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December 7, 2006

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

Subject: Duke Power Company LLC d/b/a Duke Energy Carolinas, LLC  
(Duke)  
Catawba Nuclear Station, Units 1 and 2  
Docket Numbers 50-413 and 50-414  
McGuire Nuclear Station, Units 1 and 2  
Docket Numbers 50-369 and 50-370  
Proposed Technical Specifications (TS) Amendments  
TS 3.7.10 (Catawba)/TS 3.7.9 (McGuire) -  
Control Room Area Ventilation System (CRAVS)  
TS 3.7.11 (Catawba)/TS 3.7.10 (McGuire) -  
Control Room Area Chilled Water System (CRACWS)

References: Letters from Duke Energy Corporation to NRC, dated  
October 12, 2005, October 13, 2005, and March 7,  
2006

In accordance with the provisions of 10 CFR 50.90, Duke proposes to revise the Catawba and McGuire Facility Operating Licenses and TS to allow a period of time with both trains of the subject systems inoperable before TS Limiting Condition for Operation (LCO) 3.0.3 is required to be entered.

The October 12, 2005 reference letter requested a Notice of Enforcement Discretion (NOED) for McGuire Unit 2 for a situation where both CRACWS trains were inoperable. CRACWS Train A was functionally inoperable and CRACWS Train B was administratively inoperable because the power supply to the CRACWS chiller was aligned to Unit 1, which was in a refueling outage at the time. The October 13, 2005 reference letter requested a temporary TS change in conjunction with the NOED request. The March 7, 2006 reference letter withdrew the temporary TS change request and indicated that Duke would submit a permanent TS change request for both Catawba and McGuire by December 31, 2006. Although the McGuire NOED and temporary TS change request involved only the

CRACWS, these proposed amendments are being submitted for both the CRAVS and the CRACWS. The CRAVS functions to maintain an acceptable control room environment and the CRACWS functions to maintain control room temperature.

The technical justification for this amendment request package is based conceptually on the methodology contained in Topical Report WCAP-16125-NP-A, Revision 0, "Justification for Risk-Informed Modifications to Selected Technical Specifications for Conditions Leading to Exigent Plant Shutdown" (TAC MB1257). This WCAP, which was approved by the NRC in a Safety Evaluation dated July 9, 2004, was transmitted in its approved form via letter dated September 14, 2004 (letter WOG-04-462). The NRC is presently in the process of reviewing generic proposed TS changes based on the methodology contained in WCAP-16125-NP-A, Revision 0. These generic proposed TS changes were submitted to the NRC via letter transmitting Technical Specifications Task Force (TSTF)-426, Revision 0, "Revise or Add Actions to Preclude Entry into LCO 3.0.3 - RITSTF Initiatives 6b & 6c," dated August 30, 2004 (letter TSTF-04-09). Although WCAP-16125-NP-A, Revision 0 and TSTF-426, Revision 0 were developed for Combustion Engineering plants, the concepts and methodology contained in them can be applied to Catawba and McGuire.

The contents of this amendment request package are as follows:

Attachments 1a and 1b provide marked copies of the affected TS and Bases pages for Catawba and McGuire, respectively, showing the proposed changes. Attachments 2a and 2b are placeholders for reprinted pages of the affected TS and Bases pages for Catawba and McGuire, respectively. The reprinted pages will be provided to the NRC following the completion of the technical review of these proposed amendments. Attachment 3 provides a description of the proposed changes and technical justification. Pursuant to 10 CFR 50.92, Attachment 4 documents the determination that the amendments contain No Significant Hazards Considerations. Pursuant to 10 CFR 51.22(c)(9), Attachment 5 provides the basis for the categorical exclusion from performing an Environmental Assessment/Impact Statement.

Amendment implementation will be accomplished within 60 days of NRC approval.

In accordance with Duke administrative procedures and the Quality Assurance Program Topical Report, these proposed amendments have been previously reviewed and approved by the Catawba and McGuire Plant Operations Review Committees and the Duke Nuclear Safety Review Board.

