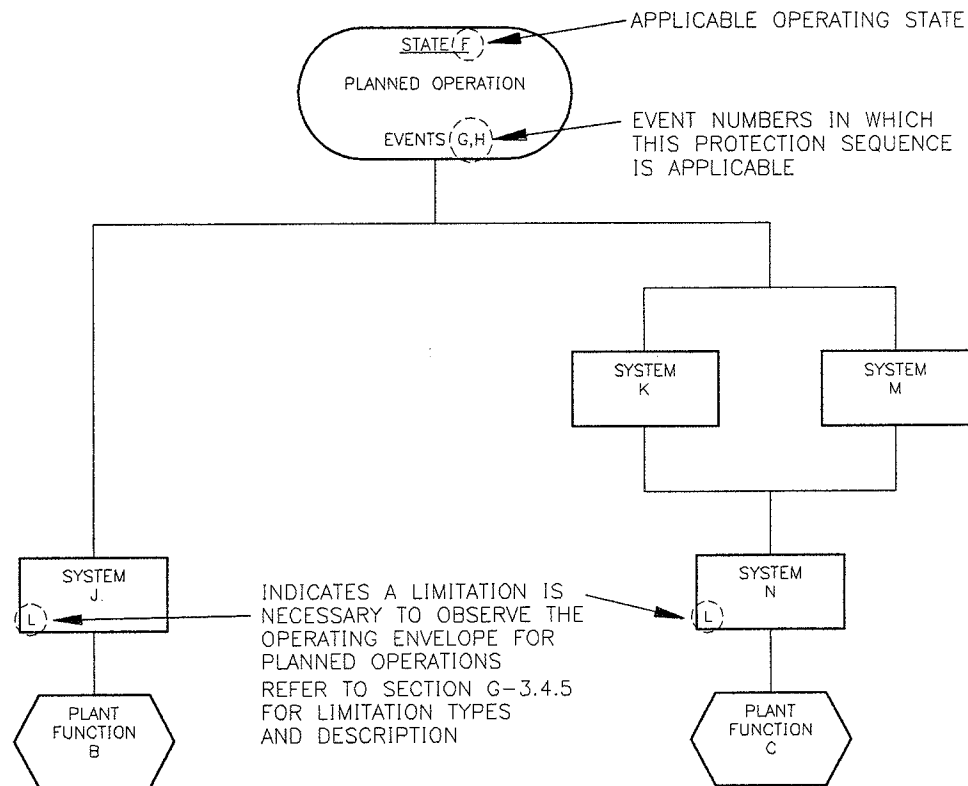


Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

BLOCK DIAGRAM FOR NUCLEAR SAFETY OPERATIONAL ANALYSIS

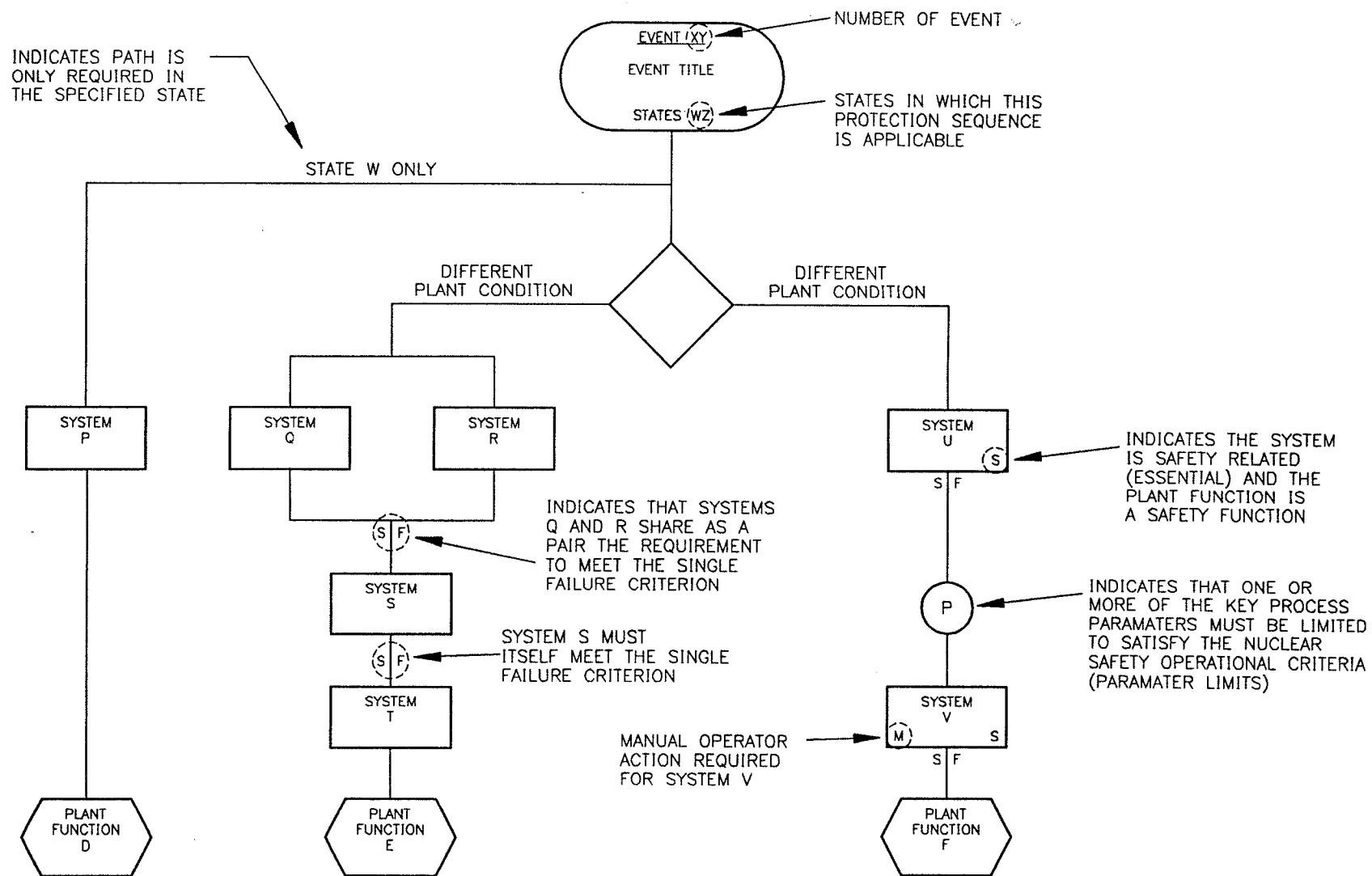
FIGURE G-2-2
7/22/96



Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

**FORMAT FOR
PROTECTION SEQUENCE DIAGRAMS
- PLANNED OPERATION**

FIGURE G-4-1
8/3/00

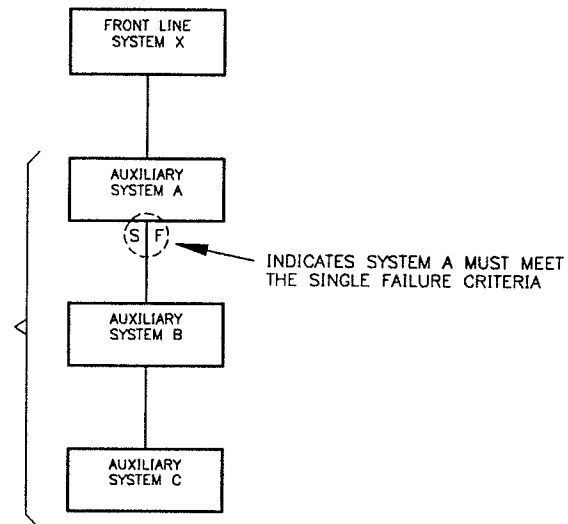


Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

FORMAT FOR PROTECTION SEQUENCE DIAGRAMS - EVENTS

FIGURE G-4-2
7/22/96

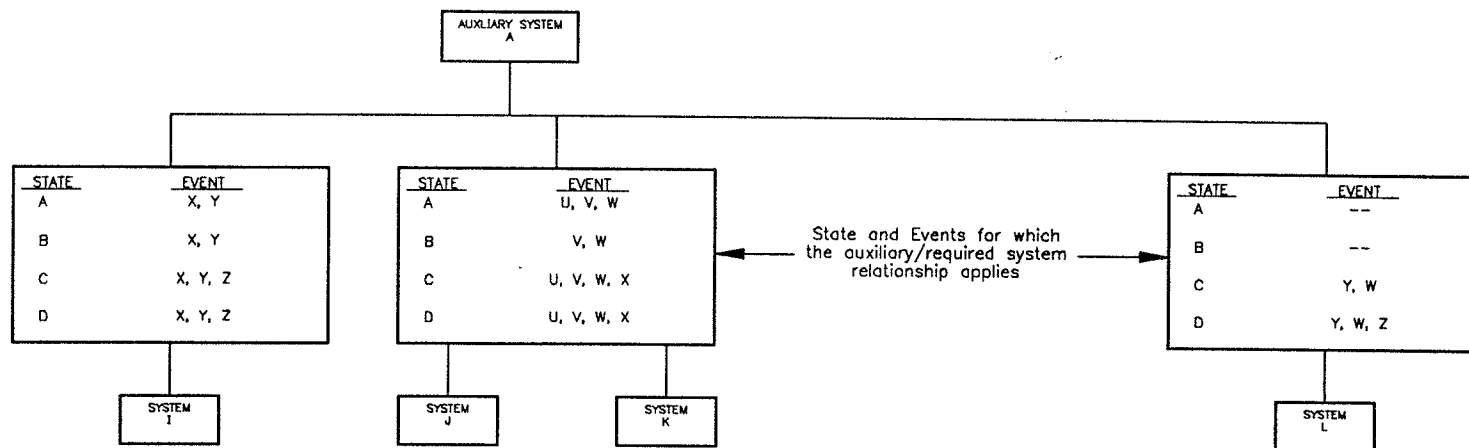
DIAGRAM INDICATES THAT AUXILIARY SYSTEMS A,B AND C ARE REQUIRED FOR THE OPERATION OF FRONT-LINE SYSTEM X. IF SYSTEM X IS SAFETY RELATED (ESSENTIAL), THEN AUXILIARY SYSTEMS A,B, AND C MUST ALSO BE SAFETY RELATED (ESSENTIAL).



Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

FORMAT FOR AUXILIARY SYSTEM DIAGRAMS

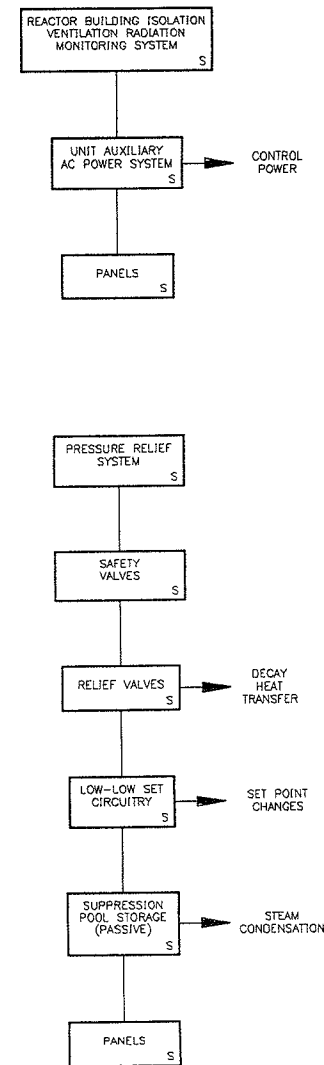
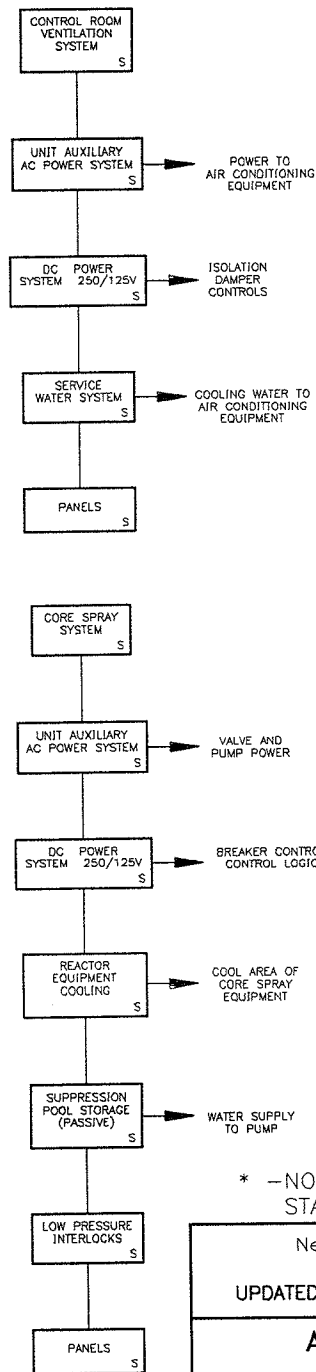
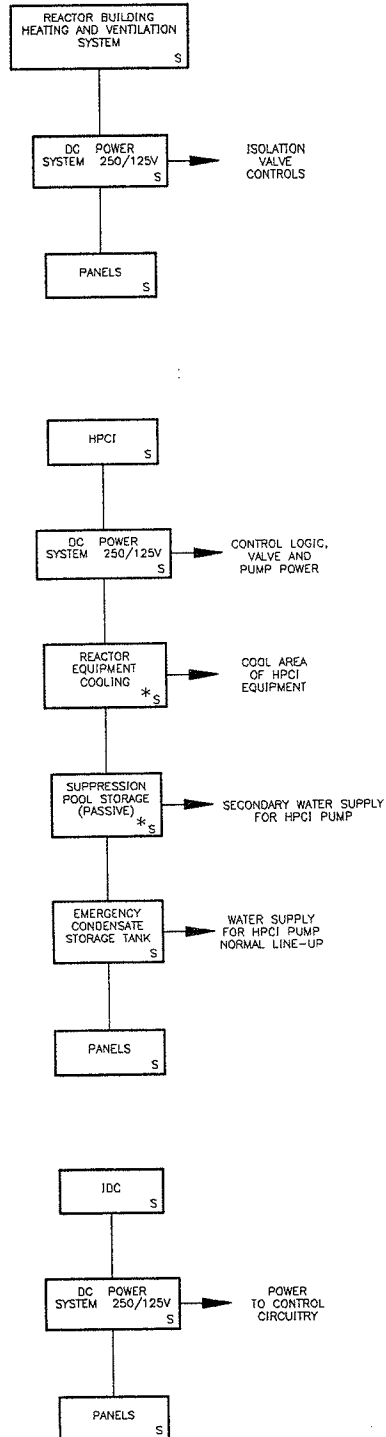
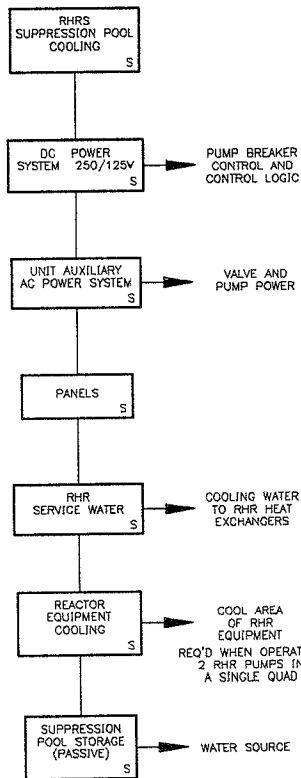
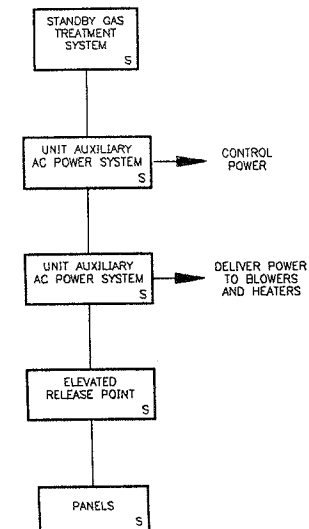
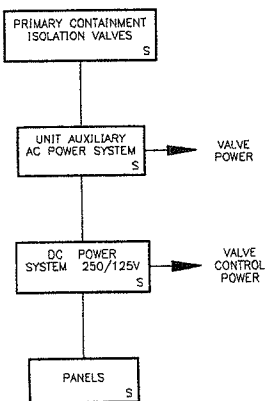
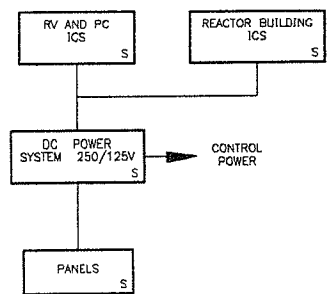
FIGURE G-4-3
7/22/96



Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

FORMAT FOR COMMONALITY DIAGRAMS

FIGURE G-4-4
7/22/96

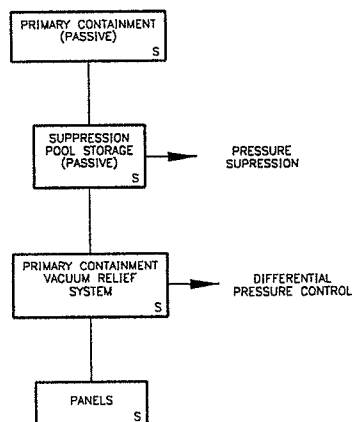
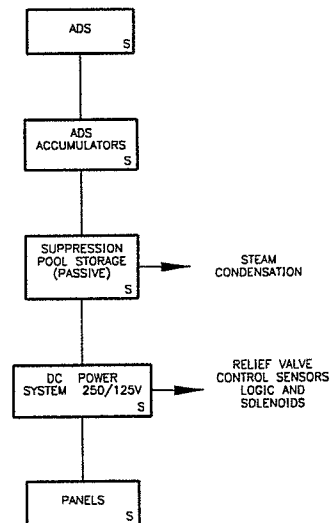
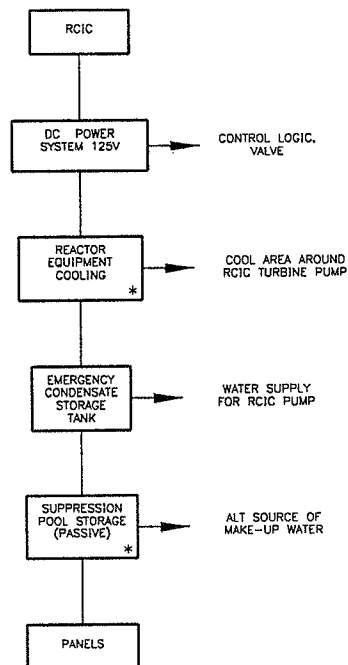
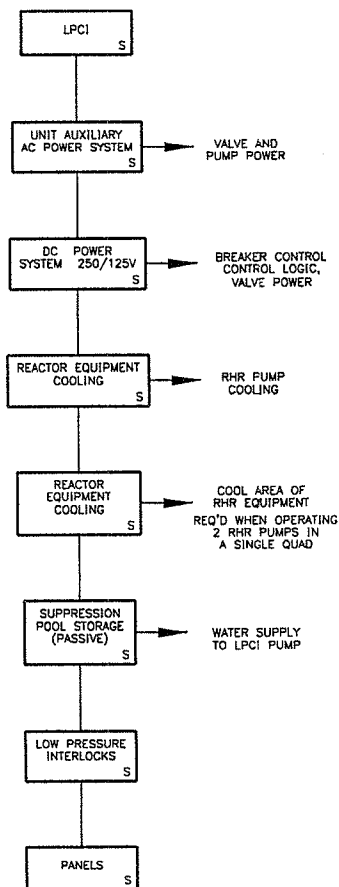


