BEFORE THE

UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of the Facility Operating License)		
of	)	Docket No. 50-267
PUBLIC SERVICE COMPANY OF COLORADO	)	

Application for Amendment to
Appendix A of Facility Operating License
License No. DPR-34

OF THE

PUBLIC SERVICE COMPANY OF COLORADO

FOR THE

FORT ST. VRAIN NUCLEAR GENERATING STATION

This application for Amendment to Appendix A of Facility Operating License, License No. DPR-34, is submitted for NRC review and approval.

Respectfully submitted,

PUBLIC SERVICE COMPANY OF COLORADO

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ATTACHMENT 1

Specification LCO 4.2.6 - Fire Water System/Fire Suppression Water System, Limiting Condition for Operation

The reactor shall not be operated at power unless the fire water system is operable including the following:

a) Both fire water pump pits are operable.

b) Both the motor driven and engine driven fire pumps are operable and there is at least 325 gallons of fuel for the engine driven pump in storage.

c) The discharge of both the fire water pumps is aligned to the fire water header.

d) An operable flow path shall exist from the fire water pump discharges to those fixed water spray systems, fire hose stations, and yard fire hydrants required to be operable in Specifications LCO 4.10.5, LCO 4.10.7, and LCO 4.10.8.

Basis for Specification LCO 4.2.6

The operability of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety related equipment is located. The fire suppression system consists of the water system, spray and/or sprinklers, carbon dioxide, Halon, fire hose stations, and yard fire hydrants. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety related equipment.

Basis for Specification LCO 4.2.6 (continued)

In addition to the fire suppression function either of the fire pumps operating in conjunction with either fire water booster pump provides adequate capacity to operate a circulator water turbine and supply emergency cooling water for safe shutdown cooling. With the 325 gallons of fuel in storage, the engine driven fire pump can operate at rated conditions for 24 hours which is adequate time to have more fuel delivered to the site. For further explanation, see Final Safety Analysis Report, Sections 1.4, 10.3, and 14.4.

Specification SR 5.2.10 - Fire Water System/Fire Suppression Water System, Surveillance Requirement

a) The fire water system shall be verified operable as follows:

1) The motor driven and engine driven fire pumps shall be functionally tested monthly. The associated instruments and controls shall be functionally tested monthly and calibrated annually.

2) The diesel engine fuel shall be inventoried monthly and sampled and tested quarterly.

3) The diesel engine shall be inspected during each refueling shutdown.

4) The diesel engine starting battery and charger shall be inspected weekly for proper electrolyte level and overall battery voltage. The battery electrolyte shall be tested quarterly for proper specific gravity.

5) The batteries, cell plates, and battery racks, shall be inspected each refueling cycle for evidence of physical damage or abnormal degradation. The battery-to-battery and terminal connections shall be verified to be clean, tight, free of corrosion, and coated with anti-corrosion material each refueling cycle.

b) The fire suppression water system shall be verified operable as follows:

1) Monthly 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.

Specification SR 5.2.10 - Fire Water System/Fire Suppression Water System, Surveillance Requirement (continued)

2) Semi-annually by performance of a fire suppression water system flush.

3) Annually by cycling each testable valve in the fire suppression water system flow path through at least one complete cycle of full travel.

4) Each refueling cycle by performing a fire suppression water system functional test which includes simulated automatic actuation of the system throughout its operating sequence, and:

   (a) Verifying that each automatic valve in the flow path actuates to its correct position.

   (b) Verifying that each fire water pump develops at least 1,500 gpm at a system head of 290 feet.

   (c) Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.

   (d) Verifying that each fire water pump starts sequentially to maintain the fire suppression water system pressure at greater than or equal to 125 psig.

5) Each three years by performing a flow test.

Specification SR 5.2.10 - Fire Water System/Fire Suppression Water System, Surveillance Requirement (continued)

Basis for Specification SR 5.2.10

The fire water pumps are required to supply water for fire suppression and safe shutdown cooling. The specified testing interval is sufficient to ensure proper operation of the pumps and controls. The motor driven pump routinely operates intermittently.

