ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. FACILITY OPERATING LICENSE NO. DPR-31

AMENDMENT NO. FACILITY OPERATING LICENSE NO. DPR-41

DOCKET NO. 50-250 AND 50-251

Revise Appendix A as follows:

Remove Pages	Insert Pages
i	i
1-7	1-7
1-8	1-8
1-9	1-9
Table 1.1	Table 1.1
3.4 -1	3.4 -1
3.4-2	3.4-2
3.4-2a	3.4-2a
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Table 4.1-1, Sheet 2	Table 4.1-1, Sheet 2
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1.24 E-AVERAGE DISINTEGRATION ENERGY

E shall be the average (weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (in MeV) for isotopes, other than iodines, with half lives greater than 30 minutes, making up at least 95% of the total noniodine activity in the coolant.

1.25 GAS DECAY TANK SYSTEM

The GAS DECAY TANK SYSTEM is designed and installed to reduce radioactive gaseous effluents by collecting primary coolant system offgases from the primary system and providing for delay or holdup for the purpose of reducing the total radioactivity prior to release to the environment.

1.26 VENTILATION EXHAUST TREATMENT SYSTEM

A VENTILATION EXHAUST TREATMENT SYSTEM is any system designed and installed to reduce radioactive material in particulate form in effluents by passing ventilation or vent exhaust gases through HEPA filters for the purpose of removing particulates from the gaseous exhaust stream prior to the release to the environment. Such a system is not considered to have any effect on noble gas effluents. Engineered Safety Feature (ESF) atmospheric cleanup systems are not considered to be ventilation exhaust treatment system components.

1.27 PROCESS CONTROL PROGRAM (PCP)

The PROCESS CONTROL PROGRAM shall contain the provisions, based on full scale testing, to asure that dewatering of spent bead resins results in a waste form with the properties that meet the requirements of 10CFR61 (as implemented by 10CFR20) and of the low level radioactive waste disposal site at the time of disposal.

1.28 OFFSITE DOSE CALCULATION MANUAL (ODCM)

The OFFSITE DOSE CALCULATION MANUAL shall contain the methodology and parameters used in the calculation of offsite doses due to radioactive gaseous and liquid effluents and in the calculation of gaseous and liquid effluent monitoring alarm/trip setpoints.

1.29 DOSE EQUIVALENT I-131

The DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microcurie/gram) which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134 and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in Table III of TID-14844, "Calculation of Distance Factors for Power and Test Reactor Sites", or in NRC Regulatory Guide 1.109, Rev. 1, October, 1977.

1.30 PURGE - PURGING

PURGE or PURGING is the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration or other operating condition, in such a manner that replacement air or gas is required to purify the confinement.

1.31 VENTING

VENTING is the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration or other operating condition, in such a manner that replacement air or gas is not provided or required during VENTING. Vent, used in system names, does not imply a VENTING process.

1.32 SITE BOUNDARY

The SITE BOUNDARY shall be that line beyond which the land is neither owned, leased nor otherwise controlled by the licensee.

1.33 UNRESTRICTED AREA

An UNRESTRICTED AREA shall be any area at or beyond the SITE BOUNDARY access to which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation from radioactive materials, or any area within the SITE BOUNDARY used for residential quarters or for industrial, commercial, institutional and/or recreational purposes.

1.34 MEMBER(S) OF THE PUBLIC

MEMBER(S) OF THE PUBLIC shall include all persons who are not occupationally associated with the plant. This category does not include employees of the licensee, its contractors, vendors or members of the Armed Forces using property located within the SITE BOUNDARY. Also excluded from this category are persons who enter the site to service equipment or to make deliveries. This category does include persons who use portions of the site for recreational, occupational or other purposes not associated with the plant.

1.35 HEAVY LOADS

Any load in excess of the nominal weight of a fuel and control rod assembly and associated handling tool. For the purpose of this specification, HEAVY LOADS will be defined as loads in excess of 2000 pounds.

1.36 OPERATIONAL MODE - MODE

An OPERATIONAL MODE (i.e., MODE) shall correspond to any one inclusive combination of core reactivity condition, power level, and average reactor coolant temperature specified in Table 1.1.

1.37 STAGGERED TEST BASIS

A STAGGERED TEST BASIS shall consist of:

a. A test schedule for (n) systems, subsystems, trains, or other designated components obtained by dividing the specified test interval into (n) equal subintervals, and

b. The testing of one system, subsystem, train, or other designated component at the beginning of each subinterval.

