

# NOTES

1. THIS DRAWING IS A SIMPLIFIED LOGIC DIAGRAM SHOWING THE INITIATION SIGNALS AND THE COMPONENTS INITIATED DUE TO SIGNALS GENERATED IN THE HEAT SINK PROTECTION SYSTEM (HSPS) ELECTRONICS CABINETS. THIS DRAWING DOES NOT SHOW INPUTS TO THE ANNUNCIATOR SYSTEM OR THE COMPUTER SYSTEM, TESTING SWITCHES, TEST LIGHTS OR TEST JACKS, OR INPUTS TO HSPS STATUS LIGHT. THIS DRAWING IS FOR ILLUSTRATIVE AND TRAINING PURPOSES.

2. TWO OUT OF FOUR (2/4) LOGIC PERMITS AN OUTPUT WHEN ANY TWO OR MORE OF THE INPUTS ARE PRESENT.

3. OPERATOR MAY DEFEAT INITIATION/ISOLATION SIGNAL BY PLACING CONTROL SWITCH IN DEFEAT POSITION.

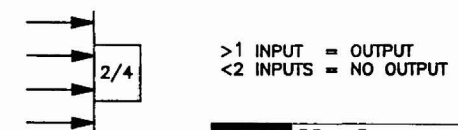
4. THE MSRD OPERATES IN THE FOLLOWING MANNER:

WHEN THE OTSG PRESSURE DROPS BELOW 750 PSIG A PRETRIP SIGNAL IS GENERATED. TO PREVENT FW ISOLATION THE OPERATOR MUST DEFEAT THIS SIGNAL BEFORE THE OTSG PRESSURE DROPS BELOW 600 PSIG. THE SIGNAL SHALL REMAIN DEFEATED UNTIL THE OTSG PRESSURE AGAIN INCREASES ABOVE 750 PSIG. THIS FEATURE IS PROVIDED TO DISTINGUISH BETWEEN A DECREASE IN OTSG PRESSURE DURING NORMAL SHUTDOWN AND A DECREASE IN OTSG PRESSURE DUE TO LOSS OF PRESSURE INTEGRITY.

# ABBREVIATIONS

MSRD - MAIN STEAMLINE RUPTURE DETECTION  
EF - EMERGENCY FEED WATER  
FW - MAIN FEED WATER  
RCP - REACTOR COOLANT PUMP  
ΔP - DIFFERENTIAL PRESSURE  
R.B. - REACTOR BLDG.  
OP - OPERATE  
SU - START-UP

# LOGIC SYMBOLOLOGY



GPU Nuclear				GPU Nuclear			
REVISED TO INCORP. FCN-CO85928				REVISED TO INCORP. FCN-CO74827			
REV	DRAFT	CHECK	APPROVED	DATE	APP	REV	DRAFT
REVISION				REVISION			

A. T. SMITH 9-13-90				GPU Nuclear/ IMPELL			
DRAWN DATE 10/1/90				HEAT SINK PROTECTION SYSTEM			
CHECKED DATE 10/1/90				SIMPLIFIED LOGIC DIAGRAM			
DESIGN LEADER DATE 10/1/90				TMI: UNIT 1			
ENGINEER DATE 10/2/90				DWG. NO. 0370-140-001			
MANAGER APPROVAL DATE				SCALE: NONE			
NO. DWG. NO. TITLE				B.A. TASK NO.			
REFERENCES							

