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ITSB1 - IMPROVED TECHNICAL SPECIFICATIONS MANUAL BASES UNIT 1

REMOVE MANUAL TABLE OF CONTENTS DATE: 03/21/2002

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CATEGORY: DOCUMENTS TYPE: ITSB1
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A001

TSB

APPROVED AMENDMENT TO THE

UNIT 1 TECHNICAL SPECIFICATIONS BASES MANUAL

REVISION 32

EFFECTIVE DATE 05/06/202

Replace the following pages of the Technical Specifications Bases Manual with the enclosed pages. The revised pages are identified by Revision Number and contain vertical lines indicating the area of change.

REMOVE PAGES	REV. #	INSERT PAGES	REV. #
TS / B LOES	31	TS / B LOES	32
TS / B 3.3-68	2	TS / B 3.3-68	3
B 3.4-29	0	TS / B 3.4-29	1

BASES

LCO

5. Primary Containment High Radiation (continued)

and to provide release assessment for use by operators in determining the need to invoke site emergency plans. Two independent channels, which output to one control room recorder per channel with a range of 10° to $1X10^{8}$ R/hr, monitor radiation. The recorders are the primary method of indication used by the operator during an accident, therefore the PAM Specification deals specifically with this portion of the instrument channel.

6. Primary Containment Isolation Valve (PCIV) Position

PCIV position is provided for verification of containment integrity. In the case of PCIV position, the important information is the isolation status of the containment penetration. The LCO requires a channel of valve position indication in the control room to be OPERABLE for an active PCIV in a containment penetration flow path, i.e., two total channels of PCIV position indication for a penetration flow path with two active valves. For containment penetrations with only one active PCIV having control room indication, Note (b) requires a single channel of valve position indication to be OPERABLE. This is sufficient to redundantly verify the isolation status of each isolable penetration via indicated status of the active valve, as applicable, and prior knowledge of passive valve or system boundary status. If a penetration flow path is isolated, position indication for the PCIV(s) in the associated penetration flow path is not needed to determine status. Therefore, the position indication for valves in an isolated penetration flow path is not required to be OPERABLE. These valves which require position indication are specified in Table B 3.6.1.3-1. Furthermore, the loss of position indication does not necessarily result in the PCIV being inoperable.

The PCIV position PAM instrumentation consists of position switches unique to PCIVs, associated wiring and control room indicating lamps (not necessarily unique to a PCIV) for active PCIVs (check valves and manual valves are not required to have position indication). Therefore, the PAM Specification deals specifically with these instrument channels.

(continued)

BASES (continued)

TABLE B 3.4.5-1

REACTOR COOLANT SYSTEM PRESSURE ISOLATION VALVES

1st Isolation Valve(s) Number(s)	2nd Isolation Valve(s) Number(s)	Service
HV-152F006A HV-152F037A	HV-152F005A	Core Spray Injection
HV-152F006B HV-152F037B	HV-152F005B	Core Spray Injection
HV-151F050A HV-151F122A	HV-151F015A	LPCI Injection
HV-151F050B HV-151F122B	HV-151F015B	LPCI Injection
HV-151F022	HV-151F023	Head Spray
HV-151F009	HV-151F008	Shutdown Cooling

TSB

APPROVED AMENDMENT TO THE

UNIT 1 TECHNICAL SPECIFICATIONS BASES MANUAL

REVISION 33

Effective Date 05/31/2002

Replace the following pages of the Technical Specifications Bases Manual with the enclosed pages. The revised pages are identified by Revision Number and contain vertical lines indicating the area of change.

REMOVE PAGES	REV. #	INSERT PAGES	REV. #
TSB / LOES	32	TSB / LOES	33
TS / B 3.7-27 through TS / B 3.7-29	1	TS / B 3.7-27 through TS / B 3.7-29	2

B 3.7 PLANT SYSTEMS

B 3.7.6 Main Turbine Bypass System

BASES

BACKGROUND

The Main Turbine Bypass System is designed to control steam pressure when reactor steam generation exceeds turbine requirements during unit startup, sudden load reduction, and cooldown. It allows excess steam flow from the reactor to the condenser without going through the turbine. The bypass capacity of the system is 25% of the Nuclear Steam Supply System rated steam flow. Sudden load reductions within the capacity of the steam bypass can be accommodated without reactor scram. The Main Turbine Bypass System consists of five valves connected to the main steam lines between the main steam isolation valves and the turbine stop valve bypass valve chest. Each of these five valves is operated by hydraulic cylinders. The bypass valves are controlled by the pressure regulation function of the Turbine Electro Hydraulic Control System, as discussed in the FSAR, Section 7.7.1.5 (Ref. 1). The bypass valves are normally closed, and the pressure regulator controls the turbine control valves that direct all steam flow to the turbine. If the speed governor or the load limiter restricts steam flow to the turbine, the pressure regulator controls the system pressure by opening the bypass valves. When the bypass valves open, the steam flows from the bypass chest, through connecting piping, to the pressure breakdown assemblies, where a series of orifices are used to further reduce the steam pressure before the steam enters the condenser.

