1.0 Definitions

The following terms are defined so that a uniform interpretation of these specifications may be achieved.

A. (Deleted)

B. Cold Shutdown Condition - Cold shutdown condition means reactor operation with the Mode Switch in the SHUTDOWN position, coolant temperature $\leq$ 212°F, and with no core alterations permitted. During the performance of inservice hydrostatic or leakage testing with all control rods fully inserted and reactor coolant temperature > 212°F, and/or reactor vessel pressurized, the reactor may be considered to be in the Cold Shutdown Condition for the purpose of determining Limiting Condition for Operation applicability. Note that the Cold Shutdown Condition may be referred to in different ways throughout the Technical Specifications. For example, "reactor subcritical and reactor coolant temperature < 212°F," "irradiated fuel in the reactor vessel and the reactor is depressurized," "reactor water temperature < 212°F and reactor coolant system vented," or "reactor is not pressurized (i.e., $\leq$ 212°F)" should be interpreted as COLD SHUTDOWN. However, compliance with an ACTION requiring COLD SHUTDOWN shall require a reactor coolant temperature $\leq$ 212°F. In addition, compliance with the following Specifications is required when performing the hydrostatic or leakage testing under the identified conditions: 3.5.B.1.b, 3.5.C.1.c, 3.6.F.2.d, 3.7.C.1.a(7), 3.9.c, and applicable notes in Table 3.2-1.

C. Core Alteration - Core alteration shall be the addition, removal, relocation, or movement of fuel, sources, incore instruments, or reactivity controls within the reactor pressure vessel with the vessel head removed and fuel in the vessel. Suspension of core alterations shall not preclude completion of the movement of a component to a safe conservative position.

D. Design Power - Design power refers to the power level at which the reactor is producing 105 percent of reactor vessel rated steam flow. Design power does not necessarily correspond to 105 percent of rated reactor power. The stated design power in megawatts thermal (MWt) is the result of a heat balance for a particular plant design. For Hatch Nuclear Plant Unit 1 the design power is approximately 2537 MWt.

E. Engineered Safety Features - Engineered safety features are those features provided for mitigating the consequences of postulated accidents, including for example containment, emergency core cooling, and standby gas treatment system.

F. Hot Shutdown Condition - Hot shutdown condition means reactor operation with the Mode Switch in the SHUTDOWN position, coolant temperature > 212°F, and no core alterations are permitted. During the performance of inservice hydrostatic or leakage testing with all control rods fully inserted and reactor coolant temperature > 212°F, and/or reactor vessel pressurized, the reactor may be considered to be in the Cold Shutdown Condition for the purpose of determining Limiting Condition for Operation applicability. However, compliance with an ACTION requiring COLD SHUTDOWN shall require a reactor coolant temperature ≤ 212°F.

G. Hot Standby Condition - Hot standby condition means reactor operation with the Mode Switch in the START & HOT STANDBY position, coolant temperature greater than 212°F, reactor pressure less than 1045 psig, critical.

H. Immediate - Immediate means that the required action shall be initiated as soon as practicable, considering the safe operation of the Unit and the importance of the required action.

I. Instrument Calibration - An instrument calibration means the adjustment of an instrument output signal so that it corresponds, within acceptable range and accuracy, to a known value(s) of the parameter which the instrument monitors.

J. Instrument Channel - An instrument channel means an arrangement of a sensor and auxiliary equipment required to generate and transmit to a trip system a single trip signal related to the plant parameter monitored by that instrument channel.

Notes for Table 3.2-1

a. The column entitled "Ref. No." is only for convenience so that a one-to-one relationship can be established between lines in Table 3.2-1 and items in Table 4.2-1.

b. Primary containment integrity shall be maintained at all times prior to withdrawing control rods for the purpose of going critical, when the reactor is critical, or when the reactor water temperature is above 212°F and fuel is in the reactor vessel except while performing low-power physics tests at atmospheric pressure at power levels not to exceed 5 MWt, or performing an inservice vessel hydrostatic or leakage test.

When primary containment integrity is required, there shall be two operable or tripped trip systems for each function.

When performing inservice hydrostatic or leakage testing or the reactor vessel with the reactor coolant temperature above 212°F, reactor vessel water level instrumentation associated with the low low (Level 2) trip requires two operable or tripped channels. The drywell pressure trip is not required because primary containment integrity is not required.

c. If the number of operable channels cannot be met for one of the trip systems, that trip system shall be tripped. However, one trip signal channel of a trip system may be inoperable for up to 2 hours during periods of required surveillance testing without tripping the associated trip system, provided that the other remaining channel(s) monitoring that same parameter within that trip system is (are) operable.

d. The valves associated with each Group isolation are given in Table 3.7-1.