* -NOT APPLICABLE FOR STATION BLACKOUT

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

AUXILIARY SYSTEMS FOR FRONT-LINE SYSTEMS

FIGURE G-5-1
8/3/00



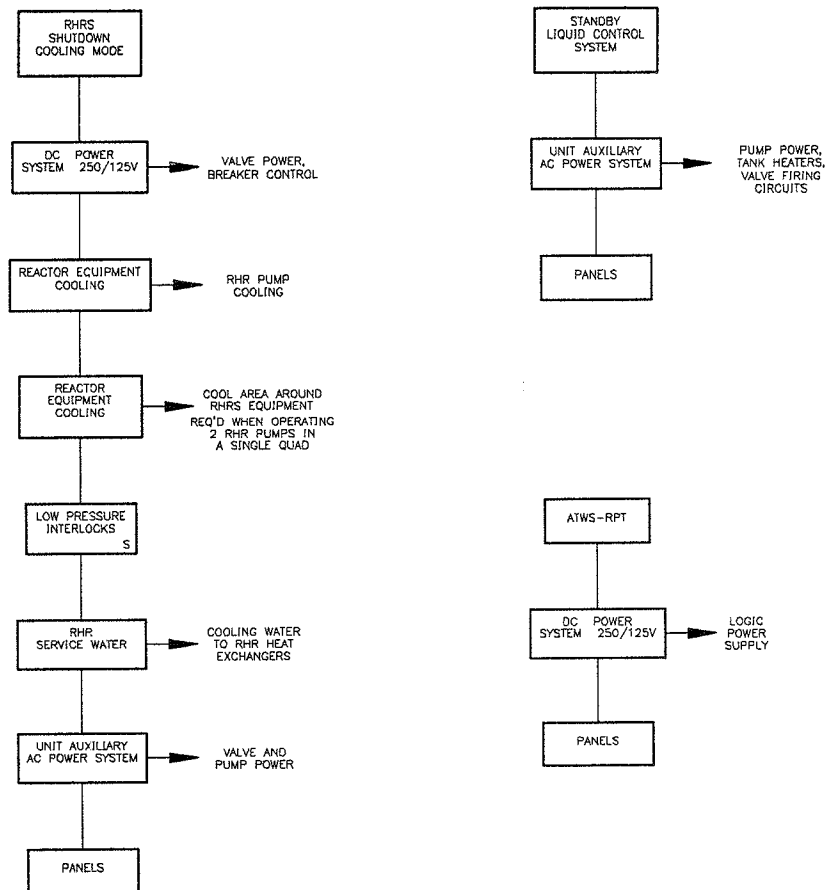
SYSTEMS WITH NO REQUIRED AUXILIARY SYSTEMS	PASSIVE	FAIL-SAFE	SELF-CONTAINED	SAFETY RELATED
FUEL ASSEMBLIES	X			X
CONTROL RODS			X	X
CONTROL ROD DRIVES		X		X
NEUTRON MONITORING		X		X
ROD BLOCK MONITORING		X		X
MAIN STEAM LINE RAD MONITORING		X		X
RPS		X		X
MSIV'S		X		X
FLOW RESTRICTORS	X			X
SAFETY VALVES			X	X
RADWASTE BUILDING	X			X
REACTOR BUILDING	X			X
CONTROL ROD VELOCITY-LIMITER	X			X
CONTROL ROD HOUSING	X			X
DC POWER SYSTEM 250/125V			X	X
SUPPRESSION POOL STORAGE			X	X
PRIMARY CONTAINMENT RELIEF		X		X
SPENT FUEL POOL	X			X
CRD HOUSING SUPPORTS	X			X
CONTROL ROOM PANELS	X			X
LOCAL PANELS AND RACKS	X			X
EMERGENCY COND. STORAGE TANK	X			

* -NOT APPLICABLE FOR STATION BLACKOUT

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

AUXILIARY SYSTEMS FOR FRONT-LINE SYSTEMS

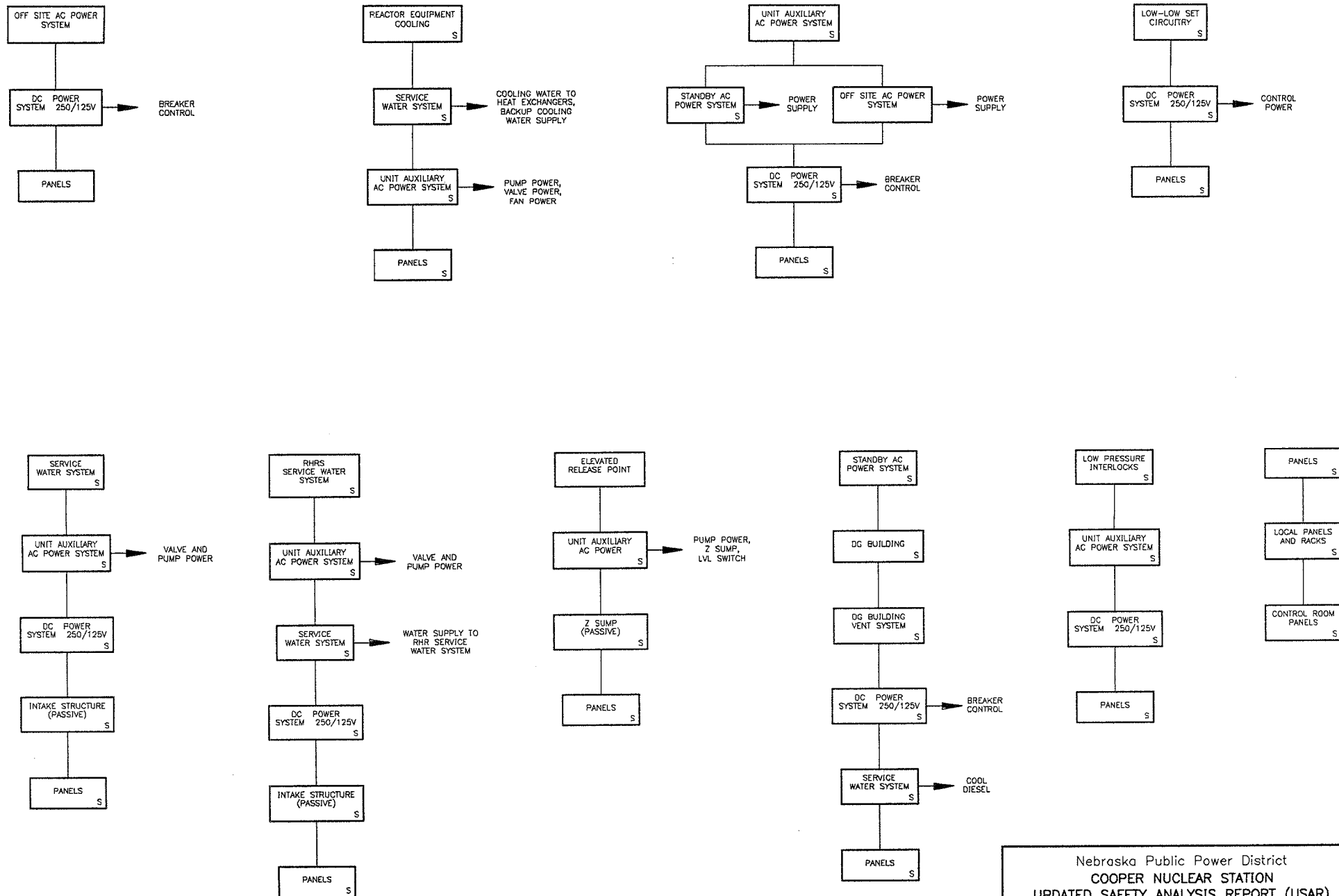
FIGURE G-5-2
5/5/06



Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

AUXILIARY SYSTEMS FOR FRONT-LINE SYSTEMS

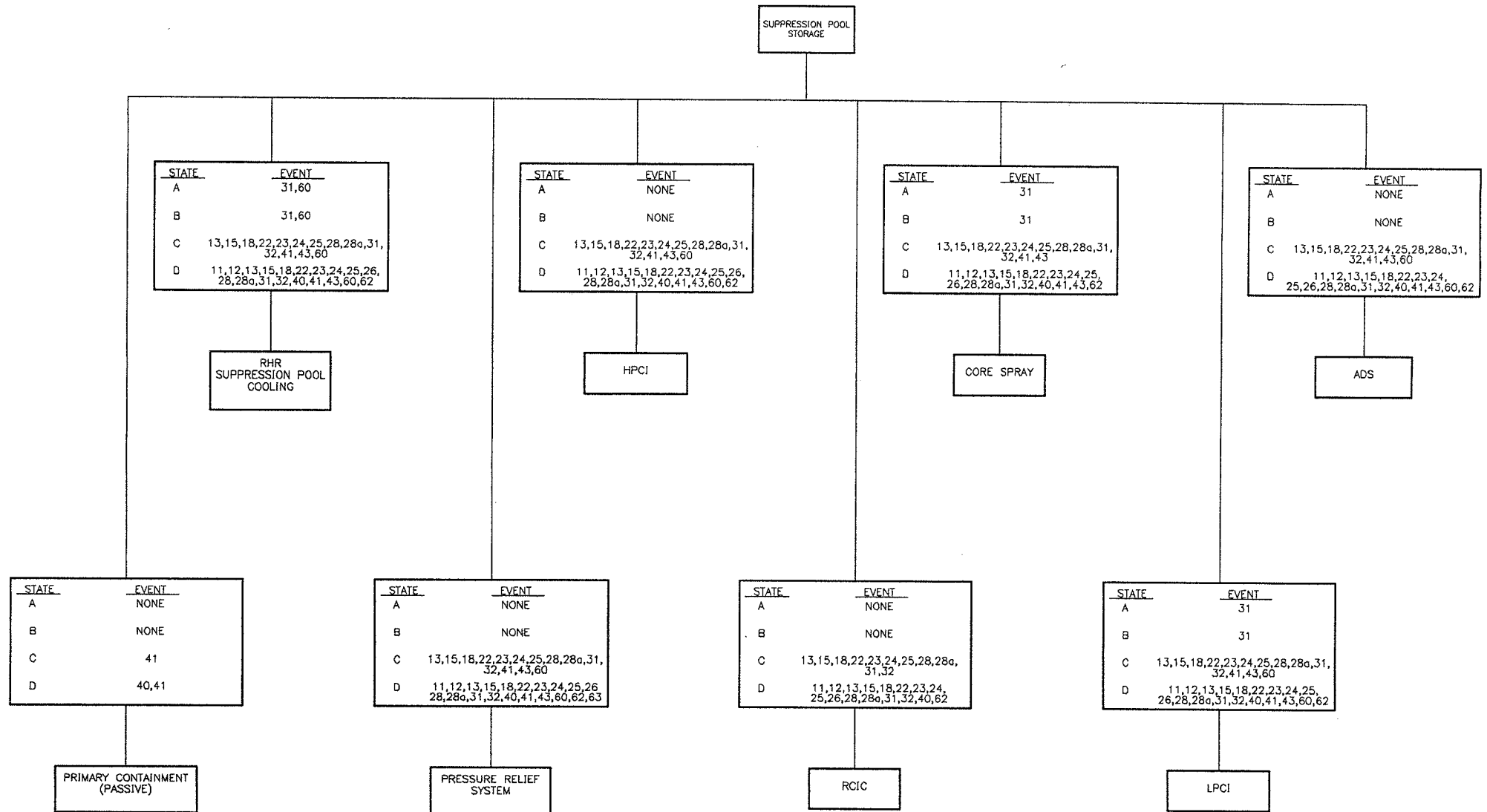
FIGURE G-5-3
8/3/00



Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

AUXILIARY SYSTEMS FOR OTHER AUXILIARY SYSTEMS

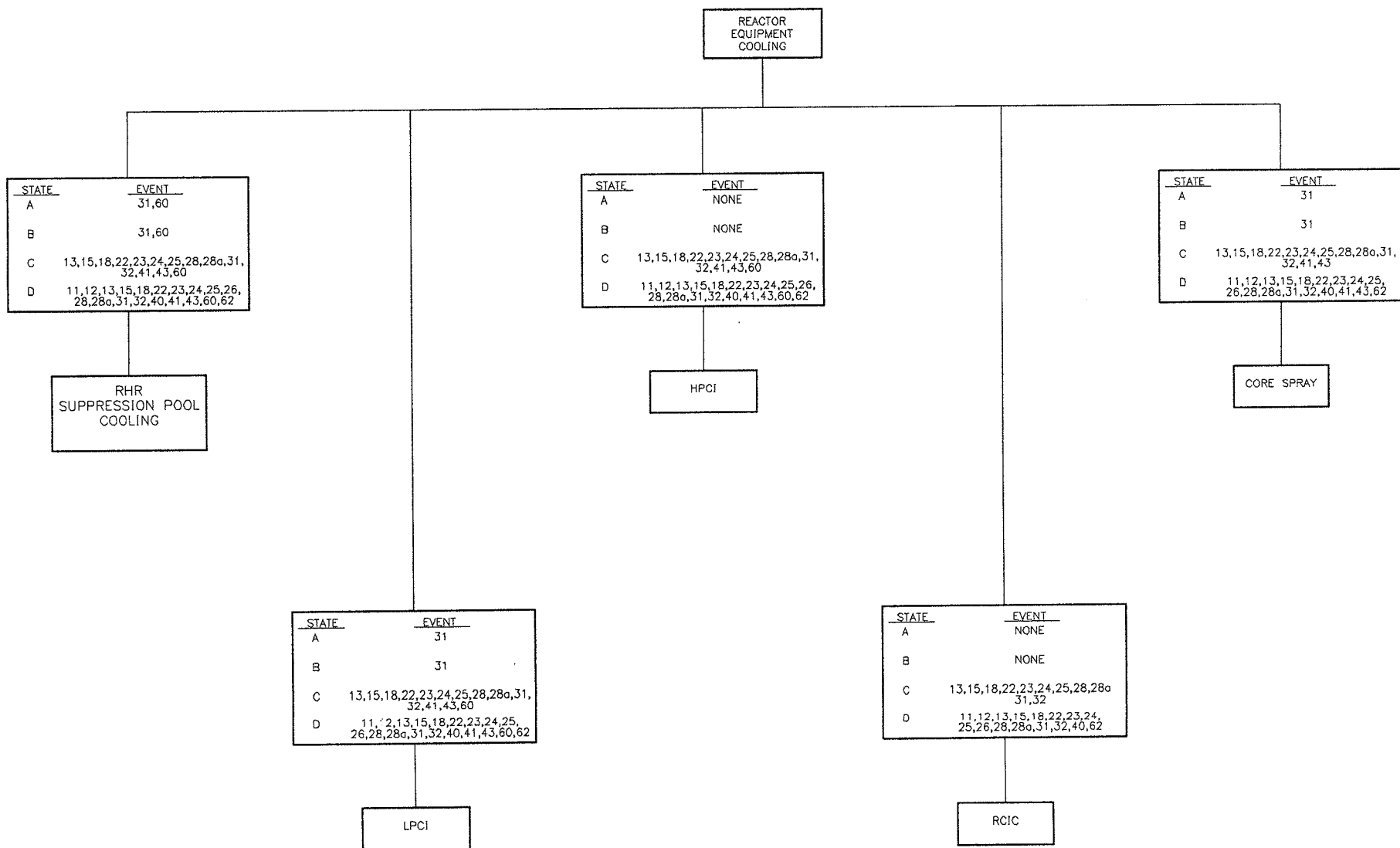
FIGURE G-5-4
8/3/00



Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

COMMONALITY DIAGRAMS

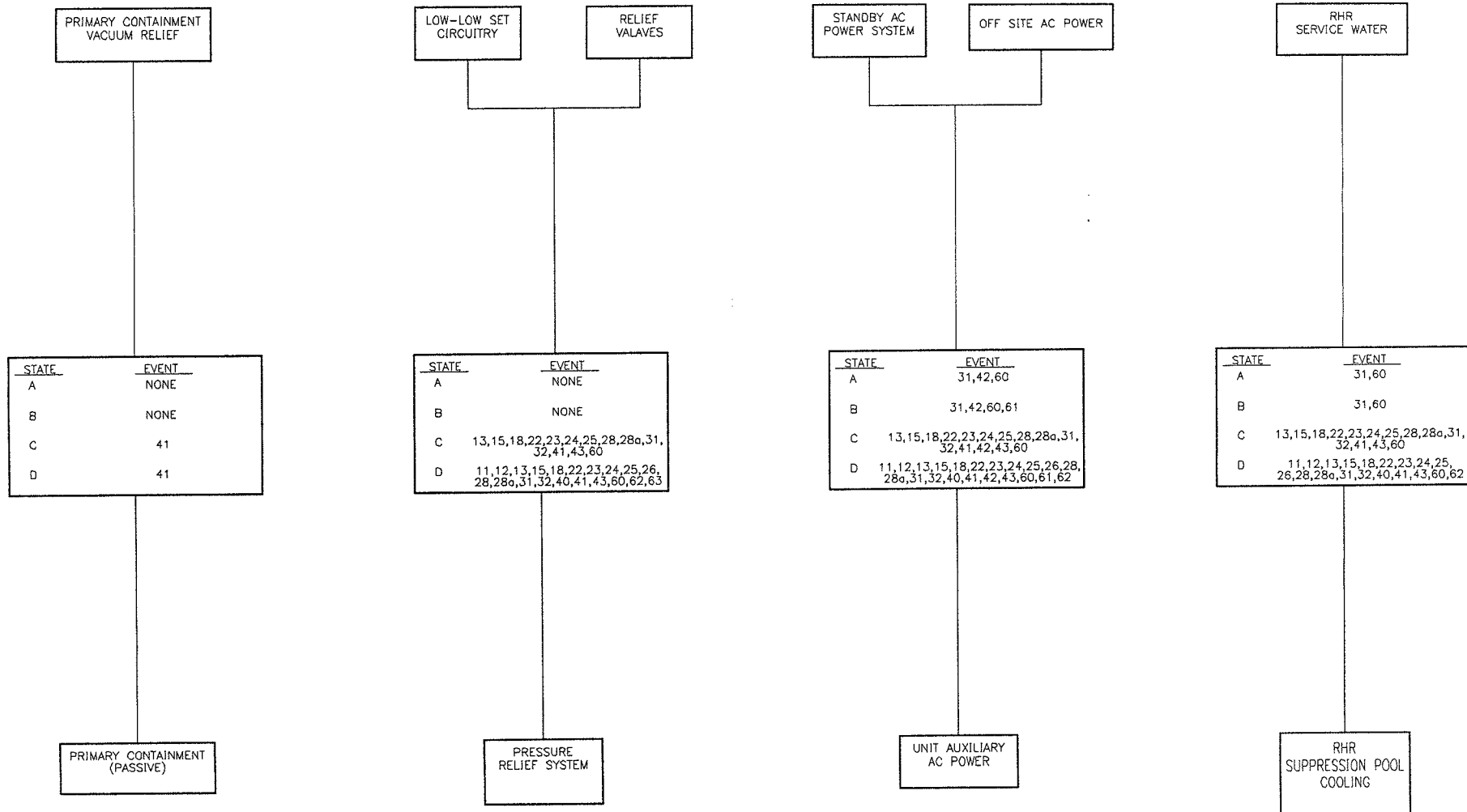
FIGURE G-5-5
1/31/01



Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

COMMONALITY DIAGRAMS

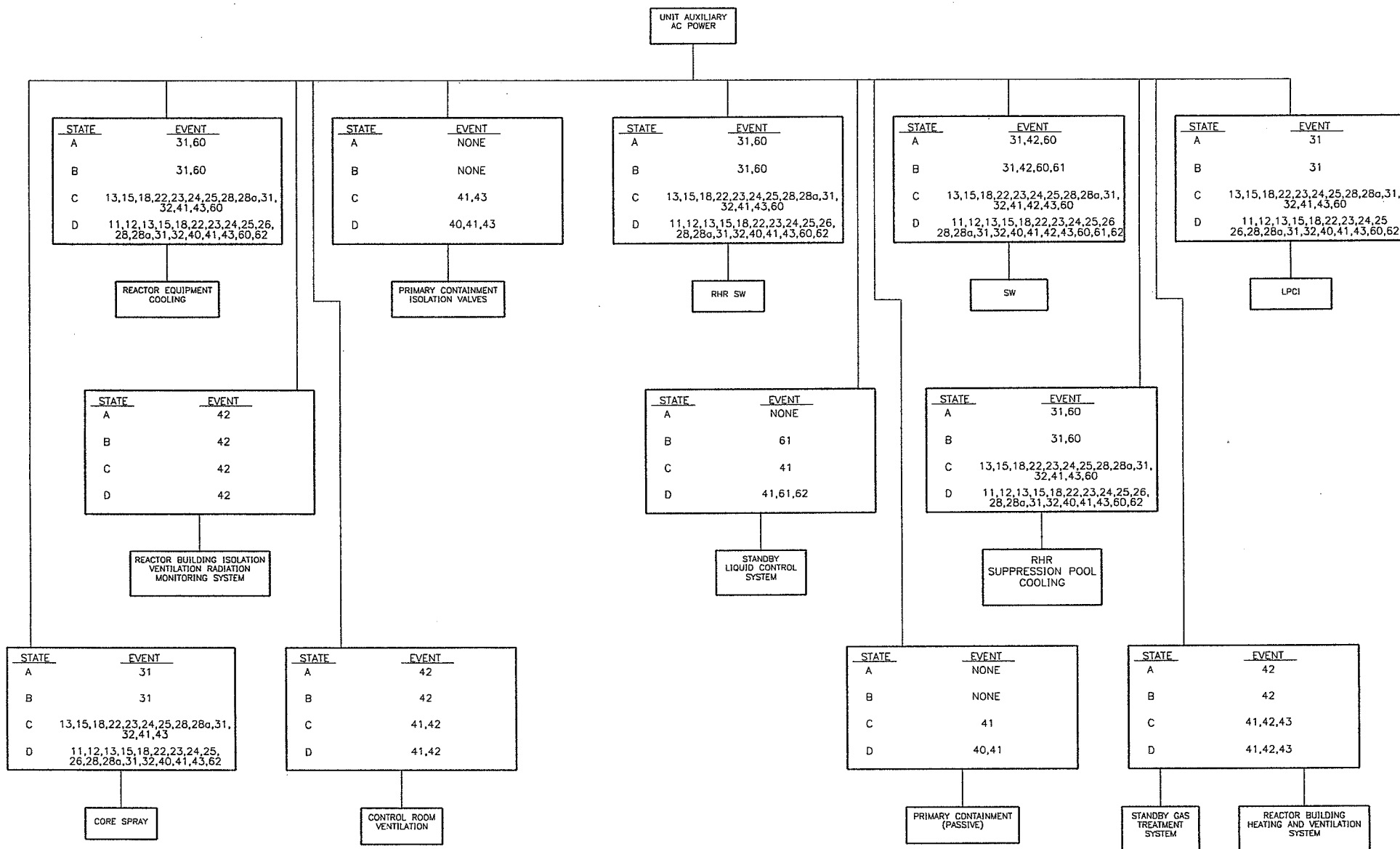
FIGURE G-5-6
8/3/00



Nebraska Public Power District
 COOPER NUCLEAR STATION
 UPDATED SAFETY ANALYSIS REPORT (USAR)