1.38 ANALOG CHANNEL OPERATIONAL TEST

An ANALOG CHANNEL OPERATIONAL TEST shall be the injection of a simulated signal into the channel as close to the sensor as practicable to verify OPERABILITY of alarm, interlock and/or trip functions. The ANALOG CHANNEL OPERATIONAL TEST shall include adjustments, as necessary, of the alarm, interlock and/or Trip Setpoints such that the Setpoints are within the required range and accuracy.

TABLE 1.1
OPERATIONAL MODES ***

	Mode	Reactivity Condition, Keff	% Rated Thermal Power*	Average Coolant Temperature
1.	Power Operation	≥ 0.99	> 5%	≥350°F
2.	Start-up	≥ 0.99	≤5%	≥350°F
3.	Hot Standby	< 0.99	0	≥350°F
4.	Hot Shutdown	< 0.99	0	350°F > Tavg >200°F
5.	Cold Shutdown	< 0.99	0	≤200°F
6.	Refueling **	≤ 0.90	0	≤140°F

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* Excluding decay heat.

** Fuel in the reactor vessel with the vessel head closure bolts less than fully tensioned or with the head removed.

*** This table shall only be applicable to those specifications that have been modified to reflect Operational Modes in the Applicability section of the LCOs, except as specified in Section 3.0.1 (Note).

3.4 ENGINEERED SAFETY FEATURES

Applicability: Applies to the operating status of the Engineered Safety Features.

Objective: To define those limiting conditions for operation that are necessary: (1) to remove decay heat from the core in emergency or normal shutdown situations, (2) to remove heat from containment in normal operating and emergency situations, and (3) to remove airborne iodine from the containment atmosphere in the event of a Maximum Hypothetical Accident.

Specification:

1. SAFETY INJECTION AND RESIDUAL HEAT REMOVAL SYSTEMS

   a. The reactor shall not be made critical, except for low power physics tests, unless the following conditions are met:

      1. The refueling water tank shall contain not less than 320,000 gal. of water with a boron concentration of at least 1950 ppm.

      2. The boron injection tank shall contain not less than 900 gal. of a 20,000 to 22,500 ppm boron solution. The solution in the tank, and in isolated portions of the inlet and outlet piping, shall be maintained at a temperature of at least 145F. TWO channels of heat tracing shall be operable for the flow path.*

      3. FOUR safety injection pumps shall be operable.

*See reference (11) on Page B.3.4-2

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4. TWO residual heat removal pumps shall be operable.

5. TWO residual heat exchangers shall be operable.

6. All valves, interlocks and piping associated with the above components and required for post accident operation, shall be operable except valves that are positioned and locked. Valves 862-A and B; 863-A and B; 864-A and 864-B and 866-A and B shall have power removed from their motor operators by locking open the circuit breakers at the Motor Control Centers. The air supply to valve 758 shall be shut off to the valve operator.

b. During power operation, the requirements of 3.4.1a may be modified to allow one of the following components to be inoperable (including associated valves and piping) at any one time except for the cases stated in 3.4.1.b.2. If the system is not restored to meet the requirements of 3.4.1a within the time period specified, the reactor shall be placed in the hot shutdown condition. If the requirements of 3.4.1a are not satisfied within an additional 48 hours, the reactor shall be placed in the cold shutdown condition. Specification 3.0.1 applies to 3.4.1.b.

1. ONE of FOUR safety injection pumps may be out of service for 30 days. A second safety injection pump may be out of service, provided the pump is restored to operable status within 24 hours. TWO of the FOUR safety injection pumps shall be tested to demonstrate operability before initiating maintenance of the inoperable pumps.

2. ONE channel of heat tracing on the flow path may be out of service for 24 hours.*

3. ONE residual heat removal pump may be out of service, provided the pump is restored to operable status within 24 hours. In addition the other residual heat removal pump shall be tested to demonstrate operability prior to initiating maintenance of the inoperable pump.

*See reference (11) on Page B.3.4-2

4. ONE residual heat exchanger may be out of service for a period of 24 hours.

5. Any valve in the system may be inoperable provided repairs are completed within 24 hours. Prior to initiating maintenance, all valves that provide the duplicate function shall be tested to demonstrate operability.

6. To permit temporary operation of the valve, e.g., for surveillance of valve operability, for the purpose of valve maintenance, etc., the valves specified in 3.4.1.a.6 may be unlocked and may have supplied air or electric power restored for a period not to exceed 24 hours.

c. During power operation three Reactor Coolant Loops shall be in operation.

