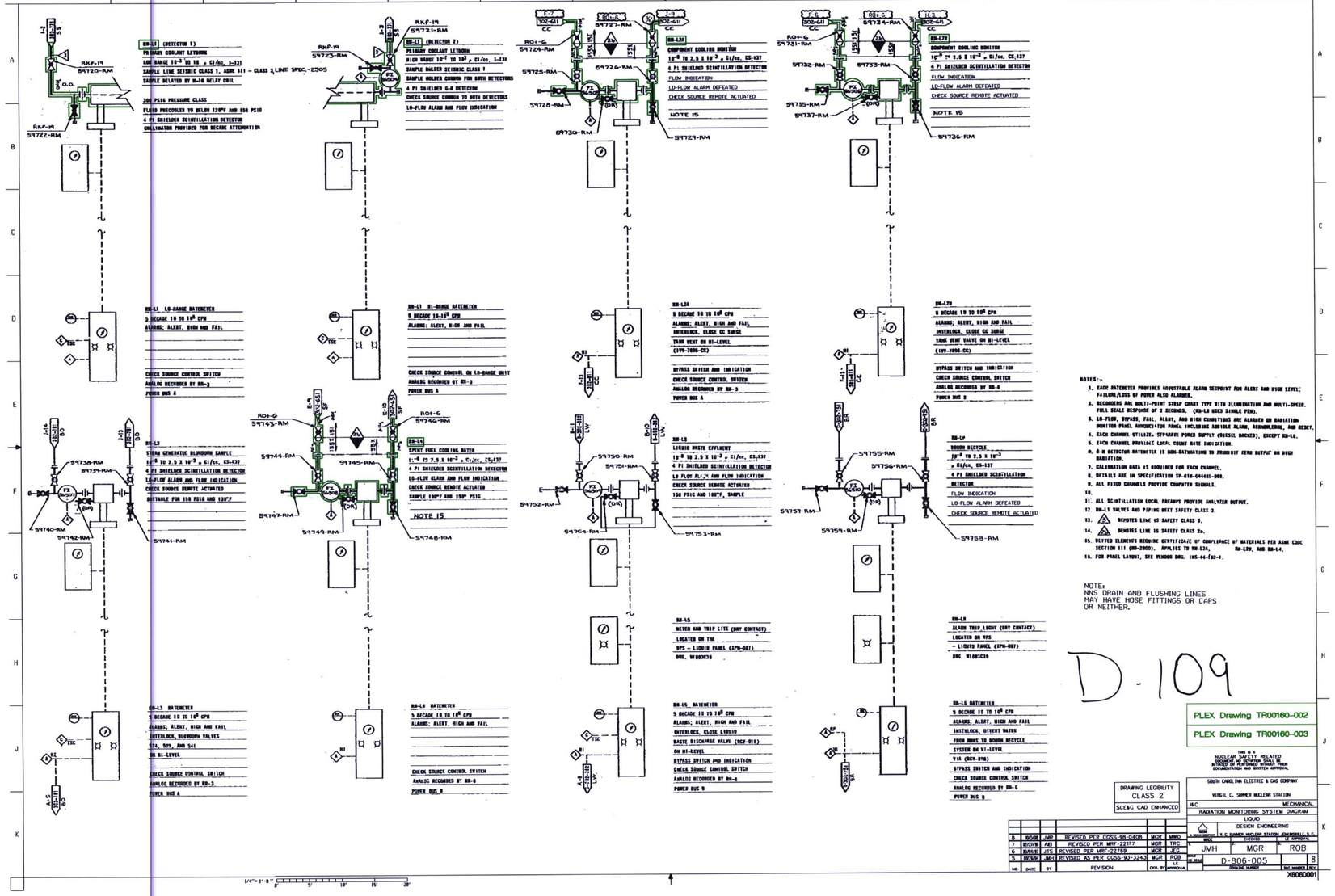
RM-L1 (DETECTOR 1)
PRIMARY COOLANT LETDOWN
LOW RANGE 10^-3 TO 10 μ Ci/cc, I-131
SAMPLE LINE SEISMIC CLASS I, ASME III - CLASS 3 LINE SPEC. -2305
SAMPLE DELAYED BY D-10 DELAY COIL
300 PSIG PRESSURE RELAXS
FLUID PRECOOLED TO BELOW 120°F AND 150 PSIG
4 PI SHIELDED SCINTILLATION DETECTOR
CALIBRATION PROVIDED FOR DECADE ATTENUATION
RM-L1 (DETECTOR 2)
PRIMARY COOLANT LETDOWN
HIGH RANGE 10^-2 TO 10^2 μ Ci/cc, I-131
SAMPLE DELAYED SEISMIC CLASS I
SAMPLE COOLED COMMON FOR BOTH DETECTORS
4 PI SHIELDED G-M DETECTOR
CHECK SOURCE COMMON TO BOTH DETECTORS
LO-FLOW ALARM AND FLOW INDICATION
RM-L2A
COMPONENT COOLING MONITOR
10^-6 TO 2.5 X 10^-3 μ Ci/cc, CS-137
4 PI SHIELDED SCINTILLATION DETECTOR
FLOW INDICATION
LO-FLOW ALARM DEFEATED
CHECK SOURCE REMOTE ACTUATED
NOTE 15
RM-L2B
COMPONENT COOLING MONITOR
10^-6 TO 2.5 X 10^-3 μ Ci/cc, CS-137
4 PI SHIELDED SCINTILLATION DETECTOR
FLOW INDICATION
LO-FLOW ALARM DEFEATED
CHECK SOURCE REMOTE ACTUATED
NOTE 15
RM-L1 LO-RANGE RATEMETER
3 DECADE 10 TO 10^3 CPM
ALARMS: ALERT, HIGH AND FAIL
CHECK SOURCE CONTROL SWITCH
ANALOG RECORDED BY RM-3
POWER BUS A
RM-L1 HI-RANGE RATEMETER
6 DECADE 10-10^6 CPM
ALARMS: ALERT, HIGH AND FAIL
CHECK SOURCE CONTROL ON LO-RANGE UNIT
ANALOG RECORDED BY RM-3
POWER BUS A
RM-L2A
5 DECADE 10 TO 10^5 CPM
ALARMS: ALERT, HIGH AND FAIL
INTERLOCK, CLOSE CC SURGE
TANK VENT ON HI-LEVEL
(LVP-7006-CC)
BYPASS SWITCH AND INDICATION
CHECK SOURCE CONTROL SWITCH
ANALOG RECORDED BY RM-3
POWER BUS A
RM-L2B
6 DECADE 10 TO 10^6 CPM
ALARMS: ALERT, HIGH AND FAIL
INTERLOCK, CLOSE CC SURGE
TANK VENT VALVE ON HI-LEVEL
(LVP-7006-CC)
BYPASS SWITCH AND INDICATION
CHECK SOURCE CONTROL SWITCH
ANALOG RECORDED BY RM-5
POWER BUS B
RM-L3
STEAM GENERATOR BLOWDOWN SAMPLE
