actions are not completed within all applicable completion times. In this instance, RBS met the LCO requirements prior to the Required Completion time of Action 'D'. Therefore, Entergy respectfully requests that the NRC reconsider their conclusion and find that no violation of TS 3.4.1 occurred.

JE01

Entergy agrees that the operators had an alternative to restore recirculation flow mismatch or shutdown a recirculation loop to satisfy TS 3.4.1.A, Condition 'A', Required Action A.1; however, Entergy does not believe this was the most prudent course of action allowed by the RBS Technical Specifications. Operators are trained to not make decisions in haste that may lead to non-conservative actions. In their initial response to the event, the operating crew was concerned about the current plant conditions and was focused on stabilizing the plant and minimizing the impact to the reactor and its systems.

The operators believed, with a high level of confidence, that the cause of the mismatch would be quickly identified and corrected. This high level of confidence was reasonable because bumping of the Flow Control Valve 'B' conduit was coincident with the initiation of the flow mismatch. Couple this information with the fact that a blown fuse was identified, logically supported that the condition could be fixed within the available 14 hours[1] allowed by TS.

In lieu of removing a Reactor Recirculation Loop from operation, the operating crew chose instead to pursue placing the unit in Mode 3. When this decision was made, actions were initiated to prepare for the safe shutdown of the unit in accordance with LCO 3.4.1.A, Condition 'D', Required Action D.1. This course of action is judged to be less risk to overall plant safety than the transient associated with removing a Reactor Recirculation Loop from operation. Therefore, it was the judgment of the operators that minimizing the amount of time that the station was operated in an off-normal condition (less than normal two recirculation loop operation), would minimize risk.

Entergy's central concern is ensuring a consistent approach to implementing Technical Specification Action Statements. If this non-cited violation's concepts were generically applied to other Technical Specifications, it would result in limiting the appropriate use of prudent operator judgment and conservative decision making imbedded in the basis and mechanics of Technical Specifications; thereby changing previously accepted practices and principles used to comply with Technical Specifications.

A more detailed discussion of the basis for Entergy's conclusion that no violation should be assessed is provided in Attachment 1. Attachments 2 and 3 are provided as a reference.

---

[1] TS LCO 3.4.1.A Condition 'A', Required Action A.1 allows 2 hours to shutdown a recirculation loop and Condition 'D' Required Action D.1 allows 12 hours to be in Mode 3.

Should you have any questions regarding the attached information, please contact Mr. David Lorfing of my staff at (225) 381-4157.

Sincerely,

RJK/rlb

Attachments:

(1) Reply to Non-cited Violation 50-458/2005005-02

(2) River Bend Station Technical Specifications Section 3.4.1, Recirculation Loops Operating (Excerpt)

(3) River Bend Station Technical Specifications Section 3.3.1.1, RPS Instrumentation (Excerpt)

CC:

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Non- Cited Violation

During a NRC inspection completed on December 31, 2005, a violation of NRC requirements was identified:

> "The NRC identified a non-cited violation of Technical Specification 3.4.1.A for the licensee's failure to shut down one reactor recirculation loop within 2 hours of determining that jet pump loop flow mismatch was greater than 5 percent while operating at greater than 70 percent of rated core flow. On October 31, 2005, the Reactor Recirculation Flow Control Valve (FCV) 'B' hydraulic power unit tripped because of a blown control power fuse, causing Flow Control Valve 'B' to drift open. Operators throttled closed Flow Control Valve 'A' to maintain reactor power at 100 percent, resulting in a jet pump loop flow mismatch of approximately 8.2 percent. The flow mismatch existed for 4.5 hours. The licensee entered this into their corrective action program as Condition Report CR-RBS-2006-00274 [...] Based on management review, the finding was determined to be of very low safety significance based on the short duration of the flow mismatch, 4.5 hours, and the low likelihood of a loss of coolant accident during that time."

Discussion

On October 31st, 2005, during a filter replacement and re-installation on Recirculation Hydraulic Power Unit ("HPU") 'B' Sub-loop 1, a conduit connected to a pressure switch was bumped and a small electrical arc was observed. As a result, FCV 'B' started to slowly drift from its initial position of 86.2% to approximately 92.6%, resulting in an increase in reactor power and a mismatch of recirculation flow between the two recirculation loops of approximately 8.2%.

