Non-Concurrence Process Record for NCP-2011-009

The U.S. Nuclear Regulatory Commission (NRC) strives to establish and maintain an environment that encourages all employees to promptly raise concerns and differing views without fear of reprisal and to promote methods for raising concerns that will enhance a strong safety culture and support the agency's mission.

Individuals are expected to discuss their views and concerns with their immediate supervisors on a regular, ongoing basis. If informal discussions do not resolve concerns, individuals have various mechanisms for expressing and having their concerns and differing views heard and considered by management.

Management Directive MD 10.158, "NRC Non-Concurrence Process," describes the Non-Concurrence Process (NCP). http://pbadupws.nrc.gov/docs/ML0706/ML070660506.pdf

The NCP allows employees to document their differing views and concerns early in the decision-making process, have them responded to, and attach them to proposed documents moving through the management approval chain.

NRC Form 757, Non-Concurrence Process is used to document the process.

Section A of the form includes the personal opinions, views, and concerns of an NRC employee.

Section B of the form includes the personal opinions and views of the NRC employee's immediate supervisor.

Section C of the form includes the agency's evaluation of the concerns and the agency's final position and outcome.

NOTE: Content in Sections A and B reflects personal opinions and views and does not represent official factual representation of the issues, nor official rationale for the agency decision. Section C includes the agency's official position on the facts, issues, and rationale for the final decision.

The agency's official position (i.e., the document that was the subject of the non-concurrence) is included in ADAMS Accession Number ML111300570.

This record has been redacted prior to discretionary release to the public.

NRC FORM 757
NRC MD 10.158
(3-2009)

U.S. NUCLEAR REGULATORY COMMISSION

NON-CONCURRENCE PROCESS

SECTION A - TO BE COMPLETED BY NON-CONCURRING INDIVIDUAL

TITLE OF DOCUMENT	ADAMS ACCESSION NO.
NRC Inspection Report 05000397/2011002, Section 4OA2.3	
DOCUMENT SPONSOR	SPONSOR PHONE NO.
Wayne Walker	**817-860-8148**
NAME OF NON-CONCURRING INDIVIDUAL	PHONE NO.
David Proulx	**817-276-6561**

☐ DOCUMENT AUTHOR ☐ DOCUMENT CONTRIBUTOR ☑ DOCUMENT REVIEWER ☐ ON CONCURRENCE

TITLE	ORGANIZATION
Senior Project Engineer	**Branch A, DRP, Region IV**

REASONS FOR NON-CONCURRENCE

See attached.

☐ CONTINUED IN SECTION D

SIGNATURE David Proulx DATE 4/21/11

SUBMIT FORM TO DOCUMENT SPONSOR AND COPY TO YOUR IMMEDIATE SUPERVISOR AND DIFFERING VIEWS PROGRAM MANAGER

I do not concur with Section 4OA2.3 of NRC Inspection Report 05000397/2011002 for the following reasons:

1) Section 4OA2.3 issued a Severity Level IV noncited violation against 10 CFR 50.72(b)(3)(v)(D) for failure to report within 8 hours, a condition that would have prevented fulfillment of a safety function. This section also stated that NRC guidance would also have required the licensee to submit a Licensee Event Report (LER) for the issue discussed. I do not believe that an either an 8-hour report or an LER were required when the Low Pressure Core Spray (LPCS) system was briefly inoperable for less than its Technical Specification allowed outage time of 7 days. Thus, no violation of NRC requirements existed.

2) This event should not have been reportable as loss of a single train system (thus a loss of safety function) because LPCS is not a single train system, but a subsystem of two distinct safety functions. There is only one system with the name "Low Pressure Core Spray" (using semantics), but this system serves as a subsystem two functions. The first function is the low pressure coolant injection function which is met by any one of four subsystems RHR A, B and C, and LPCS. The second function is the core spray cooling function. The core spray function is met by either the HPCS or LPCS subsystems. Even if one were to allow that "low pressure core spraying" is in itself a function, when the plant is depressurized (according to the FSAR) the HPCS system is capable of supplying 6500 gpm of low pressure core spray cooling. And thus, meets the low pressure core spray function.