1. With less than three Reactor Coolant Loops in operation, the reactor must be in hot shutdown within one hour.

d. In hot shutdown at least two Reactor Coolant Loops shall be operable and at least one Reactor Coolant Loop shall be in operation.*

1. With less than two Reactor Coolant Loops operable, restore the required Coolant Loops to operable status within 72 hours to reduce Tavg to less than or equal to 350F within the next 12 hours.

2. With no Reactor Coolant Loop in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required Coolant Loop to operation.

e. With average coolant temperature less than 350F, at least two Coolant Loops shall be operable or immediate corrective action must be taken to return two Coolant Loops to operable as soon as possible. One of these Coolant Loops shall be in operation.*

1. With no Coolant Loop in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required Coolant Loop to operation.

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* All reactor coolant pumps and residual heat removal pumps may be de-energized for up to 1 hour provided 1) no operations are permitted that would cause dilution of the reactor coolant system boron concentration, and 2) core outlet temperature is maintained as last 10F below staturation temperature.

3.4.1.f ACCUMULATORS

LIMITING CONDITION FOR OPERATION

3.4.1.f Each Reactor Coolant System (RCS) accumulator shall be OPERABLE with:

1. The isolation valve open and its circuit breaker locked open,
2. A contained borated water volume of 6545 to 6665 gallons,
3. A boron concentration of 1950 to 2350 ppm, and
4. A nitrogen cover-pressure of 600 to 675 psig.

APPLICABILITY: MODES 1, 2 and 3*.

ACTION:

a. With one accumulator inoperable, except as a result of a closed isolation valve, restore the inoperable accumulator to OPERABLE status within 4 hours or be in at least HOT STANDBY within the next 6 hours and reduce presssurizer pressure to less than 1000 psig within the following 6 hours.

b. With one accumulator inoperable due to the isolation valve being closed, either immediately open the isolation valve or be in at least HOT STANDBY within 6 hours and reduce pressurizer pressure to less than 1000 psig within the following 6 hours.

* Pressurizer pressure above 1000 psig

TABLE 4.1-1 SHEET 2

	Channel Description	Check	Calibrate	Test	Remarks
10.	Rod Position Bank Counters	S†	N/A	N/A	With analog Rod Position
11.	Steam Generator Level	S†	R	M†	
12.	Charging Flow	N/A	R	N/A	
13.	Residual Heat Removal Pump Flow	N/A	R	N/A	
14.	Boric Acid Tank Level	W	R	N./A	
15.	Refueling Water Storage Tank Level	W†	R	N./A	
16.	Volume Control Tank Level	N/A	R	N/A	
17A.	Containment Pressure - Narrow Range	M† †	R	N/A	
17B.	Containment Pressure - Wide Range	M† †	R	N/A	
18A.	Process Radiation***	D	N/A	M	
18B.	Area Radiation	D	A	M	
19.	Boric Acid Control	N/A	N/A	R	
20.	Containment Sump Level	N/A	R	N/A	
21.	Deleted				
22.	Steam Line Pressure	S†	R	M†	

TABLE 4.1-2 (Sheet 2 of 3)

MINIMUM FREQUENCIES FOR EQUIPMENT AND SAMPLING TESTS

		Check	Frequency	Max. Time Between Tests (Days)
5.	Control Rods (cont'd)	Partial movement of full length rods	Biweekly while critical	20
6.	Pressurizer Safety Valves	Set Point	Each refueling shutdown	N/A
7.	Main Steam Safety Valves	Set Point	Each refueling shutdown	N/A
8.	Containment Isolation Trip	Functioning	Each refueling shutdown	N/A
9.	Refueling System Interlocks	Functioning	Prior to each refueling	N/A
10.	Deleted			
11.	Reactor Coolant System Leakage	Evaluate	Daily	N/A
12.	Diesel Fuel Supply	Fuel Inventory	Weekly	10
13.	Spent Fuel Pit	Boron Concentration	Monthly	45
14.	Fire Protection Pump and Power Supply	Operable	Monthly	45
15.	Turbine Stop and Control Valves, Reheater Stop and Intercept Valves	Closure	Monthly*	45
16.	LP Turbine Rotor Inspector (w/o rotor disassembly)	V, MT, PT	Every 5 years	6 years
17.	Spent Fuel Cask Crane	Functioning	Within 7 days	7 days when crane is being used to manuever spent fuel cask.

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2. Pumps shall start and reach required head for normal and recirculation flow, whichever is applicable to the operating condition; the instruments and visual observations shall indicate proper functioning. Test operation shall be for at least 15 minutes.

b. Valves

1. The boron injection tank isolation valves receiving a Safety Injection signal shall be cycled monthly.††*

2. The containment recirculation sump suction valves shall be cycled monthly.†

3. The refueling water storage tank outlet valves shall be tested in performing the respective pump tests.†

† – N/A during cold or refueling shutdowns. The specified tests, however, shall be performed within one surveillance interval prior to reactor startup.

