Entergy

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Fred Dacimo
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December 15, 2004

Re: Indian Point Unit No. 3
Docket No. 50-286
NL-04-158

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

SUBJECT: **Supplement to Proposed Change to Technical Specifications Regarding Full Scope Adoption of Alternate Source Term (TAC No. MC3351)**

References:
1) Entergy letter NL-04-068 to NRC, "Proposed Change to Technical Specifications Regarding Full Scope Adoption of Alternate Source Term", dated June 2, 2004.

2) Entergy letter NL-04-138 to NRC, "Proposed License Amendment Regarding Control Room Ventilation System", dated October 26, 2004

Dear Sir:

The purpose of this letter is to supplement the proposed amendment to the Operating License for Indian Point Nuclear Generating Unit No. 3 (IP3) regarding the full scope adoption of alternate source term (AST) (Reference 1). In order to adopt AST, it is necessary to modify the Control Room Ventilation System (CRVS) to enable it to be operated in new configurations for Control Room Habitability. This modification will be installed prior to the next scheduled refueling outage. Reference 2 submitted a request to place the CRVS in the new modified configuration to permit tracer gas testing, to temporarily leave the CRVS in that configuration until the upcoming refueling outage, and to credit protective actions for control room operators in the event unfiltered in-leakage based on tracer gas testing exceeds current analysis assumptions. Additional Technical Specification changes are included herein to make permanent the change requested in Reference 2, and to reflect changes to the Control Room Ventilation System and implementation of the Alternate Source Term as contained in Reference 1.

A003

The additional changes consist of the following:

- Technical Specification Surveillance Requirement SR 3.7.11.4 - change from "≤ 400 cfm" to "≥ 1500 cfm".

  This Technical Specification change adopts the ≥ 1500 CFM makeup flow rate criterion contained in Reference 1, which is part of the modification for the CRVS for Control Room Habitability. This is the mode that provides the greatest benefit to dose reduction for the control room operators and is consistent with the Reference 1 analyses. This change effectively makes permanent the change requested in Reference 2.

- Editorial changes to Technical Specifications 3.3.7.A.1, 3.3.7.B.1, and Surveillance Requirement SR 3.7.11.4 to change the terminology for the CRVS mode description to be consistent with modifications to the CRVS.

  - Technical Specifications 3.3.7.A.1 and 3.3.7.B.1, Required Action - change from "10% incident mode" to "CRVS Mode 3".

  - Technical Specification Surveillance Requirement SR 3.7.11.4 - change from "the 10% incident mode of" to "CRVS Mode 3".

- Bases pages B 3.7.11-2 and B 3.7.11-8 are included for information, and revise text as appropriate to reflect the dose evaluation for the alternate source term contained in Reference 1. Additional bases changes to support the proposed AST amendment will be made under the 50.59 process upon issuance of the license amendment.

The current licensing basis design and operating configuration of the CRVS is described in Section 9.9 of the FSAR and in Section 3.7.11 of the Technical Specification Bases. The current licensing basis dose analysis for control room operators is described in Section 14.3.5 of the FSAR.

Entergy intends to modify the operating configuration of the CRVS.

The current configuration of the control room ventilation system has 4 modes of operation. CRVS Mode 1 is 'Off', the system is shut down. CRVS Mode 2 is 'Normal', the system supplies a mixture of conditioned return air (from the Control Room) and outside air. In CRVS Mode 3 ("10% Incident Mode"), the system takes a portion of the return air from the Control Room, mixes it with outside air before going through a

Charcoal Filter Unit and then supplies it to the Control Room after conditioning. In CRVS Mode 4 ("100% Incident Mode"), the system takes a portion of the return air, directs it through the Charcoal Filter Unit, and then supplies it to the Control Room after conditioning (there is no outside air supplied). CRVS Mode 3 is used for radiological release events and CRVS Mode 4 is used for hazardous chemical release events, although the Charcoal Filtering Unit is not credited for hazardous chemical removal in the event analysis.