The operability of the fire suppression water system ensures that adequate fire suppression and emergency safe shutdown cooling capability is available. The specified testing interval is sufficient to ensure proper operation of the system when required.

ATTACHMENT 2

Specification SR 5.2.24 - Circulating Water Makeup System, Surveillance Requirement

The circulating water makeup system shall be verified operable as follows:

a) The circulating water makeup pond minimum inventory shall be verified daily. The pond level instrumentation shall be functionally tested monthly and calibrated annually.

b) The circulating water makeup pumps shall be functionally tested weekly. The pump controls and instrumentation including the fire water pump pits shall be functionally tested monthly and calibrated annually.

c) The valve lineup of the flow path between the circulating water storage ponds and the fire water pump pits shall be verified correct monthly.

Basis for Specification SR 5.2.24

The circulating water makeup system is required to supply water for fire suppression and safe shutdown cooling. The specified testing interval is sufficient to ensure proper operation of the pumps and controls. The system routinely operates during normal plant operation.

ATTACHMENT 3

Specification SR 5.10.3 - Smoke Detectors and Alarm, Surveillance Requirement

The smoke detectors and alarms listed in Table 4.10-3 shall be demonstrated operable as follows:

a) Monthly by functional test of the non-supervised circuits between the local panels and the main control panel.

b) Semi-annually by functional test of the smoke detectors and alarms, and by functional test of supervisory circuits associated with the smoke detector alarms.

Basis for Specification SR 5.10.3

Operability of the fire detection instrumentation ensures that adequate warning capability is available for the prompt detection of fires. This capability is required in order to detect and locate fires in their early stages. Testing at the specified intervals is sufficient to ensure operability of the system.

ATTACHMENT 4

Specification LCO 4.10.5 - Fixed Water Spray System, Limiting Condition for Operation

The following fixed water spray or sprinkler systems shall be operable during power operation:

a) The 480 volt switchgear room system.

b) The auxiliary electrical equipment room system.

c) The system serving the congested cable area of the reactor building side of the "J" wall.

d) The system serving the congested cable area of the turbine building side of the "G" wall.

e) The Loop 1 hydraulic power unit system.

f) The Loop 2 hydraulic power unit system.

g) The boiler feed pump 1A system.

h) The boiler feed pump 1C system.

i) Auxiliary boiler room.

j) Reactor plant exhaust filters.

If one or more of the spray systems becomes inoperable, a fire watch shall be established along with backup fire suppression equipment for the affected area or areas. The affected area will be inspected once per hour. If the system or systems can not be made operable within 14 days the reactor shall be shutdown in an orderly manner.

Specificaton LCO 4.10.5 - Fixed Water Spray System, Limiting Condition for Operation (continued)

Basis for Specification LCO 4.10.5

The operability of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety related equipment is located. The fire suppression system consists of the water system, spray and/or sprinklers, carbon dioxide, Halon, fire hose stations, and yard fire hydrants. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety related equipment and is a major element in the facility fire protection program.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service.

Specification SR 5.10.6, Fixed Water Spray System, Surveillance Requirement

Each of the fixed water spray systems listed in LCO 4.10.5 shall be verified operable as follows:

a) Annually by cycling each valve in the flow path through one complete cycle of full travel.

b) Each refueling cycle by inspection of the flow headers to verify their integrity and inspection of each nozzle to verify no blockage.

c) At least once per three years by performing an air flow test through each open head spray/sprinkler header and verifying each open head spray/sprinkler nozzle is unobstructed.

d) The temperature instruments and controls associated with the reactor plant exhaust filters shall be functionally tested semi-annually.

Basis for Specification SR 5.10.6

Operation of the valves and verification of the flow path at the specified intervals is sufficient to demonstrate capability to operate if required.

Semi-annually testing the temperature instruments and controls associated with the reactor plant exhaust filters is sufficient to ensure operability of the system.