Operators took immediate action to mitigate the flow mismatch and throttled closed recirculation FCV 'A' to maintain reactor power less than 100%. At 1506 on October 31st, 2005, operators entered TS 3.4.1.A, Condition 'A' because recirculation loop flow mismatch exceeded 5% with >70% rated core flow.

Corrective actions to evaluate and repair the faulted pressure switch and restore FCV 'B' to normal operation were initiated immediately. Given their knowledge that maintenance activities had coincided with the onset of the recirculation flow mismatch, operations personnel had high confidence in the ability to quickly restore recirculation flow parameters. In addition, based upon the operator's judgment, priority was placed on conservatively minimizing plant maneuvers which might potentially elevate two fuel leaks that the station had been monitoring.

Approximately one hour and eighteen minutes following entry into TS 3.4.1.A, Condition 'A', Required Action 'A', RBS determined the cause of the flow mismatch. In lieu of removing a Reactor Recirculation Loop from operation, Entergy chose instead to place the unit in Mode 3, if repairs could not be successfully implemented as expected. This action would satisfy LCO 3.4.1.A, Condition 'D', Required Action D.1.

On October 31st, 2005, at 1706, the operators entered LCO 3.4.1, Condition 'D', a twelve-hour shutdown Action Statement. When this decision was made, preparations were being made for the safe shutdown of the unit. By doing so, RBS maintained the acceptable safety levels; as allowed by TS. Approximately four and one half hours after entering TS LCO 3.4.1.A, Condition 'A', RBS restored recirculation loop flows (October 31st, 2005, @ 1936).

The NRC stated in their inspection report that the failure to comply with TS LCO 3.4.1 or complete the required action of TS 3.4.1.A.1 was a violation. Entergy respectfully disagrees with the NRC's position that this action was a violation and is providing the following information to support our denial of this violation.

Regulatory Basis

10 CFR50.36 Technical Specifications

Technical Specifications for operating reactors include a section specifying LCOs, which are the lowest functional capability or performance levels of equipment required for safe operation of the facility. This definition of the LCO is taken from 10 CFR50.36. Additionally,10 CFR50.36 states that when a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met.

The order of actions stated in 10 CFR50.36 lists the shutdown of the reactor as the first option, and taking remedial actions as the second option. This order is important because it lays a foundation for how technical specification actions are treated. This clearly supports the breadth of technical specifications to include all interim actions up to reactor shutdown—or exiting the mode of applicability.

Technical Specification Section 1.3 – Completion Time

Technical Specification Section 1.3 provides information for the use of Completion Times in the Action section of individual LCOs. These serve as fundamental principles for implementation of TS.

Example 1.3-6 in TS Section 1.3 is similar to TS LCO 3.4.1.A. In this example, Condition 'A' contains two Required Actions (A.1 and A.2); either of which satisfy the Condition. Condition 'B' requires shutdown if the Required Actions of Condition 'A' are not met. The guidance states that if the Completion Time of A.1 or A.2 is not met, Condition 'B' is entered. It is noted that Required Action A.2 (Reduce thermal power to less than 50% RTP) in this example is very similar to LCO 3.4.1. While the example does not state the circumstances that allow Condition 'B' to be entered, it implies that a choice to move from Condition 'A' to Condition 'B' exists. The basis for the non-cited violation implies that entry into Condition 'B' without the completion of the Actions in Condition 'A' is only allowed if there is no method for compliance with the Actions of Condition 'A'. The NRC Region IV violation basis seems to be in conflict with the TS Section 1.3, Example 1.3-6.

Application of LCO 3.0.2

LCO 3.0.2 provides the applicability rules related to application of LCO Required Actions when a LCO is not met. In general, LCO 3.0.2 provides three remedies to address not meeting a LCO. The first is to comply with the Required Actions, the second is to restore compliance with the LCO, and the third is to place the plant in a mode of operation that is not applicable for the LCO. The Bases for LCO 3.0.2 states: "Completing the Required Actions is not required when an LCO is met or is no longer applicable, unless otherwise stated in the individual Specifications."

