ATTACHMENT 1
PROPOSED TECHNICAL SPECIFICATION AMENDMENTS

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
6. Turbine Trip (Continued)					
c. Steam Generator Water Level-High-High (P-14)	4/steam generator	2/steam generator in any operating steam generator	3/steam generator in each operating steam generator	1,2	19*
d. Trip of All Main Feedwater Pumps	2/pump	1/pump	1/pump	1,2#	25
e. Reactor Trip (P-4)	2	2	2	1,2,3	22
f. Safety Injection	See Item 1. above for all Safety Injection initiating functions and requirements.				
7. Containment Pressure Control System (Termination/Start Permissive)		2/train (Start Permissive) 1/train (Termination)			
a. ~~Start Permissive~~ Containment Spray System	2 ~~X~~/train	~~2/train~~	1 ~~X~~/train	1, 2, 3, 4	~~19*~~ 29*
b. ~~Termination~~	2 ~~X~~/train	~~2/train~~	1 ~~X~~/train	1, 2, 3, 4	~~19*~~ 29*
8. Auxiliary Feedwater					
a. Manual Initiation	1/train	1/train	1/train	1, 2, 3	26
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3	21

Containment Air Return and Hydrogen Skimmer System

2/train (Start Permissive)
1/train (Termination)

TABLE 3.3-3 (Continued)

ACTION STATEMENTS (Continued)

ACTION 20 - With less than the Minimum Channels OPERABLE, within 1 hour determine by observation of the associated permissive status light(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.

ACTION 21 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

ACTION 22 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

ACTION 23 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or declare the associated valve inoperable and take the ACTION required by Specification 3.7.1.4.

ACTION 24 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE, restore the inoperable channel to OPERABLE status within 48 hours, or initiate and maintain operation of the Control Room Area Ventilation System with flow through the HEPA filters and activated carbon adsorbers.

ACTION 25 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours.

ACTION 26 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

ACTION 27 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

Insert ACTION 29 or place on new page 3/4 3-26a

INSERT FOR PAGE 3/4 3-26

ACTION 29 - a. With the number of OPERABLE channels one less than the Total Number of Channels:

1. Place the inoperable channel in the start permissive mode within 2 hours, and

2. Restore the inoperable channel to OPERABLE status within 72 hours, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With the number of OPERABLE channels one less than the Minimum Channels operable requirement:

1. Place the inoperable channels in the start permissive mode with 2 hours, and

2. Apply the applicable ACTION statement (Containment Spray Technical Specification 3.6.2, Containment Air Return and Hydrogen Skimmer System Technical Specification 3.6.5.6).

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
6. Turbine Trip					
a. Manual Initiation	N.A.	N.A.	N.A.	N.A.	N.A.
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.
c. Steam Generator Water Level-High-High (P-14)					
1. Unit 1	5.4	2.18	1.5	≤ 82.4% of narrow range instrument span	≤ 84.2% of narrow range instrument span
2. Unit 2	9.7	2.18	1.5	≤78.1% of narrow range instrument span	≤79.9% of narrow range instrument span
d. Trip of All Main Feedwater Pumps	N.A.	N.A.	N.A.	N.A.	N.A.
e. Reactor Trip (P-4)	N.A.	N.A.	N.A.	N.A.	N.A.
f. Safety Injection	See Item 1. above for all Safety Injection Setpoints and Allowable Values.				
7. Containment Pressure Control System (Termination / Start Permissive)				0.3 ≤ T/SP ≤ 0.4 psid	0.25 ≤ T/SP ≤ 0.45 psid
a. ~~Start Permissive~~ Containment Spray System	N.A.	N.A.	N.A.	~~≤ 0.4 psid~~	~~≤ 0.45 psid~~
b. ~~Termination~~	N.A.	N.A.	N.A.	~~≥ 0.3 psid~~	~~≥ 0.25 psid~~
8. Auxiliary Feedwater					
a. Manual Initiation	N.A	N.A.	N.A.	N.A	N.A.
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.

