

EXHIBIT B

License Amendment Request Dated August 2, 1989

Docket No. 50-263

License No. DPR-22

Exhibit B consists of marked up pages from the Monticello Technical Specifications showing the proposed changes listed below:

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3.0 LIMITING CONDITIONS FOR OPERATION

reactor core, operations with a potential for reducing the shutdown margin below that specified in specification 3.3.A, and handling of irradiated fuel or the fuel cask in the secondary containment are to be immediately suspended if secondary containment integrity is not maintained.

D. Primary Containment Isolation Valves

1. During reactor power operating conditions, all isolation valves ^{Primary Containment automatic} ~~listed in Table 3.7.1~~ and all primary system instrument line flow check valves shall be operable except as specified in 3.7.D.2.

4.0 SURVEILLANCE REQUIREMENTS

D. Primary Containment Isolation Valves

1. The primary containment isolation valve surveillance shall be performed as follows:
 - a. At least once per operating cycle the operable isolation valves that are power operated and automatically initiated shall be tested for simulated automatic initiation and closure times.
 - b. At least once per operating cycle the primary system instrument line 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.

3.0 LIMITING CONDITIONS FOR OPERATION

2. In the event any isolation valve ~~specified in Table 3.7.1~~ becomes inoperable, reactor operation in the run mode may continue provided at least one valve in each line having an inoperable valve is closed.
3. If Specification 3.7.D.1 and 3.7.D.2 cannot be met, initiate normal orderly shutdown and have reactor in the cold shutdown condition within 24 hours.

Primary Containment automatic

4.0 SURVEILLANCE REQUIREMENTS

c. At least once per quarter - Continued

- (2) With the reactor power less than 75% of rated, trip main steam isolation valves (one at a time) and verify closure time.

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

2. Whenever an isolation valve ~~listed in Table 3.7.1~~ is inoperable, the position of at least one fully closed valve in each line having an inoperable valve shall be recorded daily.
3. A ~~the~~ isolation valve ~~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 operating time.
4. The seat seals of the drywell and suppression chamber 18-inch purge and vent valves shall be replaced at least once every five years.

Primary Containment automatic

Primary Containment automatic

3.0 LIMITING GAS CONTROL SYSTEM

E. Combustible Gas Control System

1. Two separate and independent Combustible Gas Control System trains shall be operable at all times whenever the reactor is in the run mode except as specified in Section 3.7.E.2 and 3.7.E.3 below.
2. After one of the Combustible Gas Control System train(s) is made or found to be inoperable for any reason, restore the inoperable train to operable status within 30 days or submit a special report to the Commission within the next 30 days which includes the following information:
 - 1) Identification of the inoperable equipment or subsystems and the reason for inoperability,
 - 2) Action(s) to be taken to restore equipment to operable status, and
 - 3) Summary description of action(s) taken to prevent recurrence.
3. With both of the Combustible Gas Control System trains inoperable for any reason, restore at least one train to operable status within 30 days or initiate an orderly shutdown of the reactor and be in the cold shutdown condition within 24 hours.

4.0 SURVEILLANCE REQUIREMENTS

E. Combustible Gas Control System

1. At least once an operating cycle, perform the following:
 - a. Calibrate the following instrumentation and control circuits
 1. Inlet flow indicator
 2. Total Flow indicator
 3. Return gas high temperature
 4. High reaction chamber temperature
 - b. Perform a resistance to ground test on all heater electrical circuits
 - c. Verify through a visual examination that there is no evidence of abnormal conditions.
2. At least once every six months verify the recombiner reaction chamber operability by verifying that the outlet temperature exceeds 600°F within one hour and that heater current is within 5% of rated current when the power setting is increased to maximum.
3. The leak tightness of the recombiners and associated piping shall be verified during each shutdown when a Type A overall integrated containment leakage test is required by either:
 - a. Venting the recombiner trains to the containment during the Type A test, or
 - h. Performing a separate leakage test of both recombiner trains and adding the results to the Type A test leakage.

TABLE 3.7.1

PRIMARY CONTAINMENT ISOLATION

Isolation Group	Valve Identification	Number of Valves		Maximum Operating Time (Sec)	Normal Position
		Inboard	Outboard		
1	Main Steam Line Isolation	4	4	5*	Open
1	Main Steam Line Drain	1	1	60	Closed
1	Recirculation Loop Sample Line	1	1	60	Open
2	Drywell Floor Drain		2	60	Open
2	Drywell Equipment Drain		2	60	Open
2	Drywell Vent		2	15**	Closed
2	Drywell Vent Bypass		1	15**	Closed
2	Drywell Purge Inlet		2	15**	Closed
2	Drywell and Suppression Chamber Air Makeup		1	15**	Closed
2	Suppression Chamber to Drywell N ₂ Recirculation		1	60	Closed
2	Suppression Chamber Vent		2	15**	Closed
2	Suppression Chamber Vent Bypass		1	15**	Closed
2	Suppression Chamber Purge Inlet		1	15**	Closed
2	Shutdown Cooling System	1	1	120	Closed