3) Technical Specifications are designed to reflect the fact that the LPCS system is a subsystem of the low pressure coolant injection and core spray cooling functions. Technical Specification 3.5.1 allows the LPCS system to be inoperable for up to 7 days. It also allows a combination of any two low pressure coolant injection sources to be inoperable for 72 hours. Other combinations would require entry into Technical Specification 3.0.3 and shutdown in 1 hour, because it is a loss of low pressure cooliant injection safety function. Similarly, if both the HPCS and LPCS systems are inoperable, the licensee is required to enter TS 3.0.3 because it represents a loss of the core spray cooling function. Logically, if LPCS were a single train system, then its failure would constitute a loss of safety function and would require entry into TS 3.0.3. The fact that the Improved Standard Technical Specifications allow a fairly liberal allowed outage time for loss of the LPCS system strongly suggests that the BWROG did not consider it a loss of safety function.

4) Requiring the licensee to inform the Headquarters Operations Officer and submit LERs for losses of a single subsystem of LPCS for less than the Technical Specification allowed outage time is a change to a previously accepted NRC position, and is thus a backfit. I do not believe that NRC has followed its process to impose a change in reporting criteria on licensees. Management Directive 8.4 and 10 CFR 50.109 require the NRC to follow specific processes for imposing industry-wide or plant specific

backfits. The fact that NRR plans to revise NUREG 1022, "Event Reporting Guidelines 10 CFR 50.72 and 50.73," Revision 2 to specifically require licensees to report single failures of the LPCS subsytem is a de-facto admission that it is a change in NRC position. If NRC believes that this is a compliance backfit (i.e. a backfit necessary to restore compliance) then the NRC should follow the process and document it as such.

5) The licensee provided a position paper to the NRC that refuted the NRC's position that a short term loss of the LPCS system was reportable. However, after numerous discussions with the NRC, the licensee recanted their position, so as not to look defensive, despite contacts with numerous other BWR licensee's and the BWR Owners Group that agreed with the position paper. Every other licensee contacted stated they would deny a violation similar to that discussed in Section 4OA2.3 of the inspection report. Independently, several senior residents at other BWR 5/6 product line plants (with the same ECCS package as Columbia Generating Station) have been contacted, and nearly all agree that a single failure of the LPCS system is not reportable.

Finally, the Statements of Consideration (SOC) for 10 CFR 50.72 and 50.73 that accompanied issuance of the event reporting rules provided insight as to the logic behind the reporting rules. The SOC for 10 CFR 50.72(b)(3)(v)(D) states that 8 hours to report conditions that result in a loss of safety function is required so that the NRC can make a prompt decision as to whether or not to initiate a special inspection. In the condition discussed in Section 4OA2.3, no loss of safety function occurred, and the system was restored well within its Technical Specification allowed outage time. NRC Region IV did not, and would not reasonably, initiate a Management Directive 8.3 "NRC Incident Investigation Process" evaluation for the short-term single failure of a safety subsystem to determine if a special inspection was required. Thus the 8-hour report to the Headquarters Operations Officer should not have been necessary in this instance or similar instances in the future.

NRC FORM 757
NRC MD 10.158
(3-2009)

U.S. NUCLEAR REGULATORY COMMISSION

NON-CONCURRENCE PROCESS

TITLE OF DOCUMENT	ADAMS ACCESSION NO.
NRC Inspection Report 05000397/2011002, Section 4OA2.3	

SECTION B - TO BE COMPLETED BY NON-CONCURRING INDIVIDUAL'S SUPERVISOR
(THIS SECTION SHOULD ONLY BE COMPLETED IF SUPERVISOR IS DIFFERENT THAN DOCUMENT SPONSOR.)

NAME	
TITLE	PHONE NO.
ORGANIZATION	

COMMENTS FOR THE DOCUMENT SPONSOR TO CONSIDER

☐ I HAVE NO COMMENTS

☐ I HAVE THE FOLLOWING COMMENTS

NOT APP LICABLE SEE SECTION C

☐ CONTINUED IN SECTION D

SIGNATURE	DATE

SUBMIT THIS PAGE TO DOCUMENT SPONSOR

NRC FORM 757
NRC MD 10.158
(3-2009)

U.S. NUCLEAR REGULATORY COMMISSION

NON-CONCURRENCE PROCESS

TITLE OF DOCUMENT	ADAMS ACCESSION NO.
NRC Inspection Report 05000397/2011002, Section 4OA2.3	

SECTION C - TO BE COMPLETED BY DOCUMENT SPONSOR

NAME	
Wayne C. Walker	
TITLE	PHONE NO.
Branch Chief	817-860-8148
ORGANIZATION	
Division of Reactor Projects	

ACTIONS TAKEN TO ADDRESS NON-CONCURRENCE (This section should be revised, as necessary, to reflect the final outcome of the non-concurrence process, including a complete discussion of how individual concerns were addressed.)