U.S. Nuclear Regulatory Commission

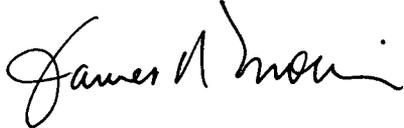
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Pursuant to 10 CFR 50.91, a copy of these proposed amendments is being sent to the appropriate state officials.

Inquiries on this matter should be directed to L.J. Rudy at (803) 831-3084.

Very truly yours,

A handwritten signature in cursive script that reads "James R. Morris". The signature is written in black ink and is positioned above the printed name.

James R. Morris

LJR/s

Attachments

December 7, 2006

James R. Morris affirms that he is the person who subscribed his name to the foregoing statement, and that all the matters and facts set forth herein are true and correct to the best of his knowledge.



James R. Morris, Vice President

Subscribed and sworn to me: 12/7/06  
Date



Notary Public

My commission expires: 7/2/2014  
Date

SEAL

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**ATTACHMENT 1a**

**MARKED-UP TS AND BASES PAGES FOR CATAWBA**

**ACTIONS**

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>D. Required Action and associated Completion Time of Condition A not met in MODE 5 or 6.</p>	<p>D.1 Place OPERABLE CRAVS train in operation.</p>	<p>Immediately</p>
<p>E. Two CRAVS trains inoperable in MODE 5 or 6, or one or more CRAVS trains inoperable during movement of irradiated fuel assemblies.</p>	<p>E.1 Suspend movement of irradiated fuel assemblies.</p>	<p>Immediately</p>
<p>F. Two CRAVS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B.</p>	<p>F.1 Enter LCO 3.0.3.</p>	<p>Immediately</p> <p style="text-align: center;">(INSERT 1)</p> <p style="text-align: right;">(continued)</p>

BASES

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ACTIONS (continued)

D.1

In MODE 5 or 6, if the inoperable CRAVS train cannot be restored to OPERABLE status within the required Completion Time, action must be taken to immediately place the OPERABLE CRAVS train in operation. This action ensures that the operating (or running) train is OPERABLE, that no failures preventing automatic actuation will occur, and that any active failure would be readily detected.

E.1

In MODE 5 or 6, with two CRAVS trains inoperable, or during movement of irradiated fuel assemblies with one or more CRAVS trains inoperable, action must be taken immediately to suspend activities that could result in a release of radioactivity that might enter the control room. This places the unit in a condition that minimizes accident risk. This does not preclude the movement of fuel to a safe position.

F.1

If both CRAVS trains are inoperable in MODE 1, 2, 3, or 4, for reasons other than Condition B, the CRAVS may not be capable of performing the intended function and the unit is in a condition outside the accident analyses. Therefore, LCO 3.0.3 must be entered immediately. INSERT 2

G.1 and G.2

With one or more CRAVS heaters inoperable, the heater must be restored to OPERABLE status within 7 days. Alternatively, a report must be initiated per Specification 5.6.6, which details the reason for the heater's inoperability and the corrective action required to return the heater to OPERABLE status.

The heaters do not affect OPERABILITY of the CRAVS filter trains because carbon adsorber efficiency testing is performed at 30°C and 95% relative humidity. The accident analysis shows that site boundary and control room operator radiation doses are within 10 CFR 50.67 limits during a DBA LOCA under these conditions.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Two CRACWS trains inoperable in MODE 5 or 6, or during movement of recently irradiated fuel assemblies.	D.1 Suspend movement of recently irradiated fuel assemblies.	Immediately
E. Two CRACWS trains inoperable in MODE 1, 2, 3, or 4.	E.1 Enter LCO 3.0.3.	Immediately <b>INSERT 3</b>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.11.1 Verify the control room temperature is $\leq 90^{\circ}\text{F}$ .	12 hours

BASES

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ACTIONS (continued)

B.1 and B.2

In MODE 1, 2, 3, or 4, if the inoperable CRACWS train cannot be restored to OPERABLE status within the required Completion Time, the unit must be placed in a MODE that minimizes the risk. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

C.1 and C.2

In MODE 5 or 6, or during movement of recently irradiated fuel, if the inoperable CRACWS train cannot be restored to OPERABLE status within the required Completion Time, the OPERABLE CRACWS train must be placed in operation immediately. This action ensures that the remaining train is OPERABLE, and that active failures will be readily detected.