In the case of Technical Specification LCO 3.4.1, Condition 'D' provides the approach for accomplishing the Required Action to exit the Applicability of the LCO when the Required Actions of Condition 'A' are not met. During the specific event, RBS complied with the ACTIONS section of the LCO by entering and complying with the Required Actions of Condition 'D'. By doing so, the Required Actions of Condition 'A' were no longer applicable[2].

[2] This principle is also supported by TS Section 1.3 which states: "An ACTIONS Condition remains in effect and the Required Actions apply until the Condition no longer exists or the unit is not within the LCO Applicability."

Application to Similar RBS Technical Specifications

Another example that demonstrates the fundamental principles of operator judgment and decision making during implementation of Technical Specification Actions is TS Bases 3.3.1.1, RPS Instrumentation. An excerpt is provided below: (Attachment 3 includes the TS Actions).

> TS Bases 3.3.1.1 "RPS Instrumentation":
>
> Required Actions A.1 and A.2 [...] If the inoperable channel cannot be restored to OPERABLE status within the allowable out of service time, the channel or the associated trip system must be placed in the tripped condition per Required Actions A.1 and A.2. Placing the inoperable channel in trip (or the associated trip system in trip) would conservatively compensate for the inoperability, restore capability to accommodate a single failure, and allow operation to continue. *Alternately, if it is not desired to place the channel (or trip system) in trip* (e.g., as in the case where placing the inoperable channel in trip would result in a full scram), *Condition D must be entered and its Required Action taken [...]*

While the Actions of TS 3.3.1.1.A.1 and A.2 require the inoperable channel(s) to be placed in trip, the Bases gives a clear choice to apply operating judgment to not do so and move to Condition 'D'. The NRC Region IV violation seems to be in conflict with this fundamental principle.

NRC Enforcement Manual NUREG/BR 0195

The NRC Enforcement Manual implements the 10CFR50.36 statements essentially unaltered by stating that Action Statements prescribe remedial measures and completion times required for each condition where the LCO is not met. Furthermore, the Enforcement Manual goes on to state that entry into a LCO is not a violation of license requirements. Additionally, it states, a violation does not exist based solely on the failure to restore the equipment to operable status within the required completion time.

In the NRC Enforcement Manual Chapter 8, it explains that a violation occurs *only* when the LCO is not met and all necessary actions have not been completed within all applicable completion times.

See excerpt below:

> Example 1
>
> "When a pump is declared inoperable, Condition A is entered. If the pump is not restored to OPERABLE status within 7 days (the AOT), a violation does not exist. Instead, Condition B is entered and the Completion Time clocks for Required Actions B.1 and B.2 start. A total of 12 hours is allowed for reaching MODE 3 and a total of 36 (not 48 hours) is allowed for reaching MODE 4 from the time that Condition B was entered. If MODE 3 is reached within 6 hours, the time allowed for reaching MODE 4 is the next 30 hours because the total time allowed for reaching MODE 4 is 36 hours. *A violation exists if the pump cannot be restored to OPERABLE status after 7 days and the unit is not placed in MODE 3 within the next 12 hours or a violation exists if the pump cannot be restored to OPERABLE status after 7 days and the unit is not placed in MODE 4 within the next 36 hours.*"

RBS Specific Enforcement Precedence

Previous enforcement precedence appears to have been established when NRC responded to RBS Inspection Report 96-12 dated June 12, 1996. In this inspection report, an apparent violation of Technical Specification 3.8.1, Condition 'B' was identified based on an emergency diesel generator being inoperable for greater than 72 hours. RBS disagreed with this violation and provided an evaluation of the apparent violation to NRC. This evaluation, in part, was based on the premise that the Technical Specifications are not violated until all of the Actions available within the LCO ACTION section are expended. In this specific instance, a diesel was restored to service in 83 hours. This exceeded the 72 hour action time allowed by Technical Specification Condition 'B'. However, an additional action was to achieve hot shutdown within 12 hours if Condition 'B' was not met. In a letter to RBS dated October 11, 1996, the NRC reconsidered its position on this violation stating:

> "As to the first apparent violation, we have withdrawn it as NRC agrees with Entergy's position that the TS, in this case, allow(s) a total of 84 hours to place the plant in Mode 3 and that a violation did not occur."