DELETE

* Minimum closure time shall be >3 seconds

** Effective following startup for Cycle 13. Maximum operating time shall be 20 seconds prior to beginning of Cycle 13.

TABLE 3.7.1, continued
PRIMARY CONTAINMENT ISOLATION

Isolation Group	Valve Identification	Number of Valves		Maximum Operating Time (Sec)	Normal Position
		Inboard	Outboard		
2	Shutdown Cooling System		1	120	Closed
2	Shutdown Cooling System	DELETE		120	Closed
2	Reactor Head Cooling			120	Closed
2	Combustible Gas Control		8	60	Closed
3	Cleanup Demineralizer System	1	1	40	Open
3	Cleanup Demineralizer System		1	40	Open
4	HPCI Turbine Steam Supply	1	1	40	Open
5	RCIC Turbine Steam Supply	1	1	30	Open

NOTE: Isolation Groupings are as follows:

Group 1: The valves in Group 1 are closed upon any of the following conditions:

1. Reactor low low water level
2. Main steam line high radiation
3. Main steam line high flow
4. Main steam line tunnel high temperature
5. Main steam line low pressure (RUN mode only)

Group 2: The actions in Group 2 are initiated by any one of the following conditions:

1. Reactor low water level
2. High Drywell pressure

NOTE: Manual override is provided to permit CGCS operation during Group II isolation.

TABLE 3.7.1, continued

PRIMARY CONTAINMENT ISOLATION

~~DELETE~~

Group 3: The actions in Group 3 are initiated by reactor low water level or high drywell pressure.

Group 4: Isolation valves in the high pressure coolant injection system (HPCI) are closed upon any one of the following signals:

1. HPCI steam line high flow
2. HPCI steam line low pressure
3. High temperature in the vicinity of the HPCI steam line

Group 5: Isolation valves in the reactor core isolation cooling system (RCIC) are closed upon any one of the following signals:

1. RCIC steam line high flow
2. RCIC steam line low pressure
3. High temperature in the vicinity of the RCIC steam line

Bases Continued:

While only a small amount of particulates are released from the primary containment as a result of the loss of coolant accident, high-efficiency particulate filters before and after the charcoal filters are specified to minimize potential particulate release to the environment and to prevent clogging of the charcoal adsorbers. The charcoal adsorbers are installed to reduce the potential release of radioiodine to the environment. The in-place test results should indicate a system leak tightness of less than 1% bypass leakage for the charcoal adsorbers using halogenated hydrocarbon and a HEPA filter efficiency of at least 99% removal of DOP particulates. Laboratory carbon sample test results indicate a radioactive methyl iodide removal efficiency for expected accident conditions. Operation of the standby gas treatment circuits significantly different from the design flow will change the removal efficiency of the HEPA filters and charcoal adsorbers. If the performance requirements are met as specified, the calculated doses would be less than the guidelines stated in 10 CFR 100 for the accidents analyzed.

D. Primary Containment Isolation Valves

Double isolation valves are provided on lines penetrating the primary containment. Closure of one of the valves in each line would be sufficient to maintain the integrity of the ~~pressure~~ ^{Primary Containment.} ~~suppression system~~. Automatic initiation is required to minimize the potential leakage paths from the containment in the event of a loss-of-coolant accident. Details of the isolation valves are discussed in Sections 5.2 and 7.2 of the ~~FSAR~~ ^{Primary Containment automatic} USAR. A listing of all Primary Containment automatic isolation valves, including maximum operating time is given in USAR Table 5.2-3b.

E. Combustible Gas Control System

The function of the Combustible Control System (CGCS) is to maintain oxygen concentrations in the post-accident containment atmosphere below combustible concentrations. Oxygen may be generated in the hours following a loss of coolant accident from radioanalysis of reactor coolant.

The Technical Specifications limit oxygen concentrations during operation to less than four percent by volume during operation. The maintenance of an inert atmosphere during operation precludes the build-up of a combustible mixture due to a fuel metal-water reaction. The other potential mechanism for generation of combustible mixtures is radioanalysis of coolant which has been found to be small.

A special report is required to be submitted to the Commission to outline CGCS equipment failures and corrective actions to be taken if inoperability of one train exceeds thirty days. In addition, if both trains are inoperable for more than 30 days, the plant is required to shutdown until repairs can be made.

EXHIBIT C

License Amendment Request Dated August 2, 1989

Docket No. 50-263

License No. DPR-22

Exhibit C consists of revised pages for the Monticello Technical Specifications including the proposed changes.

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3.0 LIMITING CONDITIONS FOR OPERATION

reactor core, operations with a potential for reducing the shutdown margin below that specified in specification 3.3.A, and handling of irradiated fuel or the fuel cask in the secondary containment are to be immediately suspended if secondary containment integrity is not maintained.

