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DENTON,H.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Notifies of discrepancy discovered in updated FSAR & Rev 1 to updated FSAR submittal on 830722 & 830701, respectively re containment isolation valves, Table VI-3C, Revised Tech Specs will be provided w/updated App J submittal on 831101.

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September 12, 1983

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Nine Mile Point Unit 1
Docket No. 50-220
DPR-63

Dear Mr. Denton:

Our letters of July 22, 1982 and July 1, 1983 submitted the Final Safety Analysis Report (Updated) and the first revision to the Final Safety Analysis Report (Updated), respectively, in accordance with 10CFR50.71(e). Recently, a discrepancy was discovered in Table VI-3c "Primary Containment Isolation Valves Lines Entering Free Space of the Containment" of Section VI-D-1.0. The current wording indicates that the air/DC solenoid operated valves of the containment spray drywell and suppression chamber common supply (four lines) automatically open on receipt of a reactor low-low level and high drywell pressure signal. The original Final Safety Analysis Report and Technical Specifications indicate the same. A review of piping and instrumentation diagrams and electrical diagrams indicated that these signals are not present. The line-up for the containment spray system during normal operation requires that these valves be in the open position.

Subsequent to discovering the above discrepancy, Niagara Mohawk initiated an investigation into the potential safety consequences. The following is a summary of this review.

The Nine Mile Point Unit 1 containment spray system consists of two separate and independent systems, each capable of removing decay heat and the energy from any credible metal water reaction (0.8 to 27 percent) at a rate which will prevent containment pressures and temperatures from exceeding their design values (see Figure 1).

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There are specific features which provide a high degree of reliability of the containment spray system. These are:

1. Each system is designed with heat removal capacity well in excess of the expected maximum requirement.

2. The two redundant systems are physically separated to minimize the possibility of coincident failures.

3. The systems are designed to meet any credible seismic force.

4. Automatic initiation of all four pumps of the containment spray system assures that the containment will not be overpressurized.

5. Valve control switches are keylocked to require a deliberate operator action to change position. Position indication is provided by position lights and on a mimic board in the Control Room.

6. Electric power for the system is available from station reserve power supplies or from either of two emergency diesel generators.

7. Only one loop of each system and its associated raw water pump is necessary to keep containment pressure and temperature within design limits. Therefore, one loop of one system and both loops of the other system may be inoperable and the required cooling functions can still be met.

8. The delay between the time of the accident and full spray operation is seconds. This includes signal time for pump start, time required to get pump up to speed and diesel generator starting time. Even assuming no core sprays and the maximum metal-water reaction, this delay could be as much as 15 to 20 minutes without loss of containment integrity.

The valves under discussion are the air/DC solenoid operated valves located in the primary and secondary loop of both trains. These four valves are administratively open during normal operation as required by Operating Procedures N1-OP-14, "Containment Spray System", and N1-OP-43, "Startup and Shutdown Procedure". During an event which requires containment spray operation (isolated condition), these four valves are also required to be open. Thus, these valves do not have to change position between their normal and isolated condition.

The only times that these valves are closed is during testing and maintenance. During maintenance, the affected train is marked up and operability testing of the other train is conducted immediately and daily thereafter. This is ensured by Operating Procedure N1-OP-14, "Containment Spray System".

During surveillance testing, these valves are in the closed position to prevent flow to the primary containment. These tests are conducted in accordance with approved procedures which provide requirements for closing and subsequent reopening of these valves. If one train is in the test mode and containment spray is required, the remaining train is available and capable of adequately reducing containment pressure and temperature. This remaining train has redundant active components.

Therefore, even though the reactor low-low level and high drywell pressure signals are not available on the four containment spray drywell and suppression chamber common supply valves, as indicated in the Final Safety Analysis Report and Technical Specifications, a significant safety hazard does not exist. These valves are open during normal operation and adequate administrative controls exist to ensure that these valves remain open and are available for containment spray operation.