In the response, the NRC effectively stated that a violation of the ACTION for the LCO would only result if one failed to satisfy the final Required Action. NRC's previous conclusion in this instance supports that a violation of TS 3.4.1 should not be assessed.

Technical Specification 3.4.1 Action Statements provide two hours to place the unit in single loop operation, and an additional 12 hours to place the unit in hot shutdown. Applying a similar logic, violation of the Technical Specification would not occur until the unit has exceeded 14 hours in the condition without achieving hot shutdown. Therefore, in view of the aforementioned precedence, Entergy concludes that no violation of the Technical Specifications should be assessed.

Relationship to Reporting Guidelines

NRC regulation 10 CFR 50.73(a)(2)(i)(B) requires reporting "any operation or condition which was prohibited by the plant's Technical Specifications[...]" Section 3.2.2 of the Event Reporting Guidelines 10CFR50.72 and 50.73, Revision 2 (NUREG 1022), provides guidance on this reporting requirement. In Example 1 of this section, a Licensee Event Report (LER) is determined to be required when the initial completion time and the shutdown action statement completion time has been exceeded.

> "An LER was required because the condition existed longer than allowed by the technical specifications (7-day LCO allowed outage time and the shutdown action statement time of 8 hours). Had the inoperability been identified and corrected within the required time, the event would not be reportable."

Applying this guidance to the specific case of Technical Specification 3.4.1, a LER would not be required until 14 hours had been exceeded without entering Mode 3. This non-cited violation appears to be in conflict with the reporting guidance as it states that a violation of Technical Specifications occurred after two hours without placing the unit in single loop operation. In general, violations of Technical Specifications are considered to be reportable under this requirement. However, NUREG 1022 is clear that this condition would not be reportable.

River Bend Station Technical Specifications 3.4.1

At River Bend Station, Technical Specification 3.4.1, Recirculation Pumps Operating, governs operation of the reactor recirculation loops. The full text of TS 3.4.1 is attached as Attachment 2. The River Bend TS 3.4.1 is typical of standard TS Action Statements in that the TS first identifies the time necessary to restore the piece of inoperable equipment, and then identifies the time necessary to take other action, such as compensatory measures or shutdown, in the event that compliance with the LCO is not restored or the Required Action and associated Completion Time of Condition 'A' is not met. Specifically, the Bases of Action A.1 states that the mismatched flows must be matched within two hours. The time necessary to take other action is then identified: one recirculation loop must be shut down within two hours, or the unit must be brought to Mode 3 if compliance with the LCO is not met.

Conclusion

The over arching concern to Entergy is the potential for precedence setting if NRC continues to view this instance as a violation of Technical Specifications. Specifically, licensees would not be able to follow time tested principles used to implement Technical Specification actions nor would they be able to determine when conditions are prohibited by Technical Specifications when determining reportability. Current regulatory guidance does not support a determination that this specific issue is a violation. If the NRC decides to uphold this instance as a violation, it would be significant shift in industry and regulatory practice. This would result in a genuine need for industry generic action on the part of the NRC.

According to the Enforcement Manual, Action Statements identify the time necessary to restore the piece of inoperable equipment, identify the time necessary to take other remedial action, such as compensatory measures, or in the event that compliance with the LCO is not restored, shutdown. These fundamental principles are further supported by RBS specific enforcement precedence—a violation would occur *only* when the LCO is not met and all necessary actions have not been completed within all applicable completion times. Thus, the NRC should find no violation of TS 3.4.1 occurred. Entergy believes that by minimizing the amount of time that the station was operated in an off-normal condition[3], and complying with TS, operators had minimized risk. Upon discovery of the recirculation mismatch, RBS personnel

[3] Whether RBS moved controls rods, adjusted flow and or secured a recirculation loop additional maneuvers would have presented additional operational opportunities for error and increased the effects of recirculation flow excursions.