D. Primary Containment Automatic Isolation Valves

1. During reactor power operating conditions, all Primary Containment automatic isolation valves and all primary system instrument line flow check valves shall be operable except as specified in 3.7.D.2.

4.0 SURVEILLANCE REQUIREMENTS

D. Primary Containment Automatic Isolation Valves

1. The primary containment automatic isolation valve surveillance shall be performed as follows:
 - a. At least once per operating cycle the operable isolation valves that are power operated and automatically initiated shall be tested for simulated automatic initiation and closure times.
 - b. At least once per operating cycle the primary system instrument line 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.

3.0 LIMITING CONDITIONS FOR OPERATION

2. In the event any Primary Containment automatic isolation valve becomes inoperable, reactor operation in the run mode may continue provided at least one valve in each line having an inoperable valve is closed.
3. If Specification 3.7.D.1 and 3.7.D.2 cannot be met, initiate normal orderly shutdown and have reactor in the cold shutdown condition within 24 hours.

4.0 SURVEILLANCE REQUIREMENTS

- c. At least once per quarter - Continued
 - (2) With the reactor power less than 75% of rated, trip main steam isolation valves (one at a time) and verify closure time.
- d. At least once per week the main steam-line power-operated isolation valves shall be exercised by partial closure and subsequent reopening.
2. Whenever a Primary Containment automatic isolation valve is inoperable, the position of at least one fully closed valve in each line having an inoperable valve shall be recorded daily.
3. A Primary Containment automatic isolation valve 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 operating time.
4. The seat seals of the drywell and suppression chamber 18-inch purge and vent valves shall be replaced at least once every five years.

3.0 LIMITING GAS CONTROL SYSTEM

E. Combustible Gas Control System

1. Two separate and independent Combustible Gas Control System trains shall be operable at all times whenever the reactor is in the run mode except as specified in Section 3.7.E.2 and 3.7.E.3 below.
2. After one of the Combustible Gas Control System train(s) is made or found to be inoperable for any reason, restore the inoperable train to operable status within 30 days or submit a special report to the Commission within the next 30 days which includes the following information:
 - 1) Identification of the inoperable equipment or subsystems and the reason for inoperability,
 - 2) Action(s) to be taken to restore equipment to operable status, and
 - 3) Summary description of action(s) taken to prevent recurrence.
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4.0 SURVEILLANCE REQUIREMENTS

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1. At least once an operating cycle, perform the following:
 - a. Calibrate the following instrumentation and control circuits
 1. Inlet flow indicator
 2. Total Flow indicator
 3. Return gas high temperature
 4. High reaction chamber temperature
 - b. Perform a resistance to ground test on all heater electrical circuits
 - c. Verify through a visual examination that there is no evidence of abnormal conditions.
2. At least once every six months verify the recombiner reaction chamber operability by verifying that the outlet temperature exceeds 600°F within one hour and that heater current is within 5% of rated current when the power setting is increased to maximum.
3. The leak tightness of the recombiners and associated piping shall be verified during each shutdown when a Type A overall integrated containment leakage test is required by either:
 - a. Venting the recombiner trains to the containment during the Type A test, or
 - b. Performing a separate leakage test of both recombiner trains and adding the results to the Type A test leakage.

Bases Continued:

While only a small amount of particulates are released from the primary containment as a result of the loss of coolant accident, high-efficiency particulate filters before and after the charcoal filters are specified to minimize potential particulate release to the environment and to prevent clogging of the charcoal adsorbers. The charcoal adsorbers are installed to reduce the potential release of radioiodine to the environment. The in-place test results should indicate a system leak tightness of less than 1% bypass leakage for the charcoal adsorbers using halogenated hydrocarbon and a HEPA filter efficiency of at least 99% removal of DOP particulates. Laboratory carbon sample test results indicate a radioactive methyl iodide removal efficiency for expected accident conditions. Operation of the standby gas treatment circuits significantly different from the design flow will change the removal efficiency of the HEPA filters and charcoal adsorbers. If the performance requirements are met as specified, the calculated doses would be less than the guidelines stated in 10 CFR 100 for the accidents analyzed.

D. Primary Containment Isolation Valves

Double isolation valves are provided on lines penetrating the primary containment. Closure of one of the valves in each line would be sufficient to maintain the integrity of the Primary Containment. Automatic initiation is required to minimize the potential leakage paths from the containment in the event of a loss-of-coolant accident. Details of the Primary Containment isolation valves are discussed in Section 5.2 of the USAR. A listing of all Primary Containment automatic isolation valves including maximum operating time is given in USAR Table 5.2-3b.

E. Combustible Gas Control System

The function of the Combustible Control System (CGCS) is to maintain oxygen concentrations in the post-accident containment atmosphere below combustible concentrations. Oxygen may be generated in the hours following a loss of coolant accident from radioanalysis of reactor coolant.

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