ATTACHMENT I

PROPOSED TECHNICAL SPECIFICATION CHANGES

RELATED TO

CONTAINMENT PURGE

AND VENT

POWER AUTHORITY OF THE STATE OF NEW YORK
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
DOCKET NO. 50-333

2. From and after the date that one circuit of the Standby Gas Treatment System is made or found to be inoperable for any reason, the following would apply:

   a. If in Start-up/Hot Standby, Run or Hot Shutdown mode, reactor operation or irradiated fuel handling is permissible only during the succeeding 7 days unless such circuit is sooner made operable, provided that during such 7 days all active components of the other Standby Gas Treatment Circuit shall be operable.

   b. If in Refuel or Cold Shutdown mode, reactor operation or irradiated fuel handling is permissible only during the succeeding 31 days unless such circuit is sooner made operable, provided that during such 31 days all active components of the other Standy Gas Treatment Circuit shall be operable.

3. If Specifications 3.7.B.1 and 3.7.B.2 are not met, the reactor shall be placed in the cold condition and irradiated fuel handling operations and operations that could reduce the shutdown margin shall be prohibited.

   e. At least once per operating cycle, manual operability of the bypass valve for filter cooling shall be demonstrated.

   f. Standby Gas Treatment System Instrumentation Calibration:

differential pressure switches	Once/operating Cycle

2. When one circuit of the Standby Gas Treatment System becomes inoperable, the operable circuit shall be demonstrated to be operable immediately and daily thereafter.

3.

INTENTIONALLY BLANK

4. Whenever primary containment integrity is required as specified in Section 3.7.A.2, valve No. 27-MOV-120 shall be in the closed position; flow to the system shall be through valve No. 27-MOV-121.

4. When valve No. 27-MOV-120 is required to be closed as specified in Section 3.7.B.4, its position shall be verified and recorded monthly.

c. Secondary Containment capability to maintain a 1/4 in. of water vacuum under calm wind conditions with a filter train flow rate of not more than 6,000 cfm, shall be demonstrated at each refueling outage prior to refueling.

D. Primary Containment Isolation Valves

1. Whenever primary containment integrity is required per 3.7.A.2, the containment isolation valves listed in Table 3.7-1 shall be operable with closure times as stated in Table 3.7-1, except as specified in 3.7.D.2 and 3.7.D.3.

D. Primary Containment Isolation Vales

1.a. At least once per operating cycle, verify that closure time of each automatic isolation valve is in accordance with the time limit specified in Table 3.7-1.

b. At least once per operating cycle, the instrument line excess flow check valves shall be tested for proper operation.

c. At least once per quarter:

(1.) All normally open power-operated isolation valves (except for the main steam line power-operated isolation valves) shall be fully closed and reopened.

Amendment No.

(2.) With the reactor at reduced power level, trip main steam isolation valves and verify closure time.

d. At least twice per week, the main steam line power-operated isolation valves shall be exercised by partial closure and subsequent reopening.

2. With one or more of the isolation valves listed in Table 3.7-1 inoperable, maintain at least one isolation valve operable in each affected penetration that is open and:

a. Restore the inoperable valve(s) to operable status within 4 hours; or

b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the closed position; or

c. Isolate each affected penetration by use of at least one closed manual valve or a blind flange.

2. Whenever an isolation valve listed in Table 3.7-1 is inoperable, the position of at least one other valve in each line having an inoperable valve shall be recorded daily.

3. When primary containment integrity is required per 3.7.A.2, the containment vent and purge line isolation valves may be open for safety related reasons. With one containment purge supply isolation valve and/or one containment purge exhaust isolation or vent valve inoperable, operation may continue until the next cold shutdown provided that:

   a. The operable valve is closed; and,

   b. Either the inoperable valve is restored to operable status within 72 hours, or the operable valve is locked closed.

4. If Specification 3.7.D.1, 3.7.D.2, and 3.7.D.3 cannot be met, an orderly shutdown shall be initiated and the reactor shall be in the cold condition within 24 hr.

3. The isolation valves listed in Table 3.7-1 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 closure time.

complete containment system, secondary containment is required at all times that primary containment is required as well as during refueling.

The Standby Gas Treatment System is designed to filter and exhaust the reactor building atmosphere to the main stack during secondary containment isolation conditions with a minimum release of radioactive materials from the reactor building to the environs. Both standby gas treatment fans are designed to automatically start upon containment isolation; however, only one fan is required to maintain the reactor building pressure at approximately a negative 1/4 in.water gage pressure; all leakage should be in leakage. Each of the two fans has 100 percent capacity. If one Standby Gas Treatment System circuit is inoperable, the other circuit must be tested daily. This substantiates the availability of the operable circuit and results in no added risk; thus, reactor operation or refueling operation can continue. If neither circuit is operable, the Plant is brought to a condition where the system is not required.