COMMONALITY DIAGRAMS

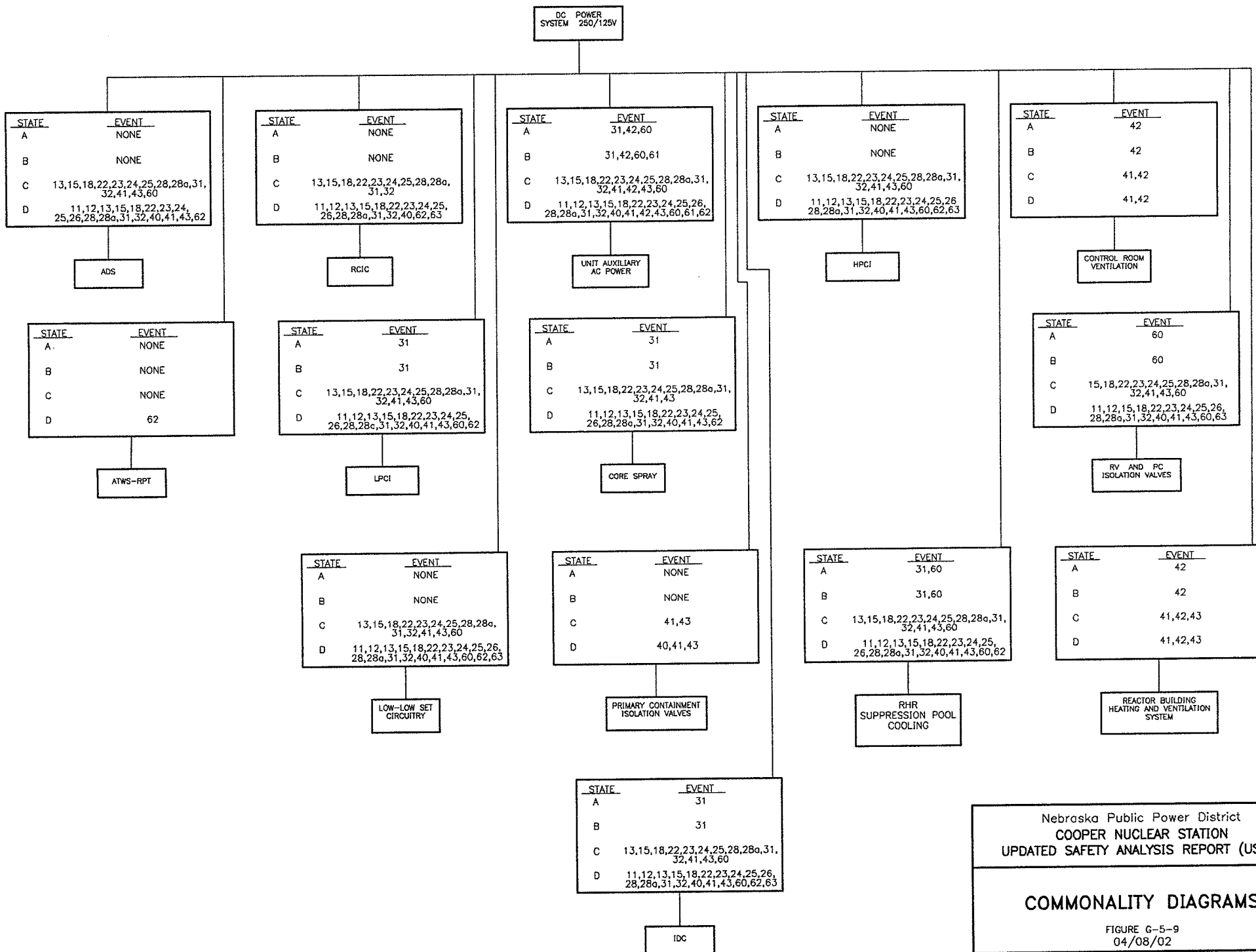
FIGURE G-5-7
 8/3/00

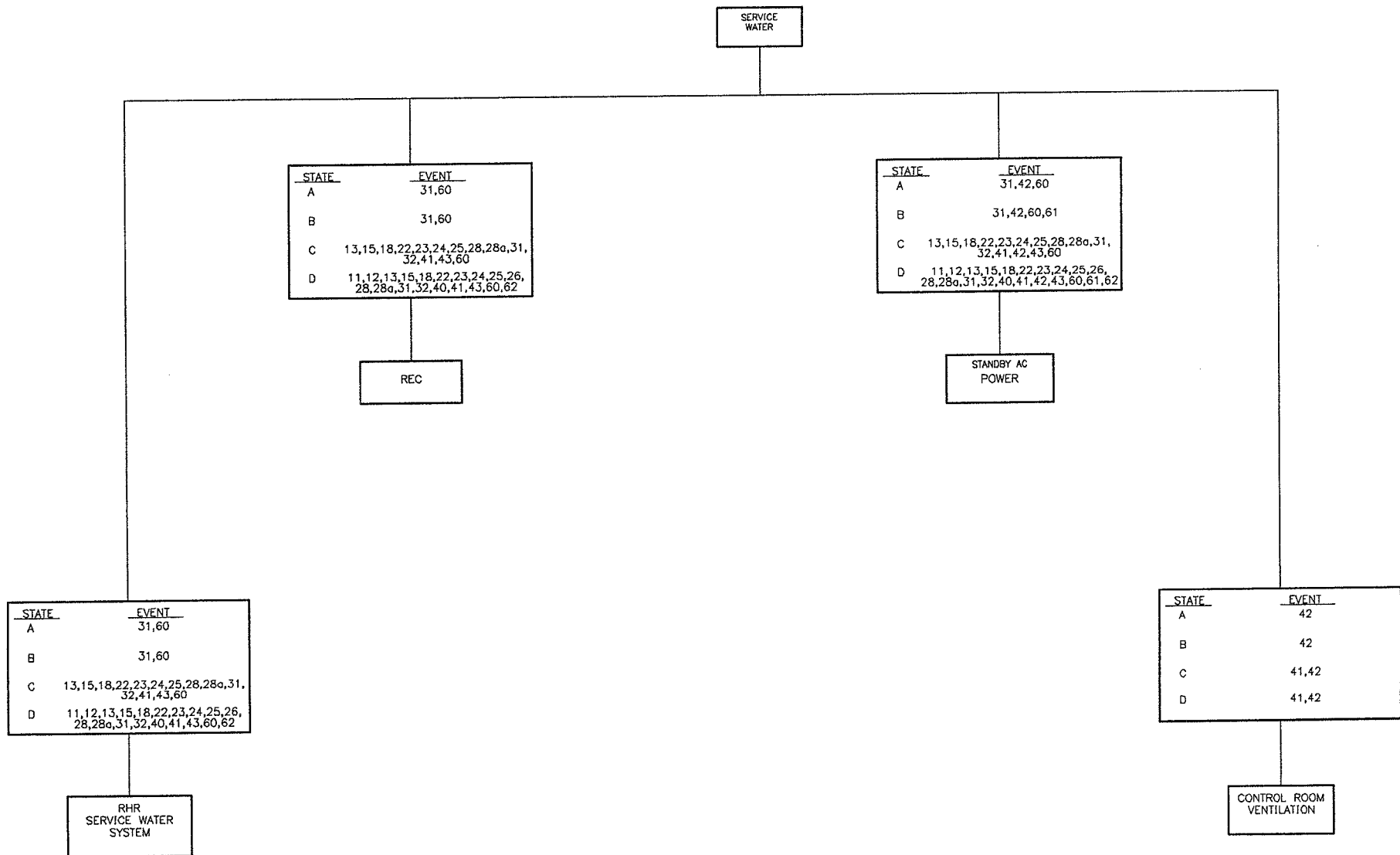


Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

COMMONALITY DIAGRAMS

FIGURE G-5-8
02/05/10

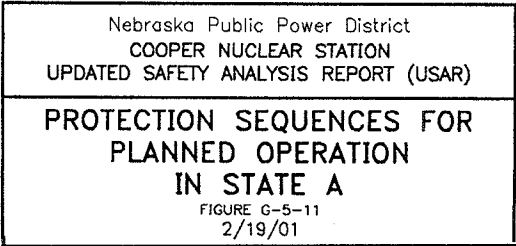


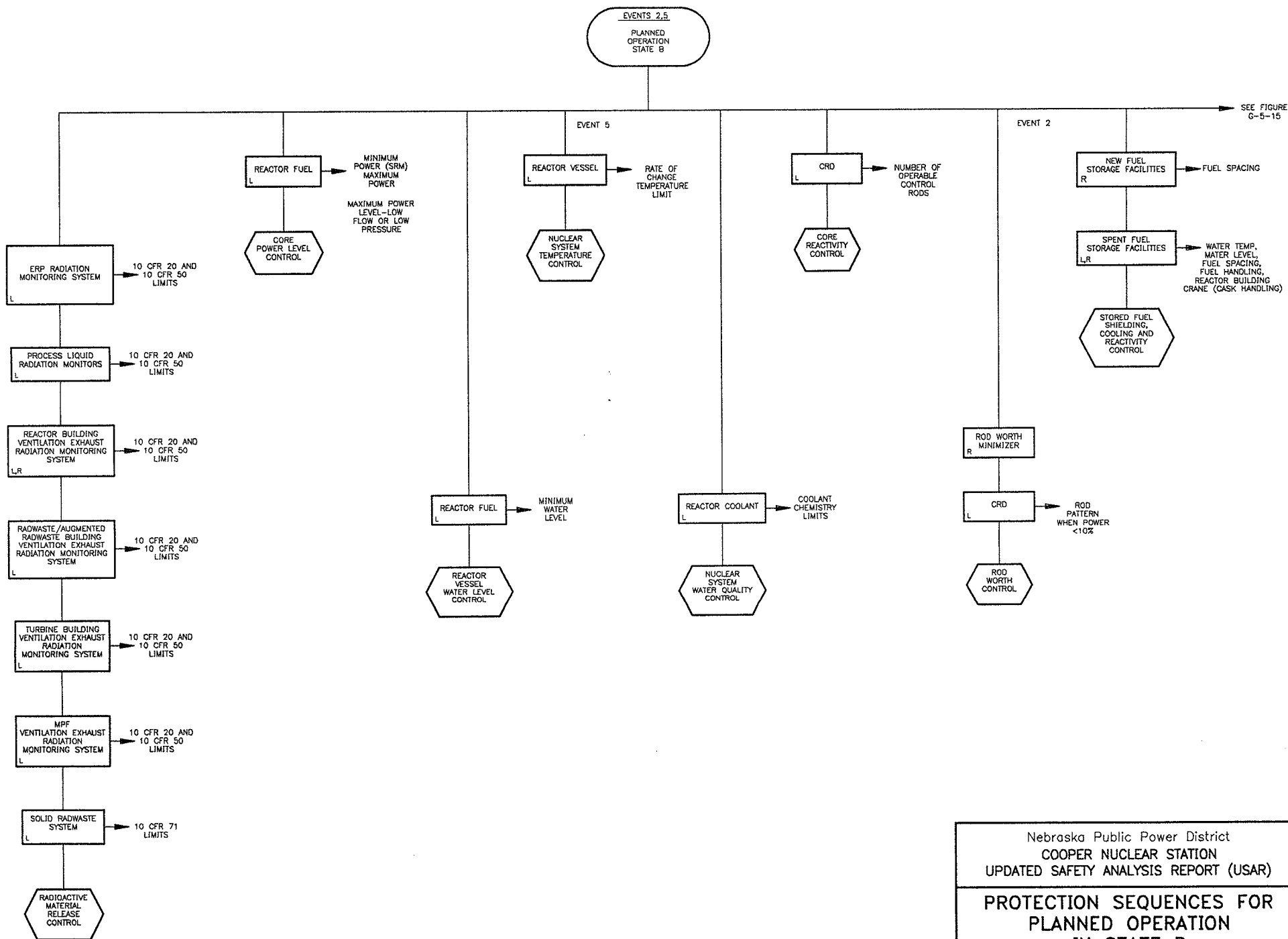


Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

COMMONALITY DIAGRAMS

FIGURE G-5-10
04/08/02



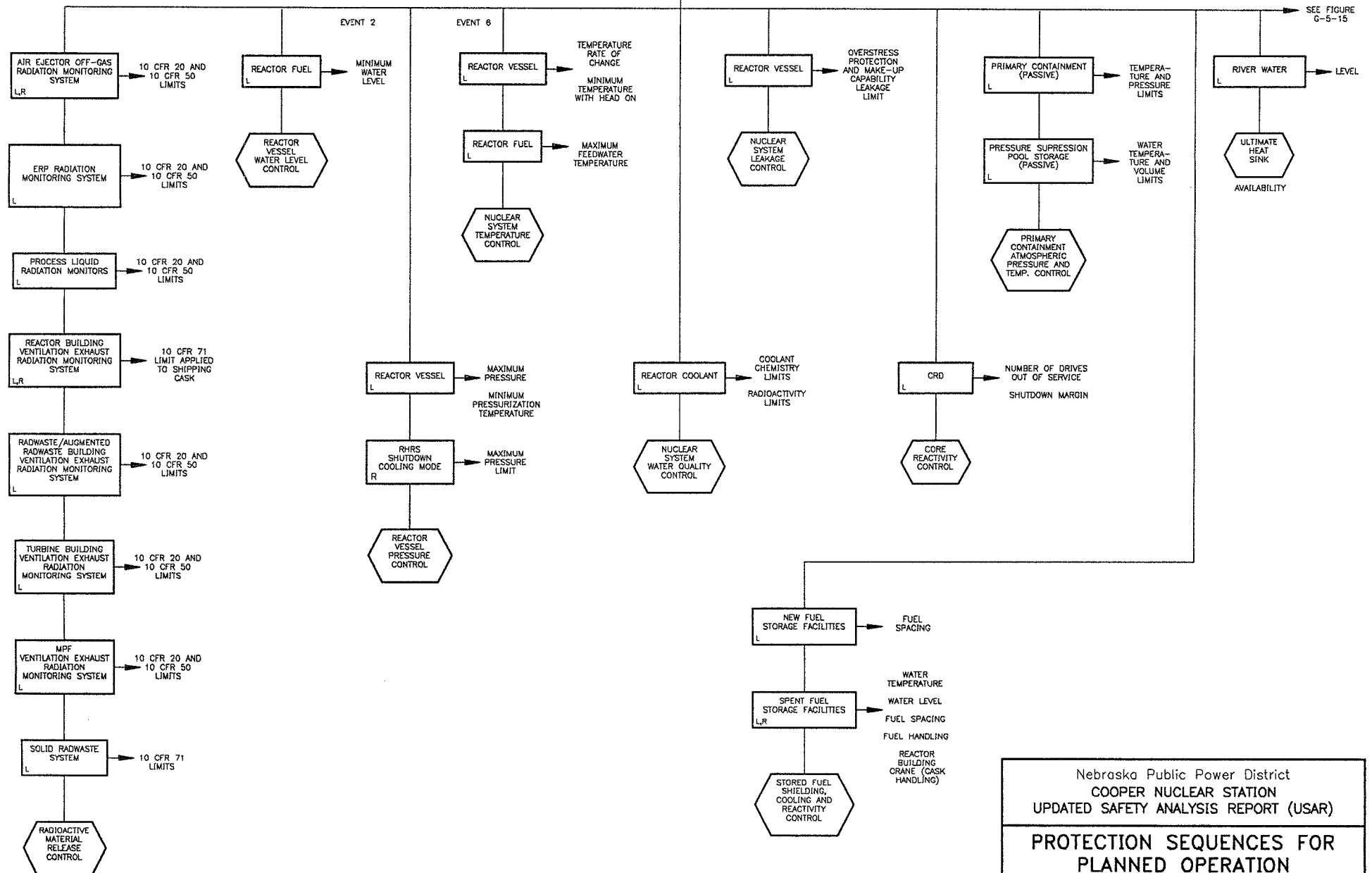


Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

**PROTECTION SEQUENCES FOR
PLANNED OPERATION
IN STATE B**

FIGURE G-5-12
2/19/01

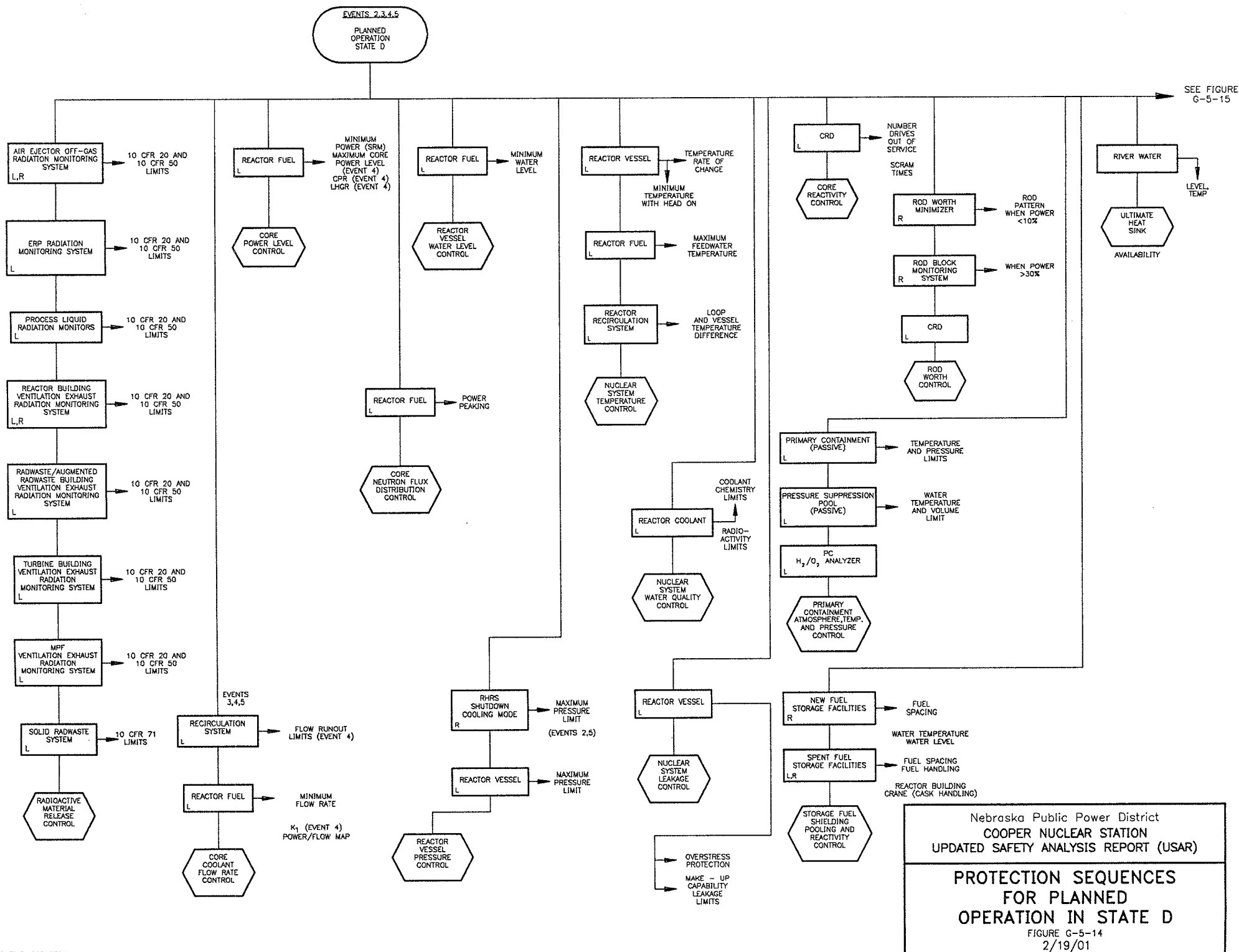
EVENTS 2,6
PLANNED
OPERATION
STATE C



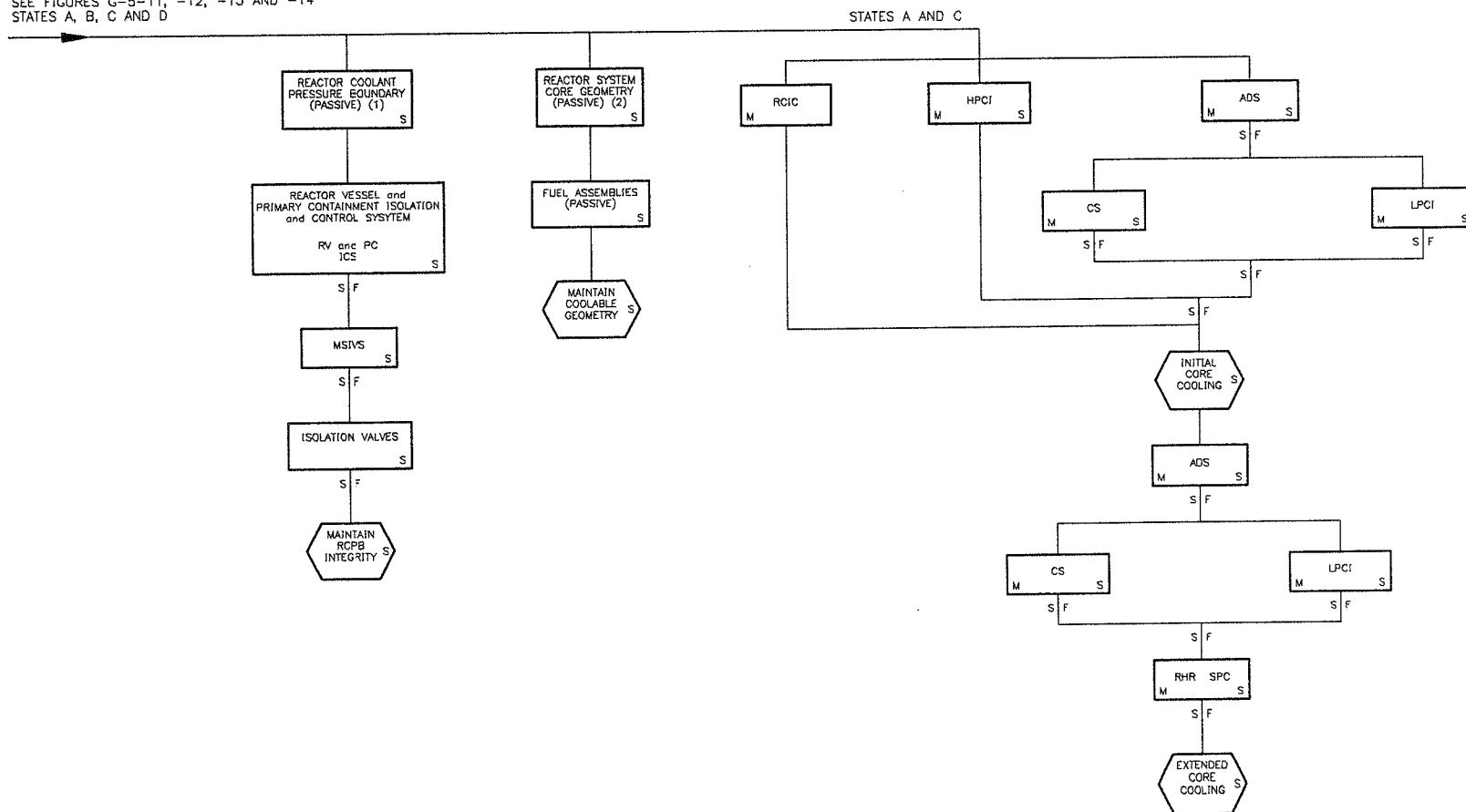
Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR
PLANNED OPERATION
IN STATE C

FIGURE G-5-13
2/19/01



SEE FIGURES G-5-11, -12, -13 AND -14
STATES A, B, C AND D



(1) RCPB:

- | | |
|----------------------|----------------------|
| 1. RPV | 6. RWCU |
| 2. MAIN STEAM SYSTEM | 7. CRD SYSTEM |
| 3. RHR | 8. SLCS |
| 4. HPCI | 9. FEED WATER SYSTEM |
| 5. RCIC | |