ATTACHMENT 5

Specification LCO 4.10.6 - Carbon Dioxide Fire Suppression System, Emergency Diesel Generator Rooms, Limiting Condition for Operation

The carbon dioxide fire suppression system for the emergency diesel generator rooms shall be operable whenever the emergency diesel generators are required to be operable.

If the carbon dioxide fire suppression system becomes inoperable, the following action shall be taken:

An individual shall be assigned to inspect the emergency diesel generator rooms once per hour.

Alternate fire suppression equipment shall be stationed outside the emergency diesel generator rooms.

The carbon dioxide fire suppression system shall be made operable within 30 days or the emergency diesel generators shall be considered inoperable.

Basis for Specification LCO 4.10.6

The carbon dioxide fire suppression system provides for detection and suppression of fires in the emergency diesel generator rooms, areas which are not normally manned, and manual backup fire suppression for the 480 volt room and auxiliary boiler room areas.

In the event part of the carbon dioxide fire suppression system becomes inoperable the hourly inspections and portable fire fighting equipment made available will minimize the possibility of fire damage to safety related equipment.

Specification SR 5.10.7 - Carbon Dioxide Fire Suppression System, Surveillance Requirement

The carbon dioxide fire suppression system shall be demonstrated operable as follows:

a) Weekly - verify storage tank level and pressure.

b) Annually:

1) Verify operation of system valves and associated dampers upon actuation signal.

2) Verify flow from each nozzle during a "puff test".

Basis for Specification SR 5.10.7

A weekly check of level and pressure in the carbon dioxide storage tank insures sufficient carbon dioxide for fire suppression and the support equipment is operating properly.

An annual flow check and simulated automatic actuation of the system along with the regular calibration of system instrumentation provides adequate assurance that the system will be ready to suppress any fire that could occur in the emergency diesel generator rooms.

ATTACHMENT 6

Specification LCO 4.10.7 - Fire Hose Stations, Limiting Condition for Operation

The fire hose stations listed in Table 4.10-7 shall be operable whenever the equipment they protect is required to be operable.

If one or more of these fire hose stations should become inoperable, an alternate fire hose shall be laid out to the unprotected area from an operable fire hose station.

Fire hose stations may be added to Table 4.10-7 without prior License Amendment provided a revision to Table 4.10-7 is included with a subsequent License Amendment request.

Basis for Specification LCO 4.10.7

The fire water system is the plant's primary fire suppression system and provides the final backup to all other fire suppression systems. The fire water hoses, or laid out alternates, provide adequate protection for required equipment to minimize damage in case of a fire.

TABLE 4.10-7

HOSE STATION NO.	BUILDING	ELEVATION
TH 6	Turbine	4829
TH 7	Turbine	4829
TH 8	Turbine	4829
TH 9	Turbine	4829
TH 10	Turbine	4811
TH 11	Turbine	4811
TH 12	Turbine	4811
TH 13	Turbine	4811
TH 1	Turbine	4791
TH 2	Turbine	4791
TH 3	Turbine	4791
TH 4	Turbine	4791
TH 5	Turbine	4791
ACH 3	Access Bay	4885
ACH 4	Access Bay	4885
ACH 6	Access Bay	4864
ACH 7	Access Bay	4864
ACH 8	Access Bay	4846
ACH 5	Access Bay	4885
ACH 2	Access Bay	4940
ACH 1	Access Bay	4960
RH 39	Reactor	4916
RH 40	Reactor	4916

TABLE 4.10-7 (continued)

HOSE STATION NO.	BUILDING	ELEVATION
RH 38	Reactor	4906
RH 34	Reactor	4881
RH 35	Reactor	4881
RH 36	Reactor	4881
RH 37	Reactor	4881
RH 30	Reactor	4864
RH 31	Reactor	4864
RH 32	Reactor	4864
RH 33	Reactor	4864
RH 28	Reactor	4854
RH 29	Reactor	4849
RH 26	Reactor	4839
RH 27	Reactor	4839
RH 22	Reactor	4829
RH 23	Reactor	4829
RH 24	Reactor	4829
RH 25	Reactor	4829
RH 20	Reactor	4811
RH 21	Reactor	4811
RH 18	Reactor	4801
RH 19	Reactor	4801
RH 15	Reactor	4791
RH 16	Reactor	4791
RH 17	Reactor	4791

