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Robert L. Mittl General Manager
Nuclear Assurance and Regulation

April 10, 1985

Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, Maryland 20814

Attention: Mr. Albert Schwencer, Chief
Licensing Branch 2
Division of Licensing

Gentlemen:

SAFETY EVALUATION REPORT TECHNICAL SPECIFICATION ISSUES
HOPE CREEK GENERATING STATION
DOCKET NO. 50-354

Attachment 1 is a current list which provides a status of the Technical Specification Issues identified in Section 16 of the Safety Evaluation Report (SER). Items identified as "complete" are those for which PSE&G has provided responses and no confirmation of status has been received from the staff. We will consider these items closed unless notified otherwise. In order to permit timely resolution of items identified as "complete" which may not be resolved to the staff's satisfaction, please provide a specific description of the issue which remains to be resolved.

Enclosed for your review and approval (see Attachment 3) are the resolutions to the SER Technical Specification Issues listed in Attachment 2.

Also enclosed (Attachment 4) for your use and incorporation into the Hope Creek Generating Station Draft Technical Specifications are five (5) sets of the following revised Hope Creek Generating Station Draft Technical Specification pages:

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B001
1/1

Page: 3/4 6-49
3/4 6-50
3/4 6-51
3/4 7-5
Insert A to pg. 3/4 7-5

These pages are submitted as Revision 3 to the Hope Creek Generating Station Draft Technical Specification and have been revised in accordance with the resolutions to the SER Technical Specification Issues provided in Attachment 3. Also included are copies of the updated Hope Creek Generating Station Draft Technical Specification List of Effective Pages (LEP).

Should you have any questions or require any additional information on these items, please contact us.

Very truly yours,

R L Mittl/R P Douglas

Attachments

C D. H. Wagner
USNRC Licensing Project Manager (w/attach.)

A. R. Blough
USNRC Senior Resident Inspector (w/attach.)

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Attachment 1

SER TECHNICAL SPECIFICATION ISSUE	SER SECTION NUMBER	SUBJECT	STATUS	R. L. MITTL TO A. SCHWENCER LETTER DATED
1	2.4.11.2	Service water intake temperature	Complete	4/10/85
2	2.4.14	Closing of doors and hatches	Complete	4/10/85
3	3.9.6	Pressure isolation valves	Open	
4	4.4.4	Thermal-hydraulic instability	Complete	4/10/85
5	4.4.4	Single-loop operation	Complete	4/10/85
6	4.4.5	Crud effects	Complete	4/10/85
7	4.4.6	Loose parts monitoring system channel operability	Complete	4/10/85
8	5.2.2	Safety/relief valve (SRV) test program	Open	
9	5.2	Reactor coolant pressure boundary leakage rates	Complete	4/10/85
10	5.4.6	Reactor core isolation cooling pump testing	Complete	4/10/85
11	5.4.7	Residual heat removal system pump operability	Complete	4/10/85
12	6.2.1.6	Torus/drywell vacuum breaker and vent system testing	Open	
13	6.2.1.6	Vacuum breaker position indication accuracy	Open	
14	6.2.3	Testing of inleakage rate and draw-down time	Complete	4/10/85
15	6.2.4.1	Leakage testing for valves with resilient seals	Open	
16	6.2.6	Containment isolation valve leakage	Open	

SER TECHNICAL SPECIFICATION ISSUE	SER SECTION NUMBER	SUBJECT	STATUS	R. L. MITTL TO A. SCHWENCER LETTER DATED
17	6.2.6, 6.7, 15.6.5.2	Main steam isolation valve leak rate testing	Open	
18	6.2.6	Various valve leak rates	Open	
19	6.3.4.2	Emergency core cooling system (ECCS) subsystem flow rates	Open	
20	6.3.4.2	ECCS subsystem operating sequence	Open	
21	6.5.1.3	Water seal bucket drain tap surveillance	Complete	4/10/85
22	7.2.2.3	Testability of plant protection system at power	Open	
23	7.2.2.8, 7.6.2.2	Anticipated transients without scram mitigation	Open	
24	7.2.2.9	Reactor mode switch	Open	
25	7.3.2.3	Freeze protection of water-filled lines	Open	
26	7.4.2.3	Remote shutdown system operability	Open	
27	7.6.2.1	Low-pressure/high-pressure systems interlocks	Open	
28	7.6.2.3	Average power range monitor electrical protection assemblies	Open Open	
29	7.7.2.3	Nonsafety-related equipment operability	Open	
30	8.3.1.3	Diesel generator connected loads	Complete	4/10/85
31	8.3.1.7	Load sequencer logic	Complete	4/10/85
32	8.3.2.7	DC system monitoring	Complete	4/10/85

SER TECHNICAL SPECIFICATION ISSUE	SER SECTION NUMBER	SUBJECT	STATUS	R. L. MITTL TO A. SCHWENCER LETTER DATED
33	8.3.3.3.5	Testing of breaker time-overcurrent trip characteristics	Open	
34	8.3.3.4.1	Periodic system testing	Complete	4/10/85
35	8.3.3.4.2	Load sequencer testing	Complete	4/10/85
36	8.3.3.5.4	Testing of fuses	Complete	4/10/85
37	9.1.3	Fuel pool cooling system pumps	Open	
38	9.2.1	Station service water pump testing	Complete	4/10/85
39	9.2.2	Safety auxiliaries cooling system and reactor auxiliaries cooling system pump availability	Complete	4/10/85
40	9.2.2	Safety auxiliaries operability to ensure diesel generator cooling	Open	
41	9.2.7	Control area chilled water system availability	Open	
42	9.3.1, 9.3.6	Air quality testing	Open	
43	9.3.2	Core damage estimate procedure	Open	
44	9.5.1.5	Fire watch	Complete	4/10/85
45	10.2	Turbine steam valve inspection	Complete	4/10/85
46	10.4.4	Turbine bypass valve surveillance	Complete	4/10/85
47	15.2	Turbine bypass system and level 8 high-water trip performance	Open	
48	15.4.9	Scram speed	Open	
49	15.6.4	Primary coolant activity	Open	

SER TECHNICAL SPECIFICATION ISSUE	SER SECTION NUMBER	SUBJECT	STATUS	R. L. MITTL TO A. SCHWENCER LETTER DATED
50	15.6.4	Main steam isolation valve closure time	Complete	4/10/85
51	15.9.3	SRV failure reporting	Complete	4/10/85
52	15.9.3	Automatic depressurization system logic	Open	