An alternative to Required Action C.1 is to immediately suspend activities that present a potential for releasing radioactivity. This places the unit in a condition that minimizes accident risk. This does not preclude the movement of fuel to a safe position.

D.1

In MODE 5 or 6, or during movement of recently irradiated fuel assemblies, with two CRACWS trains inoperable, action must be taken immediately to suspend activities that could result in a release of radioactivity. This places the unit in a condition that minimizes risk. This does not preclude the movement of fuel to a safe position.

E.1

If both CRACWS trains are inoperable in MODE 1, 2, 3, or 4, the control room CRACWS may not be capable of performing its intended function. Therefore, LCO 3.0.3 must be entered immediately.

INSERT 4

INSERTS for Catawba TS and TS Bases pages:

INSERT 1

OR

-----NOTE-----

Only applicable provided at  
least one CRAVS train  
remains capable of  
performing its required  
pressurization and  
circulation function.

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24 hours

INSERT 2

However, if at least one of the inoperable trains is capable of performing its intended function of circulating air through its filter and pressurizing the control room as specified in its Surveillance Requirements (including required autostart function), 24 hours is allowed before LCO 3.0.3 must be entered. It is expected that the 24 hour allowance of this Completion Time would only be utilized under infrequently occurring circumstances. This allowance shall not be utilized for routine circumstances or for operational convenience.

INSERT 3

OR

-----NOTE-----

Only applicable provided at  
least one CRACWS train  
remains capable of  
performing its required  
cooling function.

-----

24 hours

INSERT 4

However, if at least one of the inoperable trains is capable of performing its intended function of cooling the control room as specified in its Surveillance Requirements, 24 hours is allowed before LCO 3.0.3 must be entered. It is expected that the 24 hour allowance of this Completion Time would only be utilized under infrequently occurring circumstances. This allowance shall not be utilized for routine circumstances or for operational convenience.

**ATTACHMENT 1b**

**MARKED-UP TS AND BASES PAGES FOR MCGUIRE**

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2.1 Suspend CORE ALTERATIONS.  <u>AND</u> C.2.2 Suspend movement of irradiated fuel assemblies.	Immediately  Immediately
D. Two CRAVS trains inoperable in MODE 5 or 6, or during movement of irradiated fuel assemblies, or during CORE ALTERATIONS.	D.1 Suspend CORE ALTERATIONS.  <u>AND</u> D.2 Suspend movement of irradiated fuel assemblies.	Immediately  Immediately
E. Two CRAVS trains inoperable in MODE 1, 2, 3, or 4 (for reasons other than Condition G).	E.1 Enter LCO 3.0.3.	Immediately  <u>INSERT 1</u>
F. One or more CRAVS train(s) heater inoperable.	F.1 Restore CRAVS train(s) heater to OPERABLE status.  <u>OR</u> F.2 Initiate action in accordance with Specification 5.6.6.	7 days  7 days
G. Two CRAVS trains inoperable due to inoperable control room boundary in MODE 1, 2, 3, or 4.	G.1 Restore control room boundary to OPERABLE status.	24 hours

BASES

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ACTIONS (Continued)

unit in a condition that minimizes accident risk. This does not preclude the movement of fuel to a safe position.

E.1

If both CRAVS trains are inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition G, the CRAVS may not be capable of performing the intended function and the unit is in a condition outside the accident analyses. Therefore, LCO 3.0.3 must be entered immediately.