Containment Air Return and Hydrogen Skimmer System

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
4. Steam Line Pressure-Low (Continued)	
10) Control Room Area Ventilation Operation	N.A.
11) Annulus Ventilation Operation	$\leq$ 23
12) Auxiliary Building Filtered Exhaust Isolation	N.A.
13) Containment Sump Recirculation	N.A.
b. Steam Line Isolation	$\leq$ 7
5. Containment Pressure-High-High	
a. Containment Spray	$\leq$ 45
b. Phase "B" Isolation	$\leq$ 65(3)/76(4)
Nuclear Service Water Operation	N.A.
c. Steam Line Isolation	$\leq$ 7
d. Containment Air Return and Hydrogen Skimmer Operation	$\leq$ 600
6. Steam Line Pressure - Negative Rate-High	
Steam Line Isolation	$\leq$ 7
7. Steam Generator Water Level-High-High	
a. Turbine Trip	$\leq$ 3
b. Feedwater Isolation	$\leq$ 7
8. T_{avg}-Low	
Feedwater Isolation	N.A.
9. Doghouse Water Level-High	
Feedwater Isolation	N.A.
10. ~~Start Permissive~~ Containment Spray System	
Containment Pressure Control System (Termination / Start Permissive)	N.A.
11. ~~Termination~~	
Containment Pressure Control System (Termination / Start Permissive)	N.A.

Containment Air Return and Hydrogen Skimmer System

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

CHANNEL FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
5. Feedwater Isolation (Continued)								
b. Steam Generator Water Level-High-High (P-14)	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2
c. T_{avg}-Low (P-4 Interlock)	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2
d. Doghouse Water Level-High	N.A.	N.A.	N.A.	R(4)	N.A.	N.A.	N.A.	1, 2
e. Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.							
6. Turbine Trip								
a. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(2)	M(1)	Q	1, 2
c. Steam Generator Water Level-High-High (P-14)	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2
d. Trip of All Main Feedwater Pumps	N.A.	N.A.	N.A.	R(4)	N.A.	N.A.	N.A.	1, 2
e. Reactor Trip (P-4)	N.A.	N.A.	N.A.	R(4)	N.A.	N.A.	N.A.	1, 2, 3
f. Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.							
7. Containment Pressure Control System (Termination/Start Permissive)								
a. ~~Start Permissive~~ Containment Spray System	S	R	M	R ~~N.A.~~	N.A.	N.A.	N.A.	1, 2, 3, 4
b. ~~Termination~~	S	R	M	R ~~N.A.~~	N.A	N.A.	N.A	1, 2, 3, 4

Containment Air Return and Hydrogen Skimmer System

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2 Two independent Containment Spray Systems shall be OPERABLE with each Spray System capable of taking suction from the refueling water storage tank and transferring suction to the containment sump.

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

ACTION:

With one Containment Spray System inoperable, restore the inoperable Spray System to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the inoperable Spray System to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2 Each Containment Spray System shall be demonstrated OPERABLE:

a. At least once per 31 days 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;

b. By verifying, that on recirculation flow, each pump develops a differential pressure of greater than or equal to 185 psid when tested pursuant to Specification 4.0.5;

c. At least once per 18 months during shutdown,** by:

1) Verifying that each automatic valve in the flow path actuates to its correct position on a Phase "B" Isolation test signal, and

2) Verifying that each spray pump starts automatically on a Phase "B" Isolation test signal.

~~3)~~ Verifying that each spray pump is prevented from starting by the Containment Pressure Control System when the containment atmosphere pressure is less than or equal to 0.25 psid, and is allowed to start at greater than or equal to 0.45 psid relative to the outside atmosphere,

**This surveillance need not be performed until prior to entering HOT SHUTDOWN following the Unit 1 first refueling.

SURVEILLANCE REQUIREMENTS (Continued)

4) Verifying that each spray pump discharge valve closes or is prevented from opening by the Containment Pressure Control System when the containment atmosphere pressure is less than or equal to 0.25 psid and is allowed to open at greater than or equal to 0.45 psid relative to the outside atmosphere, and

5) Verifying that each spray pump is automatically deenergized by the Containment Pressure Control System when the containment atmosphere pressure is less than or equal to 0.25 psid relative to the outside atmosphere.

d. At least once per 5 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

SURVEILLANCE REQUIREMENTS (Continued)

f. Verifying that the motor-operated valve in the hydrogen skimmer suction line opens automatically and the hydrogen skimmer fans receive a start permissive signal; and

g. Verifying that with the fan off, the air return fan check damper is closed.