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ATTACHMENT 2

SER Technical Specification Issue	SER Section	Subject
1	2.4.11.2	Service water intake temperature
2	2.4.14	Closing of doors and hatches
4	4.4.4	Thermal-hydraulic instability
5	4.4.4	Single-loop operation
6	4.4.5	Crud effects
7	4.4.6	Loose parts monitoring system channel operability
9	5.2.5	Reactor coolant pressure boundary leakage rates
10	5.4.6	Reactor core isolation cooling pump testing
11	5.4.7	Residual heat removal system pump operability
14	6.2.3	Testing of in-leakage rate and drawdown time
21	6.5.1.3	Water seal bucket drain tap surveillance
30	8.3.1.3	Diesel generator connected loads
31	8.3.1.7	Load sequencer logic
32	8.3.2.7	DC system monitoring
34	8.3.3.4.1	Periodic system testing
35	8.3.3.4.2	Load sequencer testing
36	8.3.3.5.4	Testing of fuses
38	9.2.1	Station service water pump testing
39	9.2.2	Safety auxiliaries cooling system and reactor auxiliaries cooling system pump availability
44	9.5.1.5	Fire watch
45	10.2	Turbine steam valve inspection
46	10.4.4	Turbine bypass valve surveillance
50	15.6.4	MSIV closure time
51	15.9.3	SRV failure reporting

ATTACHMENT 3

SER Technical Specification Issue No. 1 (SER Section 2.4.11.2)

Service Water Intake Temperature

The Hope Creek Environmental Report indicated a maximum Delaware River water temperature of 88.5°F in August 1983. The applicant has stated that the maximum intake temperatures, as discussed in RG 1.27, that will allow the plant to safely shutdown under normal and emergency conditions are 91.6°F and 90.5°F, respectively. The staff concludes that the plant meets GDC 44 with respect to the thermal aspects of the UHS, but will require a Technical Specification to monitor intake water temperature at 6-hour intervals when the intake water temperature exceeds 85°F.

Response:

HCGS Draft Technical Specification Section 3.7.1.3, Ultimate Heat Sink, has been revised to provide the above surveillance requirement.

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PLANT SYSTEMS

ULTIMATE HEAT SINK ~~(Optional)~~

LIMITING CONDITION FOR OPERATION

3.7.1.3 The {ultimate heat sink} shall be OPERABLE with:

a. A minimum ~~(basin)~~ river water level at or above elevation {76'} [redacted], ~~USGS~~ PSEG datum, and

b. An average ~~(basin)~~ river water temperature of less than or equal to { 90.5 }°F.

~~(c. (At least) (Two) OPERABLE cooling tower fans.)~~

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, 5 and *.

ACTION:

With the requirements of the above specification not satisfied:

a. In OPERATIONAL CONDITIONS 1, 2 or 3, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

b. In OPERATIONAL CONDITIONS 4 or 5, declare the ~~RHRSW~~ SACS system and the plant service water system inoperable and take the ACTION required by Specification 3.7.1.1 and 3.7.1.2.

c. In Operational Condition *, declare the plant service water system inoperable and take the ACTION required by Specification 3.7.1.2. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

INSERT A →

4.7.1.3 The {ultimate heat sink} shall be determined OPERABLE at least once per:

a. 24 hours by verifying the average ~~(basin)~~ river water temperature and water level to be within their limits.

~~(b. 31 days by starting each cooling tower fan from the control room and operating the fan for at least 15 minutes.)~~

~~(c. 18 months by verifying that each (plant service water) cooling tower fan starts automatically when the associated (plant service water) loop is initiated.)~~

*When handling irradiated fuel in the ~~secondary containment.~~ reactor building (secondary containment).

INSERT A TO PG. 3/4 7-5 :

4.7.1.3 The ultimate heat sink shall be determined OPERABLE as follows:

a. By verifying at least once per 24 hours that river water level is at or above the minimum limit.

B. By verifying river water temperature within its limit:

1) At least once per 24 hours with river water temperature less than or equal to 85°F.

2) At least once per 6 hours with river water temperature greater than 85°F.

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SER Technical Specification Issue No. 2 (SER Section 2.4.14)

Closing Of Doors and Hatches

On the basis of its review in accordance with SRP Section 2.4.14, the staff concludes that a Technical Specification or Emergency Operating Plan will be required to ensure that all watertight doors and hatches to the safety-related facilities are closed and secured well in advance of a hydrologic event that is predicted to produce water levels (including wave runup) in excess of el 10.5 ft. MSL at the service water intake structure or el 13.0 ft. MSL at the power block. As discussed in Section 2.4.11.2, the staff will also require a Technical Specification to monitor the service water intake temperature.

Response:

HCGS Draft Technical Specification Section 3/4.7.3, Flood Protection, incorporates the above requirement to secure all watertight doors and hatches. The requirement to monitor service water intake temperature is addressed in revised Technical Specification Section 3.7.1.3 provided in the response to SER Technical Specification Issue No. 1.

SER Technical Specification Issue No. 4 (SER Section 4.4.4)

Thermal-Hydraulic Instability

As a result of its review of the thermal-hydraulic stability of the Hope Creek core, the staff requested the applicant to submit a plant-specific evaluation addressing his position with respect to the GE recommendations in SIL-380 for providing protection against the potential for thermal-hydraulic instability, including a Technical Specification that will restrict operation in regions of potential instability (e.g., natural circulation and single-loop operating conditions) and/or provide for surveillance and corrective action under conditions of marginal stability. By letter dated September 21, 1984, the applicant committed to implement Technical Specifications consistent with the GE recommended Technical Specifications to address the concern of thermal-hydraulic stability. The applicant also indicated that Hope Creek will operate in two-recirculation loop operation. On the basis of the applicant's statement that he will implement a Technical Specification that will restrict operation in regions of potential instability and provide surveillance and corrective actions under conditions of marginal stability, the staff concludes that the applicant will have a Technical Specifications to satisfactorily resolve the concerns of thermal-hydraulic stability and, therefore, the core thermal-hydraulic stability design is acceptable.

Response:

HCGS Draft Technical Specification Section 3/4.4.1, Recirculation System, restricts operation in regions of potential instability and provides surveillance and corrective actions under conditions of marginal instability.

SER Technical Specification Issue No. 5 (SER Section 4.4.4)

Single-Loop Operation

Since no analysis has been presented for MCPR limits or stability characteristics for single-loop operation, the staff will require a Technical Specifications that prohibits single-loop operation unless supporting analyses are provided and approved and Technical Specifications to avoid operation in regions of potential thermal-hydraulic instability during single-loop operation.