quickly identified the cause of the mismatch and responsibly planned, allocated manpower, and executed the repair to the flow control valve to restore the recirculation flow mismatch. Factors underlying the operator's decisions were the following:

- The need to immediately stabilize the plant upset resulting from the flow mismatch
- A conservative concern for fuel and reactivity management and the desire to limit unnecessary transients—single loop, driving rods, etc.
- Full compliance with *all* applicable TS LCO 3.4.1.A Conditions and Required Actions (including Condition 'D', Required Action D.1)
- A high confidence that the cause of the recirculation flow mismatch was understood
- Restoration of the flow control valve would occur in a reasonable time period

Acting deliberately, the operators took immediate action to throttle closed Recirculation Flow Control Valve (FCV) 'A' to compensate for FCV 'B' which had drifted open creating a mismatch. Once this immediate response was taken, operators stabilized the plant.

Actions were initiated to identify the specific cause of the FCV 'B' drifting. Since the bumping of the conduit coincided with the initiation of FCV 'B' drifting, it was believed that the bumping was related to the cause. Within approximately one hour and eighteen minutes, RBS determined the specific cause and it was apparent that the valve would be restored in a short period of time. Ultimately, the valve was repaired, a warm-up completed and the Recirculation Flow mismatch mitigated within approximately four and one half hours.

Despite these efforts, RBS did not restore recirculation flow mismatch within the two hours allocated by TS LCO 3.4.1.A, Condition 'A', Required Action A.1. However, as allowed by TS Condition 'D', RBS personnel chose to repair the equipment and restore it to full functionality within the Completion Time allowed under Condition 'D', rather than implement the compensatory measures identified under Required Action A.1. In the judgment of the operators, this course of action was in full compliance with TS and precluded unnecessary plant maneuvering while minimizing the time that the plant was in an off-normal condition (either mismatched flows or single loop).

RBS believes that the actions taken were within the scope of actions stated in TS 3.4.1 for the existing plant conditions. For this specific circumstance, entry into Condition 'D' of LCO 3.4.1 was appropriate based on the use and application principles of Technical Specification Section 1.0 and Technical Specification LCO 3.0.2. Entergy believes that this position is also supported by the NRC Enforcement Manual, NUREG 1022 Revision 2, Event Reporting Guidelines, and relevant RBS enforcement precedence. Entergy does not agree that a violation of TS LCO 3.4.1 occurred. Therefore, NRC should not assess a violation of TS 3.4.1, Action 'A'.

ATTACHMENT 2
River Bend Technical Specifications (Excerpt)
Recirculation Loops Operating

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.1 Recirculation Loops Operating

LCO 3.4.1

A. Two recirculation loops shall be in operation with matched flows.

OR

B. One recirculation loop shall be in operation with:

1. THERMAL POWER ≤ 77.6% RTP;
2. Total core flow within limits;
3. LCO 3.2.1,"AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)," single loop operation limits specified in the COLR;
4. LCO 3.2.2,"MINIMUM CRITICAL POWER RATIO (MCPR)," single loop operation limits specified in the COLR; and
5. LCO 3.3.1.1, "Reactor Protection System (RPS) Instrumentation," Function 2.b (Average Power Range Monitors Flow Biased Simulated Thermal Power - High), Allowable Value for single loop operation as specified in the COLR.

APPLICABILITY: MODES 1 and 2.

ATTACHMENT 2
River Bend Station Technical Specifications (Excerpt)
Recirculation Loops Operating

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Recirculation loop jet pump flow mismatch not within limits.	A.1 Shutdown one recirculation loop.	2 hours
B. THERMAL POWER > 77.6% RTP during single loop operation.	B.1 Reduce THERMAL POWER to ≤ 77.6% RTP.	1 hour
C. Requirements B.3, B.4, or B.5 of the LCO not met.	C.1 Satisfy the requirements of the LCO.	24 hours
D. Required actions and associated completion times of conditions A, B, or C not met. OR No recirculation loops in operation.	D.1 Be in Mode 3.	12 hours

ATTACHMENT 3
River Bend Station Technical Specifications (Excerpt)
RPS Instrumentation

3.3.1.1 Reactor Protection System (RPS) Instrumentation

LCO 3.3.1.1 The RPS instrumentation for each Function in Table 3.3.1.1-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.1.1-1.