INSERT 2

F.1 and F.2

Action F.1 allows one or more CRAVS heater inoperable, with the heater restored to OPERABLE status within 7 days. Alternatively, Action F.2 requires if the heater is not returned to OPERABLE within the 7 days, a report to be initiated per Specification 5.6.6, which details the reason for the heater's inoperability and the corrective action required to return the heater to OPERABLE status.

The heaters do not affect OPERABILITY of the CRAVS filter train because charcoal absorber efficiency testing is performed at 30°C and 90 % relative humidity. The accident analysis shows that control room radiation doses are within 10 CFR 100 limits during a DBA LOCA under these conditions.

G. 1

If the control room boundary is inoperable in MODES 1, 2, 3, or 4 such that the CRAVS trains can not establish or maintain the required pressure, action must be taken to restore an OPERABLE control room boundary within 24 hours. The 24 hour Completion Time is reasonable based on the low probability of a DBA occurring during this time period, the availability of the CRAVS to provide a filtered environment (albeit with potential control room inleakage), and compensatory measures available to the operator to minimize doses (e.g. self contained breathing apparatus and alternate control room air intakes).

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Two CRACWS trains inoperable in MODE 5 or 6, or during movement of irradiated fuel assemblies, or during CORE ALTERATIONS.	D.1 Suspend CORE ALTERATIONS.  <u>AND</u>  D.2 Suspend movement of irradiated fuel assemblies.	Immediately    Immediately
E. Two CRACWS trains inoperable in MODE 1, 2, 3, or 4.	E.1 Enter LCO 3.0.3.	Immediately  <div style="border: 1px solid black; border-radius: 15px; padding: 2px; display: inline-block;">INSERT 3</div>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.10.1 Verify the control room temperature is $\leq 90^{\circ}\text{F}$ .	12 hours

BASES

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ACTIONS (continued)

E.1

If both CRACWS trains are inoperable in MODE 1, 2, 3, or 4, the control room CRACWS may not be capable of performing its intended function. Therefore, LCO 3.0.3 must be entered immediately. INSERT 4

SURVEILLANCE  
REQUIREMENTS

SR 3.7.10.1

This SR verifies that the heat removal capability of the system is sufficient to maintain the temperature in the control room at or below 90°F. The 12 hour Frequency is appropriate since significant degradation of the CRACWS is slow and is not expected over this time period.

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REFERENCES

1. UFSAR, Section 6.4.
2. 10 CFR 50.36, Technical Specifications, (c)(2)(ii).

INSERTS for McGuire TS and TS Bases pages:

INSERT 1

OR

-----NOTE-----

Only applicable provided at  
least one CRAVS train  
remains capable of  
performing its required  
pressurization and  
circulation function.

-----

24 hours

INSERT 2

However, if at least one of the inoperable trains is capable of performing its intended function of circulating air through its filter and pressurizing the control room as specified in its Surveillance Requirements (including required autostart function), 24 hours is allowed before LCO 3.0.3 must be entered. It is expected that the 24 hour allowance of this Completion Time would only be utilized under infrequently occurring circumstances. This allowance shall not be utilized for routine circumstances or for operational convenience.

INSERT 3

OR

-----NOTE-----

Only applicable provided at  
least one CRACWS train  
remains capable of  
performing its required  
cooling function.

-----

24 hours

INSERT 4

However, if at least one of the inoperable trains is capable of performing its intended function of cooling the control room as specified in its Surveillance Requirements, 24 hours is allowed before LCO 3.0.3 must be entered. It is expected that the 24 hour allowance of this Completion Time would only be utilized under infrequently occurring circumstances. This allowance shall not be utilized for routine circumstances or for operational convenience.