While only a small amount of particulates is released from the Pressure Suppression Chamber System as a result of the loss-of coolant accident, high-efficiency particulate filters are specified to minimize potential particulate release to the environment and to prevent clogging of the iodine filter. The high-efficiency filters have an efficiency greater than 99 percent for particulate matter larger than 0.3 micron. The minimum iodine removal efficiency is 99 percent. Filter banks will be replaced whenever significant changes in filter efficiency occur. Tests (11) of impregnated charcoal identical to that used in the filters indicated that shelf life up to 5 yr leads to only minor decreases in methyl iodine removal efficiency.

The 99 percent efficiency of the charcoal and particulate filters is sufficient to prevent exceeding 10CFR100 guidelines for accidents analyzed. The analysis of the loss-of-coolant accident assumed a charcoal filter efficiency of 90 percent, a particulate filter efficiency of 90 percent, and TID 14844 fission product source term. Hence, requiring 99 percent efficiency for both the charcoal and particulate filters provides adequate margin. A heater maintains relative humidity below 70 percent in order to assure the efficient removal of methyl iodine on the impregnated charcoal filters.

Flow from containment to the Standby Gas Treatment System is via 6-inch valve No. 27-MOV-121. Since the maximum flow through this line is within the design capabilities of the system, this requirement assures the operability of the Standby Gas Treatment System.

D. Primary Containment Isolation Valves

Double isolation valves are provided on lines penetrating the primary containment and open to the free space of the containment. Closure of one of the valves in each line would be sufficient to maintain the integrity of the Pressure Suppression System. Automatic initiation is required to minimize the potential leakage paths from the containment in the event of a loss-of-coolant accident.

The containment isolation valves on the containment vent and purge lines may be open for safety related reasons. Safety related reasons specifically includes inerting or de-inerting primary containment, and maintaining the differential pressure between the drywell and suppression pool.

ATTACHMENT II

SAFETY EVALUATION

RELATED TO

CONTAINMENT PURGE

AND VENT

POWER AUTHORITY OF THE STATE OF NEW YORK
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
DOCKET NO. 50-333

Section I - Description of Modification

This proposed amendment to Appendix A of the James A. FitzPatrick nuclear power plant Facility Operating License was prepared in response to NRC letters dated November 29, 1978 and December 15, 1981 (Reference (c) and (d) respectively). These changes are proposed as a result of our review of the sample Technical Specifications provided as Enclosure 5 and Reference (d).

The changes affect the following Sections of Appendix A: 3.7.B.3, 3.7.D.1, 3.7.D.2, 3.7.D.3, 4.7.B.4, 4.7.D.1.a, 4.7.D.1.b and 4.7.D.3 (pages 183, 183A, 185, 186, 186A and 192.)

These changes were committed to in Reference (e).

Section II - Purpose of the Modification

These changes will provide greater assurance of containment isolation in the event an accident by requiring additional surveillance tests for all containment isolation valves, and by describing actions to be taken in the event of an isolation valve becomes inoperable . Specific actions are detailed for containment vent and purge valves.

In addition, to prevent over pressurization of the Standby Gas Treatment System in the event of an accident, Section 3.7.B.3 has been added. This section requires that flow from containment be routed through a 6 inch valve (27-MOV-121) rather than a 12 inch valve (27-MOV-120) whenever the system is required to be operable. (See Reference (a) Figure 5.3.2, and drawings attached to Reference (f).) Section 4.7.B.4 adds an associated surveillance requirement.

Section III - Impact of the Change

The increased surveillance testing and record keeping required by these proposed Technical Specification Changes should improve safety at the FitzPatrick plant by providing greater assurance of containment isolation in the event of an accident.

Also, the operability of the Standby Gas Treatment System is assured by these changes.

Section IV - Implementation of the Modification

The modification as proposed will not impact the Fire Protection or ALARA Programs at the James A. FitzPatrick nuclear power plant.

Section V - Conclusion

The incorporation of these modification: a) will not change the probability nor the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Safety Analysis Report; b) will not increase the possibility of an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report; and c) will not reduce the margin of safety as defined in the basis for any Technical Specification; and d) does not constitute an unreviewed safety question.

Section VI - References

(a) JAF FSAR

(b) JAF SER

(c) November 29, 1978 letter, T. A. Ippolito (NRC) to G. T. Berry (PASNY) regarding Containment Purging During Normal Plant Operation.

(d) December 15, 1981 letter, T. A. Ippolito (NRC) to G. T. Berry (PASNY) regarding Generic Concerns of Containment Purge and Vent.

(e) March 8, 1982 letter, J. P. Bayne (PASNY) to D. Vassallo (NRC) regarding Containment Venting and Purging (JPN-82-28).

(f) August 15, 1979 letter, P. J. Early (PASNY) to T. A. Ippolito (NRC) regarding, Justification for Continued Containment Purging During Normal Plant Operation (JPN-79-50).