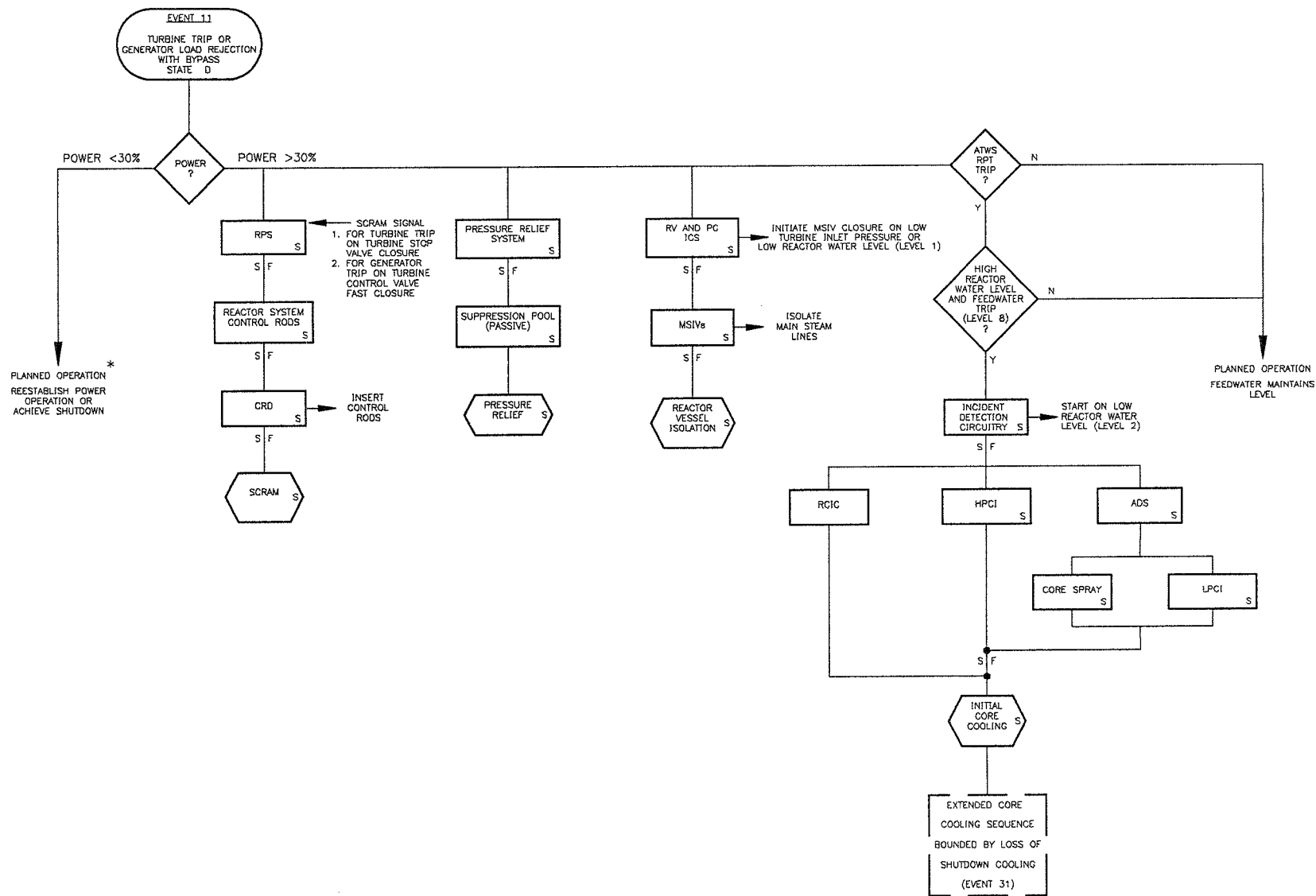
(2) CORE GEOMETRY:

1. RPV
2. CORE SUPPORT STRUCTURES
3. CORE SHROUD
4. SHROUD SUPPORT

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

**PROTECTION SEQUENCES
FOR PLANNED OPERATION
IN STATE A, B, C & D**

FIGURE G-5-15
8/3/00



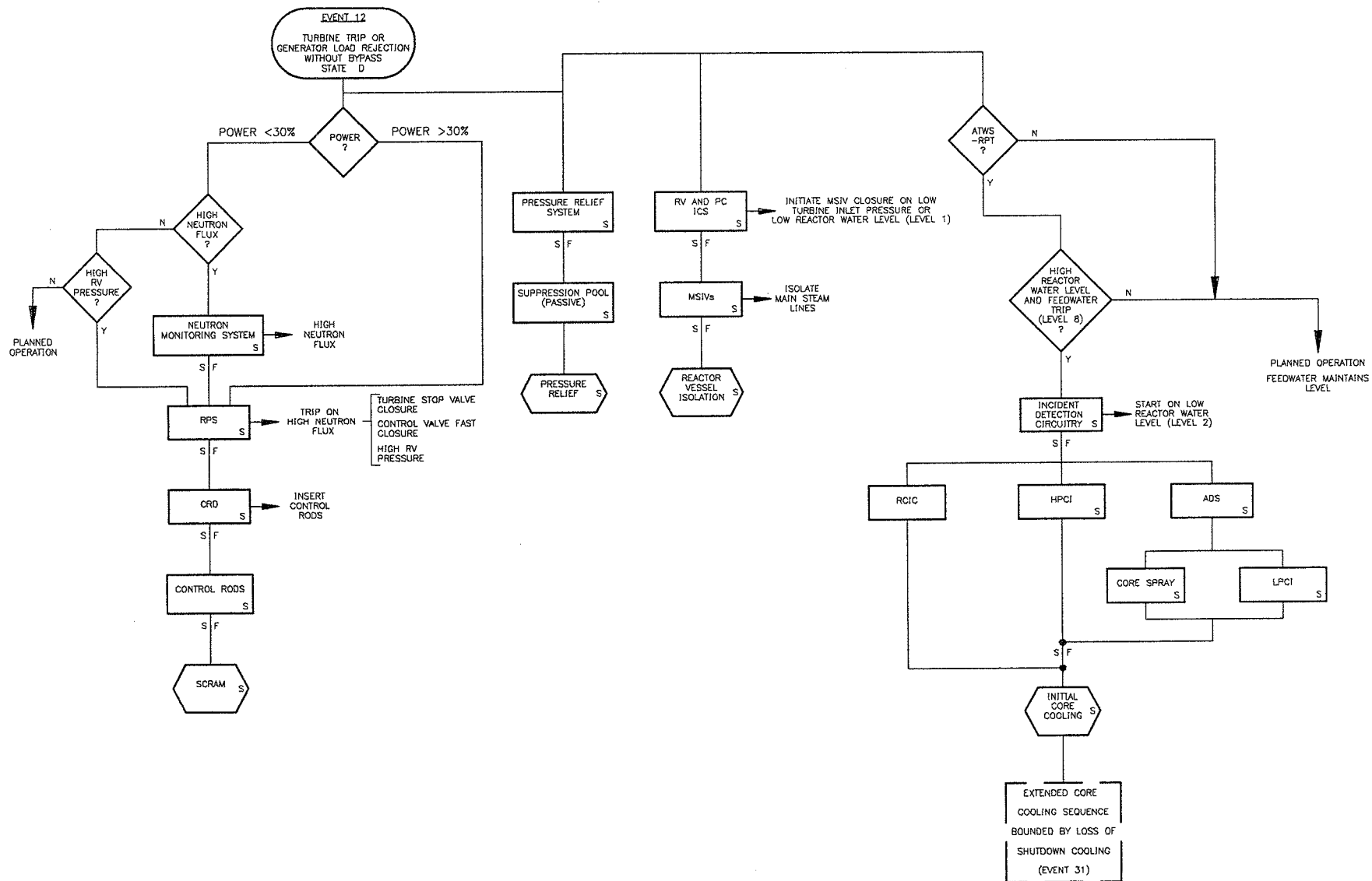
* BELOW ABOUT 25 PERCENT OF RATED POWER, THE BYPASS SYSTEM WILL TRANSFER STEAM AROUND THE TURBINE AND AVOID REACTOR SCRAM. BETWEEN ABOUT 25 PERCENT AND 30 PERCENT POWER, A HIGH RPV PRESSURE SCRAM WILL RESULT UNLESS OPERATOR ACTION CAN REDUCE POWER TO WITHIN THE BYPASS CAPACITY.

NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

**PROTECTION SEQUENCES FOR
TURBINE TRIP OR GENERATOR
LOAD REJECTION WITH BYPASS**

FIGURE G-5-16
8/3/00

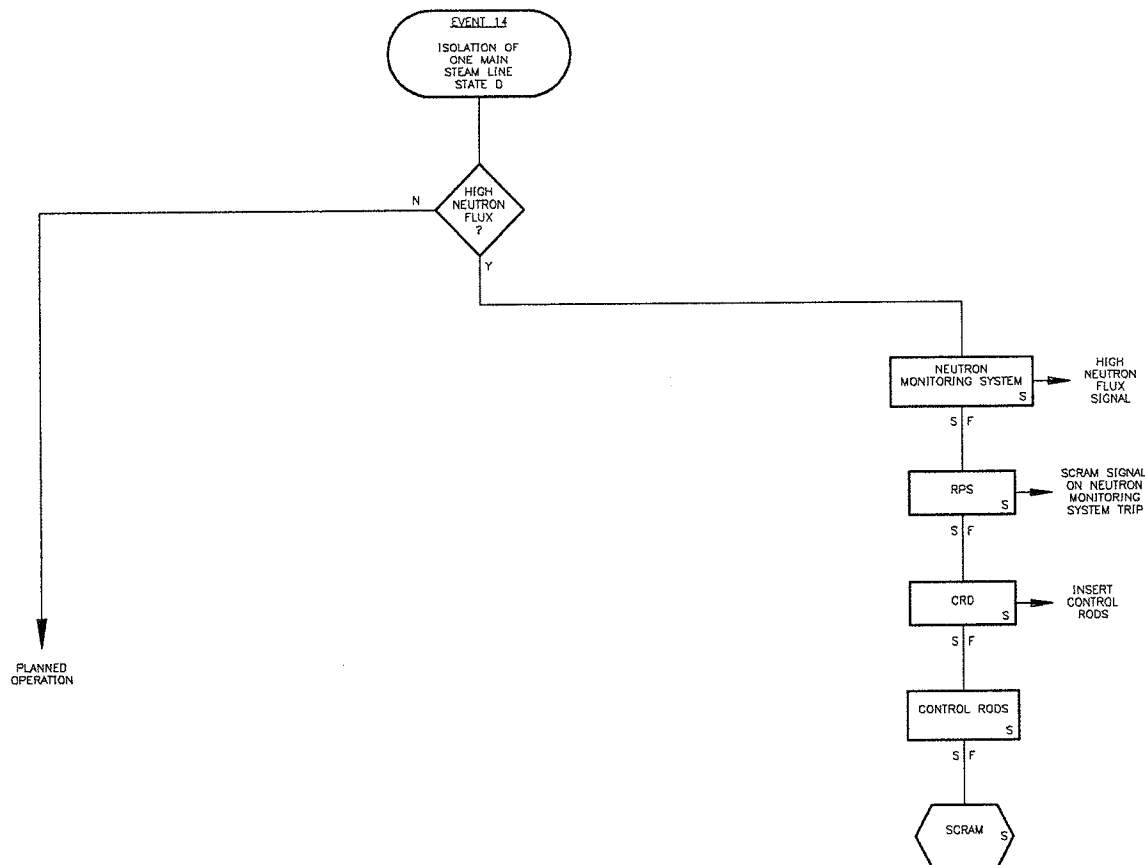


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

**PROTECTION SEQUENCES FOR
TURBINE TRIP OR GENERATOR
LOAD REJECTION W/OUT BYPASS**

FIGURE G-5-17
8/3/00

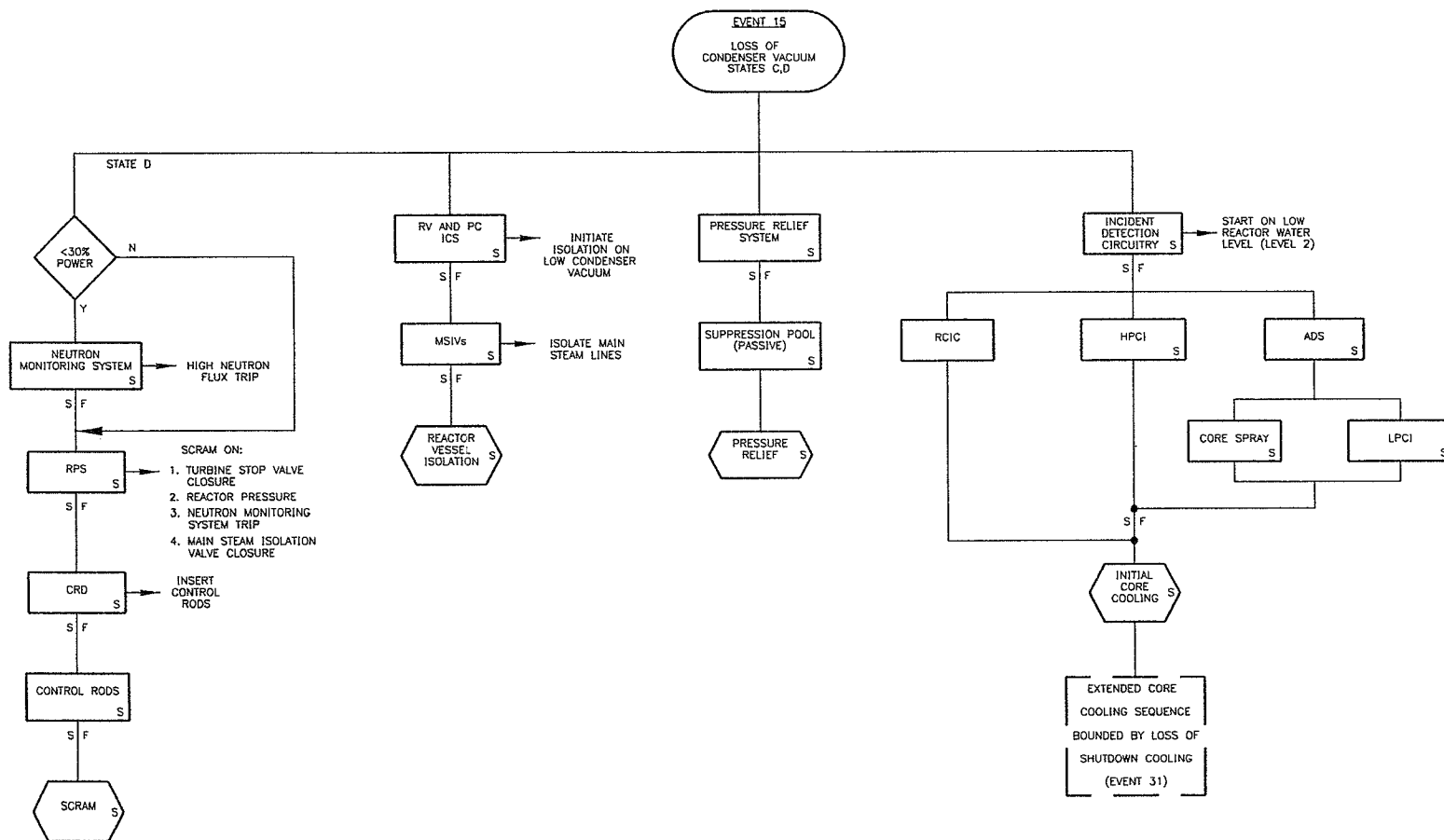


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR
ISOLATION OF ONE
MAIN STEAM LINE