**ATTACHMENT 2a**

**REPRINTED TS AND BASES PAGES FOR CATAWBA (TO BE PROVIDED TO  
NRC FOLLOWING COMPLETION OF TECHNICAL REVIEW)**

**ATTACHMENT 2b**

**REPRINTED TS AND BASES PAGES FOR MCGUIRE (TO BE PROVIDED TO  
NRC FOLLOWING COMPLETION OF TECHNICAL REVIEW)**

**ATTACHMENT 3**

**DESCRIPTION OF PROPOSED CHANGES AND TECHNICAL JUSTIFICATION**

## Description of Proposed Changes

1. For the CRAVS, TS 3.7.10 (Catawba), Condition F and TS 3.7.9 (McGuire), Condition E are modified to add an alternate Completion Time for entering LCO 3.0.3. The alternate Completion Time of 24 hours may be utilized provided at least one CRAVS train remains capable of performing its required pressurization and circulation function. Changes are also made to the TS Bases for these Conditions commensurate with the proposed TS changes.
2. For the CRACWS, TS 3.7.11 (Catawba), Condition E and TS 3.7.10 (McGuire), Condition E are modified to add an alternate Completion Time for entering LCO 3.0.3. The alternate Completion Time of 24 hours may be utilized provided at least one CRACWS train remains capable of performing its required cooling function. Changes are also made to the TS Bases for these Conditions commensurate with the proposed TS changes.

Refer to the marked-up pages of the Catawba and McGuire TS and TS Bases for the specifics of the proposed changes.

## Technical Justification

### *Background*

The CRAVS ensures that the control room will remain habitable for personnel during and following all credible accident conditions. This function is accomplished by pressurizing the control room to greater than or equal to 1/8 inch water gauge with respect to all surrounding areas (Catawba) or with respect to atmospheric pressure (McGuire), by filtering the outside air used for pressurization, and (for Catawba only) by filtering a portion of the return air from the control room to clean up the control room environment.

The CRAVS consists of two independent, redundant trains of equipment. Each train consists of a pressurizing filter train fan, a filter unit which includes moisture separators and/or prefilters, high efficiency particulate air (HEPA) filters, and carbon adsorbers, and associated ductwork, dampers/valves, air handling units (McGuire), and controls.

At Catawba, key operated selector switches located in the control room initiate operation of all train related CRAVS equipment. The selected train is in continuous operation. Upon receipt of an Engineered Safety Feature (ESF) signal,

the selected CRAVS train continues to operate and the pressurizing filter train fan of the non-selected train is started. This assures control room pressurization, assuming an active failure of one of the pressurizing filter train fans.

At McGuire, during normal operation the control room is provided with 100% recirculated air and the outside air pressure filter train is in the standby mode. Actuation of the CRAVS places the system in the emergency mode of operation, depending on the initiation signal. The emergency signal initiates pressurization and filtered ventilation of the air supply to the control room. Pressurization of the control room prevents infiltration of unfiltered air from the surrounding areas of the building.

The CRAVS is designed to maintain the control room environment for 30 days of continuous occupancy after a Design Basis Accident (DBA).

TS 3.7.10 (Catawba) and TS 3.7.9 (McGuire) require two CRAVS trains to be operable in Modes 1, 2, 3, 4, 5, and 6, and during movement of irradiated fuel assemblies (and during core alterations for McGuire only). With both CRAVS trains inoperable in Mode 1, 2, 3, or 4 for reasons other than an inoperable control room pressure boundary, LCO 3.0.3 is required to be immediately entered.

The CRACWS provides temperature control for the control room (both Catawba and McGuire) and the control room area (Catawba only). The CRACWS consists of two independent and redundant trains that provide cooling to the control room and/or control room area. Each train consists of a chiller package, a chilled water pump, air handling units (Catawba only), and cooling coils.

The CRACWS provides both normal and emergency cooling to the control room and/or control room area. A single train will provide the required temperature control to maintain the control room at the desired temperature.

The design basis of the CRACWS is to maintain the control room temperature for 30 days of continuous occupancy.