Response:

HCGS Draft Technical Specification Section 3/4.4.1, Recirculation System, prohibits single-loop operation.

SER Technical Specification Issue No. 6 (SER Section 4.4.5)

Crud Effects

Crud deposition causes gradual flow reductions in some light-water-reactor cores. However, measurement of core flow by jet pump pressure drop and core plate pressure drop will provide adequate indication of such flow reductions, if they should occur. Technical Specifications will require that the core flow be checked at least once every 24 hours to detect flow reduction.

Response:

HCGS Draft Technical Specification Section 4.4.1.2, Jet Pump Surveillance Requirements, provides the requirement that the core flow be checked at least once per 24 hours to detect flow reduction.

SER Technical Specification Issue No. 7 (SER Section 4.4.6)

Loose Parts Monitoring System Channel Operability

The staff has reviewed the Hope Creek LPMS program. On the basis of the applicant's evaluation that the LPMS is in compliance with RG 1.133, the staff has concluded that the Hope Creek LPMS is acceptable on the condition that the Technical Specifications include appropriate limiting conditions for operation and surveillance requirements to demonstrate the operability of LPMS channels.

Response:

HCGS Draft Technical Specification Sections 3.3.7.9 and 4.3.7.9, Loose-Part Detection System provides the appropriate limiting conditions for operation and surveillance requirements to demonstrate the operability of LPMS channels.

SER Technical Specification Issue No. 9 (SER Section 5.2.5)

Reactor Coolant Pressure Boundary Leakage Rates

The systems' testing and calibration frequency and capability during power operation of the plant will be in accordance with the Standard Technical Specifications and, therefore, meet the guidelines of RG 1.45, Position C.8. The applicant has committed to specify the maximum allowable identified and unidentified leakage rates as 25 gpm and 5 gpm, respectively, in the Technical Specifications. Thus, the guidelines of RG 1.45, Position C.9, are met. Therefore, the staff concludes that the requirements of GDC 30, "Quality of Reactor Coolant Pressure Boundary," have been satisfied.

Response:

HCGS Draft Technical Specification Section 3/4.4.3 Reactor Coolant System Leakage, Subsection 3.4.3.2 specifies the maximum allowable identified and unidentified leakage rates as 25 gpm and 5 gpm, respectively.

SER Technical Specification Issue No. 10 (SER Section 5.4.6)

Reactor Core Isolation Cooling Pump Testing

To protect the RCIC pump from overheating, the RCIC system contains a miniflow line that discharges into the suppression pool when the line to the reactor vessel is isolated. When there is enough flow to the vessel, a valve in the miniflow line automatically closes, thus directing all flow to the reactor. The RCIC system is protected against the effects of waterhammer when it starts by a jockey pump system that maintains the discharge piping filled up to the injection valve. A high point vent is provided, and the system will be checked at least once every 31 days to ensure that the lines are filled. The RCIC system includes a full flow test line with water return to the condensate storage tank for periodic testing. Technical Specifications will include a flow test at least every 92 days and a system functional test at least every 18 months. Testing includes simulated automatic actuation and verification of proper automatic valve position. Both tests will verify that the RCIC pump will develop a minimum flow of 600 gpm.

Response:

HCGS Draft Technical Specification 3/4.7.4, Reactor Core Isolation Cooling System, Surveillance Requirement 4.7.4 provides the above test requirements.

SER Technical Specification Issue No. 11 (SER Section 5.4.7)

Residual Heat Removal System Pump Operability

The NRC staff requires that (1) low pressure coolant injection mode operability is verified every 31 days, (2) each pump is shown to start from the control room every 91 days, and (3) a system functional test is performed without requiring coolant injection into the reactor vessel every 18 months. This periodic testing is in conformance with the requirements of GDC 34 and 61 and should be addressed in the Technical Specifications.

Response:

HCGS Draft Technical Specification Section 3/4.5.1, ECCS-Operating, Surveillance Requirement 4.5.1 provides the above test requirements.

SER Technical Specification Issue No. 14 (SER Section 6.2.3)

Testing Of Inleakage Rate And Drawdown Time

The applicant will verify the design inleakage rate and drawdown time by preoperational and periodic tests. The staff will include a requirement for these periodic tests in the Technical Specifications. It finds this analysis and test commitment to be in conformance with Branch Technical Position (BTP) CSB 6-3 and, therefore, acceptable.

Response:

HCGS Draft Technical Specification Section 3/4.6.5 Reactor Building (Secondary Containment), Surveillance Requirement 4.6.5.1 provides the above test requirements.

SER Technical Specification Issue No. 21 (SER Section 6.5.1.3) Water Seal Bucket Drain Tap Surveillance

On the basis of its evaluation, the respect to the SRP criteria, the staff finds the proposed ESF atmosphere cleanup systems acceptable. The filter efficiencies given in Table 2 of RG 1.52 are appropriate for use in accident analyses. As one of the surveillance items for the ESF filter systems, the Technical Specifications will require that the water seal bucket drain traps be inspected for proper water level at 14-day intervals.

Response:

HCGS Draft Technical Specification Section 3/4.6.5.3, FRVS, has been revised to add the surveillance requirement for the drain traps.

~~FILTRATION, RECIRCULATION AND VENTILATION SYSTEM~~ ~~STANDBY GAS TREATMENT SYSTEM~~ (FRVS)

LIMITING CONDITION FOR OPERATION

3.6.5.3 ~~Two independent standby gas treatment subsystems~~ Six FRVS recirculation units and two FRVS vent units shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3 and *.

ACTION:

a. With ~~one standby gas treatment subsystem~~ two FRVS recirculation units or one FRVS vent unit inoperable, restore the inoperable ~~subsystem~~ unit to OPERABLE status within 7 days, or:

1. In OPERATIONAL CONDITION 1, 2 or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

2. In Operational Condition *, suspend handling of irradiated fuel in the ~~secondary containment~~ reactor building, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

b. With ~~both standby gas treatment subsystems~~ three FRVS recirculation or both vent units inoperable in Operational Condition *, suspend handling of irradiated fuel in the ~~secondary containment~~ reactor building, CORE ALTERATIONS or operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.5.3 Each ~~standby gas treatment subsystem~~ of the six FRVS recirculation and two vent units shall be demonstrated OPERABLE:

b. ~~a.~~ At ~~least~~ once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the subsystem operates for at least 10 hours with the heaters and humidity control instrumentation OPERABLE.

