

March 20, 1987

Docket No. 50-298

MEMORANDUM FOR: Eric H. Johnson, Deputy Director
Division of Reactor Safety and Projects
Region IV

FROM: Daniel R. Muller, Director
BWR Project Directorate #2
Division of BWR Licensing

SUBJECT: CONTAINMENT INERTING AT COOPER NUCLEAR STATION

Your memorandum dated September 4, 1986 requested technical assistance concerning Technical Specifications time limitations for being deinerted. The request relates to a June 16, 1986 event at Cooper Nuclear Station in which the containment was deinerted for personnel entry, an RCS leak identified and corrected, and the containment reinerted. The licensee did not shutdown the reactor. The containment was in a deinerted condition for approximately 36 hours.

Cooper Technical Specification 3.7.A.5.b specifies that:

Within the 24-hour period subsequent to placing the reactor in the Run mode following a shutdown, the containment atmosphere oxygen concentration shall be reduced to less than 4% by volume and maintained in this condition. Deinerting may commence 24 hours prior to a shutdown.

In the event these limitations cannot be met, the action statement of 3.7.A.5.d applies. 3.7.A.5.d specifies that:

If the specifications of 3.7.A.5a thru c cannot be met, an orderly shutdown shall be initiated and the reactor shall be in a cold shutdown condition within 24 hours.

These Technical Specifications require that when oxygen concentration exceeds 4% while in Run, the plant must within a 24-hour period either reestablish compliance with the oxygen concentration limit or be in cold shutdown.

Your specific questions were:

1. "Is it acceptable to restart the 24-hour clock for not being inerted when a decision to shutdown is reversed?"
2. "What limitations, restrictions, or guidance should be implemented or considered regarding entry into the containment building with the reactor at power? We (RIV and IE) had lengthy discussions with the licensee prior to the entry. We were uneasy about the entry being made at power, but there were, to our knowledge, no limitations or

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guidance to the contrary and the licensee chose to do so rather than take an outage."

With respect to your Question #1: This issue has been addressed previously between NRR and the licensee. A January 7, 1982 telecon record is attached. It was the staff interpretation at that time, that the 24-hour clock restarts upon making the decision not to shutdown. The January 7, 1982 interpretation is inconsistent with the Cooper Technical Specifications in that it would permit the termination of a shutdown to be considered a "startup", theoretically allowing up to 48 hours of continuous operation in the RUN mode with the oxygen concentration greater than 4% by volume. However, the DBL staff finds this acceptable. The basis is twofold, (1) it reduces the total time the containment is deinerted (by an amount equal to that which would have been required to complete the shutdown and then restart and raise power to the level at which the decision was made), and (2) it encourages plant personnel to expeditiously conduct unscheduled maintenance and repairs by allowing the licensee to minimize downtime. Furthermore, operation with the containment deinerted at low power is permitted by the technical specifications of other similar facilities. You should bear in mind that the 24-hour grace period for deinerting is intended for use in conjunction with a shutdown, not to avoid a shutdown and in order to ensure that the return to power was not made to avoid violating the technical specification, the licensee should be prepared to demonstrate that shutdown could have been reached within the 24-hour period if the decision to return to power had not been made.

With respect to your Question #2: A containment entry at power involves no public safety considerations that aren't already addressed by the containment integrity Technical Specifications. However, there are two occupational safety considerations (a) the inerted atmosphere and (b) entry to a high radiation area. Item (a) is of interest and concern to the staff but is beyond the present regulatory purview of the NRC. To promulgate inspection and enforcement guidance in this area would constitute new generic requirements. Item (b) is an ALARA, 10 CFR 19, and 10 CFR 20 consideration having a regulatory basis for inspection and enforcement by the NRC. With respect to this consideration, you should apply the same radiation protection criteria to all high radiation areas regardless of location within the plant or whether the plant is operation. The Section 8 Regulatory Guides make no distinction between radiation areas on the basis of whether they are inside containment or outside containment. If you have any questions regarding this issue, please contact Bill Long (492-9477).