TS 3.7.11 (Catawba) and TS 3.7.10 (McGuire) require two CRACWS trains to be operable in Modes 1, 2, 3, 4, 5, and 6, and during movement of recently irradiated (Catawba) or irradiated (McGuire) fuel assemblies (and during core alterations for McGuire only). With both CRACWS trains inoperable in Mode 1, 2, 3, or 4, LCO 3.0.3 is required to

be immediately entered.

On October 8, 2005, at 0320 hours, both trains of the McGuire CRACWS were declared inoperable. At the time, McGuire Unit 1 was in Mode 6 during an ongoing refueling outage and McGuire Unit 2 was in Mode 1 at 100% power. Previously on October 7, 2005, the CRACWS Train B chiller power supply was shifted from Unit 2 (the operating unit) to Unit 1 (the outage unit) to support Train B ESF testing. The CRACWS Train B chiller was declared inoperable because of its reliance on an administratively inoperable emergency power supply (i.e., the emergency power supply supporting the chiller was not explicitly required to be operable by the shutdown unit's TS, despite the fact that it remained capable of performing its required cooling function). During the ESF testing, it was discovered that the CRACWS Train A chiller was inoperable due to a defective oil pressure switch. McGuire subsequently requested a verbal NOED in a telephone conference call with NRC officials on October 8, 2005. The NOED request was to allow 24 hours prior to having to enter LCO 3.0.3 as a result of both inoperable CRACWS chillers. The NRC subsequently granted the NOED via verbal approval. On October 12, 2005, McGuire followed up the verbal NOED request with a formal written request, and on October 13, 2005, McGuire submitted a written request for a temporary TS change in response to the NOED request. (The written TS change request was subsequently determined to be unnecessary, since the 24-hour allowance granted by the NOED had already expired.) Following additional discussions with the NRC, on March 7, 2006, McGuire submitted a letter withdrawing the temporary TS change request. In this letter, Duke indicated that a permanent TS change request would be submitted for both McGuire and Catawba to address this situation so that future similar NOED requests would be unnecessary.

#### *Qualitative Evaluation*

The TS changes proposed in this request have been considered from a risk perspective. The changes have been considered with respect to Core Damage Frequency (CDF), Incremental Conditional Core Damage Probability (ICCDP), Large Early Release Frequency (LERF), and Incremental Conditional Large Early Release Probability (ICLERP) for a 24-hour allowance before requiring entry into LCO 3.0.3.

Neither the CRAVS nor the CRACWS has any impact on the calculated CDF or LERF at Catawba or McGuire. Neither the CRAVS nor the CRACWS is included in the Level I Probabilistic Risk Assessment (PRA) model. The safety

significance of these systems is low because of the ability to mitigate the consequences of the loss of these systems using alternative means. Although these means are not specifically required in order to utilize the proposed alternate Completion Time, they include the following:

- Self-Contained Breathing Apparatus (SCBA) units are available at both Catawba and McGuire for the protection of control room operators in the event of a radiological release.
- The control room can be cooled by opening the control room doors and allowing the computer area cooling system to provide some heat removal capability. Cabinet doors can be opened as needed to assist in ventilating equipment in the control room. In addition, portable fans and cooling equipment can be utilized as needed to maintain the temperature in the control room at acceptable levels. Procedures exist at both Catawba and McGuire for employing supplemental cooling in the event that the CRACWS is lost.
- If control room habitability were to be lost as a result of a toxic gas or a radiation release, Catawba and McGuire each has the capability to maintain the unit(s) in a stable condition from remote locations using safety related equipment. The Remote Shutdown System, which is governed by TS 3.3.4, can be utilized to provide control for all systems needed to maintain a hot standby condition and to cool down the affected unit(s) to cold shutdown conditions.
- Catawba and McGuire each has a Standby Shutdown System (SSS). The SSS provides an alternate, non-safety related means of achieving and maintaining hot standby conditions following certain postulated fire, flooding, security, and station blackout events. The SSS provides the capability to control and monitor selected vital systems from a location external to the main control room. It is possible to maintain both units in hot standby for 72 hours using the SSS. The SSS is governed by station Selected Licensee Commitments.