4.6.5.6.2 At least once per 18 months, each Containment Air Return and Hydrogen Skimmer System shall be demonstrated OPERABLE by:

a. Verifying that each air return fan is deenergized or is prevented from starting by the Containment Pressure Control System when the containment internal pressure is less than or equal to 0.25 psid, relative to the outside atmosphere; and

b. Verifying that each air return fan isolation damper closes or is prevented from opening by the Containment Pressure Control System when the containment internal pressure is less than or equal to 0.25 psid and is allowed to open at greater than or equal to 0.45 psid, relative to the outside atmosphere.

ATTACHMENT II
DISCUSSION AND NO SIGNIFICANT HAZARDS CONSIDERATION ANALYSIS

DISCUSSION AND NO SIGNIFICANT HAZARDS CONSIDERATION ANALYSIS

As described in Chapter 6 and Section 7.3 of the Catawba FSAR, certain Engineered Safety Features (ESF) (i.e., the Containment Air Return and Hydrogen Skimmer (VX) System and the Containment Spray (NS) System) are provided to prevent overpressurizing the containment in the event of a LCOA. The Containment Pressure Control System (CPCS) is provided to prevent excessive depressurization of the containment through inadvertent or excessive operation of these Engineered Safety Features.

The CPCS allows operation of the NS and VX Systems only when they are required for reducing containment pressure and inhibits their operation when they are not required for containment protection.

The CPCS is designed for operation over a pressure range of -5 to +60 psig. For accuracy, the containment pressure sensors are designed to respond to the reduced range of -5 to +5 psig, though not adversely affected by pressure transients up to 60 psig. The CPCS is designed such that it does not affect the accuracy, margin, or response of the ESF Actuation System as the start permissive setpoint is below the ESFAS setpoint for high containment pressure.

The start permissive and termination features of the redundant trains of the Containment Pressure Control System are provided by eight independent pressure sensors (four per train). These pressure sensors interlock the controls of the NS System and the VX Fans and Hydrogen Skimmer System to prevent their operation when containment pressure is below approximately 0.25 psig. The CPCS control logic is presented in the attached Figure.

The proposed Technical Specification changes are intended to clarify and provide further detail of the functions of the CPCS. The changes would also add a CPCS specific ACTION statement which would direct plant personnel to place any inoperable CPCS channels in the safe (start permissive) mode and either place the unit in a shutdown condition or apply the applicable VX or NS ACTION statement depending on the number of inoperable channels. This is more conservative than the current ACTION statement since the proposed ACTION statement and the VX and NS specifications contain shutdown requirements whereas the current CPCS ACTION statement would allow continued operation. Please note that the proposed ACTION Statement is ACTION 29. A new ACTION 28 was proposed in my letter dated March 11, 1988 concerning item 8.f.

It is also proposed that Surveillance Requirement 4.6.2c.3), c.4), c.5), 4.6.5.6.2a. and 4.6.5.6.2b. be deleted. These surveillances will continue to be performed under the proposed new Trip Actuating Device Operational Test Surveillances on Table 4.3-2, for items 7.a and 7.b. These new proposed surveillances will encompass the current requirements plus allow all of the requirements for the CPCS to be maintained in one location of the Technical Specifications. As stated in FSAR Section 7.6.5 the CPCS is capable of being tested with the unit on-line. The requirement contained in Surveillance 4.6.2c. to conduct the tests during shutdown was originally intended to apply to actuation of NS System components. Since the CPCS surveillances do not require operation of NS System equipment, the CPCS surveillances can be done with the plant operating. Therefore, deletion of the requirement to test during shutdown is appropriate and will not impact the safe operation of the station. The net result of this proposed amendment would be added clarification to the

Technical Specifications which cover the CPCS, more restrictive yet more prescriptive ACTION requirements and no impact on any currently required Setpoints or Surveillance Requirements.

10 CFR 50.92 (c) states that "a proposed amendment... involves no significant hazards considerations, if operation of the facility in accordance with the proposed amendment would not:

(1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

(2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or

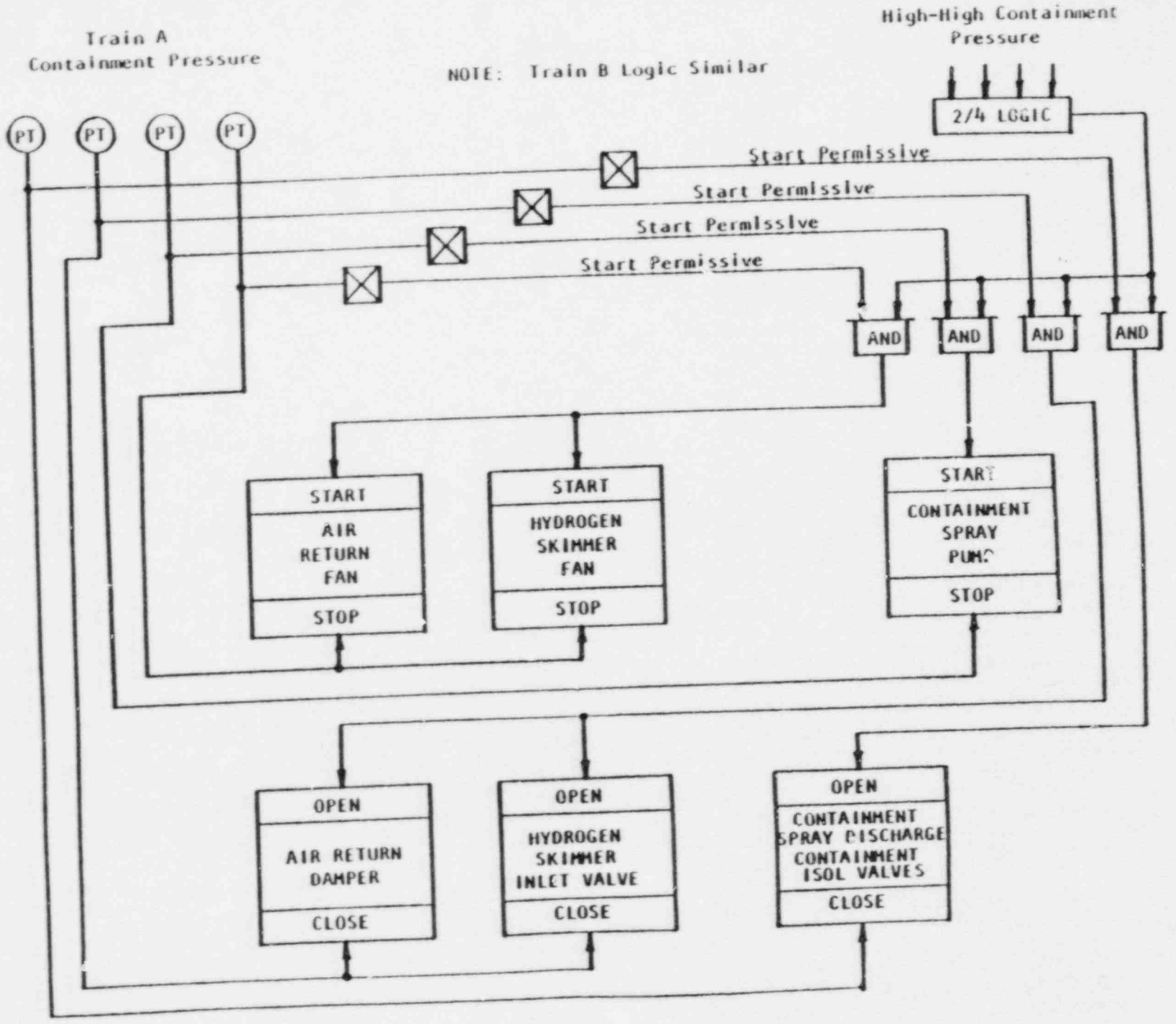
(3) Involve a significant reduction in a margin of safety.

The proposed amendment does not increase the probability or consequences of any previously evaluated accident. The changes are clarification of the description of existing instrumentation. The new ACTION statement will be at least as conservative as the existing ACTION statement. The Trip Setpoints will not be affected and the Surveillance Requirements will still be required. Also, the CPCS was designed so that testing could be performed during power operation.

The proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated. The changes are clarification and do not involve a change in the design or allowed modes of operation of the station. All current setpoints and Surveillance Requirements will be maintained and applicable ACTION Statements will be more restrictive.

The proposed changes do not involve a significant reduction in a margin of safety. The proposed changes are clarification for existing instrumentation and the new ACTION statement is at least as conservative as the existing ACTION statement. The Surveillance Requirements and Setpoints will not be changed by this amendment. Also, the CPCS was designed to allow testing during power operation.

For the reasons stated above, Duke Power concludes that the proposed amendments do not involve Significant Hazards Considerations.



CONTAINMENT PRESSURE CONTROL
SYSTEM LOGIC

CATAWBA NUCLEAR STATION

Figure 7.6.5-1