

REACTIVITY CONTROLS SYSTEMS

FLOW PATHS - OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.2 Each of the following boron injection flow paths shall be OPERABLE:

- a. A flow path from the concentrated boric acid storage system via a boric acid pump and makeup or decay heat removal (DHR) pump to the Reactor Coolant System, and
- b. A flow path from the borated water storage tank via makeup or DHR pump to the Reactor Coolant System.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With the flow path from the concentrated boric acid storage system inoperable, restore the inoperable flow path to OPERABLE status within 72 hours or be in at least HOT STANDBY and borated to a SHUTDOWN MARGIN equivalent to 1% $\Delta k/k$ at 200°F within the next 6 hours; restore the flow path to OPERABLE status within the next 7 days or be in COLD SHUTDOWN within the next 30 hours.
- b. With the flow path from the borated water storage tank inoperable, restore the flow path to OPERABLE status within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.1.2.2 Each of the above required flow paths shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that the pipe temperature of the heat traced portion of the flow path from the concentrated boric acid storage system is $\geq 105^\circ\text{F}$.

(1) IF THE 7 DAY VERIFICATION FALLS DURING TRANSFERS OF MAKE UP WATER OR DILUTE BORON SOLUTIONS (FLUID SOURCE CONCENTRATION OF LESS THAN 5000 ppmB), THE VERIFICATION PERIOD MAY BE EXTENDED UP TO 8 HOURS AFTER THE ADDITION OF DILUTE BORON SOLUTION HAS BEEN STOPPED FOR A PERIOD OF ATLEAST 8 HOURS

DAVIS-BESSE, UNIT 1

3/4 1-7

REACTIVITY CONTROL SYSTEMS

3/4.1.2 BORATION SYSTEMS

FLOW PATHS - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.2.1 At least one of the following boron injection flow paths shall be OPERABLE.

- a. A flow path from the concentrated boric acid storage system via a boric acid pump and a makeup or decay heat removal (DHR) pump to the Reactor Coolant System, if only the boric acid storage system in Specification 3.1.2.8a is OPERABLE, or
- b. A flow path from the borated water storage tank via a makeup or DHR pump to the Reactor Coolant System if only the borated water storage tank in Specification 3.1.2.8b is OPERABLE.

APPLICABILITY: MODES 5 and 6.

ACTION:

With none of the above flow paths OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes until at least one injection path is restored to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.1.2.1 At least one of the above required flow paths shall be demonstrated OPERABLE:

- a. At least once per 7 days⁽¹⁾ by verifying that the pipe temperature of the heat traced portion of the flow path is $\geq 105^{\circ}\text{F}$ when a flow path from the concentrated boric acid storage system is used, and
- b. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed or otherwise secured in position is in its correct position.

(1) IF THE 7 DAY VERIFICATION FALLS DURING TRANSFERS OF MAKEUP WATER OR DILUTE BORON SOLUTIONS (FLUID SOURCE CONCENTRATION OF LESS THAN 5000 ppmB), THE VERIFICATION PERIOD MAY BE EXTENDED UP TO EIGHT HOURS AFTER THE ADDITION OF DILUTE BORON SOLUTION HAS BEEN STOPPED FOR A PERIOD OF AT LEAST 8 HOURS.

REACTIVITY CONTROL SYSTEMS

BORATED WATER SOURCES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.2.8 As a minimum, one of the following borated water sources shall be OPERABLE:

- a. A boric acid addition system ~~and associated heat tracing~~ with:
 - 1. A minimum contained borated water volume in accordance with Figure 3.1-1,
 - 2. Between 7875 and 13,125 ppm of boron, and
 - 3. A minimum solution temperature of 105°F.
- b. The borated water storage tank (BWST) with:
 - 1. A minimum contained borated water volume of 70,700 gallons,
 - 2. A minimum boron concentration of 1800 ppm, and
 - 3. A minimum solution temperature of 35°F.

APPLICABILITY: MODES 5 and 6.

ACTION:

With no borated water sources OPERABLE, suspend all operations involving CORE ALTERATION or positive reactivity changes until at least one borated water source is restored to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.1.2.8 The above required borated water source shall be demonstrated OPERABLE:

- a. At least once per 7 days by:
 - 1. Verifying the boron concentration of the water,
 - 2. Verifying the contained borated water volume of the source, and

REACTIVITY CONTROL SYSTEMS

BORATED WATER SOURCES - OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.9 Each of the following borated water sources shall be OPERABLE:

- a. The boric acid addition system ~~and associated heat tracing~~ with:
 - 1. A minimum contained borated water volume in accordance with Figure 3.1-1,
 - 2. Between 7875 and 13,125 ppm of boron, and
 - 3. A minimum solution temperature of 105°F.
- b. The borated water storage tank (BWST) with:
 - 1. A contained borated water volume of between 482,778 and 550,000 gallons,
 - 2. Between 1800 and 2200 ppm of boron, and
 - 3. A minimum solution temperature of 35°F.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With the boric acid addition system inoperable, restore the storage system to OPERABLE status within 72 hours or be in at least HOT STANDBY and borated to a SHUTDOWN MARGIN equivalent to 1% $\Delta k/k$ at 200°F within the next 6 hours; restore the boric acid addition system to OPERABLE status within the next 7 days or be in COLD SHUTDOWN within the next 30 hours.
- b. With the borated water storage tank inoperable, restore the tank to OPERABLE status within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.