Enclosure 3

Edwin I. Hatch Nuclear Plant
Request to Revise Technical Specifications
Suppression Chamber - Drywell Vacuum Breakers

Page Change Instructions

The proposed change to the Plant Hatch Unit 1 Technical Specifications will be incorporated as follows:

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The proposed change to the Plant Hatch Unit 2 Technical Specifications will be incorporated as follows:

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LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.A.4. Pressure Suppression Chamber to Drywell Vacuum Breakers	4.7.A.4. Pressure Suppression Chamber to Drywell Vacuum Breakers
a. When primary containment is required, all pressure suppression chamber to drywell vacuum breakers shall be operable and positioned in the fully closed position ~~(except during testing)~~* except that up to three vacuum breakers may be inoperable for opening provided they are known to be in the closed position.	a. The pressure suppression chamber drywell vacuum breakers shall be visually inspected each refueling outage and checked for operability monthly.
b. If the closed position indicating lights for a pressure suppression chamber to drywell vacuum breaker is inoperable, continued reactor operation is permissible only if: (1) the operability of the redundant closed position indicating circuit is verified, and (2) a leakage test of the pressure suppression chamber to drywell vacuum breaker system is satisfactorily performed within 24 hours. If either of these requirements cannot be met, the reactor must be in the cold shutdown condition within 36 hours.	b. Closed position is indicated by redundant lights in the main control room which are operated by two separate closed position switches and circuits for each vacuum breaker. If either redundant position indicating light is inoperable or shows that the vacuum breaker is stuck open, the affected vacuum breaker shall be exercised within two hours to demonstrate operability of the remaining position indicating circuit, and every 15 days thereafter until the redundant circuit is repaired.
c. The differential pressure which actuates the pressure suppression chamber to drywell vacuum breakers shall be 0.5 psid or less.	c. Each pressure suppression chamber to drywell vacuum breaker shall be tested for proper opening differential pressure each refueling outage.
d. The total leakage between the drywell and pressure suppression chamber shall be less than the equivalent leakage through a one-inch diameter orifice at a differential pressure of one psi.	d. A leak test of the pressure suppression chamber to drywell vacuum breaker system shall be conducted at the end of each refueling outage and every 15 days when reactor operation is continued under the requirements of 3.7.A.4.b.

* ONE OR MORE VACUUM BREAKERS MAY BE OPEN DURING SURVEILLANCES OR WHEN PERFORMING THEIR INTENDED FUNCTION.

3.7.A.4. Pressure Suppression Chamber to Drywell Vacuum Breakers

The purpose of the pressure suppression chamber to drywell vacuum breakers is to equalize pressure in order to maintain structural integrity of the containment. ← INSERT FROM NEXT PAGE

The twelve pressure suppression chamber to drywell vacuum breakers limit the pressure differential between the suppression chamber and drywell during post-accident drywell cooling operations. They are sized on the basis of the Bodega Bay pressure suppression system tests. The ASME Boiler and Pressure Vessel Code, Section III, Subsection B, allows a 2 psig vacuum for the drywell. With three vacuum relief valves secured in the closed position and nine operable valves, containment integrity is not impaired.

The Bodega Bay pressure suppression tests provided the most limiting requirements for sizing these vacuum breakers; a minimum vacuum breaker flow area equal to 1/16 the downcomer vent area was established by the test to minimize the water oscillations in the downcomer. The downcomer vent area for Hatch is approximately 214 ft^2 which results in a minimum total vacuum breaker area of 13.4 ft^2 and translates into nine 18-inch vacuum breakers. The 12 vacuum breakers actually provide more than the minimum required area even considering the single failure of one vacuum breaker. Suppression chamber to drywell differential pressure resulting from vacuum breaker sizing of 1/16 the downcomer vent area is well below the design requirement of approximately 2 psid. Reference Section 5.2.3.6.1 of the FSAR.

The position indication system for the Hatch pressure suppression chamber to drywell vacuum breakers consists of three position switches, two of which are highly sensitive closed position indicating switches which are physically separated from each other. Due to the "snap" action of the magnetic latch provided, the "not closed" position would be indicated immediately upon opening. The closed position switches will indicate the valve to be open when the pallet is approximately .015 to .035 inches away from the seat at the location of the switches; the pallet would be at an angle of approximately 3 to 7 minutes open, respectively, at that time. Reference Section 5.2.3.6.1 of the FSAR.