†† – N/A during cold or refueling shutdowns. The specified tests, however, shall be performed within one surveillance interval prior to heatup above 200°F.

* – See reference (11) on Page B.3.4-2.

4.5.3 Each accumulator shall be demonstrated OPERABLE:

a. At least once per shift or 12 hours, whichever is more limiting, by:

1) Verifying the contained borated water volume and nitrogen cover-pressure in the tanks, and

2) Verify that each accumulator isolation valve is open by control room indication (power maybe restored to the valve operator to perform this surveillance if the redundant indicator is inoperable).

b. At least once per 31 days and within 6 hours after each solution volume increase of greater than or equal to 1% of tank volume by verifying the boron concentration of the accumulator solution; and

c. At least once per 31 days when the RCS pressure is above 1000 psig, by verifying that the power to the isolation valve operator is disconnected by a locked open breaker.

d. During each refueling shutdown, accumulator check valves shall be checked for operability.

4.5.4 Each accumulator water level and pressure channel shall be demonstrated OPERABLE:

a. At least once per 31 days by the performance of an ANALOG CHANNEL OPERATIONAL TEST, and

b. During each refueling by the performance of a CHANNEL CALIBRATION.

B3.4 BASES FOR LIMITING CONDITIONS FOR OPERATION, ENGINEEREED SAFETY FEATURES

1. Safety Injection and Residual Heat Removal Systems

a.1 The requirements for refueling water tank storage meet the safety analysis.(1)

a.2 The boron injection tank contains sufficient solution to meet the steam line break accident analysis.(1)(2)(11)

a.3 Any two safety injection pumps meet the requirements of the MHA analysis and the steam line break accident analysis.(2)(4)(5)

a.4 a.5 A single residual heat removal pump and heat exchanger meets the MHA analysis requirements.(4)(5)

b.1 See a.3.above.

b.2 b.3 See a.4 above.

c.1 ACCUMULATORS

The OPERABILITY of each Reactor Coolant System (RCS) accumulator ensures that a sufficient volume of borated water will be immediately forced into the reactor core through each of the cold legs in the event the RCS pressure falls below the pressure of the accumulators. This initial surge of water into the core provides the initial cooling mechanism during large RCS pipe ruptures.

The limits on accumulator volume, boron concentration and pressure ensure that the assumptions used for accumulator injection in the safety analysis are met.

Because the accumulator isolation valves (865A, B, and C) fail to meet single failure criteria, removal of power to the valves is required.

The limits for operation with an accumulator inoperable for any reason except an isolation valve closed minimizes the time exposure of the plant to a LOCA event occurring concurrent with failure of an additional accumulator which may result in unacceptable peak cladding temperatures. If a closed isolation valve cannot be immediately opened the full capability of one accumulator is not available and prompt action is required to place the reactor in a mode where this capability is not required.

B3.4 BASES FOR LIMITING CONDITIONS FOR OPERATION, ENGINEEREED SAFETY FEATURES (continued)

2. Emergency Containment Cooling Systems

Either two of the three emergency containment cooling units or one of the two spray pumps has the cooling capability requried to meet the MHA analysis.(6)(7)(9)

3. Emergency Containment Filtering Systems

Two of three filter units have capacity to meet the MHA analysis.(7)(8)

4. Component Cooling System

One pump and two heat exchangers meet the requirement of the MHA analysis.(10)

5. Intake Cooling Water System

One pump meets the requirements of the MHA analysis.(6)

References:

(1) FSAR 6.2.2
(2) FSAR 14.2.5
(3) FSAR 14.3.2
(4) FSAR 14.1.9
(5) FSAR 6.2.3
(6) FSAR 14.3.4
(7) FSAR 6.3
(8) FSAR 14.3.5
(9) FSAR 6.4
(10) FSAR 9.3
(11) The requirement for use of the BIT tanks for Mitigation of the Main Steam Line Break accident has been removed following installation of the Model 44F Steam Generators. The required supporting analyses can be found in L-81-(502), dated 11/30/81. The temperature requirement above 145°F is no longer applicable. Therefore, the heat tracing requirement is not necessary. There is no Boron Concentration Requirement in the BIT.

B4.5 BASES FOR SAFETY INJECTION TESTS

The Safety Injection system is not operated during reactor operation and system test must be run with the reactor shut down. The tests will demonstrate proper operation of controls and components. The test intervals have been selected based on experience with similar equipment.