ACTIONS

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

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required channels inoperable.	A.1 Place channel in trip. OR A.2 Place associated trip system in trip.	12 hours 12 hours
B. One or more Functions with one or more required channels inoperable in both trip systems.	B.1 Place channel in one trip system in trip. OR B.2 Place one trip system in trip.	6 hours 6 hours
C. One or more Functions with RPS trip capability not maintained.	C.1 Restore RPS trip capability.	1 hour
D. Required Action and associated Completion Time of Condition A, B, or C not met.	D.1 Enter the Condition referenced in Table 3.3.1.1-1 for the channel.	Immediately
E. As required by Required Action D.1 and referenced in Table 3.3.1.1-1.	E.1 Reduce THERMAL POWER to < 40% RTP.	4 hours

3.3 INSTRUMENTATION

3.3.1.1 Reactor Protection System (RPS) Instrumentation

LCO 3.3.1.1 The RPS instrumentation for each Function in Table 3.3.1.1-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.1.1-1.

ACTIONS

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

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. As required by Required Action D.1 and referenced in Table 3.3.1.1-1.	F.1 Reduce THERMAL POWER to < 23.8% RTP.	4 hours
G. As required by Required Action D.1 and referenced in Table 3.3.1.1-1.	G.1 Be in MODE 2.	6 hours
H. As required by Required Action D.1 and referenced in Table 3.3.1.1-1.	H.1 Be in MODE 3.	12 hours
I. As required by Required Action D.1 and referenced in Table 3.3.1.1-1.	I.1 Initiate action to fully insert all insertable control rods in core cells containing one or more fuel assemblies.	Immediately

Attachment C

NRC Response to Entergy Denial of Noncited Violation

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

June 22, 2006

EA-06-154

Paul D. Hinnenkamp
Vice President - Operations
Entergy Operations, Inc.
River Bend Station
St. Francisville, LA 70775

SUBJECT: NRC RESPONSE TO ENTERGY OPERATIONS, INC. DENIAL OF NONCITED VIOLATION 05000458/2005005-02

Dear Mr. Hinnenkamp:

On February 13, 2006, the NRC issued NRC Integrated Inspection Report 05000458/2005005 documenting the results of NRC inspection activities for the period October 1 through December 31, 2005. During this inspection, as documented in the report, the NRC identified a noncited violation of Technical Specification (TS) 3.4.1.A for the failure of River Bend Station personnel to shut down one reactor recirculation loop within 2 hours of determining that the recirculation loop jet pump flow mismatch was greater than 5 percent while operating at greater than 70 percent of rated core flow. In a letter dated March 24, 2006, you informed the NRC that Entergy Operations, Inc. was contesting this violation. Entergy's position was that River Bend Station complied with the requirements of TS 3.4.1; therefore, a violation did not occur. The NRC reviewed your letter dated March 24, 2006, and determined that Noncited Violation 05000458/2005005-02 was appropriate in that on October 31, 2005, a violation of TS 3.4.1, Condition A, did occur. This letter documents our basis for this decision.

On October 31, 2005, the Reactor Recirculation Flow Control Valve B hydraulic power unit tripped due to a blown control power fuse, causing Flow Control Valve B to drift open. Operators throttled closed Flow Control Valve A to maintain reactor power at 100 percent, resulting in a recirculation loop jet pump flow mismatch of approximately 8.2 percent. The operators entered TS 3.4.1, Condition A, because the reactor recirculation loop jet pump flow mismatch exceeded 5 percent with the plant operating at greater than 70 percent rated core flow. Two hours later, operators exited TS 3.4.1, Condition A, and entered TS 3.4.1, Condition D, which required that the reactor be placed in Mode 3 in 12 hours. The flow mismatch existed for 4.5 hours before repairs were completed and recirculation loop jet pump flow was restored to normal.

