

3.7 PLANT SYSTEMS

3.7.8 Ultimate Heat Sink (UHS)

LCO 3.7.8 The UHS shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Service water temperature not within limit.	A.1 Verify required cooling capacity maintained.	1 hour <u>AND</u> Once per 12 hours thereafter
	<u>AND</u> A.2 Verify service water temperature is $\leq 99^{\circ}\text{F}$.	Once per hour
B. Required Action and associated Completion Time not met. OR UHS inoperable for reasons other than Condition A.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.8.1 Verify water level of UHS is ≥ 218 ft mean sea level.	24 hours

Surveillance Requirements (continued)

SURVEILLANCE	FREQUENCY
SR 3.7.8.2 Verify service water temperature is \leq 97°F.	24 hours

BASES

APPLICABLE
SAFETY ANALYSES
(continued)

The UHS satisfies Criterion 3 of the NRC Policy Statement.

LCO

The UHS is required to be OPERABLE and is considered OPERABLE if it contains a sufficient volume of water at or below the maximum temperature that would allow the SWS to operate for at least 22 days following the design basis LOCA without the loss of NPSH, and without exceeding the maximum design temperature of the equipment served by the SWS. To meet this condition, the UHS temperature should not exceed 97°F and the level should not fall below 218 ft MSL during normal unit operation.

APPLICABILITY

In MODES 1, 2, 3, and 4, the UHS is required to support the OPERABILITY of the equipment serviced by the UHS and required to be OPERABLE in these MODES.

In MODE 5 or 6, the OPERABILITY requirements of the UHS are determined by the systems it supports.

ACTIONS

A.1. and A.2

With the SW temperature > 97°F but ≤ 99°F, the required cooling capacity of the SW System must be verified by evaluating the existing operational condition of the systems and components served by the SW System and verifying that each is capable of performing its safety related function. The required cooling capacity must also be re-verified once per 12 hours. In addition, the SW temperature must be verified ≤ 99°F once per hour. The temperature verification ensures the SW temperature remains below the maximum water temperature allowed for the safety related components to perform their safety function.

(continued)

BASES

ACTIONS

A.1. and A.2 (continued)

The Completion Time of Required Action A.1 was developed considering that some activities required to complete the evaluation of required cooling capacity could be completed prior to the Condition being entered.

The Completion Time of Required Action A.2 is based on shift schedules for convenience and is considered acceptable since temperature monitoring capability is available to detect an increase in SW temperature throughout the period of Condition A.

B.1. and B.2

If the Required Actions and associated Completion Times are not met or the UHS is inoperable for reasons other than Condition A, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours and in MODE 5 within 36 hours.

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE
REQUIREMENTS

SR 3.7.8.1

This SR verifies that adequate long term (22 day) cooling can be maintained. The specified level also ensures that sufficient NPSH is available to operate the SWS pumps. The 24 hour Frequency is based on operating experience related to trending of the parameter variations during the applicable MODES. This SR verifies that the UHS water level is ≥ 218 ft MSL.

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.7.8.2

This SR verifies that the SWS is available to cool the CCW System to at least its maximum design temperature with the maximum accident or normal design heat loads for 30 days following a Design Basis Accident. The 24 hour Frequency is based on operating experience related to trending of the parameter variations during the applicable MODES. This SR verifies that the service water temperature is $\leq 97^{\circ}\text{F}$.

REFERENCES

1. UFSAR, Section 9.2.4.
 2. UFSAR Section 2.4.6.1.
 3. UFSAR Section 2.1.1.2.
 4. NUREG-75/024, "Final Environmental Statement Related to the Operation of H. B. Robinson Nuclear Steam-Electric Plant Unit 2," U. S. Nuclear Regulatory Commission, Washington DC 20555, April 1975, page 3-7.
 5. USGS Historical Daily Values for Station Number 02130900, Black Creek Near McBee, South Carolina, Years 1960-1993.
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