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 Office of Nuclear Reactor Regulation, Director

SUBJECT: Submits addl info requested 811113 re review of problems
 associated w/containment venting & purging during normal
 operation.

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Attn: Document & Control Desk
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Washington, DC 20555



MONTICELLO NUCLEAR GENERATING PLANT
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Containment Purging During Normal Operation

In a letter dated November 13, 1981 from T A Ippolito, Chief Operating Reactors Branch #2, Division of Licensing, USNRC, we were asked to supply additional information related to the NRC Staff's ongoing review of problems associated with containment venting and purging.

Specifically, we are responding to the following questions or requests for information:

1. Provide a discussion of the provisions to insure that isolation valve closure will not be prevented by debris which could eventually become entrained in the escaping air and steam. Installation of debris screens is one acceptable method of accomplishing this function. If no provisions are considered necessary, provide information to justify this conclusion. NSP's February 26, 1980 letter in response to a similar request for additional information dated January 7, 1980 provided inadequate justification.
2. It is the NRC Staff's recommendation that NSP commit to limiting the use of the purge/vent system to a specified annual time commensurate with plant operational safety needs. NSP should provide such a commitment or justification why such a limitation is considered unnecessary.
3. Technical specifications should be proposed that would require the Standby Gas Treatment System (SBGT) to be configured via the 2-inch line during operating modes 1 through 4 to prevent damage to the SBGT system should a LOCA occur during venting operations. If no specifications are considered necessary NSP should provide information to justify this conclusion.
4. Technical specification changes should be proposed incorporating the test requirements set forth in Enclosure 1 together with the details

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of your proposed test program. If the results of current and past surveillance tests and operating experience are believed to demonstrate operability of those valves, provide this information as justification for not modifying the surveillance requirements.

5. Although the technical specifications necessary to finalize the purge and vent part of Item II.E.4.2 are not completely finalized, we request that you review your existing technical specifications against the sample provided in T. A Ippolito's letter of November 13, 1981, for any areas in which your existing technical specifications need expansion.

Isolation Valve Closure Prevented by Debris

It is still our contention that debris of a size which could potentially become entrained in the escaping air-stream mixture from first entering a containment purge or vent line and then preventing both valves from closing tightly is extremely unlikely. Specifically, the probability of one object large enough to block both isolation valves from fully closing being entrained in the escaping air-stream mixture and entering the containment purge or vent line and being at the precise location required to block both valves at the time of valve closure is extremely small. Further, the probability of two objects large enough for each to block a single isolation valve from fully closing being entrained in the escaping air-stream mixture and entering the containment purge or vent line and both objects being at the precise location required to block both valves at the time of valve closure is also extremely small. However, to resolve this issue, we will commit to installing debris screens and to have them installed prior to the end of the 1983 refueling outage.

Limiting Use of the Purge/Vent System

We believe that a commitment to limiting the use of the purge/vent system to a specified annual time is unnecessary. We have previously stated that all purging and venting times will be limited to as low as achievable. We have also raised a concern that an abnormally large number of reactor shutdowns for containment entry and maintenance could cause any specified time to be exceeded during a year.

All isolation valves on the purge and vent system are capable of operating under design basis accident differential pressure by design. We have modified the 18-inch butterfly valves with 40 degree limit stops and have valve manufacturer's analyses which demonstrates that the modified purge and vent valves are capable of closing during a LOCA while the containment is being purged.

Since valve operability and reliability has been demonstrated and we have committed to limiting purging and venting times to as low as achievable, we feel that specifying a specific annual time limitation on purging and venting will not increase the safety provided to the public.

Technical Specifications Requiring SBTG Configured Via 2-Inch Line During Operation

We will submit proposed technical specifications that will require the Standby Gas Treatment System (SBGT) to be configured by way of a 2-inch line during operating modes. We will also submit proposed technical specifications which will permit containment venting for inerting and deinerting operations by way of the Reactor Building exhaust plenum. These steps should prevent damage to the SBTG System should a LOCA occur during venting operation and will allow the use of the large diameter path for containment inerting and deinerting operations when the reactor is above 212°F.

High radiation isolation signal from the plenum radiation monitor will isolate the purge/vent valves being used for inerting or deinerting in the event of a release.

Technical Specifications for Purge/Vent Valve Testing

Technical specification changes incorporating the test requirements set forth in T. A. Ippolito's letter of November 13, 1981 are not being proposed because operating experience indicates that the existing surveillance tests and preventive maintenance is adequate to assure the operability of our purge/vent isolation valves. Surveillance test records since 1973 indicate that we have had only one instance of a valve exceeding leakage criteria. In that instance the leakage was less than one scfm. The redundant valve had zero leakage. During the 1981 refueling outage all of the software parts of all the purge/vent valves were replaced as part of a preventive maintenance program. It is our intention to replace or test the software parts of these valves on a 5 year schedule.

Technical Specification Review Against A Generic Technical Specification

We have reviewed our technical specifications against the sample technical specification provided. We believe that our present technical specifications address and are comparable to all items in the sample technical specification except for the following two surveillance requirements:

- 1) The valve seals of the purge supply and exhaust isolation valves and the vent line isolation valves shall be replaced at least one per 5 years.
- 2) The isolation valves specified in Table 3.6-1 shall be demonstrated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of a cycling test, and verification of isolation time.

A proposed technical specification similar to these surveillance requirements will be submitted.

Please contact us if you have any questions related to the information we have provided.

A handwritten signature in cursive script, reading "L. O. Mayer".

L O Mayer, PE
Manager of Nuclear Support Services

cc Regional Director - III, USNRC
Resident Inspector, USNRC
NRR Project Manager, USNRC
G Charnoff