In your March 24, 2006, letter, you requested that the NRC reconsider our conclusion and find that a violation of TS 3.4.1 did not occur. Your letter indicated that the basis for contesting the violation was that the NRC Enforcement Manual and previous enforcement precedence

concludes that no violation of TS exists unless all actions are not completed within all applicable completion times. You stated that, in this instance, River Bend Station met the Limiting Condition for Operation (LCO) requirements prior to the required completion time of Action D.

Entergy agreed that the operators had an alternative to restore recirculation flow mismatch within limits or shut down a recirculation loop to satisfy TS 3.4.1.A, Condition A, Required Action A.1; however, Entergy did not believe this was the most prudent course of action allowed by the River Bend Station TS, citing operator training to not make decisions in haste that may lead to nonconservative actions. The NRC agrees that operators should operate the nuclear plant in a deliberate and conservative manner. However, TS are required to be followed and licensee's do have the option to request enforcement discretion if compliance with TS would involve an unnecessary plant transient.

Upon receipt of your letter, NRC staff, including members of the Office of Nuclear Reactor Regulation and the Office of Enforcement, initiated a review of the circumstances and documents related to this issue, including your bases for concluding that a violation did not occur. Based on this review, the NRC concluded that the violation, as documented in NRC Integrated Inspection Report 05000458/2005005, occurred as described.

Your basis for contesting the violation was primarily based on the premise that the NRC Enforcement Manual and previous enforcement precedence indicate that a TS violation does not exist unless all actions are not completed within all applicable completion times. Our review found that the NRC Enforcement Manual, Section 8.1.1.b, provides guidance on how to cite a violation for equipment inoperability. The guidance assumes that a licensee, upon entering an LCO required action, takes the necessary steps to complete the required TS action within the allotted completion time. If, for some reason (e.g., equipment malfunction or inaccessible equipment), a licensee attempts, but is unable, to complete the required action in the allotted completion time, the licensee would then enter the next appropriate TS required action. However, in response to the flow mismatch, River Bend Station personnel made a conscious decision not to take action to shut down one recirculation loop within the 2-hour completion time but, instead, at the end of the 2-hour period, entered Required Action D in lieu of completing Required Action A.1. The guidance in the Enforcement Manual was not intended to apply to a situation in which the licensee chooses not to meet the required action in the required completion time.

With respect to previous enforcement precedence, you cited an apparent violation documented in NRC Inspection Report 50-458/96-12 associated with an emergency diesel generator being inoperable for greater than 72 hours. In this example, a diesel generator was restored to service 83 hours after it was declared inoperable. This exceeded the 72-hour action time allowed by TS. You stated that the NRC, in a letter dated October 11, 1996, reconsidered its position on this violation stating that the apparent violation was withdrawn as the NRC agreed with Entergy's position that the TS, in this case, allowed a total of 84 hours to place the plant in Mode 3 and that a violation did not occur.

In the above scenario, River Bend Station personnel, upon discovery of the condition, took actions to repair the emergency diesel generator and restore it to an operable status prior to entering Mode 3. The NRC appropriately agreed with the licensee's determination that a total

of 84 hours was allowed by TS to place the plant in Mode 3 and that a violation did not occur. The current disputed noncited violation differs from this example in that River Bend Station personnel made no attempt to correct the flow mismatch or shut down one recirculation loop during the 2-hour completion time, despite the fact that it was within their capability to do so. Two hours after entering Required Action A.1, the flow balance was not restored and operators chose to enter Condition D. Personnel elected not to take the actions described in Required Action A.1, as opposed to the above scenario in which the licensee was unable to restore operability of the emergency diesel generator within 72 hours.