FIGURE G-5-19
8/3/00

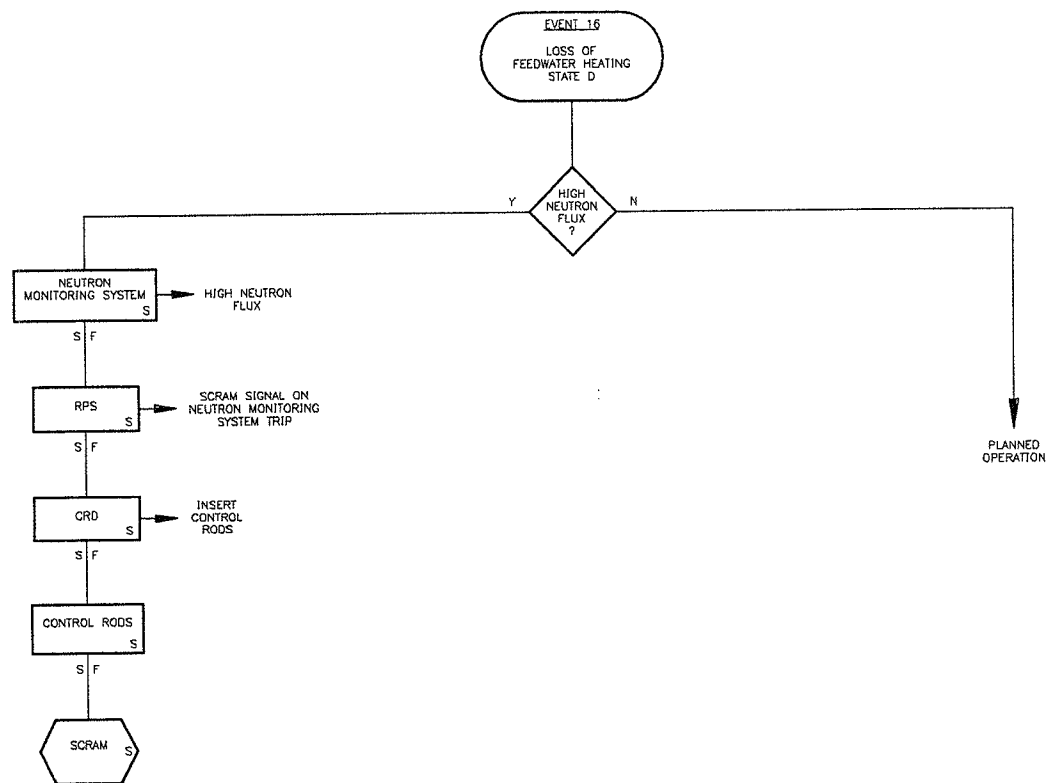


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR LOSS OF CONDENSER VACUUM

FIGURE G-5-20
8/28/08

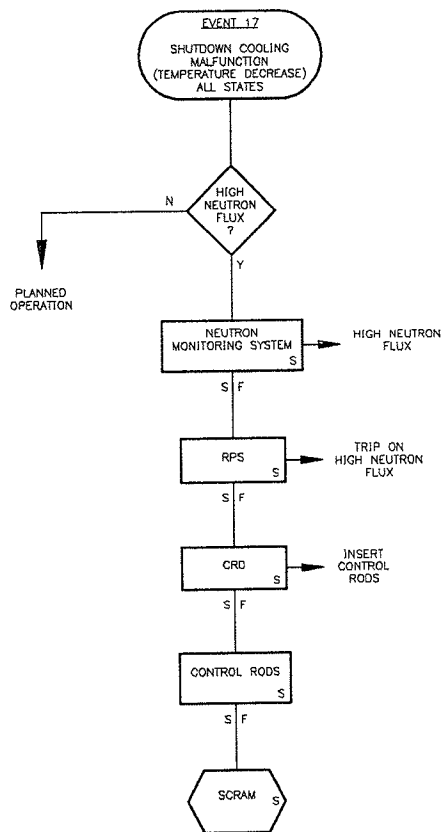


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

**PROTECTION SEQUENCES
FOR LOSS OF
FEEDWATER HEATING**

FIGURE G-5-21
8/3/00

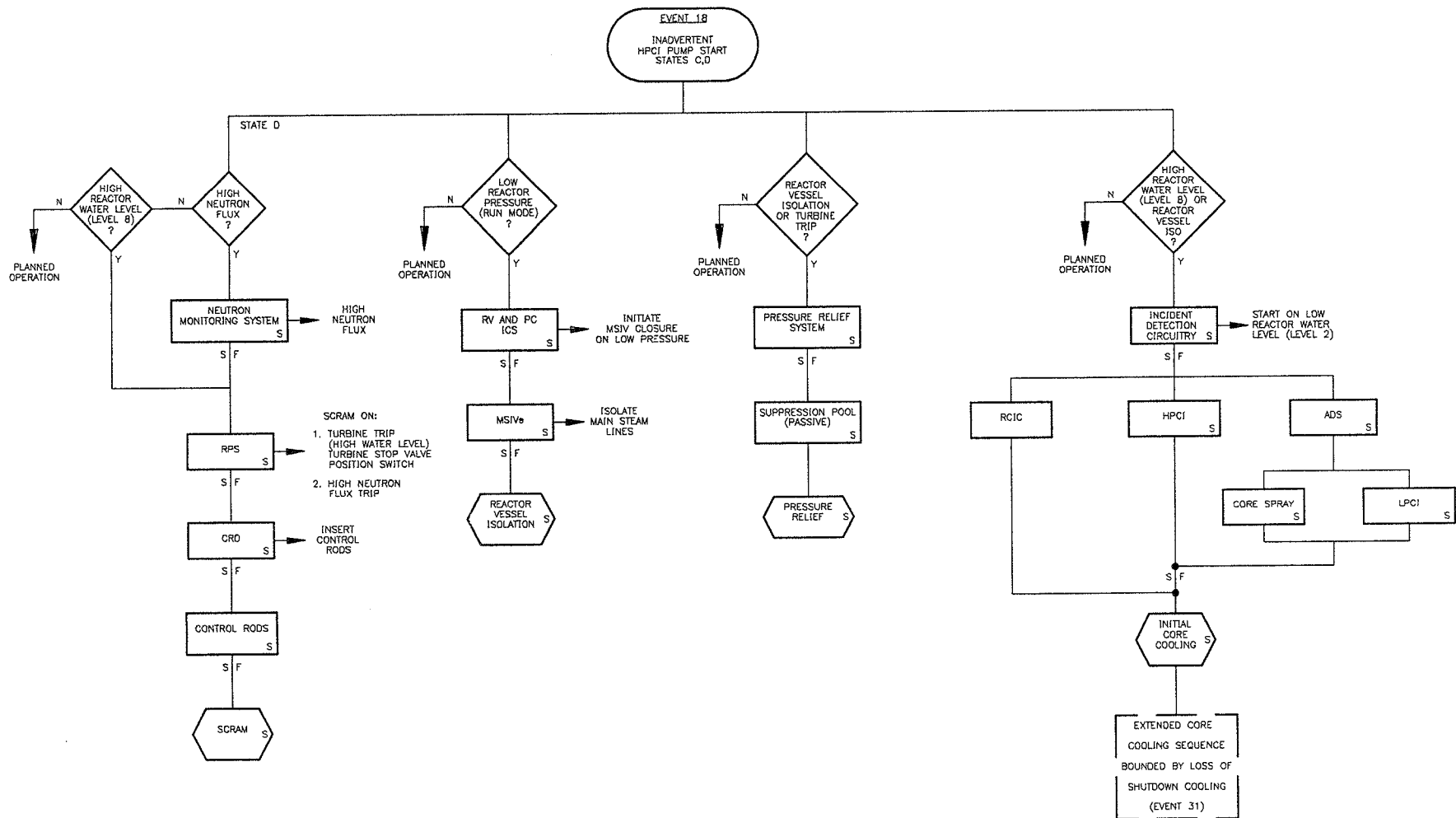


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR
SHUTDOWN COOLING (RHRS)
MALFUNCTION - TEMP DECREASE

FIGURE G-5-22
8/3/00

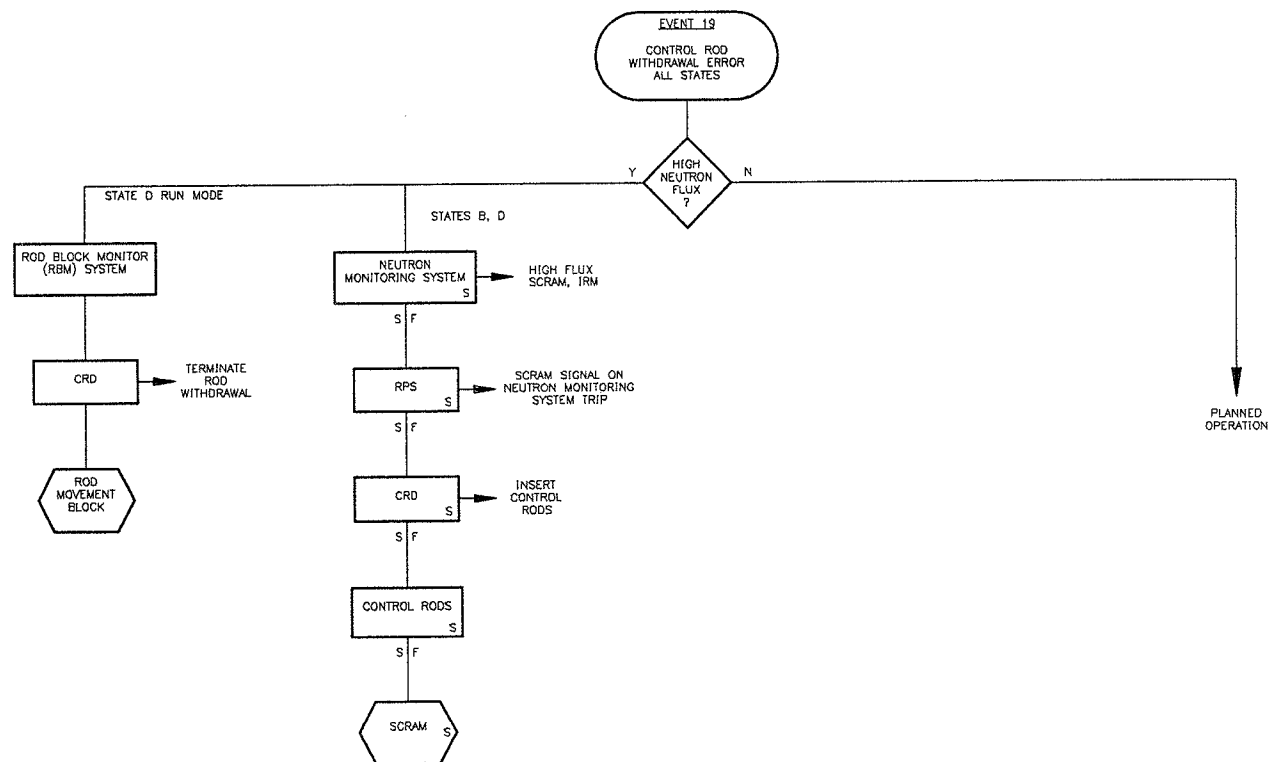


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

**PROTECTION SEQUENCES FOR
INADVERTENT HPCI
PUMP START**

FIGURE G-5-23
8/3/00

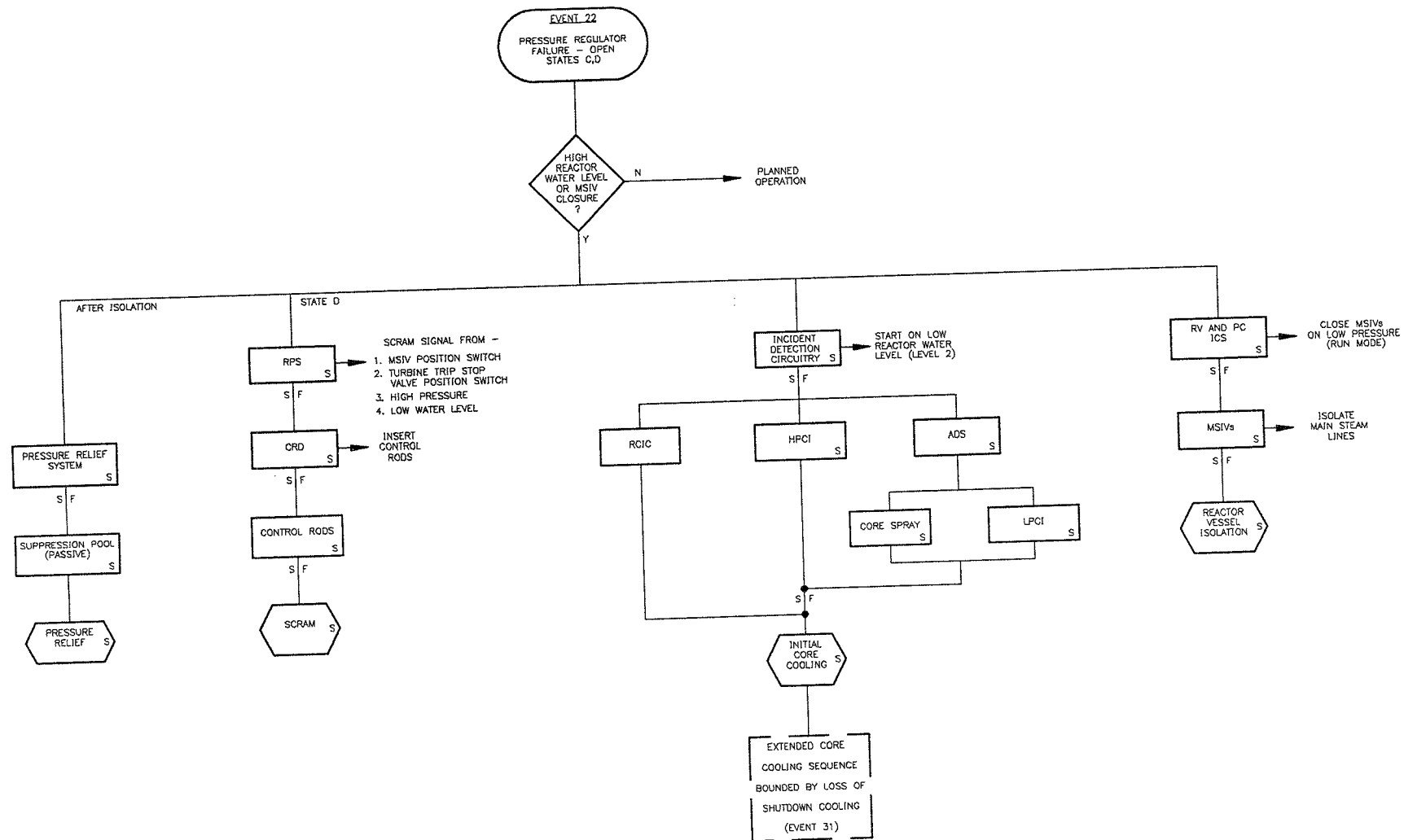


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR
CONTROL ROD
WITHDRAWAL ERROR