Differential pressure between the suppression chamber and the drywell can be due to depressurization of the drywell caused by events such as cooling cycles, inadvertent drywell spray actuation, and steam condensation from sprays or subcooled water reflood of a break in the event of a primary system rupture. Operations which add gas to the suppression chamber and/or remove gas from the drywell can also increase the differential pressure. For example, such operations may include inerting or deinerting of the primary containment.

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3/4.6.4 VACUUM RELIEF

SUPPRESSION CHAMBER - DRYWELL VACUUM BREAKERS

LIMITING CONDITION FOR OPERATION

3.6.4.1 All suppression chamber - drywell vacuum breakers shall be OPERABLE and closed* with:

a. A total leakage between the suppression chamber and the drywell or less than the equivalent leakage through a 1 inch diameter orifice at a differential pressure of 1 psi,

b. The redundant position indicators OPERABLE, and

c. An opening set point of ≤ 0.5 psid.

APPLICABILITY: CONDITIONS 1, 2 and 3.

ACTION:

a. With up to two suppression chamber - drywell vacuum breakers inoperable for opening but known to be closed, the provisions of Specification 3.0.4 are not applicable and operation may continue provided Surveillance Requirement 4.6.4.1.a is performed on the OPERABLE vacuum breakers within 2 hours and at least once per 15 days thereafter. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. With three suppression chamber - drywell vacuum breakers inoperable for opening but known to be closed, operation may continue provided Surveillance Requirement 4.6.4.1.a is performed on the OPERABLE vacuum breaker. Ithin 2 hours and at least once per 15 days thereafter. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

c. With four suppression chamber - drywell vacuum breakers inoperable for opening but known to be closed, restore at least one inoperable vacuum breaker to OPERABLE status within 72 hours to be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

* ONE OR MORE VACUUM BREAKERS MAY BE OPEN DURING SURVEILLANCES OR WHEN PERFORMING THEIR INTENDED FUNCTION.

3/4.6.4 VACUUM RELIEF

Vacuum relief breakers are provided to equalize the pressure between the suppression chamber and drywell and between the reactor building and suppression chamber. This system will maintain the structural integrity of the primary containment under conditions of large differential pressures.

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The vacuum breakers between the suppression chamber and the drywell must not be inoperable in the open position since this would allow bypassing of the suppression pool in case of an accident. There are an adequate number of valves to provide some redundance so that operation may continue with no more than three vacuum breakers inoperable in the closed position.

Each set of vacuum breakers between the reactor building and the suppression chamber provides 100% relief, so operation may continue with one valve out-of-service for 7 days.

3/4.6.5 SECONDARY CONTAINMENT

Secondary containment is designed to minimize any ground level release of radioactive material which may result from an accident. The reactor building provides secondary containment during normal operation when the drywell is sealed and in service. When the reactor is shutdown or during refueling the drywell may be open and the reactor building then becomes the primary containment.

Establishing and maintaining a vacuum in the building with the standby gas treatment system once per 18 months, along with the surveillance of the doors, hatches and dampers, is adequate to ensure that there are no violations of the integrity of the secondary containment. Only one closed damper in each penetration line is required to maintain the integrity of the secondary containment.

3/4.6.6 CONTAINMENT ATMOSPHERE CONTROL

The OPERABILITY of the containment iodine filter trains ensures that sufficient iodine removal capability will be available in the event of a LOCA. The reduction in containment iodine inventory reduces the resulting site boundary radiation doses associated with containment leakage. The operation of this system and resultant iodine removal capacity are consistent with the assumptions used in the LOCA analyses.

Differential pressure between the suppression chamber and the drywell can be due to depressurization of the drywell caused by events such as cooling cycles, inadvertent drywell spray actuation, and steam condensation from sprays or subcooled water reflood of a break in the event of a primary system rupture. Operations which add gas to the suppression chamber and/or remove gas from the drywell can also increase the differential pressure. For example, such operations may include functional testing of the primary containment hydrogen recombiners and inerting/deinerting of the primary containment.