Changes to the current configuration are for operation in CRVS Modes 3 and 4. For CRVS Mode 3, recirculation through the filtration system is being eliminated. Also for CRVS Mode 3, the filtered make-up flow through the filtration system is being increased from $\leq$ 400 CFM to $\geq$ 1500 CFM to be consistent with the analysis contained in Reference 1. For CRVS Mode 4, recirculation through the filtration system is also being eliminated.

The new configuration of the control room ventilation system will have 4 modes of operation. CRVS Mode 1 is 'Off', the system is shut down. CRVS Mode 2 is 'Normal', the system supplies a mixture of conditioned return air (from the Control Room) and outside air. CRVS Mode 3 (known as "10% Incident Mode") will provide pressurization of the Control Room by directing all outside air through a Charcoal Filter Unit and then supplying it to the Control Room after conditioning. CRVS Mode 4 (redesignated to "100% Recirculation Mode") will continue to be used for hazardous chemical release events. The system will not take in any outside air and there will be no flow through the Charcoal Filter Unit.

The "no significant hazards consideration" submitted with Reference 1 is unchanged by this amendment request because the dose calculations performed assumed the value of makeup flow rate being requested herein. Further, there is no impact on the "no significant hazards consideration" that was submitted with Reference 2 for the temporary change because the value of the makeup flow rate herein is the same as was requested.

A copy of this application and the associated attachments are being submitted to the designated New York State official.

Entergy requests approval of the proposed amendment by March 15, 2005 to support the schedule for implementation of modifications to the CRVS for Control Room Habitability. Further, the time between the issuance of the license amendment and the implementation date is requested to be 30 days.

There are no new commitments contained in this letter. If you have any questions or require additional information, please contact Mr. Patric W. Conroy at 914-734-6668.

I declare under penalty of perjury that the foregoing is true and correct. Executed on 12/15/04

Sincerely,

Fred R. Dacimo
Site Vice President
Indian Point Energy Center

Attachments:
1. Proposed Technical Specification Changes (markup)

cc: Mr. Patrick D. Milano
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ATTACHMENT 1

to NL-04-158

Markup of Technical Specification and Bases Pages for
Proposed Changes Regarding Control Room Ventilation System

Entergy Nuclear Operations, Inc.
Indian Point Nuclear Generating Unit No. 3
Docket No. 50-286

3.3 INSTRUMENTATION

3.3.7 Control Room Ventilation System (CRVS) Actuation Instrumentation

LCO 3.3.7 The CRVS actuation instrumentation for each Function in Table 3.3.7-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4

ACTIONS

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

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one channel or train inoperable.	A.1 Place CRVS in ~~10% incident mode.~~ CRVS Mode 3	7 days
B. One or more Functions with two channels or two trains inoperable.	B.1. Place CRVS in ~~10% incident mode.~~ CRVS Mode 3	72 hours
C. Required Action and associated Completion Time for Condition A or B not met.	C.1 Be in MODE 3. AND C.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.11.1	Operate each CRVS train for ≥ 15 minutes.	31 days
SR 3.7.11.2	Perform required CRVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with VFTP
SR 3.7.11.3	Verify each CRVS train actuates on an actual or simulated actuation signal.	24 months
SR 3.7.11.4	Verify one CRVS train can maintain a slight positive pressure relative to the adjacent enclosed area during ~~the 10% incident mode of~~ CRVS Mode 3 operation at a makeup flow rate of ~~≤ 400~~ ≥1500 cfm.	24 months on a STAGGERED TEST BASIS

BASES

- Ventilation is provided to the CCR via outside air drawn through Damper A driven by the operation of the CRACS fan(s) and the toilet/locker room exhaust fan;

CRVS Mode 2

BACKGROUND (continued)

a) Normal operation ~~consists of approximately 85% (8500 cfm) unfiltered recirculated flow driven by the air conditioning fans and approximately 15% (1500 cfm) unfiltered outside air makeup;~~