*When irradiated fuel is being handled in the ~~secondary containment~~ reactor building and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

a. AT LEAST ONCE PER 14 DAYS BY VERIFYING THAT THE WATER SEAL BUCKET TRAPS HAVE A WATER SEAL AND MAKING UP ANY EVAPORATIVE LOSSES BY FILLING THE TRAP TO THE OVERFLOW.

SURVEILLANCE REQUIREMENTS (Continued)

c. ~~b.~~ At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the subsystem by:

1. Verifying that the subsystem satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than ~~[ ]~~ 1% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rates ~~is (2300) cfm ± 10%.~~ are 30,000 cfm ± 10% for each FRVS recirculation unit, and 9,000 cfm ± 10% for each FRVS vent unit.
2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than ~~[ ]~~ 1_1%; and
30,000 cfm ± 10% for each FRVS recirculation unit and 9,000 cfm ± 10% for each FRVS vent unit
3. Verifying a subsystem flow rate of ~~(2300) cfm ± 10%~~ during system operation when tested in accordance with ANSI N510-1975.

d. ~~c.~~ After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than ~~[ ]~~ 1_1%.

e. ~~d.~~ At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks in the recirculation filter train and less than 5 inches W.G. in the vent train is less than ~~[8]~~ inches Water Gauge while operating the filter train at a flow rate of ~~(2300) cfm ± 10%~~ 30,000 cfm ± 10% for each FRVS recirculation unit and 9,000 cfm ± 10% for each FRVS vent unit.
2. Verifying that the filter train starts and isolation dampers open on each of the following test signals:

   a. Manual initiation from the control room, and

   b. Simulated automatic initiation signal.

~~3. Verifying that the filter cooling bypass dampers can be manually opened and the fan can be manually started.~~

3 ~~4~~. Verifying that the heaters dissipate ~~(9.3)~~ $^{100}_{5}$ ~~(1.0)~~ kw for each recirculation unit and 32 ± 3 kw for each vent unit when tested at full load in accordance with ANSI N510-1975. Also verifying humidity control instruments operate to maintain ~~65 ± 5% RH or less.~~ LESS THAN OR EQUAL TO 70% RH

SURVEILLANCE REQUIREMENTS (Continued)

f. ~~d.~~ After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter bank satisfies the inplace penetration (for a DOP test aerosol) and ~~bypass~~ leakage testing acceptance criteria of less than ~~1%~~ 1% in accordance with ANSI N510-1975 while operating the system at a flow rate of ~~(2300) cfm ± 10%~~ 30,000 cfm ±10% for each FRVS recirculation unit and 9,000 cfm ±10% for each FRVS vent unit. B

g. ~~d.~~ After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorber bank satisfies the inplace ~~bypass~~ penetration and leakage testing acceptance criteria of less than ~~1%~~ 1% in accordance with ANSI N510-1975 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of ~~(2300) cfm ± 10%~~ 30,000 cfm ±10% for each FRVS recirculation unit and 9,000 cfm ±10% for each FRVS vent unit.

Note: Individual FRVS recirculation and vent charcoal filter efficiency is 95%. Since these filters are in series overall FRVS efficiency is 99% B

~~(*0.05% value applicable when a HEPA filter or charcoal adsorber efficiency of 99% is assumed, or 1% when a HEPA filter or charcoal adsorber efficiency of 95% or less is assumed in the NRC staff's safety evaluation. (Use the value assumed for the charcoal adsorber efficiency if the value for the HEPA filter is different from the charcoal adsorber efficiency in the staff's safety evaluation.))~~

~~(**0.175% value applicable when a charcoal adsorber efficiency of 99% is assumed, or 1% value applicable when a charcoal adsorber efficiency of 95% is assumed, or 10% value applicable when a charcoal adsorber efficiency of 90% is assumed in the NRC staff's safety evaluation)~~

SER Technical Specification Issue No. 30 (SER Section 8.3.1.3)

Diesel Generator Connected Loads

Surveillance Requirements for periodic verification that automatically connected loads do not exceed the continuous rating of the diesel generator will be included in the Technical Specifications.

Response:

HCGS Draft Technical Specification Section 3/4.8.1, A.C. Sources, Surveillance Requirement 4.8.1.1.2.h.9 provides the above test requirement to verify that the auto-connected loads to each diesel generator do not exceed the 2000-hour rating of 4737 kW, at least once per 18 months, during shutdown.

SER Technical Specification Issue No. 31 (SER Section 8.3.1.7)

Load Sequencer Logic

Surveillance requirements for the operability of the load sequencer logic on a 30-day periodic basis will be included in the Technical Specifications.

Response:

HCGS Draft Technical Specification Section 3/4.8.1, A.C. Sources, Surveillance Requirement 4.8.1.1.2.e provides the above test requirement to perform a functional test on the emergency load sequencer to verify operability at least once per 31 days.

SER Technical Specification Issue No. 32 (SER Section 8.3.2.7)

DC System Monitoring

The staff has concluded that the above-cited monitoring, augmented by the periodic test and surveillance requirements that are included in the Technical Specifications, provides reasonable assurance that the Class 1E dc power system is ready to perform its intended safety function.

Response:

HCGS Draft Technical Specification Section 4.8.2.1, D.C. Sources - Operating, provides the surveillance requirements which assure that the Class 1E dc power system is ready to perform its intended safety function.

SER Technical Specification Issue No. 34 (SER Section 8.3.3.4.1)

Periodic System Testing

Periodic system tests shall be performed using written procedures which will be designed to demonstrate system performance. The frequency of testing shall be governed by the frequencies specified in the Technical Specifications.

The following periodic system tests are required by Section 6.4 of IEEE Std. 308-1974 to demonstrate the following:

(1) The Class 1E loads can operate on the preferred power supply.

(2) The loss of the preferred power supply can be detected.

(3) The standby power supply can be started and can accept design load within the design-basis time.

(4) The standby power supply is independent of the preferred power supply.

In a letter dated September 21, 1984, the applicant stated that each of these tests would be included in the Hope Creek Technical Specifications. On the basis of this statement, the staff concludes that periodic system testing will comply with the guidelines of Section 6.4 of IEEE Std. 308-1974, meets the requirements of GDC 17 and 18, and is acceptable. Inclusion of the subject specifications will be reviewed with the Technical Specifications.