e. Within 24 hours prior to the planned start of the hydrogen injection test with the reactor power at greater than 20% rated power, the normal full-power radiation background level and associated trip setpoints may be changed based on a calculated value of the radiation level expected during the test. The background radiation level and associated trip setpoints may be adjusted during the test based on either calculations or measurements of actual radiation levels resulting from hydrogen injection. The background radiation level shall be determined and associated trip setpoints shall be set within 24 hours of re-establishing normal radiation levels after completion of hydrogen injection and prior to establishing reactor power levels below 20% rated power.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.5.A.2. Operation with Inoperable Components If one CS system loop is inoperable, the reactor may remain in operation for a period not to exceed seven (7) days providing all active components in the other CS system loop, the RHR system LPCI mode and the diesel generators (per Specification 4.9.A.2.a) are operable. When performing an inservice hydrostatic or leakage test with the reactor coolant temperature above or below 212°F the CS system is not required to be operable.	4.5.A.2. Surveillance with Inoperable Components When it is determined that one core spray loop is inoperable at a time when operability is required, the other core spray loop and the RHR system LPCI mode shall be demonstrated to be operable immediately. The operable core spray loop shall be demonstrated to be operable daily until both loops are returned to normal operation.
3. Shutdown Requirements If Specification 3.5.A.1.a. or 3.5.A.2. cannot be met the reactor shall be placed in the Cold Shutdown Condition within 24 hours.	
B. Residual Heat Removal (RHR) System (LPCI and Containment Cooling Mode)	B. Residual Heat Removal (RHR) System (LPCI and Containment Cooling Mode)
1. Normal System Availability	1. Normal Operational Tests
	RHR system testing shall be performed as follows:
	Item: a. Air test on drywell headers and nozzles and air or water test on torus headers and nozzles Frequency: Once/5 years
a. The RHR System shall be operable: (1) Prior to reactor startup from a cold condition, or (2) When irradiated fuel is in the reactor vessel and the reactor pressure is greater than atmospheric except as stated in Specification 3.5.B.2.	

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS

3.5.B.1. Normal System Availability (Cont.)

b. One RHR loop with two pumps or two loops with one pump per loop shall be operable in the shutdown cooling mode when irradiated fuel is in the reactor vessel and the reactor pressure is atmospheric except prior to a reactor startup as stated in Specification 3.5.B.1.a. During an inservice hydrostatic or leakage test, one RHR loop with two pumps or two loops with one pump per loop shall also be operable in the LPCI mode.

c. The reactor shall not be started up with the RHR system supplying cooling to the fuel pool.

d. During reactor power operation, the LPCI system discharge cross-tie valve, E11-F010, shall be in the closed position and the associated valve motor starter circuit breaker shall be locked in the off position. In addition, an annunciator which indicates that the cross-tie valve is not in the fully closed position shall be available in the control room.

e. Both recirculation pump discharge valves shall be operable prior to reactor startup (or closed if permitted elsewhere in these specifications).

2. Operation with Inoperable Components

a. One LPCI Pump Inoperable

If one LPCI pump is inoperable, the reactor may remain in operation for a period not to exceed seven (7) days provided that the remaining LPCI pumps, both LPCI subsystem flow paths, the Core Spray system, and the associated diesel generators are operable (per Specification 4.9.A.2.a).

b. One LPCI Subsystem Inoperable

A LPCI subsystem is considered to be inoperable if (1) both of the LPCI pumps within that system are inoperable or (2) the active valves in the subsystem flow path are inoperable.

4.5.B.1. Normal Operational Tests

	Item	Frequency
b.	Simulated Automatic Actuation Test	Once/Operating Cycle
c.	System flow rate: Each RHR pump shall deliver at least 7700 gpm against a system head of at least 20 psig.	Once/3 months
d.	Pump Operability	Once/month
e.	Motor Operated valve operability	Once/month

f. Both recirculation pump discharge valves shall be tested for operability during any outage exceeding 48 hours, if operability tests have not been performed during the preceding month.

2. Surveillance with Inoperable Components

a. One LPCI Pump Inoperable

When one LPCI pump is inoperable, the remaining LPCI pumps and associated flow paths and the Core Spray system shall be demonstrated to be operable immediately and daily thereafter, until the inoperable LPCI pump is restored to normal service.

b. One LPCI Subsystem Inoperable

When one LPCI subsystem is inoperable, all active components of the remaining LPCI subsystem and the Core Spray system shall be demonstrated to be operable, immediately

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.5.B.2. Operation with Inoperable Components (Continued)	4.5.B.2. Surveillance with Inoperable Components (Continued)
b. If one LPCI subsystem is inoperable, the reactor may remain in operation for a period not to exceed seven (7) days provided that all active components of the remaining LPCI subsystem, the Core Spray system, and the associated diesel generators are operable (per Specification 4.9.A.2.a).	and daily thereafter, until the inoperable LPCI subsystem is restored to normal service.
c. When performing an inservice hydrostatic or leakage test with the reactor coolant temperature above or below 212°F, comply with Specification 3.5.B.1.b.	

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS

3.5.B.3. Shutdown Requirements

If Specification 3.5.B.1.a. or 3.5.B.2. cannot be met, the reactor shall be placed in the Cold Shutdown Condition within 24 hours.