CRVS Mode 3

Known as the

- Ventilation and pressurization are provided for the CCR via filtered outside air drawn through Damper B, driven by the operation of the CRACS fan(s) and its associated filter booster fan;

b) Incident mode with outside air makeup (~~i.e.~~ 10% incident mode) ~~consists of approximately 87% (9250 cfm) unfiltered recirculated flow driven by the two safety related air conditioning fans, at least 10% (> 1000 cfm) filtered recirculated flow driven by either one of the two filter booster fans and 35 to 400 cfm filtered outside air makeup;~~

CRVS Mode 4

- In this mode there is no ventilation provided to the CCR. Both A and B Dampers are closed and the only associated CRVS components operating are the CRACS fan(s).

c) Incident mode with no outside air makeup (i.e. 100% ~~incident~~ recirculation mode) ~~consists of 85% (9100 cfm) unfiltered recirculated flow driven by the two safety related air conditioning fans, approximately 15% filtered recirculated flow driven by either one of the two filter booster fans and no outside air makeup.~~

~~Note that the required recirculation rates are demonstrated with surveillance tests conducted with the air conditioning system (CRACS) operating. An inoperable CRACS fan will affect the flow balance of the CRVS due to interconnected ductwork. Therefore, if the fan associated with one of the air conditioning units governed by LCO 3.7.12 is inoperable, Conditions in both LCO 3.7.11, Control Room Ventilation System, and LCO 3.7.12, Control Room Air Conditioning System (CRACS), will apply.~~

CRVS Mode 3 (10% Incident Mode)

~~Incident mode with outside air makeup~~ is the ~~preferred~~ required method of operation during any radiological event because it provides outside air for pressurization of the Control Room. ~~Calculations indicate that very low flowrates (e.g. 35 cfm) of outside air makeup will maintain the Control Room at a slight positive pressure. Nevertheless, due to the difficulty of adjusting and maintaining the flow dampers to provide a low flow, the dampers are typically adjusted to provide a flow of approximately 250 cfm (2.5% outside air makeup). However, a higher volume of outside air makeup to~~

industry experience with

It has been demonstrated via tracer gas testing that increased pressurization helps attenuate unfiltered inleakage.

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.11.3

This SR verifies that each CRVS train starts and operates on an actual or simulated actuation signal. The Frequency of 24 months is based on operating experience which has demonstrated this Frequency provides a high degree of assurance that the booster fans will operate and dampers actuate to the correct position when required.

SR 3.7.11.4

CRVS Mode 3

This SR verifies the integrity of the control room enclosure, and the assumed inleakage rates of the potentially contaminated air. The control room positive pressure, with respect to potentially contaminated adjacent areas, is periodically tested to verify proper functioning of the CRVS. During ~~the~~ operation in ~~the incident mode with outside air makeup~~ (i.e. 10% incident mode), the CRVS is designed to maintain the control room at a slight positive pressure with respect to adjacent areas in order to ~~prevent~~ unfiltered inleakage. ~~The CRVS is designed to maintain this positive pressure with very low volumes of outside air makeup. Due to the difficulty of adjusting and maintaining the flow dampers to provide a low flow, it was determined that the damper should be adjusted to provide a flow of approximately 250 cfm (2.5% outside air makeup). Note that the higher the volume of outside air makeup to the Control Room, the higher the thyroid dose to the operators during an accident.~~ The acceptance ~~criteria of 400~~ cfm ~~(4.0% outside air makeup)~~ is the ~~volume~~ used in the Control Room dose assessment.

attenuate

criterion of ≥ 1500

value

The SR Frequency of 24 months on a staggered test basis is acceptable because operating experience has demonstrated that the control room boundary is not normally disturbed. Staggered testing is acceptable because the SR is primarily a verification of Control Room integrity because fan operation is tested elsewhere.

(continued)