Response:

HCGS Draft Technical Specification Section 3/4.8.1 A.C. Sources, Surveillance Requirement 4.8.1.1.2 provides the above test requirements.

SER Technical Specification Issue No. 35 (SER Section 8.3.3.4.2)

Load Sequencer Testing

In Amendment 4 to the FSAR, the applicant, in response to a request for information, indicated that provisions exist for testing the automatic load sequencer logic for various modes during normal plant operation. If an actual loss of offsite power or accident signal occurs during testing, the sequencer resets automatically and responds to the signal. This design meets the guidelines of RG 1.118 and the requirements of GDC 18 and is acceptable. Periodic testing of the load sequencer will be included in the Hope Creek Technical Specifications.

Response:

HCGS Draft Technical Specification Section 3/4.8.1, A.C. Sources, Surveillance Requirement 4.8.1.1.2, Items e, h.4 and h.6 provide the above requirements for load sequencer testing.

SER Technical Specification Issue No. 36 (SER Section 8.3.3.5.4)

Testing of Fuses

Subsequently, in a letter dated August 1, 1984, the applicant stated that testing of fuses will be done at least once every 18 months using the provisions specified in the Standard Technical Specifications. On the basis of this statement, the staff considers this item resolved.

Response:

HCGS Draft Technical Specification Section 3/4.8.4, Electrical Equipment Protective Devices, Surveillance Requirement 4.8.4.1, Item 3 provides the above test requirement for fuses, at least once per 18 months.

SER Technical Specification Issue No. 38 (SER Section 9.2.1)

Station Service Water Pump Testing

The SSW pumps are normally operating. The availability of the standby pumps is ensured by periodic functional tests and inspections. The system design also incorporates provisions for accessibility to permit inservice inspection as required. The frequency of the functional testing and inspection will be in accordance with the Standard Technical Specifications. Thus, the staff concludes that the requirements of GDC 45 and 46 are satisfied.

Response:

HCGS Draft Technical Specification Section 3/4.7.1, Service Water Systems, Surveillance Requirement 4.7.1.2, and Surveillance Requirement 4.0.5 provide the above requirements for functional testing and inspection of the service water pumps.

MP 85 64/07 18-mr

SER Technical Specification Issue No. 39 (SER Section 9.2.2)

Safety Auxiliaries Cooling System And Reactor Auxiliaries Cooling System Pump Availability

The SACS and RACS pumps are normally operating. The availability of pumps are on standby is ensured by periodic functional tests and inspections as delineated in the plant Technical Specifications. The system design also incorporates provisions for accessibility to permit inservice inspection as required. Thus, the staff concludes that the requirements of GDC 45 and 46 are satisfied.

Response:

HCGS Draft Technical Specification Section 3/4.7.1, Service Water System, Surveillance Requirements 4.7.1.1, and Surveillance Requirement 4.0.5 provide the above requirements for functional testing and inspection of the SACS pumps. As stated in FSAR Section 9.2.8.3, the RACS has no safety-related function and is not required to be operable following a LOCA. Therefore, Technical Specifications for the RACS pumps are not required.

MP 85 64/07 19-mr

SER Technical Specification Issue No. 44 (SER Section 9.5.1.5)

Fire Watch

The Class B system is electrically supervised to detect circuit breaks, ground faults, removal of a detection device from a detector circuit, and power failure. If any of these problems occur, fire detection system trouble is annunciated locally and in the main control room. This would alert the oeprators to repair the system or establish a fire watch in the affected area in conformance with the plant Technical Specifications. The staff concludes that the possibility of the Class B supervised portion of the detection system being inoperable for an extended time is low and can accept this as a deviation to its guidelines.

Response:

HCGS Draft Technical Specification Section 3.3.7.8 provides the above requirement to restore the system to operable status or establish a fire watch in the affected areas.

SER Technical Specification Issue No. 45 (SER Section 10.2)

Turbine Steam Valve Inspection

An inservice inspection program for the main steam stop and control valves and combined intercept valves is provided and includes:

1. dismantling and inspecting one of each type of turbine steam valve at approximately 3-1/3 year intervals during refueling or maintenance shutdowns coinciding with the inservice inspection schedule.

2. exercising and observing at least once a week the main steam stop and control valves and combine intercept valves. This program will be included in the plant Technical Specifications.

Response:

HCGS Draft Technical Specification Section 3/4.3.8, Turbine Overspeed Protection System, Surveillance Requirement 4.3.8.2 a.1 and a.2 provide the requirement to exercise and observe the main steam stop valves and combined intercept valves at least once per 7 days.

Surveillance Requirement 4.3.8.2 b provides the requirement to exercise and observe the high pressure turbine control valves at least once per 31 days. This change to the BWR Standard Technical Specification (i.e., allowing the high pressure turbine control valves to be tested monthly rather than weekly) is based on General Electric Technical Information Letter (TIL) No. 969 which concludes that the excellent reliability record of these valves justifies this change in the frequency of surveillance testing. HCGS FSAR 10.2.3 is being revised in Amendment 10 to reflect the above revision to the surveillance testing of the high pressure turbine control valves.

Surveillance Requirement 4.3.8.2 d provides the requirement to dismantle and inspect one of each type of turbine steam valve at least once per 40 months.

SER Technical Specification Issue No. 46 (SER Section 10.4.4)

Turbine Bypass Valve Surveillance

The applicant in a letter dated August 1, 1984, stated that the turbine bypass valves would be exercised at least once a week, that a turbine bypass system functional test, which includes a simulated automatic activation and verification that each automatic valve actuates to its correct position, would be performed every 18 months; and that this would be included in the plant Technical Specifications.

Response:

HCGS Draft Technical Specification Section 3/4.7.10, Main Turbine Bypass System, Surveillance Requirement 4.7.10a provides the requirement to exercise each turbine bypass valve at least once per 31 days. This change to the BWR Standard Technical Specification (i.e., allowing the turbine bypass valves to be tested monthly rather than weekly) is based on General Electric Service Information Letter (SIL) No. 413 which concludes that the excellent reliability record of these valves justifies this change in the frequency of surveillance testing. The response to FSAR Question 430.167 is being revised in Amendment 10 to reflect the above revision to the surveillance testing of the turbine bypass valves.

Surveillance Requirement 4.7.10 b.1 provides the requirement to perform a turbine bypass system functional test which includes a simulated automatic activation and verification that each automatic valve actuates to its correct position, at least once per 18 months.