FIGURE G-5-24
8/3/00

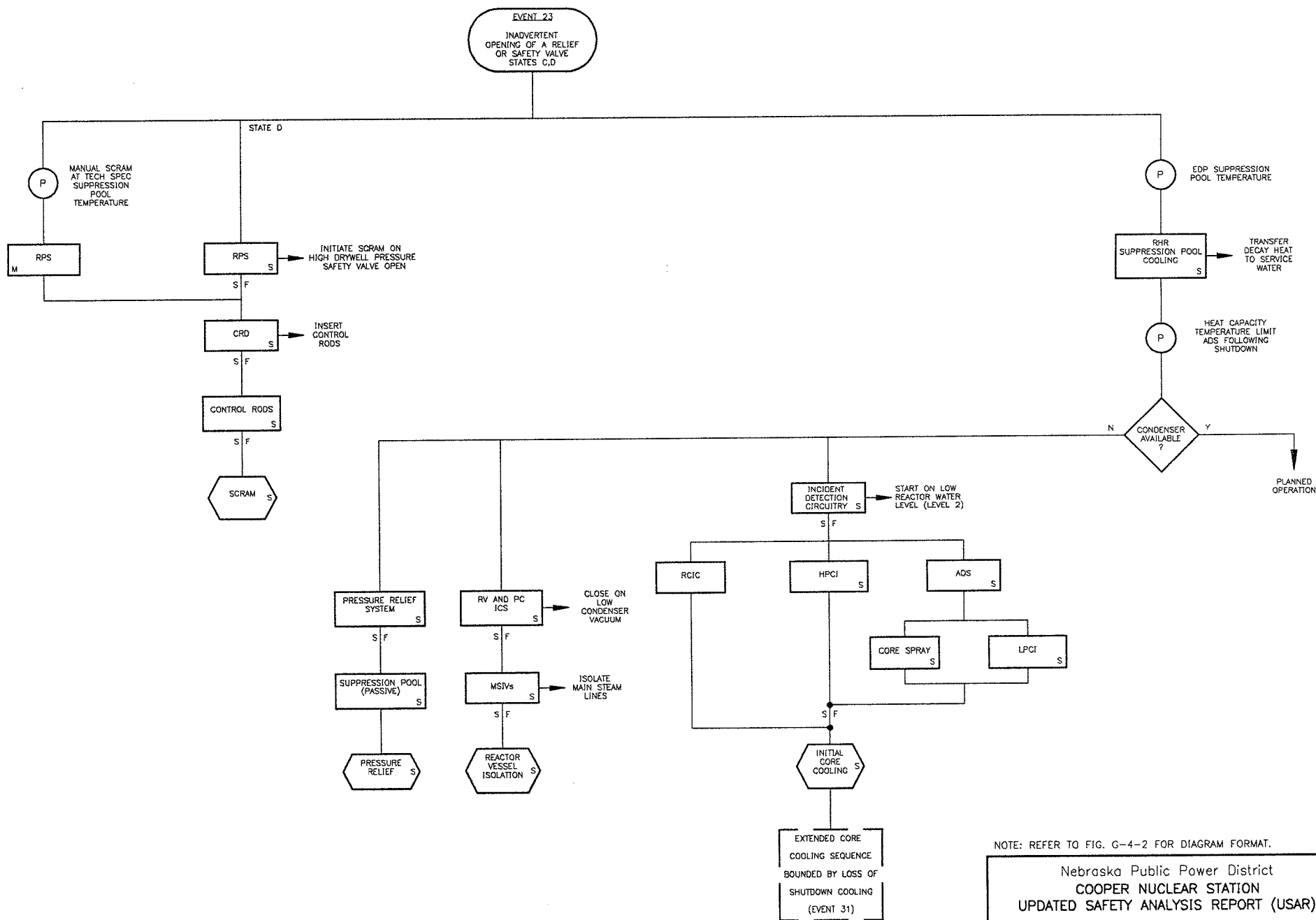


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

**PROTECTION SEQUENCES FOR
PRESSURE REGULATOR
FAILURE - OPEN**

FIGURE G-5-25
8/3/00

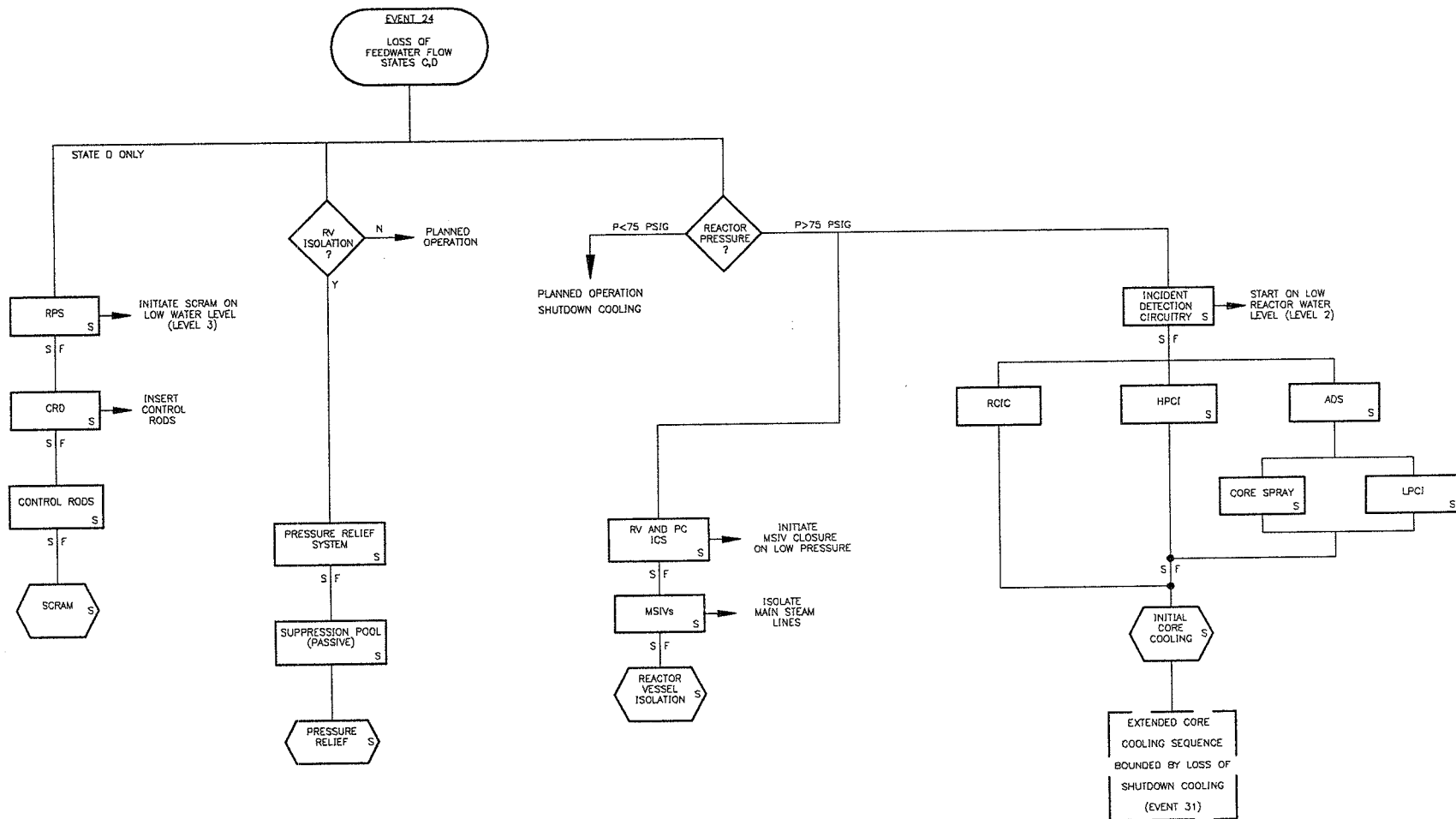


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

**PROTECTION SEQUENCES FOR
INADVERTENT OPENING
OF A SAFETY OR RELIEF VALVE**

FIGURE G-5-26
8/3/00

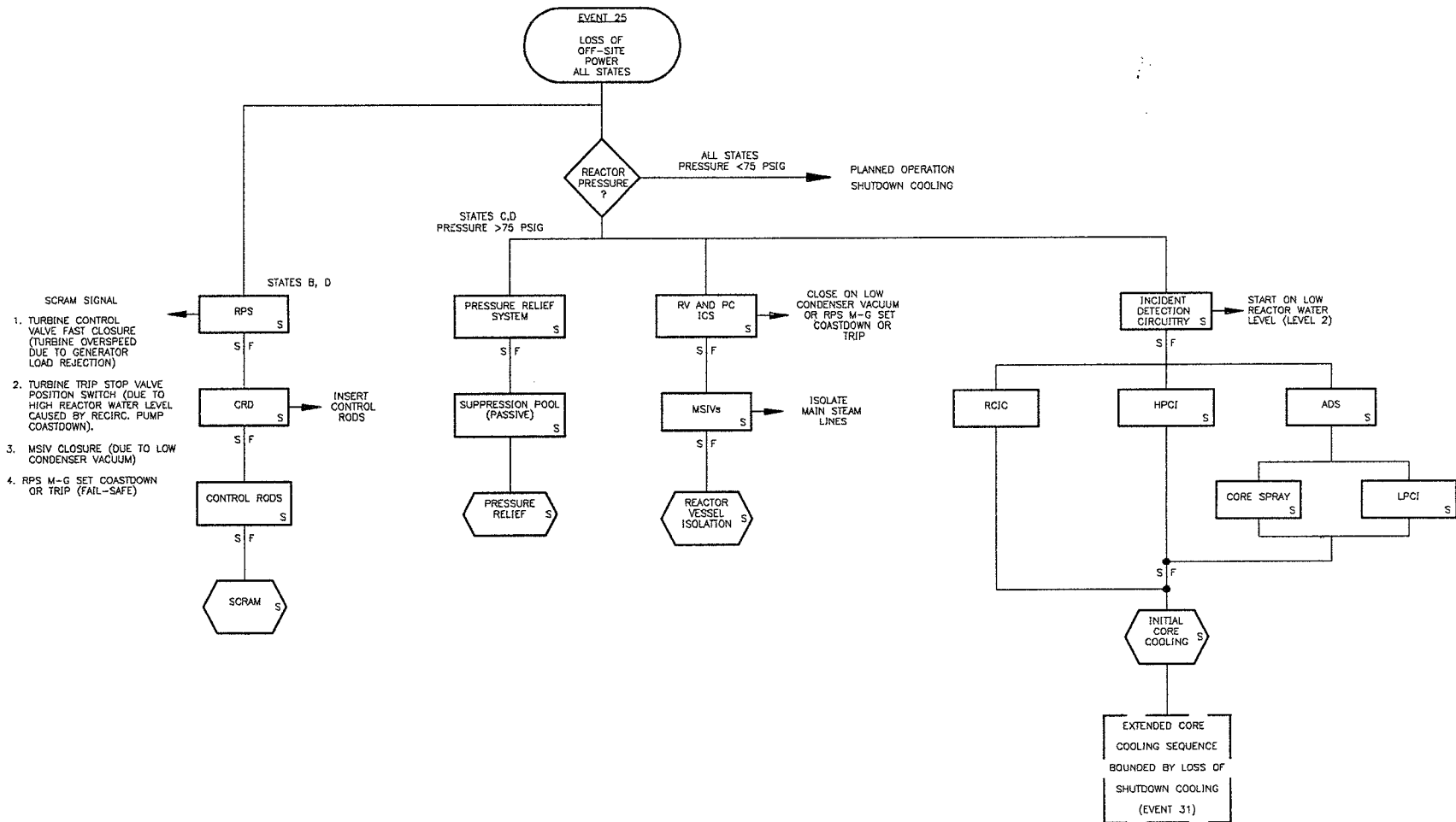


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR LOSS OF FEEDWATER FLOW

FIGURE G-5-27
8/3/00

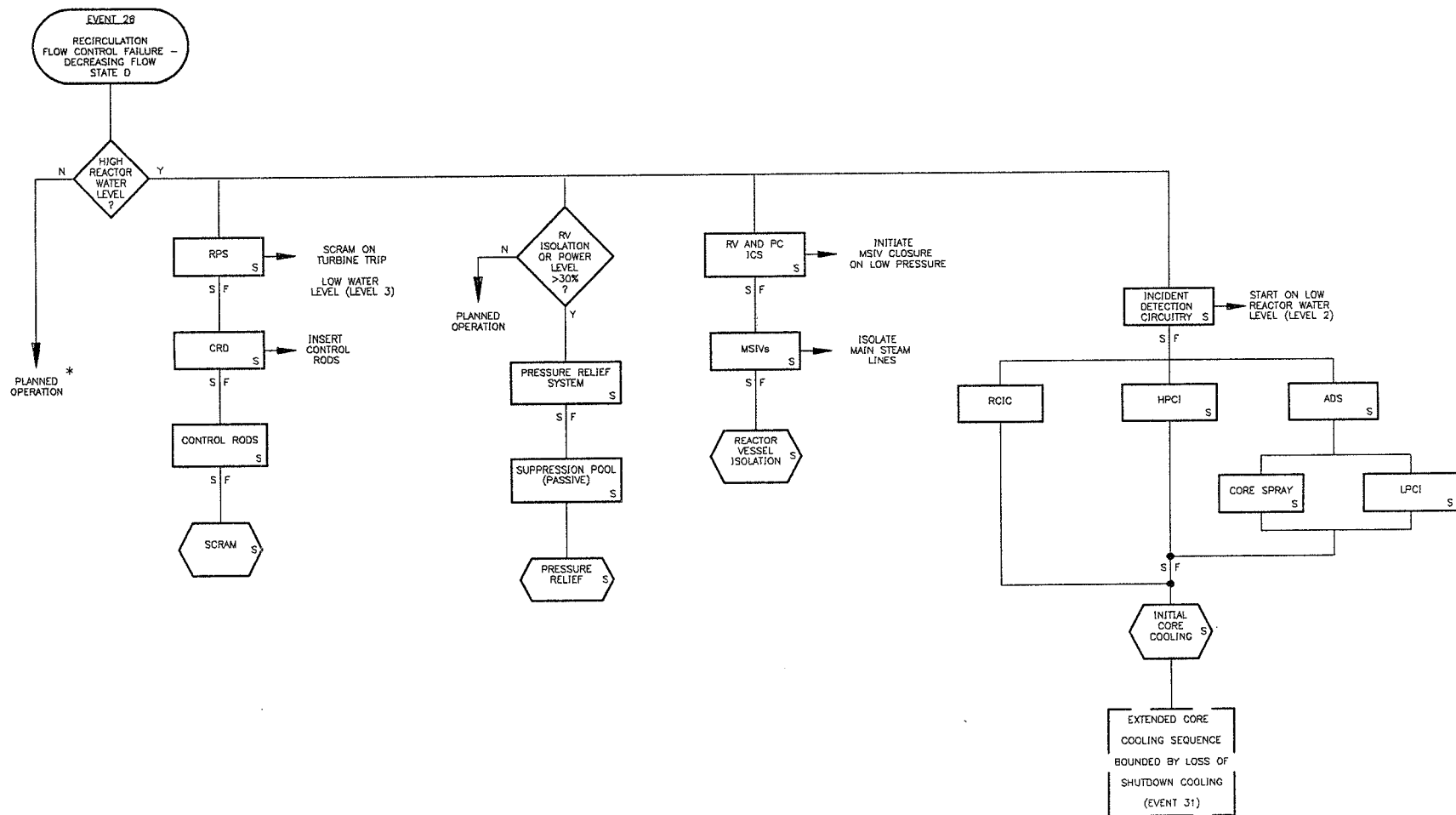


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR LOSS OF OFF-SITE POWER

FIGURE G-5-28
8/3/00



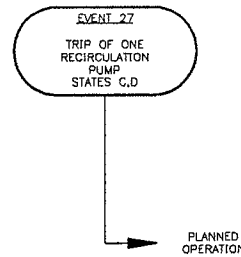
* BELOW ABOUT 25 PERCENT OF RATED POWER, THE BYPASS SYSTEM WILL TRANSFER STEAM AROUND THE TURBINE AND AVOID REACTOR SCRAM. BETWEEN ABOUT 25 PERCENT AND 30 PERCENT POWER, A HIGH RPV PRESSURE SCRAM WILL RESULT UNLESS OPERATOR ACTION CAN REDUCE POWER TO WITHIN THE BYPASS CAPACITY.

NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

**PROTECTION SEQUENCES FOR
RECIRCULATION FLOW
CONTROLLER FAILURE-
DECREASING FLOW**

FIGURE G-5-29
8/3/00

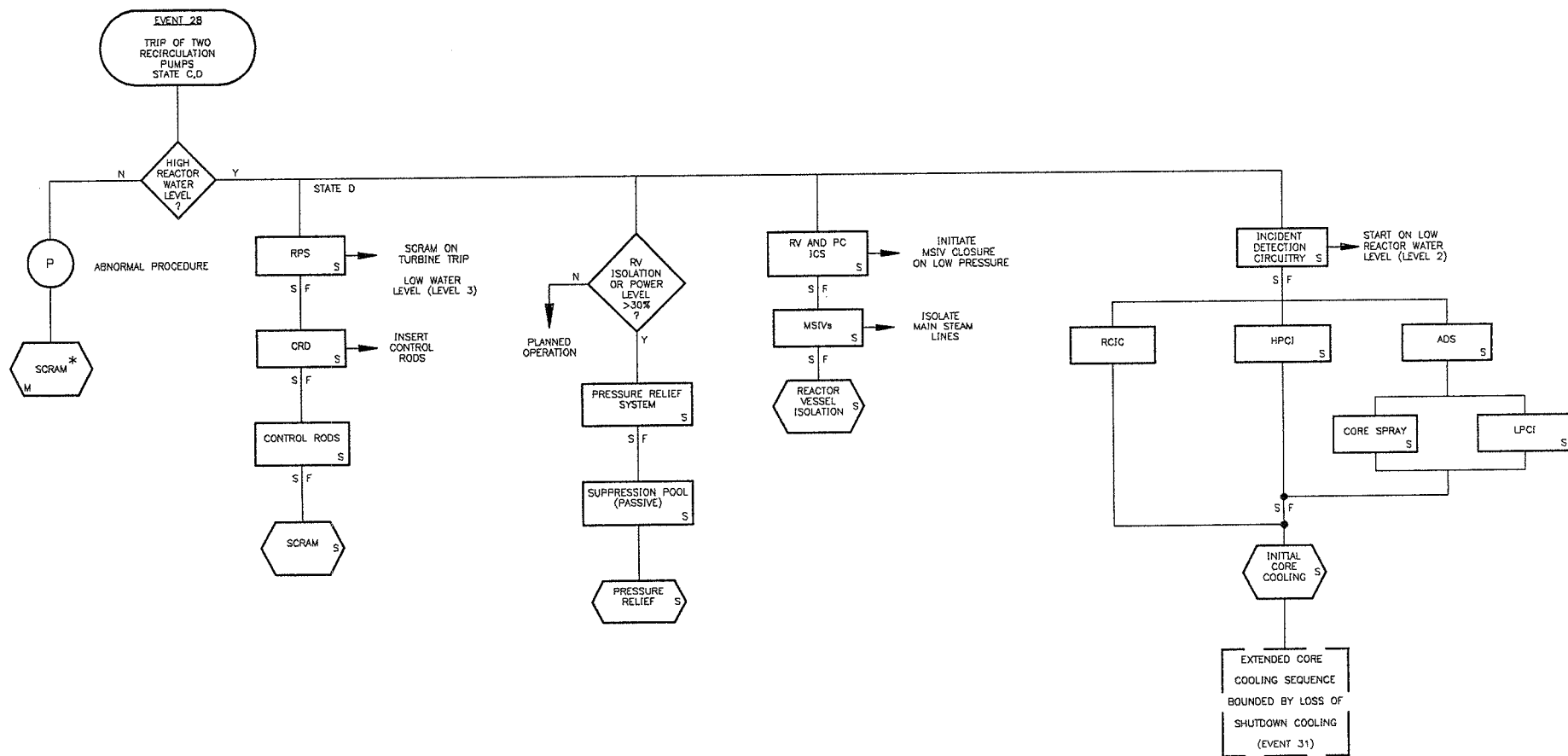


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR
TRIP OF ONE
RECIRCULATION PUMP

FIGURE G-5-30
8/3/00



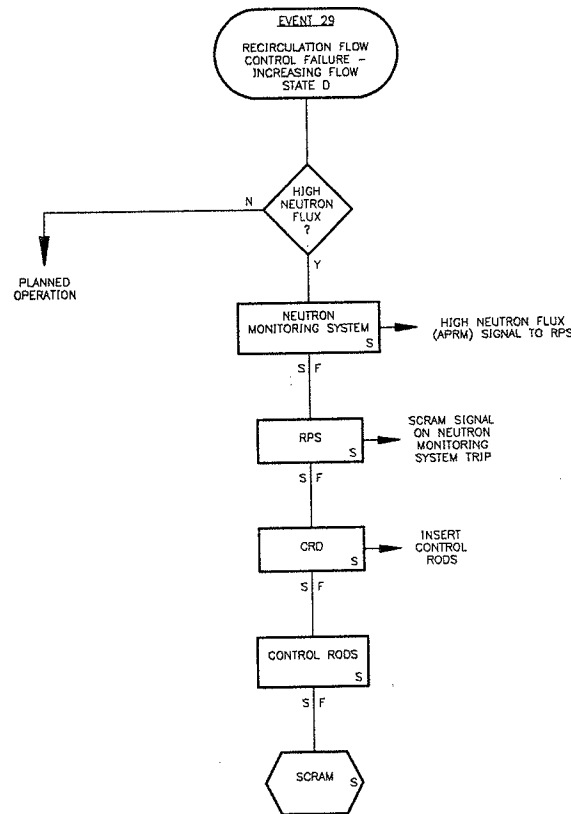
* THE ANALYSIS ASSUMES BELOW ABOUT 25 PERCENT OF RATED POWER, THE BYPASS SYSTEM WILL TRANSFER STEAM AROUND THE TURBINE AND AVOID REACTOR SCRAM. BETWEEN ABOUT 25 PERCENT AND 30 PERCENT POWER, A HIGH RPV PRESSURE SCRAM WILL RESULT UNLESS OPERATOR ACTION CAN REDUCE POWER TO WITHIN THE BYPASS CAPACITY HOWEVER, THE ABNORMAL PROCEDURE REQUIRES THE OPERATOR TO INITIATE A MANUAL SCRAM.

NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR TRIP OF TWO RECIRCULATION PUMPS

FIGURE G-5-31
8/3/00

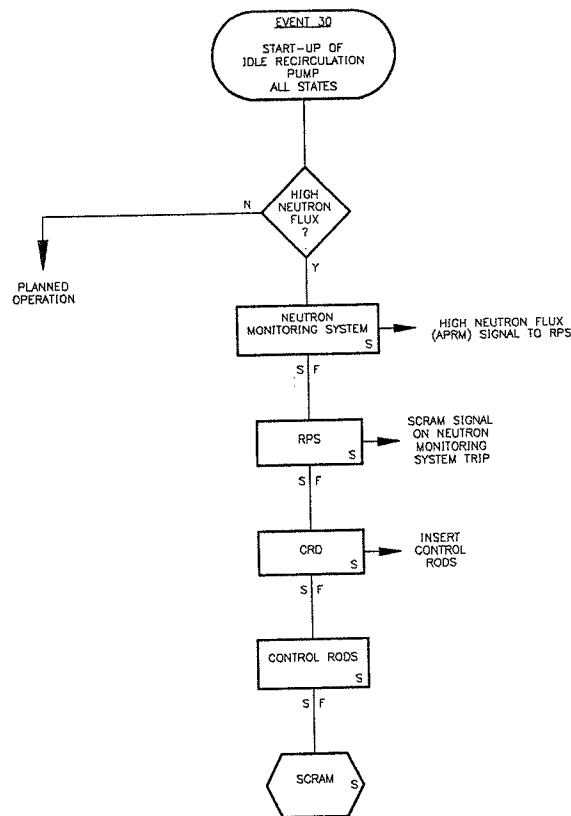


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR
RECIRCULATION FLOW
CONTROLLER FAILURE-
INCREASING FLOW

FIGURE G-5-32
8/3/00



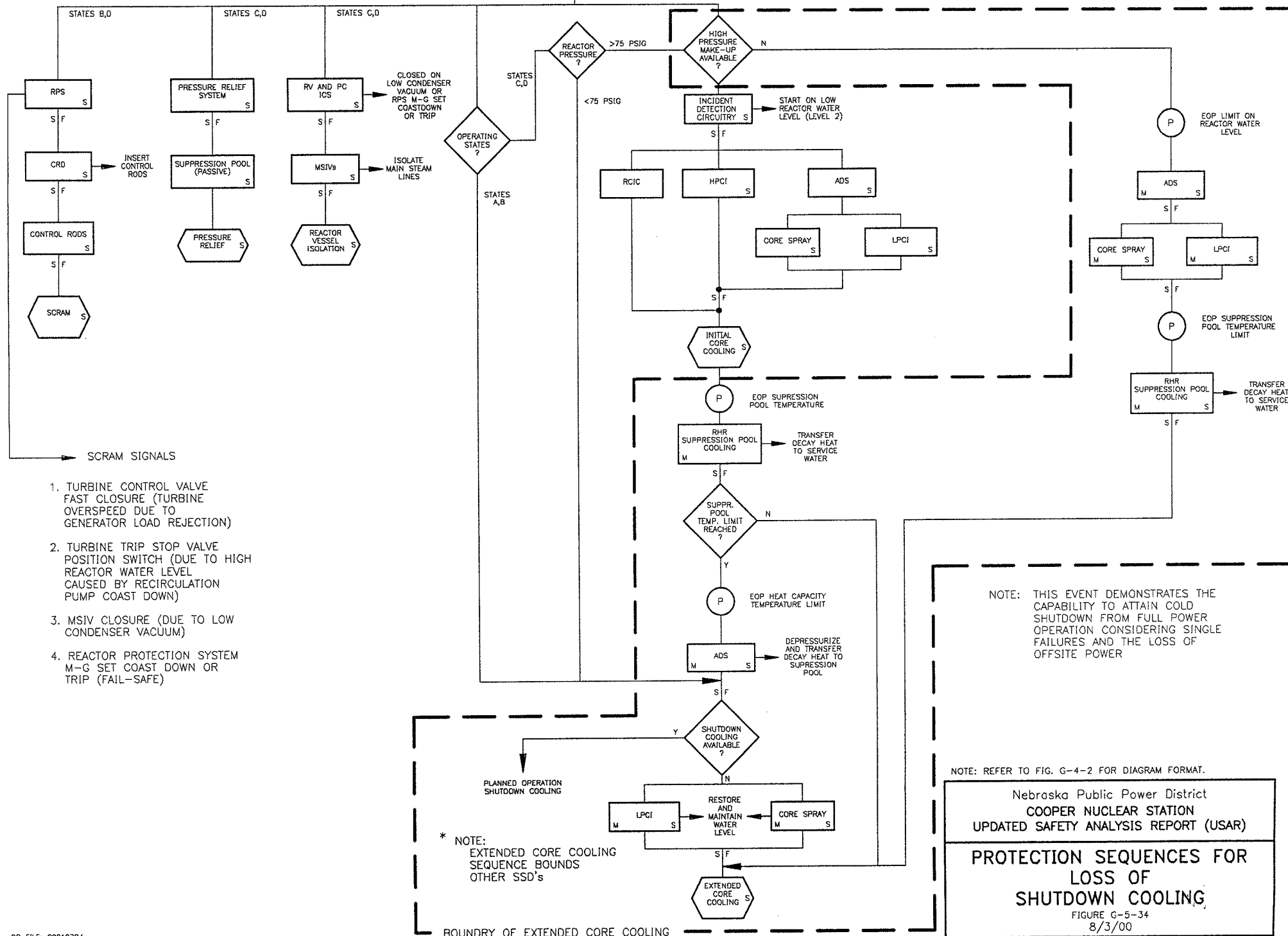
NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