Daniel R. Muller, Director
BWR Project Directorate #2
Division of BWR Licensing

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Enclosure:
As stated

guidance to the contrary and the licensee chose to do so rather than take an outage."

With respect to your Question #1: This issue has been addressed previously between NRR and the licensee. A January 7, 1982 telecon record is attached. It was the staff interpretation at that time, that the 24-hour clock restarts upon making the decision not to shutdown. The January 7, 1982 interpretation is inconsistent with the above interpretation, in that it would, by permitting the termination of a shutdown to be considered a "startup", allow up to 48 hours of continuous deinerted operation in the RUN mode. However, the DBL staff finds this acceptable. The basis is twofold, (1) it reduces the total time the containment is deinerted (by an amount equal to that which would have been required to complete the shutdown and then restart and raise power to the level at which the decision was made), and (2) it encourages plant personnel to expeditiously conduct unscheduled maintenance and repairs by allowing the licensee to minimize downtime. Furthermore, operation with the containment deinerted at low power is permitted by the technical specifications of other similar facilities. Accordingly, it is our recommendation, that when such circumstances arise, you use enforcement discretion. You should bear in mind that the 24-hour grace period for deinerting is intended for use in conjunction with a shutdown, not to avoid a shutdown and in order to ensure that the return to power was not made to avoid violating the technical specification, the licensee should be prepared to demonstrate that shutdown could have been reached within the 24-hour period if the decision to return to power had not been made.

With respect to your Question #2: A containment entry at power involves no public safety considerations that aren't already addressed by the containment integrity Technical Specifications. However, there are two occupational safety considerations (a) the inerted atmosphere and (b) entry to a high radiation area. Item (a) is of interest and concern to the staff but is beyond the present regulatory purvue of the NRC. To promulgate inspection and enforcement guidance in this area would constitute new generic requirements. Item (b) is an ALARA, 10 CFR 19, and 10 CFR 20 consideration having a regulatory basis for inspection and enforcement by the NRC. With respect to this consideration, you should apply the same radiation protection criteria to all high radiation areas regardless of location within the plant or whether the plant is operation. The Section 8 Regulatory Guides make no distinction between radiation areas on the basis of whether they are inside containment or outside containment. If you have any questions regarding this issue, please contact Bill Long (492-9477).

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RECORD OF TELEPHONE CONVERSATION

Sheet DOCUMENT (SET) START of _____
Date 1-7-82
Time 3:04 PM

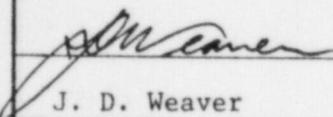
FROM: Name <u>Byron Siegel</u> Company <u>NRC</u>	TO: Name <u>Paul Borer/Jeff Weaver</u> Company <u>NPPD</u>
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SUBJECT: Inerting Time Requirement Technical Specification

TOPICS OF CONVERSATION:

The present Technical Specification 3.7.A.5.b "Oxygen Concentration" allows CNS to commence deinerting 24 hours prior to shutdown and to be inerted within 24 hours following a shutdown. The District had requested from the NRC clarification on instances where plant shutdown is aborted (i.e. the problem is corrected within the 24 hour deinerting clock period.) Since in this case shutdown will never be actually achieved, there is no defined mechanism to start the 24 hour inerting clock. It was previously explained to Byron Siegel that this specific Tech Spec does not contain the provision such as Definition J "Limiting Conditions for Operation" which provides for corrective measures being implemented in the interim.

Our Project Manager informed us that he had discussed this issue with the Branch Chief (T. A. Ippolito) and that once the problem is rectified and it is decided not to shutdown, the 24 hours allowed for inerting commences. No permanent or emergency Tech Spec change is required for this type of occurrence.


J. D. Weaver

Licensing Manager

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