10^-6 TO 2.5 X 10^-3 μ Ci/cc, CS-137
4 PI SHIELDED SCINTILLATION DETECTOR
LO-FLOW ALARM AND FLOW INDICATION
CHECK SOURCE REMOTE ACTUATED
SUITABLE FOR 150 PSIG AND 130°F
RM-L4
SPENT FUEL COOLING WATER
10^-6 TO 2.5 X 10^-3 μ Ci/cc, CS-137
4 PI SHIELDED SCINTILLATION DETECTOR
LO-FLOW ALARM AND FLOW INDICATION
CHECK SOURCE REMOTE ACTUATED
SAMPLE 100°F AND 150° PSIG
NOTE 15
RM-L5
LIQUID WASTE EFFLUENT
10^-6 TO 2.5 X 10^-3 μ Ci/cc, CS-137
4 PI SHIELDED SCINTILLATION DETECTOR
LO FLOW ALARM AND FLOW INDICATION
CHECK SOURCE REMOTE ACTUATED
150 PSIG AND 100°F, SAMPLE
RM-LP
BORON RECYCLE
10^-6 TO 2.5 X 10^-3
μ Ci/cc, CS-137
4 PI SHIELDED SCINTILLATION
DETECTOR
FLOW INDICATION
LO-FLOW ALARM DEFEATED
CHECK SOURCE REMOTE ACTUATED
RM-L5
METER AND TRIP LITE (DRY CONTACT)
LOCATED ON THE
WPS - LIQUID PANEL (XPM-087)
DWG. W180D038
RM-LS
ALARM TRIP LIGHT (DRY CONTACT)
LOCATED ON WPS
- LIQUID PANEL (XPM-087)
DWG. W180D038
RM-L3 RATEMETER
5 DECADE 10 TO 10^5 CPM
ALARMS: ALERT, HIGH AND FAIL
INTERLOCK, BLOWDOWN VALVES
524, 525, AND 541
ON HI-LEVEL
CHECK SOURCE CONTROL SWITCH
ANALOG RECORDED BY RM-3
POWER BUS A
RM-L4 RATEMETER
5 DECADE 10 TO 10^5 CPM
ALARMS: ALERT, HIGH AND FAIL
CHECK SOURCE CONTROL SWITCH
ANALOG RECORDED BY RM-6
POWER BUS B
RM-L5 RATEMETER
5 DECADE 10 TO 10^5 CPM
ALARMS: ALERT, HIGH AND FAIL
INTERLOCK, CLOSE LIQUID
WASTE DISCHARGE VALVE (RCV-010)
ON HI-LEVEL
BYPASS SWITCH AND INDICATION
CHECK SOURCE CONTROL SWITCH
ANALOG RECORDED BY RM-5
POWER BUS B
RM-LS RATEMETER
5 DECADE 10 TO 10^5 CPM
ALARMS: ALERT, HIGH AND FAIL
INTERLOCK, DIVERT WATER
FROM BORE TO BORON RECYCLE
SYSTEM ON HI-LEVEL
VIA (RCV-018)
BYPASS SWITCH AND INDICATION
CHECK SOURCE CONTROL SWITCH
ANALOG RECORDED BY RM-5
POWER BUS B
NOTES:-