APPLICABLE SAFETY ANALYSES

The Main Turbine Bypass System fast opening feature is assumed to function during the turbine generator load rejection and feedwater controller failure transients, as discussed in the FSAR, Section 15.2.2 (Ref. 2). Opening the bypass valves during the pressurization event mitigates the increase in reactor vessel pressure, which affects the MCPR during the event. An inoperable Main Turbine Bypass System may result in an MCPR penalty.

The Main Turbine Bypass System satisfies Criterion 3 of the NRC Policy Statement. (Ref. 3)

(continued)

BASES (continued)

LCO

The Main Turbine Bypass System fast opening feature is required to be OPERABLE to limit peak pressure in the main steam lines and maintain reactor pressure within acceptable limits during events that cause rapid pressurization, so that the Safety Limit MCPR is not exceeded. With the Main Turbine Bypass System inoperable, modifications to the MCPR limits (LCO 3.2.2, "MINIMUM CRITICAL POWER RATIO (MCPR)") may be applied to allow this LCO to be met. The MCPR limit for the inoperable Main Turbine Bypass System is specified in the COLR. An OPERABLE Main Turbine Bypass System requires the bypass valves to open in response to increasing main steam line pressure. Licensing analysis credits an OPERABLE Main Turbine Bypass System as having the bypass valve fast opening feature in response to turbine control valve or turbine stop valve closure. This response is within the assumptions of the applicable analysis (Ref. 2).

APPLICABILITY

The Main Turbine Bypass System is required to be OPERABLE at $\geq$ 25% RTP to ensure that the fuel cladding integrity Safety Limit is not violated during the turbine generator load rejection transient. As discussed in the Bases for LCO 3.2.2, sufficient margin to these limits exists at < 25% RTP. Therefore, these requirements are only necessary when operating at or above this power level.

ACTIONS

A.1

If the Main Turbine Bypass System is inoperable (one or more bypass valves inoperable), and the MCPR limits for an inoperable Main Turbine Bypass System, as specified in the COLR, are not applied, the assumptions of the design basis transient analysis may not be met. Under such circumstances, prompt action should be taken to restore the Main Turbine Bypass System to OPERABLE status or adjust the MCPR limits accordingly. The 2 hour Completion Time is reasonable, based on the time to complete the Required

(continued)

BASES

ACTIONS (continued)

B.1

Action and the low probability of an event occurring during this period requiring the Main Turbine Bypass System.

If the Main Turbine Bypass System cannot be restored to OPERABLE status or the MCPR limits for an inoperable Main Turbine Bypass System are not applied, THERMAL POWER must be reduced to < 25% RTP. As discussed in the Applicability section, operation at < 25% RTP results in sufficient margin to the required limits, and the Main Turbine Bypass System is not required to protect fuel integrity during the turbine generator load rejection transient. The 4 hour Completion Time is 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 3.7.6.1

Cycling each main turbine bypass valve through one complete cycle of full travel demonstrates that the valves are mechanically OPERABLE and will function when required. The 31 day Frequency is based on engineering judgment, is consistent with the procedural controls governing valve operation, and ensures correct valve positions. Operating experience has shown that these components usually pass the SR when performed at the 31 day Frequency. Therefore, the Frequency is acceptable from a reliability standpoint.

SR 3.7.6.2

The Main Turbine Bypass System is required to actuate automatically to perform its design function. This SR demonstrates that, with the required system initiation signals (simulate automatic actuation), the valves will actuate to their required position. The 24 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a unit outage and because of the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown the 24 month Frequency, which is based on the refueling cycle, is acceptable from a reliability standpoint.

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ITSB2 - IMPROVED TECHNICAL SPECIFICATIONS BASES MANUALS UNIT 2

REMOVE MANUAL TABLE OF CONTENTS DATE: 03/21/2002

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CATEGORY: DOCUMENTS TYPE: ITSB2
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UNIT 2 TECHNICAL SPECIFICATIONS BASES MANUAL

REVISION 31

EFFECTIVE DATE 05/06/2002

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REMOVE PAGES	REV. #	INSERT PAGES	REV. #
TSB / LOES	30	TS / B LOES	31
TS / B 3.3-68	2	TS / B 3.3-68	3
B 3.4-29	0	TS / B 3.4-29	1

BASES

LCO

5. Primary Containment High Radiation (continued)

and to provide release assessment for use by operators in determining the need to invoke site emergency plans. Two independent channels, which output to one control room recorder per channel with a range of 10^{0} to $1X10^{8}$ R/hr, monitor radiation. The recorders are the primary method of indication used by the operator during an accident, therefore the PAM Specification deals specifically with this portion of the instrument channel.

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(continued)

BASES (continued)

TABLE B 3.4.5-1

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HV-252F006B HV-252F037B	HV-252F005B	Core Spray Injection
HV-251F050A HV-251F122A	HV-251F015A	LPCI Injection
HV-251F050B HV-251F122B	HV-251F015B	LPCI Injection
HV-251F022	HV-251F023	Head Spray
HV-251F009	HV-251F008	Shutdown Cooling