SER Technical Specification Issue No. 50
(SER Section 15.6.4) MSIV Closure Time

A guillotine break of one of the four main steamlines is postulated to occur outside the primary containment, downstream of the outermost isolation valve, resulting in mass loss of both ends of the break. The primary coolant loss is assumed to be limited by steamline flow limiters to a maximum release rate of 200 percent of rated steam flow, and by Technical Specifications which ensure the maximum closure time of the main steam isolation valves (MSIVs) is 5.5 sec. Mass loss from the broken steamline terminates when the MSIVs are fully closed. The applicant has calculated that 99,400 lb. of water and steam would be released to the atmosphere before the MSIVs would close following such an accident. The staff followed the recommendation of SRP Section 15.6.4 (NUREG-0800) and conservatively assumed 140,000 lb. of coolant would be released.

Response:

HCGS Draft Technical Specification Section 3/4.4.7, Main Steam Isolation Valves, provides the limiting conditions for operation and surveillance requirements for the MSIVs. The maximum closure time specified is 5 seconds.

DJD:vw

MP85 76 04 1-vw

SER Technical Specification Issue No. 51 (SER Section 15.9.3)

SRV Failure Reporting

Because Hope Creek has not yet operated, no valve failures have been reported. The applicant will promptly report safety/relief valve failures via the Licensee Event Report system and will summarize failures in the annual report. The plant Technical Specifications will require these failures to be reported within 30 days. The staff finds this acceptable.

Response:

HCGS Draft Technical Specification Section 6.6.1, Reportable Event Action, provide the above requirement to report safety/relief valve failures within 30 days, in accordance with 10 CFR 50.73. HCGS Draft Technical Specification Section 6.9.1.5, Annual Reports, provides the requirement to document all challenges to main steam safety/relief valves in the annual report.

ATTACHMENT 4

Revision 3 HCGS Draft Technical
Specification Pages

HOPE CREEK GENERATING STATION

REV. 3

DRAFT TECHNICAL SPECIFICATIONS

~~STANDARD~~

~~TECHNICAL SPECIFICATIONS~~

~~GENERAL ELECTRIC~~

~~BOILING WATER REACTORS~~

~~(GE-STS)~~

~~BWR/4~~

HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
Index	0
i	2
ii	2
iii	0
iv	0
v	0
vi	0
vii	0
viii	0
ix	0
x	0
xi	2
xii	0
xiii	0
xiv	0
xv	0
xvi	0
xvii	0
xviii	0
xix	0
xx	0
xxi	0
Section 1.0	0
1-1	0
1-2	0
1-3	2
Insert A to pg. 1-3	2
1-4	2
Insert A to pg. 1-4	2
Insert B to pg. 1-4	2
Insert C to pg. 1-4	2
1-5	2
Insert A to pg. 1-5	2
1-6	2
Insert A to pg. 1-6	2
Insert B to pg. 1-6	2
1-7	2
Insert A to pg. 1-7	2
1-8	2
1-9	0
Section 2.0	0
2-1	0
2-2	0
2-3	0
2-4	0
Bases for Section 2.0	0
Note	0

HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
B2-1	0
B2-2	0
B2-3	0
B2-4	0
B2-5	0
B2-6	0
B2-7	0
B2-8	0
B2-9	0
Section 3.0 & 4.0	0
3/4 0-1	0
Insert A to pg. 3/4 0-1	0
3/4 0-2	0
3/4 0-3	0
3/4 1-1	0
3/4 1-2	0
3/4 1-3	0
3/4 1-4	0
3/4 1-5	0
3/4 1-6	0
3/4 1-7	0
3/4 1-8	0
3/4 1-9	0
Insert to pg. 3/4 1-9	0
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3/4 1-13	0
3/4 1-14	0
3/4 1-15	0
3/4 1-16	0
3/4 1-17	0
3/4 1-18	0
3/4 1-19	0
3/4 1-20	0
3/4 1-21	0
3/4 2-1	0
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3/4 2-5	0

HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

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3/4 3-2	0
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3/4 3-10	0
3/4 3-11	0
3/4 3-12	0
3/4 3-13	0
3/4 3-14	0
3/4 3-15	0
3/4 3-16	0
3/4 3-17	0
3/4 3-18	0
3/4 3-19	0
3/4 3-20	0
3/4 3-21	0
3/4 3-22	0
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3/4 3-24	0
3/4 3-25	0
3/4 3-26	0
3/4 3-27	0
3/4 3-28	0
3/4 3-29	0
3/4 3-30	0
3/4 3-31	0
3/4 3-32	0
3/4 3-33	0
3/4 3-34	0
3/4 3-35	0
3/4 3-36	0
3/4 3-37	0
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3/4 3-39	0

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DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
3/4 3-40	0
3/4 3-41	0
3/4 3-42	0
3/4 3-43	0
3/4 3-44	0
3/4 3-45	0
3/4 3-46	0
3/4 3-47	0
3/4 3-48	0
3/4 3-49	0
3/4 3-50	0
3/4 3-51	0
3/4 3-52	0
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3/4 3-74	0
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3/4 3-78	0
3/4 3-79	0
3/4 3-80	0

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DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
3/4 3-81	0
3/4 3-82	0
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3/4 3-90	0
3/4 3-91	0
3/4 3-92	0
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3/4 3-113	0
3/4 3-114	0
3/4 4-1	0
3/4 4-2	0
3/4 4-3	0
3/4 4-4	1
3/4 4-5	0
3/4 4-6	0

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DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
3/4 4-7	0
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3/4 4-8	0
3/4 4-9	0
3/4 4-10	0
3/4 4-11	0
3/4 4-12	0
3/4 4-13	0
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3/4 4-23	0
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3/4 4-25	0
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3/4 5-9	0
3/4 6-1	0
3/4 6-2	0
3/4 6-3	0
3/4 6-4	0
3/4 6-5	0
3/4 6-6	0

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LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
3/4 6-7	0
3/4 6-8	1
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Insert C to pg. 3/4 6-8	1
3/4 6-9	0
3/4 6-10	1
3/4 6-11	1
3/4 6-11a	1
3/4 6-11b	1
3/4 6-11c	1
3/4 6-11d	1
3/4 6-11e	1
3/4 6-11f	1
3/4 6-11g	1
3/4 6-12	1
3/4 6-13	0
3/4 6-14	0
Insert A&B to page 3/4 6-14	0
3/4 6-15	0
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3/4 6-16	0
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3/4 6-27	0
3/4 6-28	0
3/4 6-29	0
3/4 6-30	0