1. EACH RATEMETER PROVIDES ADJUSTABLE ALARM SETPOINT FOR ALERT AND HIGH LEVEL; FAILURE/LOSS OF POWER ALSO ALARMED.
2. RECORDERS ARE MULTI-POINT STRIP CHART TYPE WITH ILLUMINATION AND MULTI-SPEED. FULL SCALE RESPONSE OF 3 SECONDS. (RD-LR USES SINGLE PEN).
3. LO-FLOW, BYPASS, FAIL, ALERT, AND HIGH CONDITIONS ARE ALARMED ON RADIATION MONITOR PANEL ANNUNCIATOR PANEL INCLUDING AUDIBLE ALARM, ACKNOWLEDGE, AND RESET.
4. EACH CHANNEL UTILIZE: SEPARATE POWER SUPPLY (BRISSL BACKER), EXCEPT RM-L6.
5. EACH CHANNEL PROVIDES LOCAL COUNT RATE INDICATION.
6. G-M DETECTOR RATEMETER IS NON-SATURATING TO PROHIBIT ZERO OUTPUT ON HIGH RADIATION.
7. CALIBRATION DATA IS ROUTINED FOR EACH CHANNEL.
8. DETAILS ARE IN SPECIFICATION SP-816-64601-000.
9. ALL FIXED CHANNELS PROVIDE COMPUTER SIGNALS.
10.
11. ALL SCINTILLATION LOCAL PREAMPS PROVIDE ANALYZER OUTPUT.
12. RM-L1 VALVES AND PIPING MEET SAFETY CLASS 3.
13. ⚠ DENOTES LINE IS SAFETY CLASS 3.
14. ⚠ DENOTES LINE IS SAFETY CLASS 2a.
15. WETTED ELEMENTS REQUIRE CERTIFICATE OF COMPLIANCE OF MATERIALS PER ASME CODE SECTION III (NB-2000). APPLIES TO RM-L3A, RM-L2B, AND RM-L4.
16. FOR PANEL LAYOUT, SEE VENDOR DWG. 1NE-46-F62-3.
NOTE:
NNS DRAIN AND FLUSHING LINES
MAY HAVE HOSE FITTINGS OR CAPS
OR NEITHER.
D-109
PLEX Drawing TR00160-002
PLEX Drawing TR00160-003
THIS D.T. NUCLEAR SAFETY RELATED DOCUMENT, IT MAY NOT BE INITIATED OR PERFORMED WITHOUT PRIOR DOCUMENTATION AND WRITTEN APPROVAL
DRAWING LEGIBILITY CLASS 2
SCE&G CAD ENHANCED
SOUTH CAROLINA ELECTRIC & GAS COMPANY
VIRGIL C. SUMMER NUCLEAR STATION
MECHANICAL
RADIATION MONITORING SYSTEM DIAGRAM
LIQUID
DESIGN ENGINEERING
S.C. SUMMER NUCLEAR STATION JENKINSVILLE, S.C.
DRAWN JMH
CHECKED MGR
LEAD ENGINEER ROB
D-806-005
8
XB060001
1/4"=1'-0"
0 5 10 15 20