As a result of the above considerations, the impact on the ICCDP is expected to be much less than 5E-07 and the impact on the ICLERP is expected to be much less than 5E-08.

### *Quantitative Evaluation*

On July 9, 2004, the NRC issued a Safety Evaluation (SE) approving WCAP-16125-NP, Revision 0, "Justification for Risk-Informed Modifications to Selected Technical Specifications for Conditions Leading to Exigent Plant Shutdown." The WCAP was subsequently published as an approved version and transmitted to the NRC via letter dated September 14, 2004. WCAP-16125-NP-A, Revision 0 in part provided a risk-informed justification to extend the Completion Time for various LCO 3.0.3 action statements. The WCAP analysis supported a 24-hour Completion Time with two inoperable system trains associated with various TS systems for Combustion Engineering plants. Two of the systems evaluated in the WCAP were the Control Room Emergency Air Cleanup System (CREACS) (which is functionally equivalent to the Catawba and McGuire CRAVS) and the Control Room Emergency Air Temperature Control System (CREATCS) (which is functionally equivalent to the Catawba and McGuire CRACWS).

For the CREACS, the SE approved a 24-hour Completion Time for restoring one train (or the time to reach 5 rem, which may be less than 24 hours). The 24-hour Completion Time only applies to the radiation protection function of the CREACS. The SE indicates that site specific validation is necessary to support extension to toxic gas and chemical protection functions. For the CREATCS, the SE approved a 24-hour Completion Time for restoring one train. The SE assumes that during the 24-hour time period that both trains of the affected systems are functionally unavailable and unable to perform their accident mitigation functions. For both systems, the SE imposed no Tier 2 restrictions regarding this approval.

The risk assessment approach used in the WCAP analysis introduced risk impact measures similar to ICLERP and  $\Delta$ LERF. The risk measures are the Incremental Conditional Radiation Release Probability (ICRRP) and the change in the Radiation Release Frequency ( $\Delta$ RRF).

The proposed TS changes for the Catawba and McGuire CRAVS and CRACWS are acceptable because they are consistent with and at least as conservative as the NRC approved changes for the CREACS and CREATCS for Combustion Engineering plants. The non-Large Early Release (non-LER) risk increases in Table 8 of the NRC SE dated July 9, 2004 of about  $2.6E-7$  for ICRRP and about  $8.3E-8$  for  $\Delta$ RRF/yr remain bounding for Catawba and McGuire (assumes a frequency of use of 1 in every 3 years and a challenge frequency of  $1E-4$ /yr). The

NRC found that these risk assessment results support the proposed change of a 24-hour Completion Time.

Specifically, for Catawba and McGuire, the following calculations were made utilizing data from the current plant specific PRA models which consider both internal and external events.

	Proposed CT (hrs)	Challenge Frequency per reactor yr (all events)	ICRRP	$\Delta$ RRF per reactor yr (f=1/5) once in 5 years	$\Delta$ RRF per reactor yr (f=1/3) once in 3 years
Catawba	24	3.1E-05	8.5E-08	1.7E-08	2.8E-08
McGuire	24	4.1E-05	1.1E-07	2.2E-08	3.7E-08

The values in the table above are within the acceptance guidelines for radiation release (non-LER) risks which are 1E-7 per year for  $\Delta$ RRF and 5E-7 for ICRRP. These values are analogous to the guideline values documented in Regulatory Guides 1.174 and 1.177. Therefore, the proposed changes are fully supported by the PRA results for Catawba and McGuire and do not represent an unacceptable increase in overall plant risk. Although WCAP-16125-NP-A, Revision 0 was not developed specifically for Westinghouse plants, the proposed changes are nevertheless consistent with the WCAP. (A similar draft document has been developed for Westinghouse plants. It addresses those systems that do not impact CDF or LERF and utilizes the same methodology as WCAP-16125-NP-A.) In addition, the proposed changes are actually more conservative than the corresponding changes evaluated in the WCAP and approved in the SE. For Catawba and McGuire, the 24-hour Completion Time will only be utilized if at least one of the inoperable trains in each system is capable of performing its intended function as specified in its Surveillance Requirements. This is significantly more conservative than the SE approved changes, where both trains of the affected systems could be functionally unavailable.