In your letter, you cited TS 1.3 as providing guidance for the use of completion times in the action section of individual LCOs and that the basis for the NRC noncited violation seemed to be in conflict with TS Section 1.3, Example 1.3-6. Based on the NRC's review, we determined that Example 1.3-6 clearly states that entry into Condition A offers a choice between Required Action A.1 or A.2. If Required Action A.1 is followed and the action is not met within the completion time (plus the extension allowed by SR 3.0.2), Condition B is entered. If Required Action A.2 is followed and the completion time of 8 hours is not met, Condition B is entered. If after entry into Condition B, Required Action A.1 or A.2 is met, Condition B is exited and operation may then continue in Condition A. There is no implication that a choice exists to move from Condition A to Condition B. TS actions which offer a choice are designated by an "or" statement. In this example, the actions listed in Condition A.1 or Condition A.2 are required to be completed. If they cannot be completed, then the actions of Condition B must be completed. The noncited violation concerns LCO 3.4.1 required actions in Conditions A and D. Unlike Example 1.3-6, there is no "or" connecter in LCO 3.4.1. Upon discovery that a specified condition exists, required actions must be completed. In this case, operators were required to take the actions required by TS 3.4.1.A.1 to shut down one recirculation loop within 2 hours. The bases section of the RBS TS emphasizes this requirement and provides the following basis: "With both recirculation loops operating but the flows not matched, the recirculation loops must be restored to operation with matched flows within 2 hours. If the flow mismatch cannot be restored to within limits within 2 hours, one recirculation loop must be shutdown." The bases section further states that: "The 2 hour Completion Time is based on the low probability of an accident occurring during this time period, on a reasonable time to complete the required action, and on frequent core monitoring by operators allowing abrupt changes in core flow conditions to be quickly detected." The required action for Condition A should have been completed within the 2-hour completion time to avoid operating the plant in an unanalyzed condition as defined in the bases of TS 3.4.1. An additional action available to the operators was to restore the flow balance between the recirculation loops.

You stated that LCO 3.0.2 provides the applicability rules related to application of LCO required actions when an LCO is not met. You described your response to the flow mismatch as being supported by LCO 3.0.2. Based on the NRC's review, we determined that the bases for LCO 3.0.2 establish that, upon discovery of a failure to meet an LCO, the associated actions shall be met. The completion time of each required action for an action condition is applicable from the point in time that an action condition is entered. The required actions establish those remedial measures that must be taken within specified completion times when the requirements of an LCO are not met. The Bases for LCO 3.0.2 states that the reasons for intentionally relying on the actions include, but are not limited to, performance of surveillances, preventive maintenance, corrective maintenance, or investigation of operational problems. Entering

actions for these reasons must be done in a manner that does not compromise safety. On October 31, 2005, Condition A was entered at 3:06 p.m. The operating log indicates that the operators did not attempt to shut down one recirculation loop within the 2-hour completion time, thus allowing the plant to enter into an unanalyzed condition as defined in the Bases of TS 3.4.1. At 5:06 p.m., Condition D was entered. Because the required actions of Condition A had not been met in the required completion time, the plant remained in an unanalyzed condition for another 2.5 hours until the recirculation flows were matched within TS limits.

You stated that Entergy's overarching concern is the potential for precedence setting if the NRC upholds this violation in that licensees would not be able to follow time tested principles used to implement TS actions and that upholding the violation would be a significant shift in industry and regulatory practice. As discussed above, proper implementation of TS requires licensee's to implement the required actions when LCOs are not satisfied. This is a fundamental concept of TS implementation and compliance. In addition, a licensee has the option to request an exigent TS change or enforcement discretion if compliance with TS would involve an unnecessary plant transient. In this case, TS 3.4.1, Required Action A.1, was required to be completed within 2 hours of the flow mismatch. The bases for this action, and the 2-hour completion time, were described in the Bases for TS 3.4.1. Required Action A.1 was an action that was within the operators' ability to complete within 2 hours. Additionally, operators could have taken actions to restore the recirculation loop jet pump flow mismatch within TS limits and restore compliance with TS 3.4.1.A. In this case, operators incorrectly determined that these actions were not required. The NRC's position is that upholding the violation is consistent with the principles and precedence regarding the proper implementation of TS.

You characterized the action required by Required Action A.1 as a "compensatory action." Actions required to be implemented when LCOs are not satisfied are required actions that must be implemented in accordance with the provisions of the specific TS.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and your response (if any) will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/ by AVegel

Arthur T. Howell III, Director
Division of Reactor Projects

Docket: 50-458
License: NPF-47