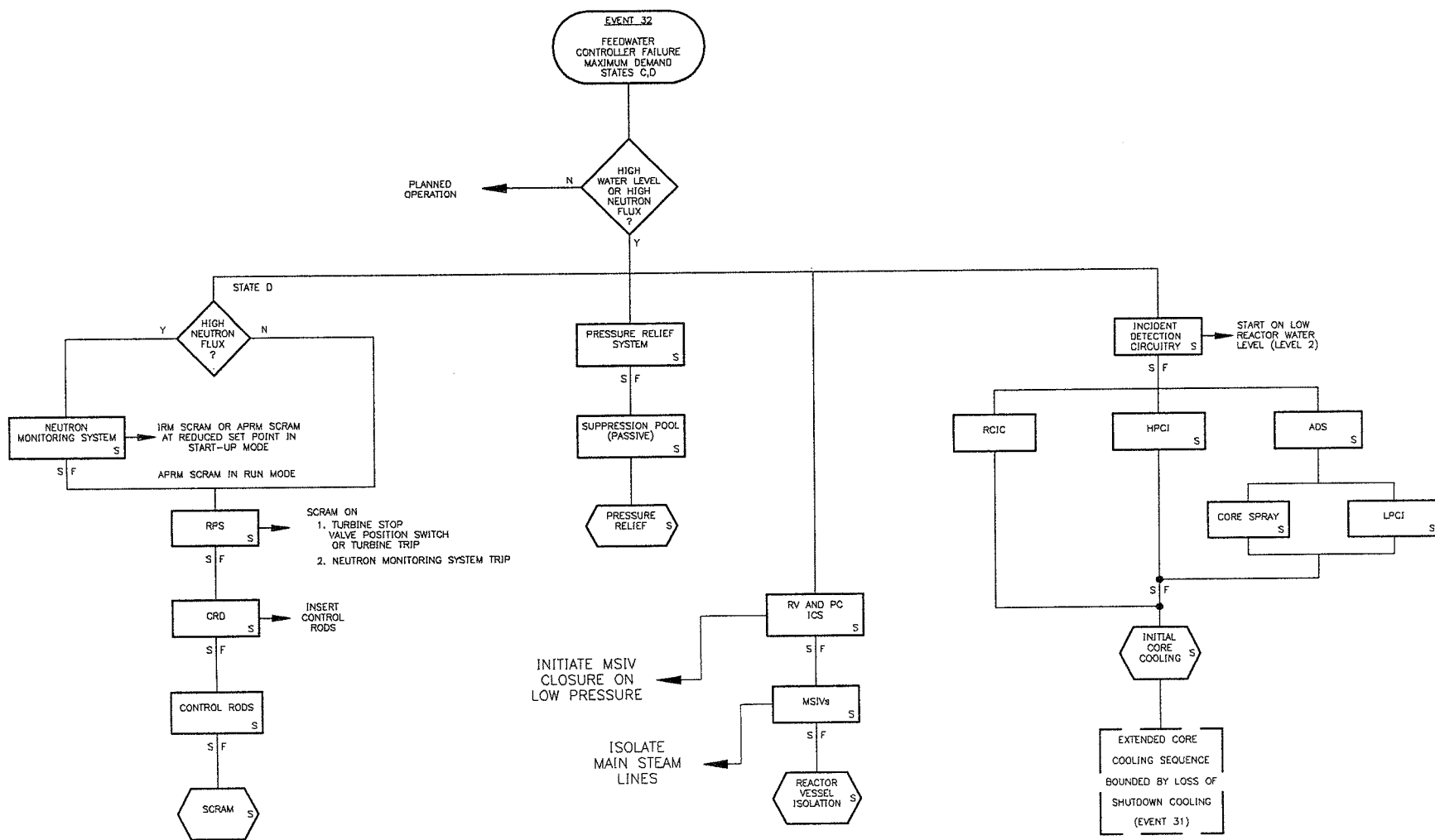
Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR
START-UP OF IDLE
RECIRCULATION PUMP

FIGURE G-5-33
8/3/00

EVENT 31
LOSS OF
SHUTDOWN COOLING
ALL STATES



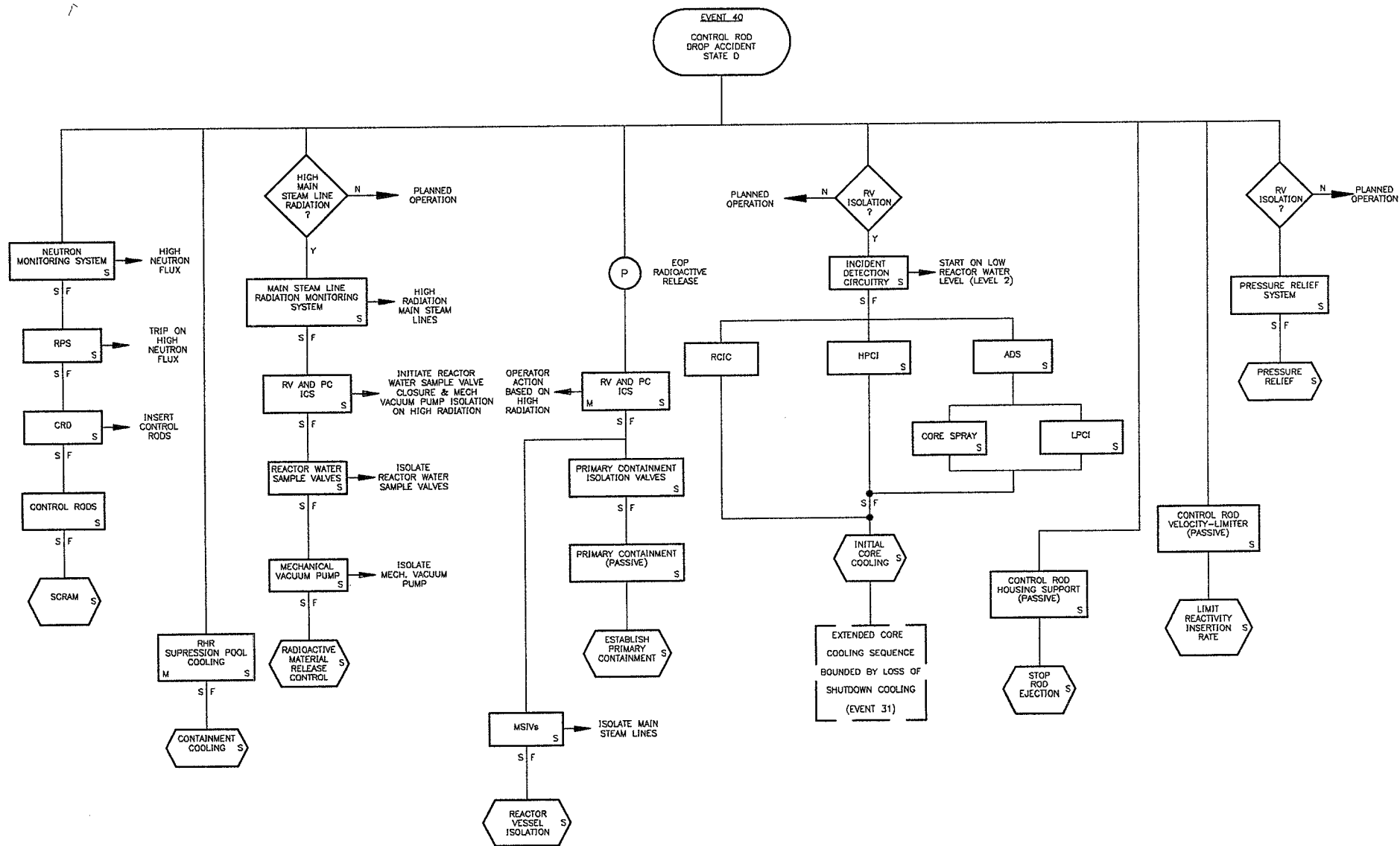


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

**PROTECTION SEQUENCES FOR
FEEDWATER CONTROLLER
FAILURE-MAXIMUM DEMAND**

FIGURE G-5-35
8/3/00

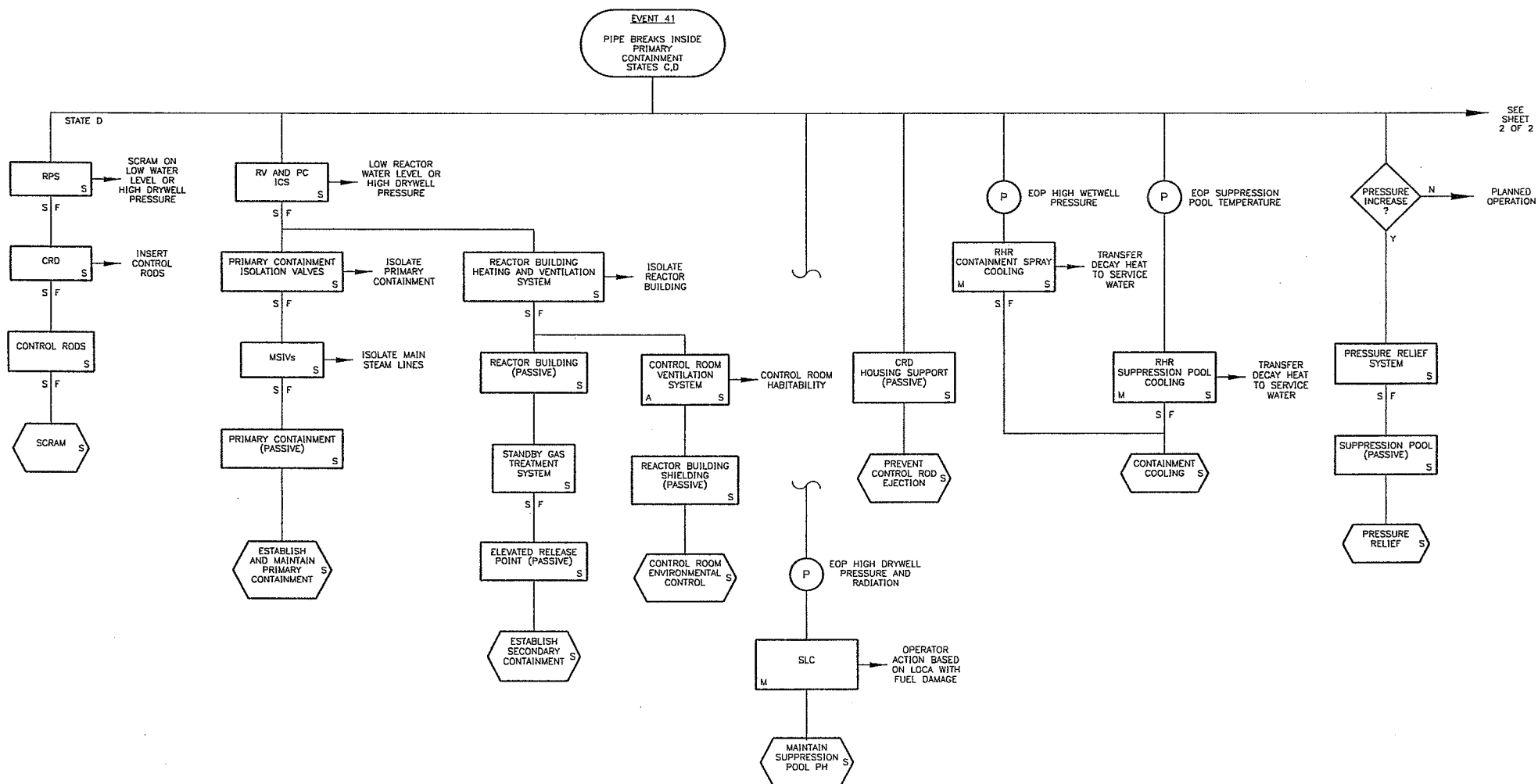


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR CONTROL ROD DROP ACCIDENT

FIGURE G-5-36
04/08/02



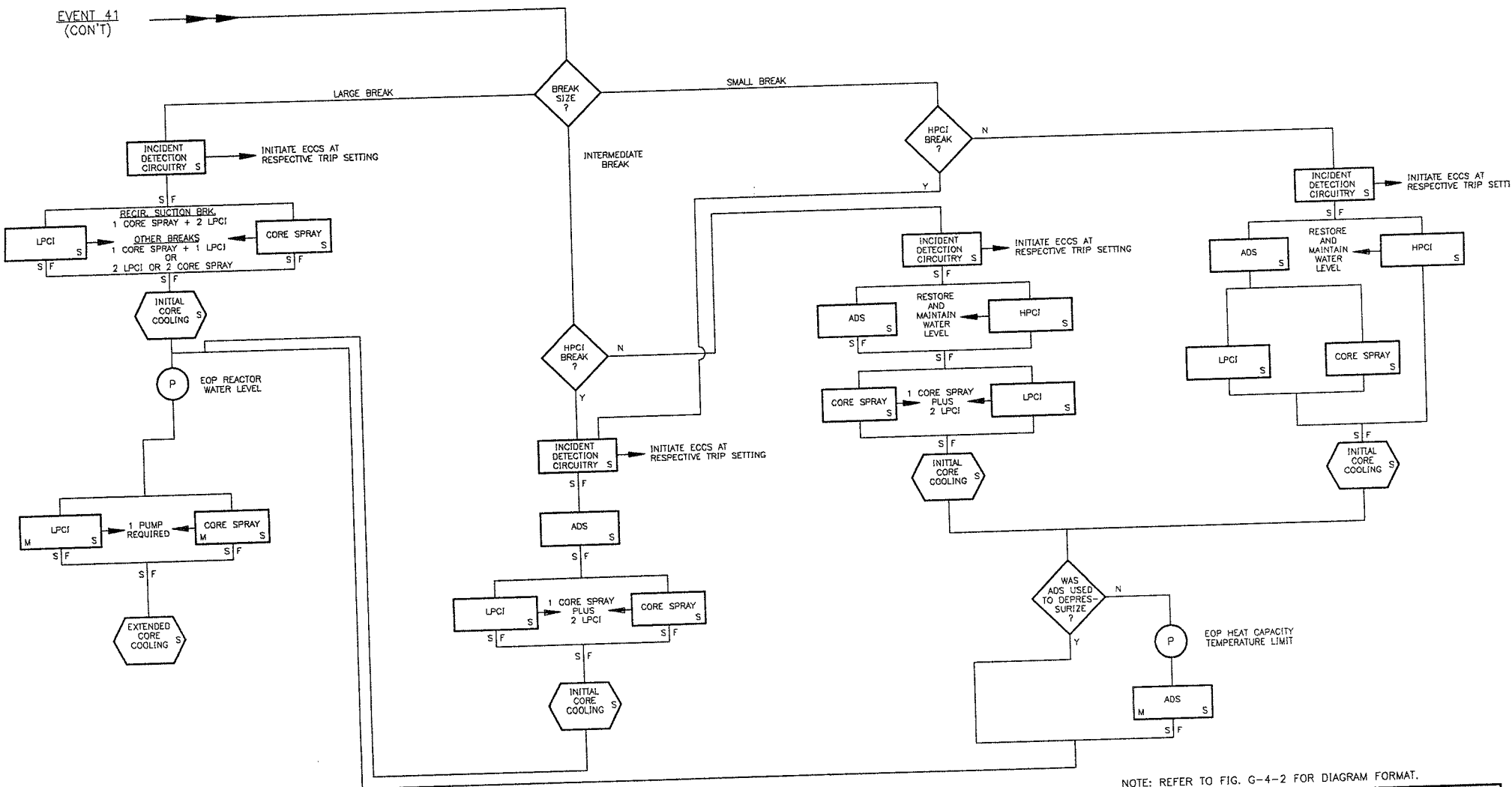
NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR PIPE BREAKS INSIDE PRIMARY CONTAINMENT SHEET 1

FIGURE G-5-37
02/05/10

EVENT 41
(CON'T)



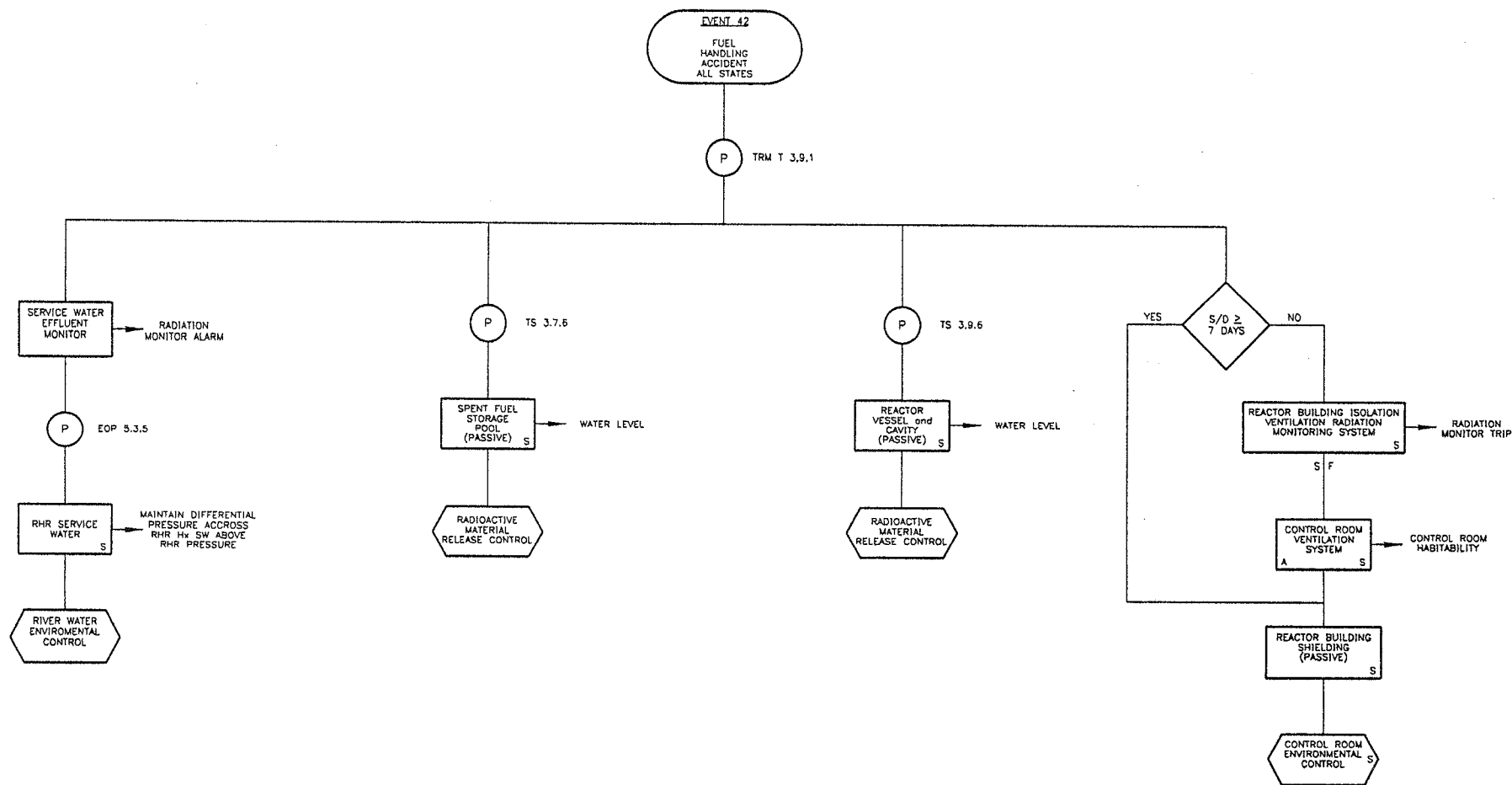
NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR
PIPE BREAKS INSIDE
PRIMARY CONTAINMENT