The non-concurrence was discussed extensively with the Division of Inspection and Regional Support in the Office of Nuclear Reactor Regulation. A response to all five non-concurrence issues is attached and was agreed upon from the Division of Inspection and Regional Support. This issue was also discussed with the Division Director for Reactor Projects, myself, and the non-concurring individual.

Based on review of the non-concurrence by Region IV and NRR, and following the guidance provided in Management Directive 10.158, "NRC Non-Concurrence Process", I determined that the rule, the Federal Register Notice discussion, and NUREG-1022 guidance all indicate that if an event or condition could have prevented fulfillment of the safety function of structures or systems, then the event is reportable, regardless if the safety function can be fulfilled by an alternate system. As discussed in the Federal Register Notice, the allowed outage/completion times in Technical Specifications have no bearing on whether or not a report is required under 10 CFR 50.72(b)(3)(v) or 10 CFR 50.73 (a)(2)(v). This position has been in effect since the rule was finalized in 1983, and as such, does not constitute a change in NRC staff position.

In conclusion, I would like to express my appreciation to Mr. Proulx for using the NRC's open collaborative work environment process to raise his concerns and his professionalism as we worked through the non-concurrence process regarding his reportability concerns.

☐ CONTINUED IN SECTION D

SIGNATURE - DOCUMENT SPONSOR	DATE	SIGNATURE - DOCUMENT SIGNER	DATE
W C Walker	5/10/11		

NON-CONCURRING INDIVIDUAL *(To be completed by document sponsor* when process is complete, i.e., after document is signed):

- ☐ CONCURS
- ☑ NON-CONCURS
- ☐ WITHDRAWS NON-CONCURRENCE (i.e., discontinues process)
- ☑ WANTS NCP FORM PUBLIC
- ☐ WANTS NCP FORM NON-PUBLIC

NRC FORM 757
NRC MD 10.158
(3-2009)

U.S. NUCLEAR REGULATORY COMMISSION

NON-CONCURRENCE PROCESS

TITLE OF DOCUMENT	ADAMS ACCESSION NO.

SECTION C - TO BE COMPLETED BY DOCUMENT SPONSOR

NAME
Kriss M. Kennedy

TITLE	PHONE NO.
Director, Division of Reactor Projects	**817-860-8248**

ORGANIZATION
Region IV

ACTIONS TAKEN TO ADDRESS NON-CONCURRENCE (This section should be revised, as necessary, to reflect the final outcome of the non-concurrence process, including a complete discussion of how individual concerns were addressed.)

In accordance with Draft MD 10.158, if the document signer is not a Senior Executive Service (SES) manager, the final review of the non-concurrence shall be elevated to the first SES management level above the document signer and the reviewing manager shall be added to document concurrence.

The NRC's Non-Concurrence Process, described in Draft Management Directive 10.158, describes one of the means for NRC staff to express their views about agency decisions. Two objectives of the Management Directive are to: 1) promote discussion and consideration of differing views on documents in the concurrence process, and; 2) provide a non-concurrence option for individuals with concerns about documents in the concurrence process that they had a role in creating or reviewing. I appreciate the careful consideration that the non-concurring individual gave to this issue and the position expressed in the non-concurrence. I believe this process fosters the open, collaborative working environment that exists in the NRC. The actions taken to express and document the basis for the non-concurrence meets agency expectations and is sincerely appreciated.

Based on my review of this non-concurrence, I have concluded that the Branch Chief sought out and carefully considered the views and inputs of the appropriate NRC stakeholders in making his decision to issue a non-cited violation. I concur with his decision.

☐ CONTINUED IN SECTION D

SIGNATURE - ~~DOCUMENT SPONSOR~~	DATE	SIGNATURE - DOCUMENT SIGNER	DATE
Kriss M. Kennedy	5/10/11		

NON-CONCURRING INDIVIDUAL *(To be completed by document sponsor* when process is complete, i.e., after document is signed):

☐ CONCURS
☐ NON-CONCURS
☐ WITHDRAWS NON-CONCURRENCE (i.e., discontinues process)
☐ WANTS NCP FORM PUBLIC
☐ WANTS NCP FORM NON-PUBLIC

ACTIONS TO ADDRESS NON-CONCURRENCE ON IR 05000397/2011002, SECTION 4OA2.3

Item # 1 Response:

10 CFR 50.72(b)(3)(v) requires that the NRC be notified within eight hours of "Any event or condition that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to:

(A) Shut down the reactor and maintain it in a safe shutdown condition;
(B) Remove residual heat;
(C) Control the release of radioactive material; or
(D) Mitigate the consequences of an accident."