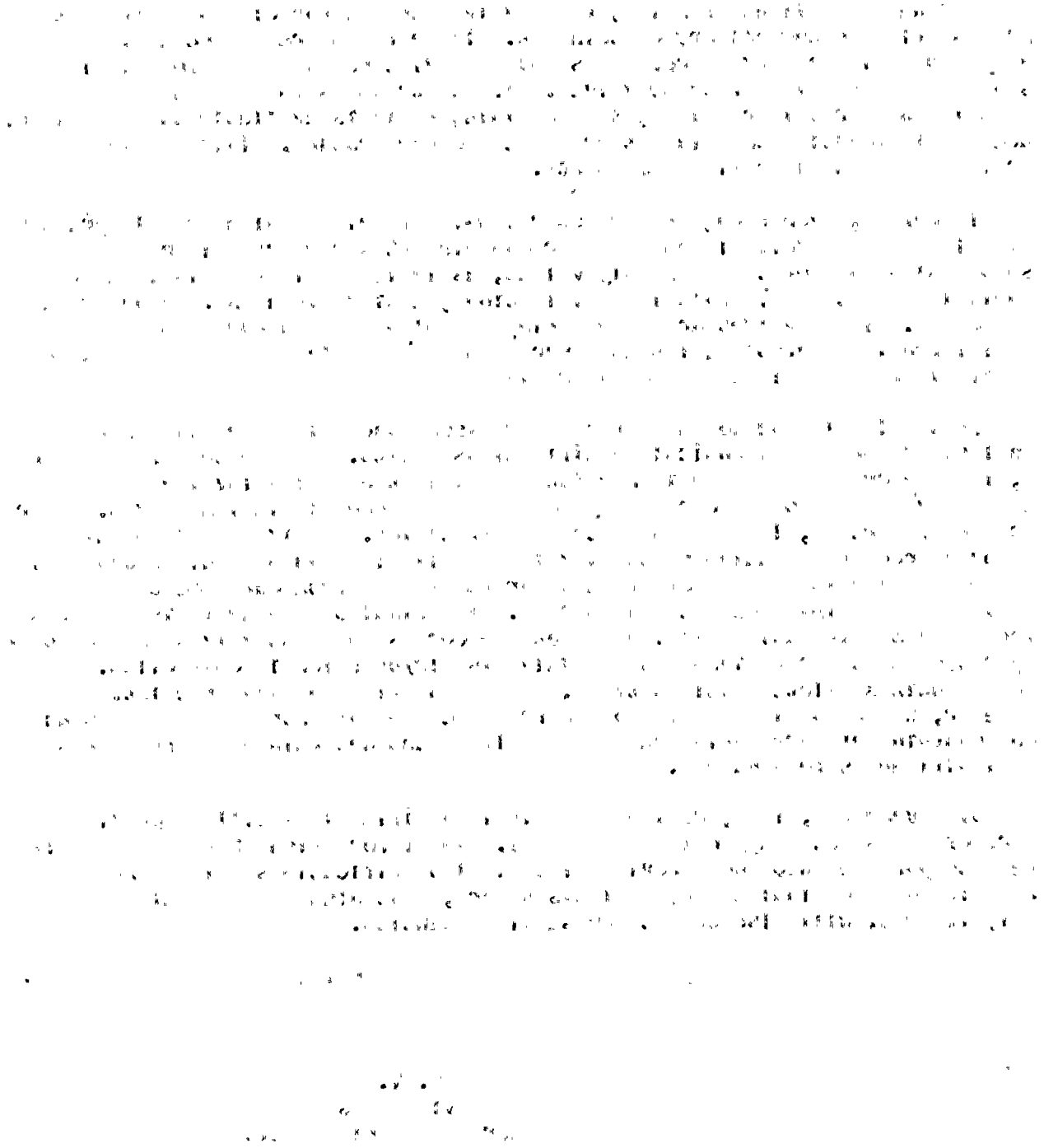
It should also be noted that another discrepancy with the Final Safety Analysis Report and Technical Specifications exists. Our letter of December 3, 1982 described an Appendix R related modification which involved removing the motive power to two core spray test line to torus isolation valves. Your letter of March 3, 1983 approved this modification. Motive power was also removed from one containment spray valve to alleviate an Appendix R concern. These modifications were performed prior to startup from our recent recirculation piping replacement outage. The Final Safety Analysis Report and Technical Specifications indicate that the core spray test valves are AC motor operated and the containment spray valve is air/DC solenoid controlled. Due to Appendix R related modifications, these conditions no longer exist. However, the removal of motive power from the two core spray test valves and one containment spray valve has been analyzed and determined not to represent a significant safety hazard.