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LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
3/4 6-31	1
3/4 6-32	0
3/4 6-33	0
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3/4 6-38	0
3/4 6-39	1
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3/4 6-41	0
3/4 6-42	1
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3/4 6-46	0
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3/4 6-47	0
3/4 6-48	0
3/4 6-49	3
3/4 6-50	3
3/4 6-51	3
3/4 6-52	1
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3/4 6-53	0
3/4 7-1	0
3/4 7-2	0
Insert E&F to page 3/4 7-2	0
3/4 7-3	0
Insert to pg. 3/4 7-3	0
3/4 7-4	0
3/4 7-5	3
Insert A to pg. 3/4 7-5	3
3/4 7-6	0
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3/4 7-10	0
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LIST OF EFFECTIVE PAGES

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3/4 7-13	0
3/4 7-14	0
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3/4 7-15	0
Insert D to pg. 3/4 7-15	0
3/4 7-16	0
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3/4 7-27	1
Insert to pg. 3/4 7-27	1
3/4 7-28	1
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3/4 7-29	0
3/4 8-1	0
Insert A to pg. 3/4 8-1	0
Insert B to pg. 3/4 8-1	0
3/4 8-2	0
Insert to pg. 3/4 8-2	0
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3/4 8-5	0
Notes to pg. 3/4 8-5	0
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LIST OF EFFECTIVE PAGES

Pages	Revision Numbers
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Insert B to pg. 3/4 8-9	0
3/4 8-10	0
Insert A to pg. 3/4 8-10	0
Insert B to pg. 3/4 8-10	0
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3/4 8-12	0
Insert to pg. 3/4 8-12	0
3/4 8-13	0
Insert to pg. 3/4 8-13	0
3/4 8-14	0
Insert to pg. 3/4 8-14	0
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3/4 8-16	0
3/4 8-17	0
3/4 8-18	0
Insert to pg. 3/4 8-18	0
3/4 8-19	0
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3/4 8-20 Sheet 4	0
3/4 8-20 Sheet 5	0
3/4 8-20 Sheet 6	0
3/4 8-20 Sheet 7	0
3/4 8-21	0
3/4 8-22 Sheet 1	0
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3/4 8-22 Sheet 3	0
3/4 8-22 Sheet 4	0
3/4 8-22 Sheet 5	0
3/4 8-23	0
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3/4 9-2	0
3/4 9-3	0
3/4 9-4	0
3/4 9-5	0
3/4 9-6	0
3/4 9-7	0
3/4 9-8	0

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3/4 9-10	0
3/4 9-11	0
3/4 9-12	0
3/4 9-13	0
3/4 9-14	0
3/4 9-15	0
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3/4 10-3	0
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3/4 10-6	0
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3/4 11-7	2
3/4 11-8	2
3/4 11-9	2
3/4 11-10	2
3/4 11-11	2
3/4 11-12	2
Insert A to pg. 3/4 11-12	2
3/4 11-13	2
3/4 11-14	2
3/4 11-15	2
3/4 11-16	2
3/4 11-17	2
3/4 11-18	2
Insert A&B to pg. 3/4 11-18	2
3/4 11-19	2
3/4 11-20	2
3/4 11-21	2
3/4 12-1	2
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HOPE CREEK GENERATING STATION
DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

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3/4 12-5	2
3/4 12-6	2
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3/4 12-11	2
3/4 12-12	2
3/4 12-13	2
3/4 12-14	2
Bases for Section 3.0 and 4.0	0
Note to pg. B3.0&4.0	0
B3/4 0-1	0
B3/4 0-2	0
B3/4 0-3	0
B3/4 1-1	0
B3/4 1-2	0
Insert A to pg. B3/4 1-2	0
B3/4 1-3	0
B3/4 1-4	0
Insert to pg. B3/4 1-4	0
B3/4 2-1	0
B3/4 2-2	0
B3/4 2-3	0
B3/4 2-4	0
B3/4 2-5	0
B3/4 3-1	0
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B3/4 3-4	0
B3/4 3-5	0
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Insert to pg. B3/4 3-6	0
B3/4 3-7	0
B3/4 4-1	0
Insert B to pg. B3/4 4-1	0
B3/4 4-2	0
B3/4 4-3	0

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DRAFT TECHNICAL SPECIFICATIONS

LIST OF EFFECTIVE PAGES

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B3/4 4-4	0
Insert to pg. B3/4 4-4	0
B3/4 4-5	0
Insert A to pg. B3/4 4-5	0
B3/4 4-6	0
B3/4 4-7	0
B3/4 4-8	0
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B3/4 6-1	0
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B3/4 6-2	0
B3/4 6-3	0
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B3/4 6-5	0
Insert to pg. B3/4 6-5	0
B3/4 6-6	0
B3/4 7-1	0
B3/4 7-2	0
Insert to pg. B3/4 7-2	0
B3/4 7-3	0
B3/4 7-4	0
Insert to pg. B3/4 7-4	0
B3/4 7-5	0
B3/4 8-1	0
B3/4 8-2	0
B3/4 8-3	0
B3/4 9-1	0
B3/4 9-2	0
B3/4 10-1	0
B3/4 11-1	2
B3/4 11-2	2
B3/4 11-3	2
B3/4 11-4	2
B3/4 11-5	2
B3/4 11-6	2
B3/4 12-1	2
B3/4 12-2	2
Section 5.0	0
5-1	0
5-2	0

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5-5	0
5-6	0
Section 6.0	0
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6-2	0
6-3	0
6-4	0
6-5	0
6-6	0
6-7	0
6-8	0
6-9	0
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6-20	0
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6-24	0
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6-26	0
Insert B to pg. 6-26	0
6-27	0
6-28	0
6-29	0

CONTAINMENT SYSTEMS

~~FILTRATION, RECIRCULATION AND VENTILATION SYSTEM~~ ~~STANDBY GAS TREATMENT SYSTEM~~ (FRVS)

LIMITING CONDITION FOR OPERATION

3.6.5.3 ~~Two independent standby gas treatment subsystems~~ Six FRVS recirculation units and two FRVS vent units shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3 and *.