### Conclusions

In summary, the proposed TS changes for the Catawba and McGuire CRAVS and CRACWS are consistent with and at least as conservative as similar changes previously approved by the NRC on a generic basis for other plants. Based on consideration of both the qualitative and quantitative risk assessments performed, the proposed changes do not represent an unacceptable increase in overall plant risk. Under infrequently occurring circumstances, the proposed changes will avert the risks associated with an unnecessary plant

shutdown and will ensure that the public health and safety is preserved.

**ATTACHMENT 4**

**NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION**

## No Significant Hazards Consideration Determination

As required by 10 CFR 50.91(a)(1), this discussion is provided to demonstrate that the proposed license amendments involve no significant hazards consideration.

Conformance of the proposed amendments to the standards for a determination of no significant hazards as defined in 10 CFR 50.92 is shown in the following:

- 1) The proposed license amendments do not involve a significant increase in the probability or consequences of an accident previously evaluated.

The CRAVS and the CRACWS are systems utilized to maintain an environment in the control room that is both habitable to the operators and appropriate for equipment operation. These systems perform these functions both during normal operation and following accident conditions. Neither the CRAVS nor the CRACWS is capable by itself of initiating an accident or of contributing to the severity of an accident. Therefore, the probability of a previously evaluated accident cannot be impacted by the proposed TS changes. In addition, the technical justification for the proposed TS changes has shown that they do not contribute to an unacceptable increase in overall plant risk. Therefore, the consequences of a previously evaluated accident will not be significantly increased.

- 2) The proposed license amendments do not create the possibility of a new or different kind of accident from any accident previously evaluated.

The CRAVS and the CRACWS are accident mitigating systems. As such, they cannot contribute to the probability of any accident being initiated. No changes are being made to the manner in which these systems are being operated or maintained. In addition, no changes are being made to the overall manner in which the nuclear units are operated. Therefore, the possibility of a new or different accident type cannot be generated.

- 3) The proposed license amendments do not involve a significant reduction in a margin of safety.

Margin of safety is related to the confidence in the ability of the fission product barriers to perform their intended functions. These barriers include the

fuel cladding, the reactor coolant system, and the containment. The performance of these barriers will not be affected by the proposed TS changes. In addition, the performance of the CRAVS and the CRACWS will not be adversely affected by the proposed TS changes. Therefore, no significant reduction in any safety margin will be created.

Based on the preceding discussion, it is concluded that the proposed license amendments do not involve a significant hazards consideration finding as defined in 10 CFR 50.92.

**ATTACHMENT 5**

**ENVIRONMENTAL ANALYSIS**

## Environmental Analysis

Pursuant to 10 CFR 51.22(b), an evaluation of this license amendment request has been performed to determine whether or not it meets the criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) of the regulations.

Implementation of these amendments will have no adverse impact upon the Catawba and McGuire units; neither will it contribute to any additional quantity or type of effluent being available for adverse environmental impact or personnel exposure.

It has been determined there is:

1. No significant hazards consideration,
2. No significant change in the types, or significant increase in the amounts, of any effluents that may be released offsite, and
3. No significant increase in individual or cumulative occupational radiation exposures involved.

Therefore, these amendments to the Catawba and McGuire TS and associated Bases meet the criteria of 10 CFR 51.22(c)(9) for categorical exclusion from an environmental impact statement.