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LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
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a. When primary containment is required, all pressure suppression chamber to drywell vacuum breakers shall be operable and positioned in the fully closed position * except that up to three vacuum breakers may be inoperable for opening provided that they are known to be in the closed position.	a. The pressure suppression chamber drywell vacuum breakers shall be visually inspected each refueling outage and checked for operability monthly.
b. If either of the closed position indicating lights for a pressure suppression chamber to drywell vacuum breaker is inoperable, continued reactor operation is permissible only if: (1) the operability of the redundant closed position indicating circuit is verified, and (2) a leakage test of the pressure suppression chamber to drywell vacuum breaker system is satisfactorily performed within 24 hours. If either of these requirements cannot be met, the reactor must be in the cold shutdown condition within 36 hours.	b. Closed position is indicated by redundant lights in the main control room which are operated by two separate closed position switches and circuits for each vacuum breaker. If either redundant position indicating light is inoperable or shows that the vacuum breaker is stuck open, the affected vacuum breaker shall be exercised within two hours to demonstrate operability of the remaining position indicating circuit, and every 15 days thereafter until the redundant circuit is repaired.
c. The differential pressure which actuates the pressure suppression chamber to drywell vacuum breakers shall be 0.5 psid or less.	c. Each pressure suppression chamber to drywell vacuum breaker shall be tested for proper opening differential pressure each refueling outage.
d. The total leakage between the drywell and pressure suppression chamber shall be less than the equivalent leakage through a one-inch diameter orifice at a differential pressure of one psi.	d. A leak test of the pressure suppression chamber to drywell vacuum breaker system shall be conducted at the end of each refueling outage and every 15 days when reactor operation is continued under the requirements of 3.7.A.4.b.

*One or more vacuum breakers may be open during surveillances or when performing their intended function.

3.7.A.4. Pressure Suppression Chamber to Drywell Vacuum Breakers

The purpose of the pressure suppression chamber to drywell vacuum breakers is to equalize pressure in order to maintain structural integrity of the containment. Differential pressure between the suppression chamber and the drywell can be due to depressurization of the drywell caused by events such as cooling cycles, inadvertent drywell spray actuation, and steam condensation from sprays or subcooled water reflood of a break in the event of a primary system rupture. Operations which add gas to the suppression chamber and/or remove gas from the drywell can also increase the differential pressure. For example, such operations may include inerting or deinerting of the primary containment.

The twelve pressure suppression chamber to drywell vacuum breakers limit the pressure differential between the suppression chamber and drywell during post-accident drywell cooling operations. They are sized on the basis of the Bodega Bay pressure suppression system tests. The ASME Boiler and Pressure Vessel Code, Section III, Subsection B, allows a 2 psig vacuum for the drywell. With three vacuum relief valves secured in the closed position and nine operable valves, containment integrity is not impaired.

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CONTAINMENT SYSTEMS

3/4.6.4 VACUUM RELIEF

SUPPRESSION CHAMBER - DRYWELL VACUUM BREAKERS

LIMITING CONDITION FOR OPERATION

3.6.4.1 All suppression chamber - drywell vacuum breakers shall be OPERABLE and closed* with:

a. A total leakage between the suppression chamber and the drywell or less than the equivalent leakage through a 1 inch diameter orifice at a differential pressure of 1 psi,

b. The redundant position indicators OPERABLE, and

c. An opening set point of $\leq$ 0.5 psid.

APPLICABILITY: CONDITIONS 1, 2 and 3.

ACTION:

a. With up to two suppression chamber - drywell vacuum breakers inoperable for opening but known to be closed, the provisions of Specification 3.0.4 are not applicable and operation may continue provided Surveillance Requirement 4.6.4.1.a is performed on the OPERABLE vacuum breakers within 2 hours and at least once per 15 days thereafter. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. With three suppression chamber - drywell vacuum breakers inoperable for opening but known to be closed, operation may continue provided Surveillance Requirement 4.6.4.1.a is performed on the OPERABLE vacuum breakers within 2 hours and at least once per 15 days thereafter. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

c. With four suppression chamber - drywell vacuum breakers inoperable for opening but known to be closed, restore at least one inoperable vacuum breaker to OPERABLE status within 72 hours to be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

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