ACTION:

a. With ~~a~~ two FRVS recirculation units or one FRVS vent unit ~~standby gas treatment subsystem~~ inoperable, restore the inoperable ~~subsystem~~ unit to OPERABLE status within 7 days, or:

1. In OPERATIONAL CONDITION 1, 2 or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

2. In Operational Condition *, ~~in the secondary containment~~ reactor building start, suspend handling of irradiated fuel with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

b. With ~~both standby gas treatment subsystems~~ three FRVS recirculation or both vent units inoperable in Operational Condition *, suspend handling of irradiated fuel in the ~~secondary~~ reactor building ~~containment~~ start, CORE ALTERATIONS or operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.5.3 Each of the six FRVS recirculation and two vent units ~~standby gas treatment subsystem~~ shall be demonstrated OPERABLE:

b. ~~c.~~ At ~~least~~ once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the subsystem operates for at least 10 hours with the heaters, and humidity control instrumentation OPERABLE.

*When irradiated fuel is being handled in the ~~secondary containment~~ reactor building start and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

a. AT LEAST ONCE PER 14 DAYS BY VERIFYING THAT THE WATER SEAL BUCKET TRAPS HAVE A WATER SEAL AND MAKING UP ANY EVAPORATIVE LOSSES BY FILLING THE TRAP TO THE OVERFLOW.

SURVEILLANCE REQUIREMENTS (Continued)

C. ~~b.~~ At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the subsystem by:

1. Verifying that the subsystem satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than ~~[ ]~~ 1% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rates ~~is (2300) cfm ± 10%.~~ are 30,000 cfm ±10% for each FRVS recirculation unit, and 9,000 cfm ±10% for each FRVS vent unit.
2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than ~~[ ]~~ 1%; and
30,000 cfm ±10% for each FRVS recirculation unit and 9,000 cfm ±10% for each FRVS vent unit
3. Verifying a subsystem flow rate of ~~(2300) cfm ± 10%~~ during system operation when tested in accordance with ANSI N510-1975.

d. ~~c.~~ After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than ~~[ ]~~ 1%.

e. ~~d.~~ At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks in the recirculation filter train and less than 5 inches W.G. in the vent train is less than ~~[ ]~~ 8 inches Water Gauge while operating the filter train at a flow rate of ~~(2300) cfm ± 10%.~~ 30,000 cfm ± 10% for each FRVS recirculation unit and 9,000 cfm ± 10% for each FRVS vent unit.
2. Verifying that the filter train starts and isolation dampers open on each of the following test signals:

   a. Manual initiation from the control room, and

   b. Simulated automatic initiation signal.

~~3. Verifying that the filter cooling bypass dampers can be manually opened and the fan can be manually started.~~

3~~4~~. Verifying that the heaters dissipate ~~(9.3)~~ $^{100}_{5}$ ~~(1.0)~~ kw for each recirculation unit and 32 ± 3 kw for each vent unit when tested at full load in accordance with ANSI N510-1975. Also verifying humidity control instruments operate to maintain ~~65 ± 5% RH or less.~~ LESS THAN OR EQUAL TO 70% RH

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SURVEILLANCE REQUIREMENTS (Continued)

f. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter bank satisfies the inplace penetration and bypass leakage testing acceptance criteria of less than ~~[illegible]~~ 1% in accordance with ANSI N510-1975 while operating the system at a flow rate of ~~(2300) cfm ± 10%~~ 30,000 cfm ±10% for each FRVS recirculation unit and 9,000 cfm ±10% for each FRVS vent unit. (for a DOP test aerosol) B

g. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorber bank satisfies the inplace penetration and bypass leakage testing acceptance criteria of less than ~~[illegible]~~ 1% in accordance with ANSI N510-1975 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of ~~(2300) cfm ± 10%~~ 30,000 cfm ±10% for each FRVS recirculation unit and 9,000 cfm ±10% for each FRVS vent unit.

Note: Individual FRVS recirculation and vent charcoal filter efficiency is 95%. Since these filters are in series overall FRVS efficiency is 99% B

~~(*0.05% value applicable when a HEPA filter or charcoal adsorber efficiency of 99% is assumed, or 1% when a HEPA filter or charcoal adsorber efficiency of 95% or less is assumed in the NRC staff's safety evaluation. (Use the value assumed for the charcoal adsorber efficiency if the value for the HEPA filter is different from the charcoal adsorber efficiency in the staff's safety evaluation.))~~

~~(**0.175% value applicable when a charcoal adsorber efficiency of 99% is assumed, or 1% value applicable when a charcoal adsorber efficiency of 95% is assumed, or 10% value applicable when a charcoal adsorber efficiency of 90% is assumed in the NRC staff's safety evaluation)~~

PLANT SYSTEMS

ULTIMATE HEAT SINK ~~(Optional)~~

LIMITING CONDITION FOR OPERATION

3.7.1.3 The ~~{~~ultimate heat sink~~}~~ shall be OPERABLE with:

a. A minimum ~~(basin)~~ river water level at or above elevation ~~{~~76'~~}~~ [redacted], ~~USGS~~ PSE&G datum, and

b. An average ~~(basin)~~ river water temperature of less than or equal to ~~{~~ 90.5 ~~}~~°F.

~~(c. (At least) (Two) OPERABLE cooling tower fans.)~~

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, 5 and *.

ACTION:

With the requirements of the above specification not satisfied:

a. In OPERATIONAL CONDITIONS 1, 2 or 3, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

b. In OPERATIONAL CONDITIONS 4 or 5, declare the ~~RHRSW~~ SACS system and the plant service water system inoperable and take the ACTION required by Specification 3.7.1.1 and 3.7.1.2.

c. In Operational Condition *, declare the plant service water system inoperable and take the ACTION required by Specification 3.7.1.2. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

INSERT A →

~~4.7.1.3 The {ultimate heat sink} shall be determined OPERABLE at least once per:~~

~~a. 24 hours by verifying the average (basin) river water temperature and water level to be within their limits.~~

~~(b. 31 days by starting each cooling tower fan from the control room and operating the fan for at least 15 minutes.)~~

~~(c. 18 months by verifying that each (plant service water) cooling tower fan starts automatically when the associated (plant service water) loop is initiated.)~~

*When handling irradiated fuel in the ~~secondary containment.~~ reactor building (secondary containment).

INSERT A TO PG. 3/4 7-5 :

4.7.1.3 The ultimate heat sink shall be determined OPERABLE as follows:

a. By verifying at least once per 24 hours that river water level is at or above the minimum limit.

B. By verifying river water temperature its limit:

1) At least once per 24 hours with river water temperature less than or equal to 85°F.

2) At least once per 6 hours with river water temperature greater than 85°F.

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