By November 1, 1983, revised Technical Specifications will be provided as part of our updated Appendix J submittal. The information stated above will be incorporated into these revised Technical Specifications. The next revision of the Final Safety Analysis Report, scheduled to be submitted by July 1, 1984, will also correct these discrepancies.

Sincerely,

C. V. Mangan
Vice President
Nuclear Engineering & Licensing

CVM/PM:bd



CONTAINMENT SPRAY SYSTEM

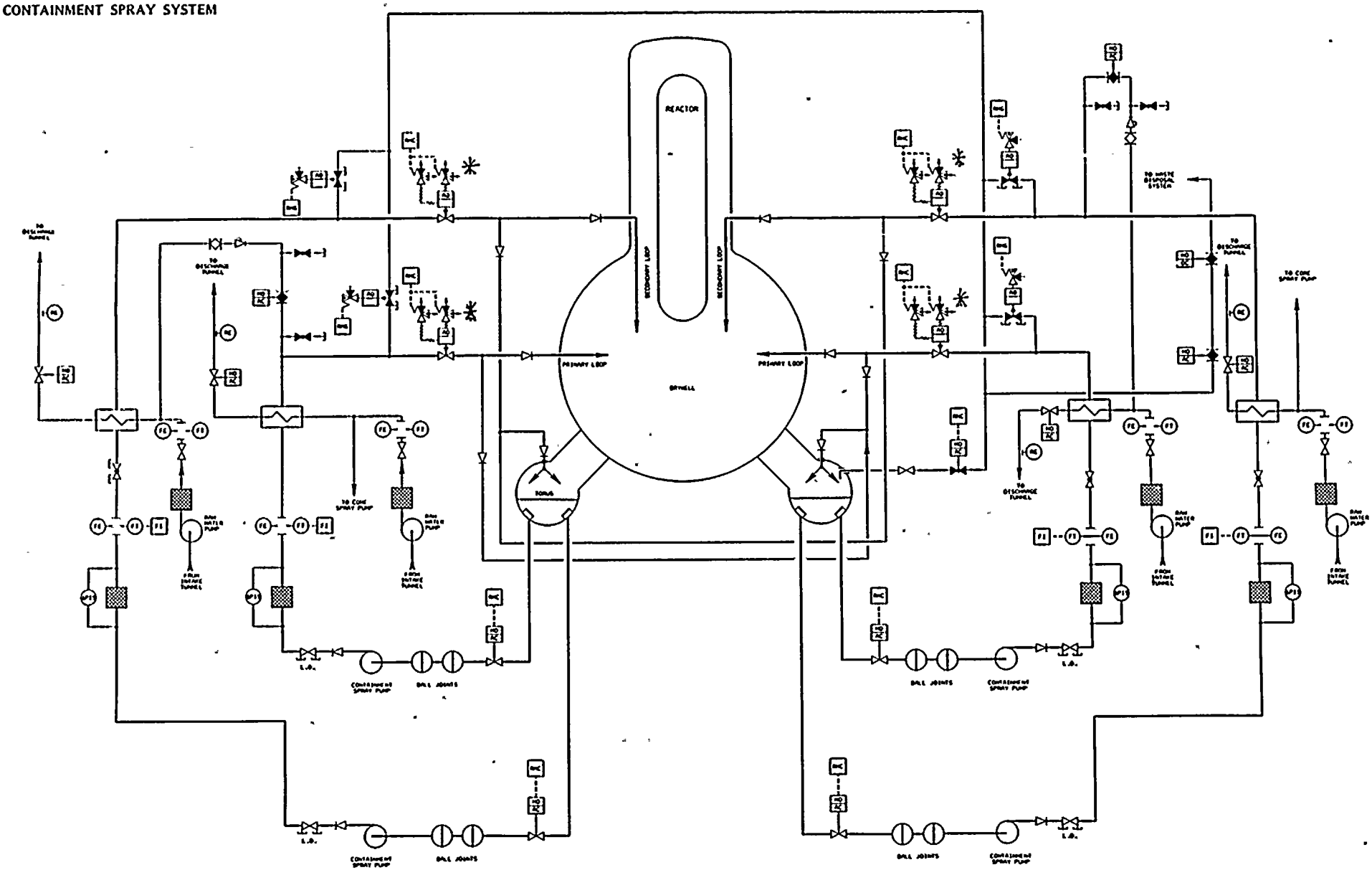


FIGURE 1