As stated in 10 CFR 50.72(b)(3)(vi), "Events covered in paragraph (b)(3)(v) of this section may include one or more procedural errors, equipment failures, and/or discovery of design, analysis, fabrication, construction, and/or procedural inadequacies. However, individual component failures need not be reported pursuant to paragraph (b)(3)(v) of this section if redundant equipment in the same system was operable and available to perform the required safety function."

NUREG-1022, Revision 2, "Event Reporting Guidelines 10 CFR 50.72 and 50.73," contains guidelines that the staff of the NRC considers acceptable for use in meeting the reporting requirements of 10 CFR 50.72 and 50.73. Page 53 of NUREG-1022, Revision 2 states "The intent of these criteria is to capture those events where there would have been a failure of a safety system to properly complete a safety function, regardless of whether there was an actual demand." Page 54 states "The event must be reported regardless of whether or not an alternate safety system could have been used to perform the safety function."

The NUREG-1022 discussion originates from discussions found in the Federal Register Notice (FRN) that is associated with the rule itself. 10 CFR 50.72 was finalized in August of 1983 (48 FRN 39044) and states:

> "This paragraph is based on the assumption that safety-related systems and structures are intended to mitigate the consequences of an accident. While paragraph 50.72(b)(2)(ii) applies to actual demands for actuation of an ESF, paragraph 50.72(b)(2)(iii) covers an event where a safety system could have failed to perform its intended function because of one or more personnel errors, including procedure violations; equipment failures; or design, analysis, fabrication, construction, or procedural deficiencies. The event should be reported regardless of the situation or condition that caused the structure or system to be unavailable."
>
> "It should be noted that there are a limited number of single-train systems that perform safety functions (e.g., the High Pressure Coolant Injection System in BWRs). For such systems, loss of the single train would prevent the fulfillment of the safety function of that system and, therefore, must be reported even though the plant

> Technical Specifications may allow such a condition to exist for a specified length of time."

The FRN for 10 CFR 50.72 also states "This reporting requirement is similar to one contained in § 50.73, thus reflecting public comment identifying the need for closer coordination of reporting requirements between § 50.72 and § 50.73." 10 CFR 50.73 was finalized in July of 1983 (48 FRN 33854) and states:

> "The event must be reported regardless of the situation or condition that caused the structure or systems to be unavailable, and regardless of whether or not an alternate safety system could have been used to perform the safety function (e.g., High Pressure Core Cooling failed, but feed-and-bleed or Low Pressure Core Cooling were available to provide the safety function of core cooling)."

The rule, the FRN discussion, and the NUREG-1022 guidance all indicate that if an event or condition could have prevented the fulfillment of the safety function of ***structures or systems***, then the event is reportable, regardless of if the safety function can be fulfilled by an alternate system. As discussed in the FRN, the allowed outage / completion times in Technical Specifications (TS) have no bearing on whether or not a report is required under 10 CFR 50.72(b)(3)(v) or its associated 10 CFR 50.73 equivalent, 10 CFR 50.73(a)(2)(v).

Chapters 6.3.2.2.3 and 6.3.2.2.4 of the Final Safety Analysis Report (FSAR) for Columbia Generating Station establish that the Low Pressure Core Spray and Low Pressure Coolant Injection are considered different systems. As a result, if an event or condition could have prevented the fulfillment of the safety function of either system at the time of discovery, it is reportable under both 10 CFR 50.72(b)(3)(v) and 10 CFR 50.73(a)(2)(v), regardless of if the alternate system is capable of performing the associated safety function.

Item #2 Response

See response to item #1. As discussed, the rule, the FRN discussion, and the NUREG-1022 guidance all indicate that if an event or condition could have prevented the fulfillment of the safety function of ***structures or systems***, then the event is reportable, regardless of if the safety function can be fulfilled by an alternate system.

Item #3 Response

See response to item #1. As discussed, the allowed outage / completion times in Technical Specification (TS) have no bearing on whether or not a report is required under 10 CFR 50.72(b)(3)(v) or its 10 CFR 50.73 equivalent, 10 CFR 50.73(a)(2)(v).

There was also significant stakeholder feedback on this topic when 10 CFR 50.72 and 50.73 were revised in 2000 and the NRC did not agree. Comment #23 on the proposed rule (64 FRN 36295) states:

> "Comment 23: One comment recommended that an event or condition that could have prevented fulfillment of the safety function of structures or systems. ... should

be reportable only when the time limits of the TS are exceeded. It indicated that if the time limits are not exceeded the event is not significant enough to warrant reporting.