C. RHR Service Water System

1. Normal System Availability

The RHR service water system shall be operable:

a. Prior to reactor startup from a Cold Shutdown Condition, or

b. When irradiated fuel is in the reactor vessel and the reactor vessel pressure is greater than atmospheric pressure except as stated in Specification 3.5.C.2.

c. When irradiated fuel is in the reactor vessel and the reactor is depressurized at least one RHR service water loop shall be operable.

2. One Pump Inoperable

If one RHR service water pump is inoperable the reactor may remain in operation for a period not to exceed 30 days provided all other active components of both subsystems are operable. When performing an inservice hydrostatic or leakage test, comply with Specification 3.5.C.1.c.

4.5.C. RHR Service Water System

1. Normal Operational Tests

RHR service water system testing shall be performed as follows:

Item	Frequency
a. Pump & Valve Operability	Once/3 months
b. Pump Capacity Test: Each RHR service water pump shall deliver at least 4000 gpm at a system head of at least 847 feet.	After pump maintenance and once/3 months

2. One Pump Inoperable

When one RHR service water pump is inoperable the remaining active components of both RHR service water subsystems shall be demonstrated to be operable immediately. An operable RHR service water pump shall be demonstrated to be operable daily thereafter until the inoperable pump is returned to normal service.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.6.F.2.c. When the time limits or maximum conductivity or chloride concentration limits are exceeded, an orderly shutdown shall be initiated and the reactor shall be in the Cold Shutdown Condition within 24 hours.	4.6.F.2.c.3. Primary coolant pH shall be measured at least once every 8 hours whenever reactor coolant conductivity is > 2.0μmho/cm at 25°C.
	d. Whenever the reactor is not pressurized, a sample of the reactor coolant shall be analyzed at least every 96 hours for chloride ion content and pH.
G. Reactor Coolant Leakage*	G. Reactor Coolant Leakage
1. Unidentified and Total	
Any time irradiated fuel is in the reactor vessel and reactor coolant temperature is above 212°F:	Unidentified sources of reactor coolant system leakage shall be checked by the drywell floor drain sump system and recorded at least once per 4 hours. Identified sources of reactor coolant system leakage shall be checked by the equipment drain sump system and recorded at least once per 4 hours. The readings provided by the primary containment atmosphere particulate radioactivity monitoring system, the primary containment radioiodine monitoring system, and the primary containment gaseous radioactivity monitoring system shall also be recorded at least once per 4 hours.
a. reactor coolant system leakage into the primary containment from unidentified sources shall not exceed 5 gpm when averaged over a 24-hour period;	
b. reactor coolant system leakage into the primary containment from unidentified sources shall not increase more than 2 gpm when averaged over a 24-hour period; and	
c. the total reactor coolant system leakage into the primary containment shall not exceed 25 gpm when averaged over a 24-hour period;	
when checked in accordance with 4.6.G.	
2. Leakage Detection Systems	
a. At least one of the leakage measurement instruments associated with each sump shall be operable and two of the other three leakage detection systems identified in Table 3.2-10, note c shall be operable when irradiated fuel is	

*Not required during performance of an inservice hydrostatic or leakage test even if reactor coolant temperature is above 212°F.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS

C. Secondary Containment*

1. Secondary Containment Integrity

a. Integrity of the secondary containment shall be maintained during all modes of Unit 1 plant operation except when all of the following conditions are met:

(1) The reactor is subcritical and Specification 3.3.A. is met.

(2) The reactor water temperature is below 212°F and the reactor coolant system is vented.

(3) No activity is being performed which can reduce the shutdown margin below that stated in Specification 3.3.A.

(4) The fuel cask or irradiated fuel is not being moved in the reactor building.

(5) All hatches between Unit 1 secondary containment and Unit 2 secondary containment are closed and sealed.

(6) At least one door in each access path between Unit 1 secondary containment and Unit 2 secondary containment is closed.

(7) Inservice hydrostatic or leakage test of reactor vessel is not in progress.

b. Integrity of the Unit 1 secondary containment shall be maintained during all modes of Unit 2 plant operations except Operational Condition 4 as defined in the Unit 2 Technical Specifications.

C. Secondary Containment

1. Surveillance While Integrity Maintained

Secondary containment surveillance shall be performed as indicated below:

a. A preopertional secondary containment capability test shall be conducted after isolating the secondary containment and placing the standby gas treatment system filter trains in operation. Such tests shall demonstrate the capability to maintain a minimum 1/4-inch of water vacuum under calm wind (< 5 mph) conditions with each filter train flow rate not more than 4000 cfm.

b. Secondary containment capability to maintain a minimum 1/4-inch of water vacuum under calm wind (< 5 mph) conditions with each filter train flow rate not more than 4000 cfm shall be demonstrated at each refueling outage, prior to refueling.

*For secondary containment during 1982 refueling outage, see page 3.7-12a.