SHEET 2

FIGURE G-5-38
8/3/00

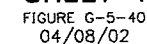


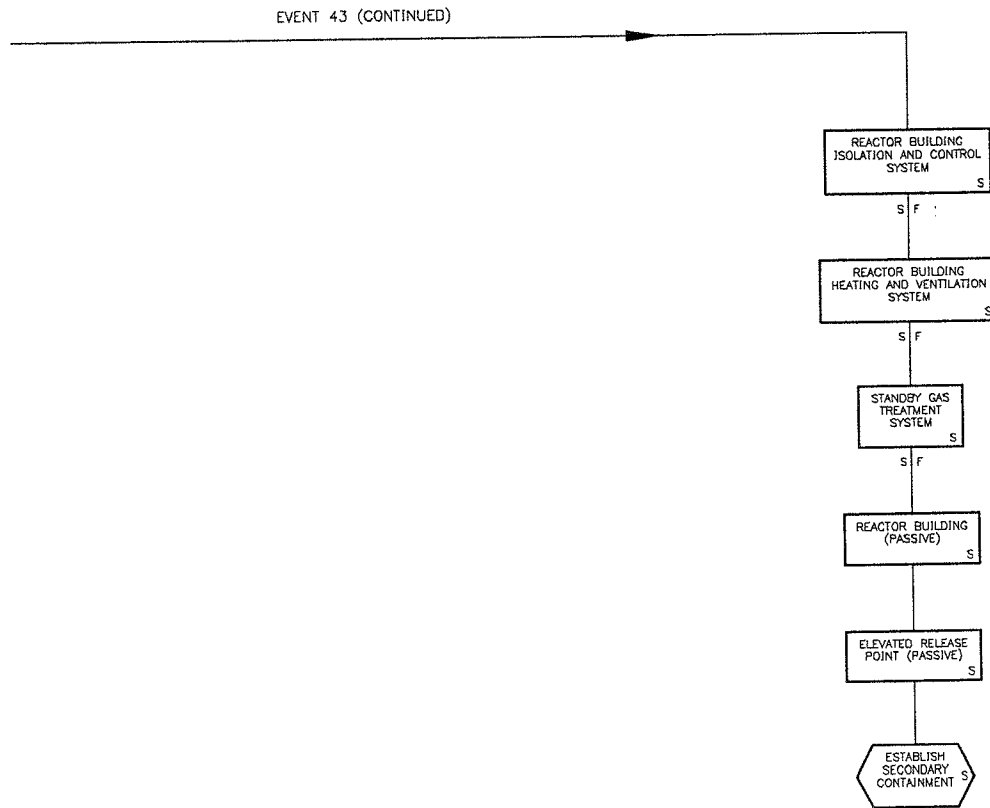
NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR FUEL HANDLING ACCIDENT

FIGURE G-5-39
03/09/07



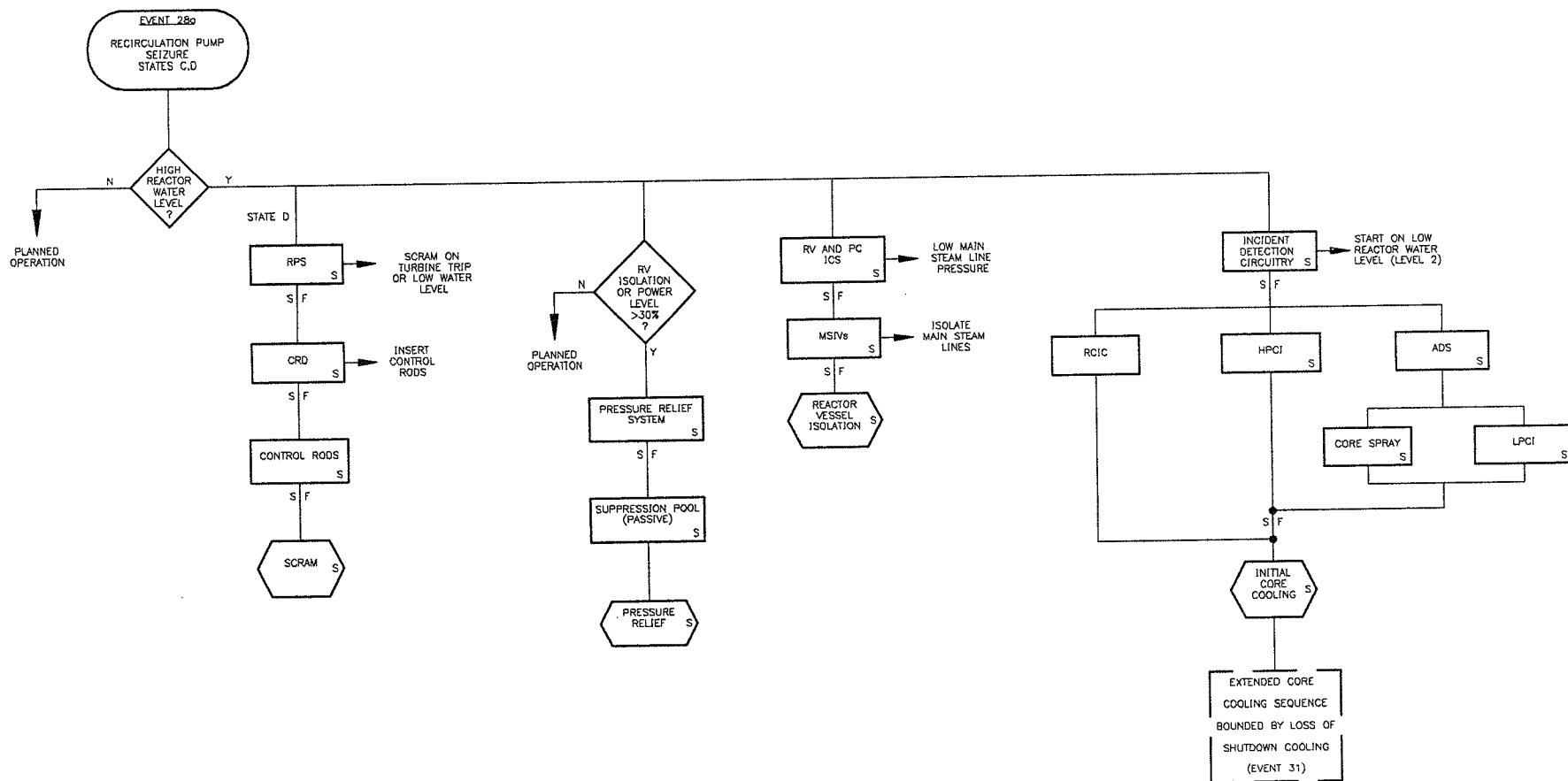


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR
PIPE BREAKS OUTSIDE
PRIMARY CONTAINMENT

SHEET 2
FIGURE G-5-41
8/3/00

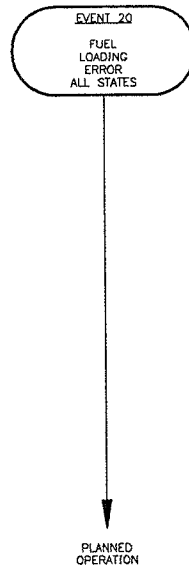


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR RECIRCULATION PUMP SEIZURE

FIGURE G-5-42
8/3/00

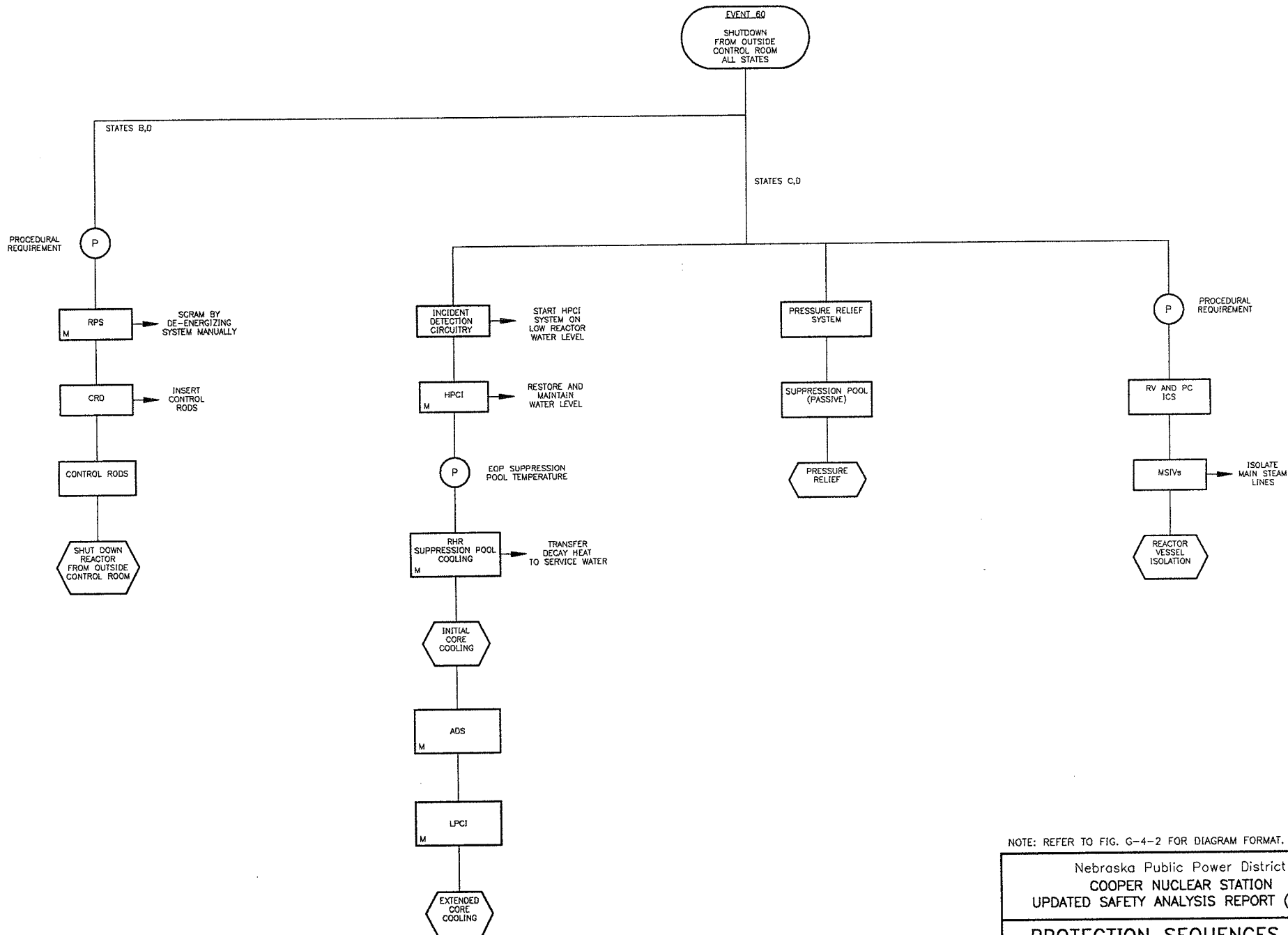


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR
FUEL LOADING
ERROR

FIGURE G-5-43
8/3/00

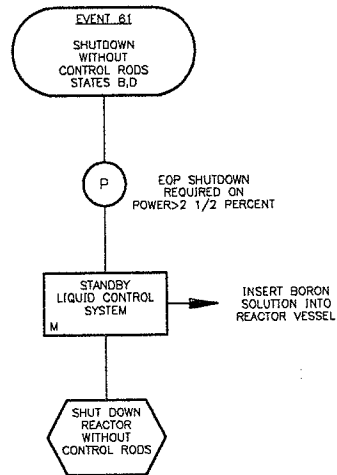


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR
SHUTDOWN FROM OUTSIDE
THE CONTROL ROOM

FIGURE G-5-44
8/3/00

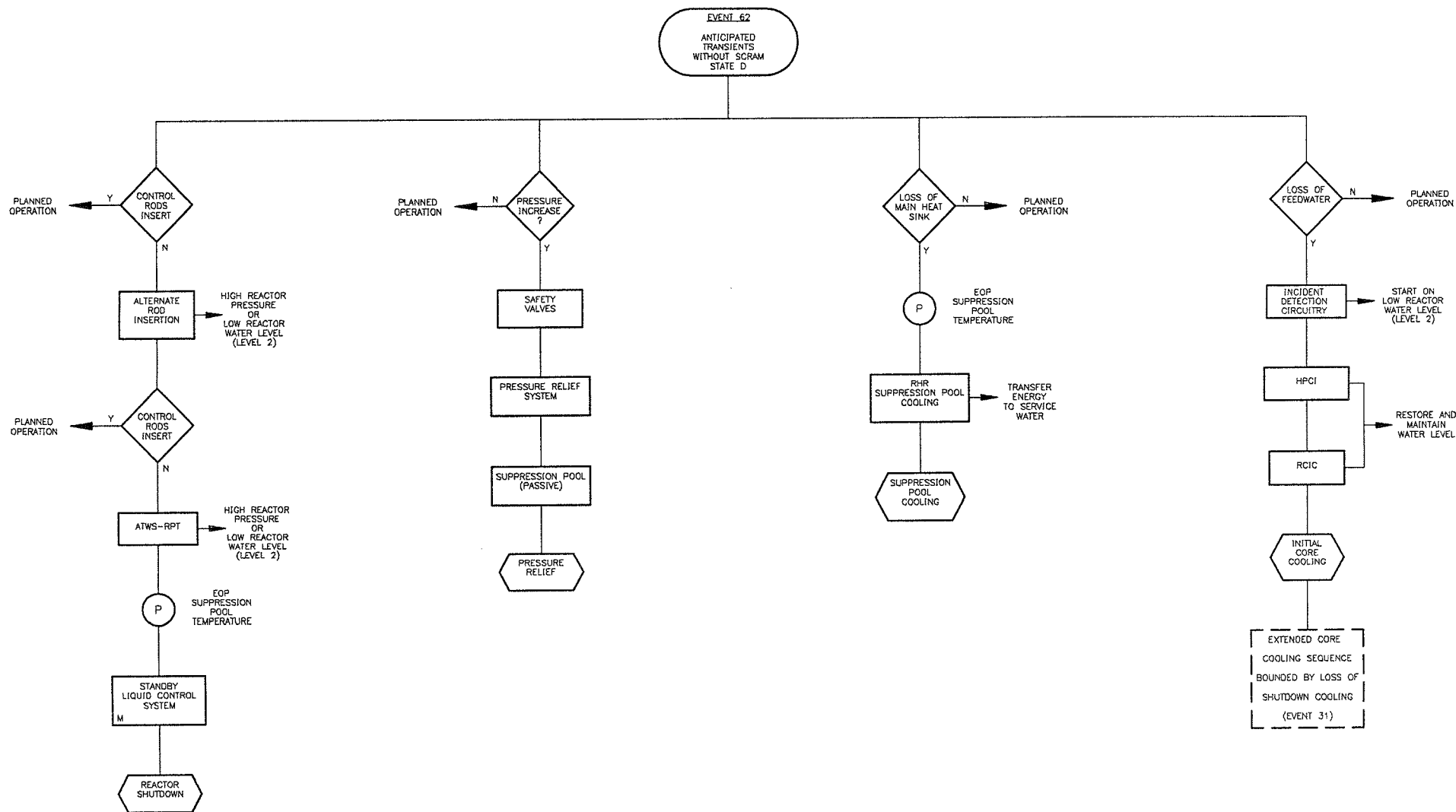


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR
SHUTDOWN WITHOUT
CONTROL RODS

FIGURE G-5-45
8/3/00

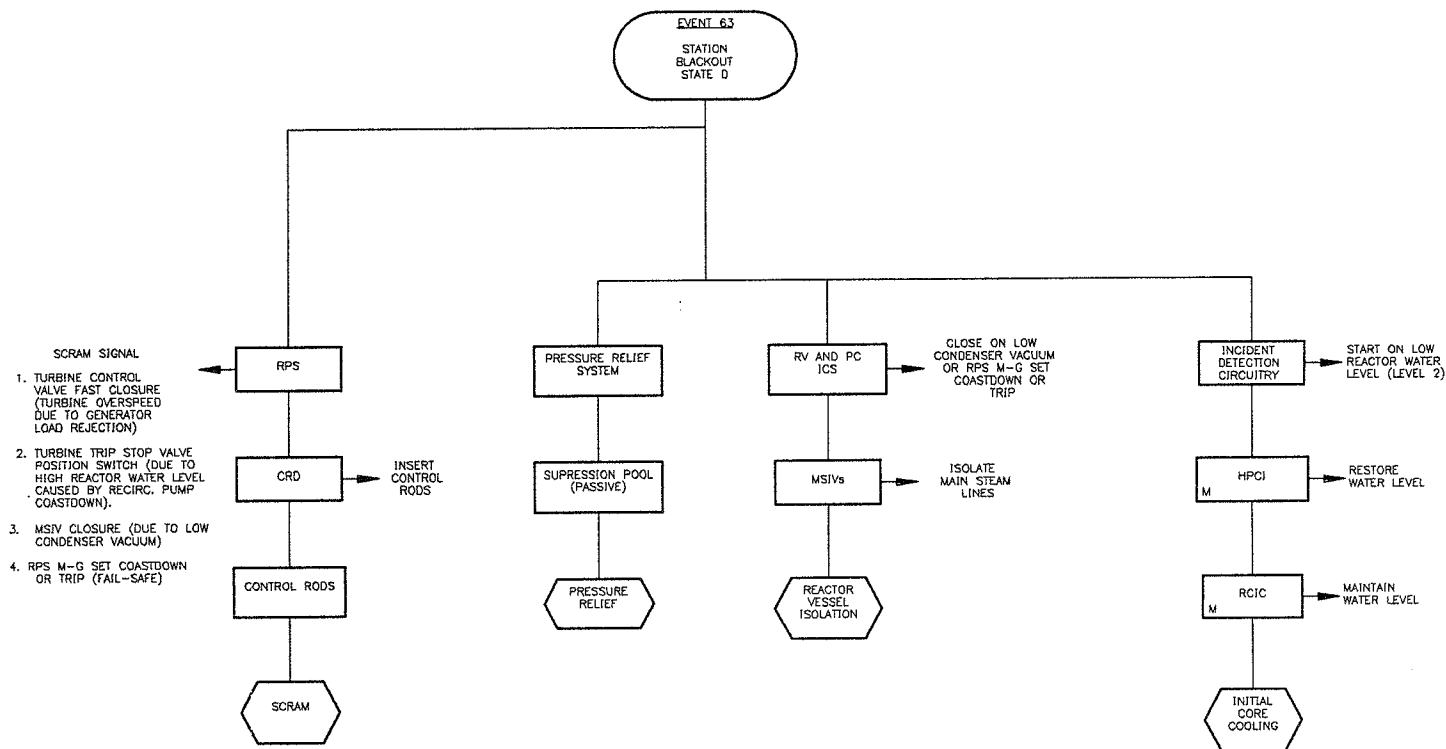


NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
COOPER NUCLEAR STATION
UPDATED SAFETY ANALYSIS REPORT (USAR)

**PROTECTION SEQUENCES
FOR ANTICIPATED TRANSIENTS
WITHOUT SCRAM**

FIGURE G-5-46
8/3/00



NOTE: REFER TO FIG. G-4-2 FOR DIAGRAM FORMAT.

Nebraska Public Power District
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UPDATED SAFETY ANALYSIS REPORT (USAR)

PROTECTION SEQUENCES FOR STATION BLACKOUT

FIGURE G-5-47
8/3/00