Response: The comment is not accepted. Generally, standard TS require commencement of shutdown within one hour if an important system, such as emergency ac power, is inoperable. However, the stated reason for allowing one hour before commencing the shutdown is to provide time to prepare for an orderly shutdown. Also, the condition might have lasted much longer than one hour before it was discovered. Finally, an event that results in a safety system failure (or inability to perform its function) is generally significant enough to warrant NRC review."

Comment F in the final rule (65 FRN 63744) states:

"Comment F (Eliminate reporting of high pressure coolant injection (HPCI) inoperability): As indicated in the 1983 Statements of Considerations for 10 CFR 50.72 and 50.73, failure or inoperability of a single train system, such as the HPCI system in BWRs, is considered to constitute an 'event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to: (A) Shut down the reactor ...; (B) Remove residual heat; (C) Control the release of radioactive material; or (D) Mitigate the consequences of an accident.'

Most commenters indicated that inoperability of HPCI does not of itself constitute a condition that would prevent the fulfillment of a safety function. Therefore, there is no benefit in reporting of HPCI inoperability if it has no affect on the ability to fulfill a safety function. BWR design considers HPCI inoperability and provides supporting systems such as reactor core isolation cooling (RCIC), Core Spray, and automatic depressurization system (ADS). This is supported by the relatively long Allowed Outage Time for HPCI in the Standard Technical Specifications (i.e., 14 days). If, in the event of HPCI inoperability, it can be shown that these systems are available and capable of fulfilling the safety function Without HPCI, the event-should not be reportable. Reporting HPCI inoperability in these cases has no meaning for event reporting and appears to be solely a data gathering exercise.

Additionally, the reactor oversight process uses a performance indicator for Safety System Functional Failures based on 10 CFR 50.73 reports. These indicators count failures of single train systems (such as HPCI), assuming that the event report documents a safety system failure. Reporting HPCI inoperability when there is no impact on the overall capability to fulfill the safety function (e.g., remove residual heat) will result in an overly conservative and detrimental assessment of this indicator.

Response: As indicated in the 1983 Statements of Considerations for 10 CFR 50.72 and 50.73, the purpose of this reporting criterion is to capture failure, inoperability, etc. on the basis of a structure or system. Thus, if an event or condition could have prevented fulfillment of the safety function of a system (i.e., by that system), it is reportable even if other system(s) could have performed the same safety function(s).

Also, in its assessment of plant performance, the NRC uses a performance indicator that includes failure or inoperability of single train systems such as HPCI. Thus, elimination of the requirement to report such events would be contrary to one of the objectives of the rulemaking-to maintain consistency with the NRC's actions to improve integrated plant performance."

Item #4 Response

See response to item #1 and item #3. The current documented staff position is that that if an event or condition could have prevented the fulfillment of the safety function of ***structures or systems***, then the event is reportable, regardless of if the safety function can be fulfilled by an alternate system. Allowed outage / completion times in TS have no bearing on whether or not a report is required under 10 CFR 50.72(b)(3)(v) or 10 CFR 50.73(a)(2)(v). No information was provided by Mr. Proulx that would indicate that a new staff position is being taken.

Mr. Proulx indicated that the NRC is in the process of revising NUREG-1022 to specifically require licensees to report single failures of the Low Pressure Core Spray System. While NUREG-1022 is undergoing a revision, with a draft soon to be available for public comment, there are no current plans, nor was there any consideration to include such language.

Item #5 Response

See response to item #1 and item #3 for discussion on the current staff position. The licensee did not provide any information that would call into question the current documented staff position. In addition, Mr. Proulx discusses that both licensees and NRC staff believe that the event is not reportable. As a precautionary measure, NRR will work with the Regions to ensure that the current staff position is understood with regards to this event.

Conclusion

The rule, the FRN discussion, and the NUREG-1022 guidance all indicate that if an event or condition could have prevented the fulfillment of the safety function of ***structures or systems***, then the event is reportable, regardless of if the safety function can be fulfilled by an alternate system. As discussed in the FRN, the allowed outage / completion times in TS have no bearing on whether or not a report is required under 10 CFR 50.72(b)(3)(v) or 10 CFR 50.73(a)(2)(v). This position has been in effect since the rule was finalized in 1983, and as such, does not constitute a change in staff position.