TABLE 4.10-7 (continued)

HOSE STATION NO.	BUILDING	ELEVATION
RH 13	Reactor	4781
RH 14	Reactor	4781
RH 10	Reactor	4771
RH 12	Reactor	4771
RH 9	Reactor	4769
RH 11	Reactor	4769
RH 6	Reactor	4759
RH 7	Reactor	4759
RH 5	Reactor	4756
RH 8	Reactor	4756
RH 1	Reactor	4740
RH 2	Reactor	4740
RH 3	Reactor	4740
RH 4	Reactor	4740

Specification SR 5.10.8 - Fire Hose Stations, Surveillance Requirement

Each of the fire hose stations listed in Table 4.10-7 shall be checked monthly to insure all required equipment is at the station.

The fire hoses at these stations shall be removed for inspection, repacking, and refurbishing as required once per refueling cycle.

These fire hose stations shall be tested for flow and the fire hoses hydrostatically tested once every 3 years.

Basis for Specification SR 5.10.8

These checks of the fire water hose system will demonstrate the system's ability to operate if required.

ATTACHMENT 7

Specification LCO 4.10.8 - Yard Fire Hydrants and Hydrant Hose Houses, Limiting Conditions for Operation

The following yard fire hydrants and associated hydrant hose houses shall be operable during power operation:

a) Number 1 northeast of the circulating water valve pit.

b) Number 3 north of the circulating water cooling tower.

c) Number 6 south of the circulating water cooling tower.

d) Number 7 southeast of the service water cooling tower.

e) Number 11 southeast of the turbine building.

If one or more of the yard fire hydrants or associated hydrant hose houses become inoperable, locate sufficient additional lengths of 2 1/2 inch diameter hose in an adjacent operable hydrant hose house to provide service to the unprotected area.

Basis for Specification LCO 4.10.8

The operability of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety related equipment is located. The fire suppression system consists of the water system, spray and/or sprinklers, carbon dioxide, Halon, fire hose stations, and yard fire hydrants. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety related equipment and is a major element in the facility fire protection program.

Specification LCO 4.10.8 - Yard Fire Hydrants and Hydrant Hose Houses, Limiting Conditions for Operation (continued)

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service.

Specification SR 5.10.9 - Yard Fire Hydrants and Hydrant Hose Houses, Surveillance Requirement

Each of the yard fire hydrants and associated hydrant hose houses listed in LCO 4.10.8 shall be verified operable as follows:

a) Monthly by visual inspection of the hydrant hose house to assure all required equipment is at the hose house.

b) Semi-annually (once during March, April, or May, and once during September, October, or November) by visually inspecting each yard fire hydrant and verifying that the hydrant barrel is dry and that the hydrant is not damaged.

c) Annually by conducting a hose hydrostatic test at a pressure at least 50 psig greater than the maximum pressure available at any yard fire hydrant and by replacement of all degraded gaskets in couplings.

Basis for Specification SR 5.10.9

Inspection and testing at the specified intervals is sufficient to ensure operability of the hydrants and hydrant hose houses when required.

ATTACHMENT 8

4.10 Fire Suppression Systems - Limiting Conditions for Operation

Applicability

Applies to the minimum operable equipment for the plant fire suppression system.

Objective

To ensure that the capability for suppressing any fire involving safety related equipment is maintained.

5.10 Fire Suppression Systems - Surveillance Requirements

Applicability

Applies to the surveillance of the fire suppression and protection systems and equpment.

Objective

To establish the minimum frequency and type of surveillance on the equipment of the fire suppression and protection equipment to assure that the capability exists for suppressing any fire involving safety related equipment.