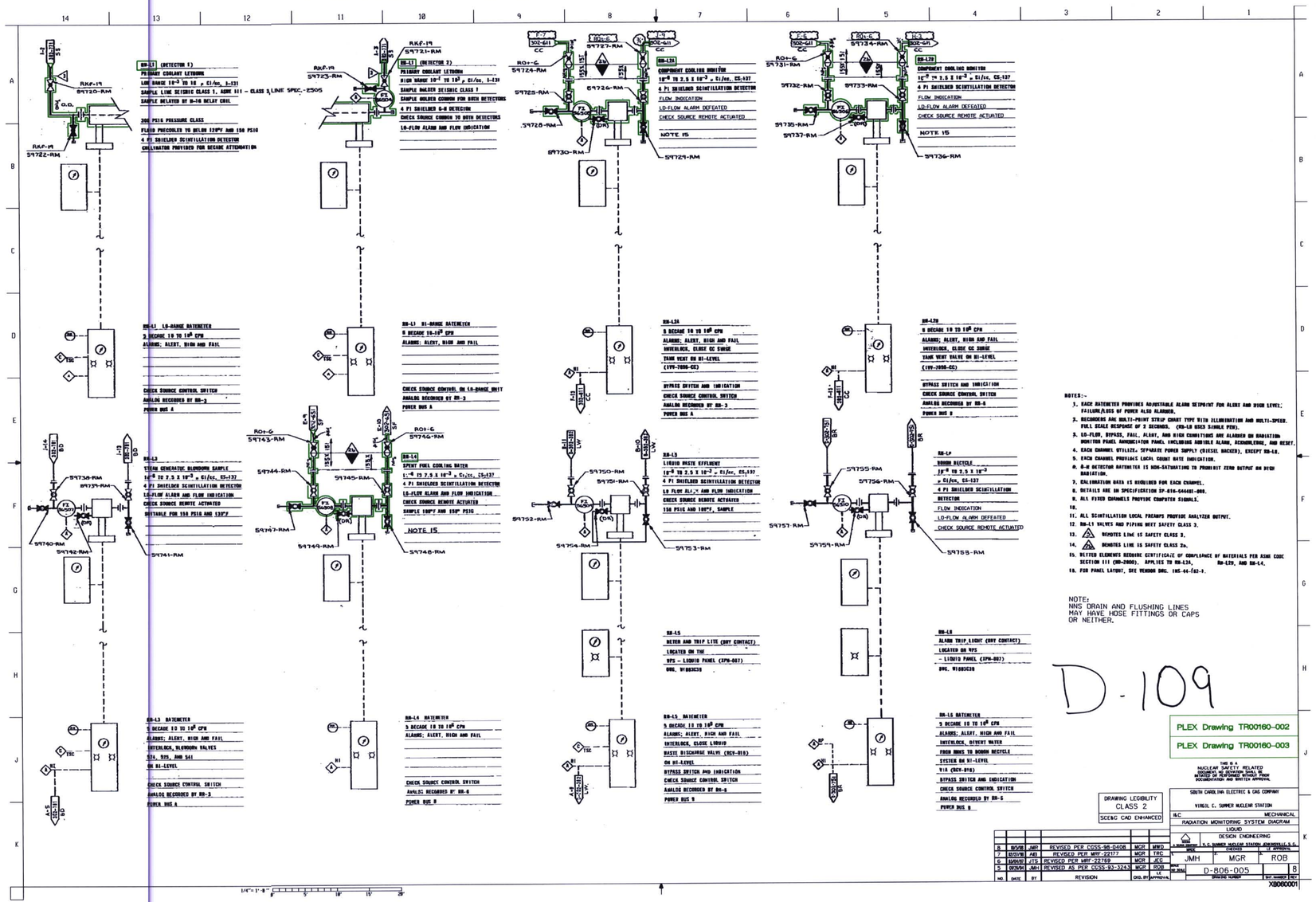
RB-L1 (DETECTOR 1)
PRIMARY COOLANT LETDOWN
LOW RANGE 10⁻³ TO 10 μ Ci/cc, I-131
SAMPLE LINE SEISMIC CLASS 1, ASME III – CLASS 3 LINE SPEC. 2305
SAMPLE DELAYED BY D-16 DELAY COIL
300 PSIG PRESSURE CLASS
FLUID PRECOOLED TO BELOW 120°F AND 150 PSIG
4 PI SHIELDED SCINTILLATION DETECTOR
CALIBRATION PROVIDED FOR DECADE ATTENUATION
RKP-19
S9722-RM
S9720-RM
RB-L1 (DETECTOR 2)
PRIMARY COOLANT LETDOWN
HIGH RANGE 10⁻² TO 10³ μ Ci/cc, I-131
SAMPLE BOILER SEISMIC CLASS 1
SAMPLE BOILER COMMON FOR BOTH DETECTORS
4 PI SHIELDED G-M DETECTOR
CHECK SOURCE COMMON TO BOTH DETECTORS
LO-FLOW ALARM AND FLOW INDICATION
S9723-RM
S9721-RM
RB-L2B
COMPONENT COOLING MONITOR
10⁻⁶ TO 2.5 X 10⁻² μ Ci/cc, CS-137
4 PI SHIELDED SCINTILLATION DETECTOR
FLOW INDICATION
LO-FLOW ALARM DEFEATED
CHECK SOURCE REMOTE ACTUATED
NOTE 15
S9724-RM
S9725-RM
S9728-RM
S9730-RM
S9727-RM
S9726-RM
S9729-RM
RB-L2A
COMPONENT COOLING MONITOR
10⁻⁶ TO 2.5 X 10⁻² μ Ci/cc, CS-137
4 PI SHIELDED SCINTILLATION DETECTOR
FLOW INDICATION
LO-FLOW ALARM DEFEATED
CHECK SOURCE REMOTE ACTUATED
NOTE 15
S9731-RM
S9732-RM
S9735-RM
S9737-RM
S9734-RM
S9733-RM
S9736-RM
RB-L1 LO-RANGE RATEMETER
5 DECADE 10 TO 10⁵ CPM
ALARMS: ALERT, HIGH AND FAIL
CHECK SOURCE CONTROL SWITCH
ANALOG RECORDED BY RB-3
POWER BUS A
RB-L1 HI-RANGE RATEMETER
6 DECADE 10-10⁶ CPM
ALARMS: ALERT, HIGH AND FAIL
CHECK SOURCE CONTROL ON LO-RANGE UNIT
ANALOG RECORDED BY RB-3
POWER BUS A
RB-L2A
5 DECADE 10 TO 10⁵ CPM
ALARMS: ALERT, HIGH AND FAIL
INTERLOCK, CLOSE CC SURGE
TANK VENT ON HI-LEVEL
(1PV-7898-CC)
BYPASS SWITCH AND INDICATION
CHECK SOURCE CONTROL SWITCH
ANALOG RECORDED BY RB-5
POWER BUS A
RB-L2B
6 DECADE 10 TO 10⁵ CPM
ALARMS: ALERT, HIGH AND FAIL
INTERLOCK, CLOSE CC SURGE
TANK VENT VALVE ON HI-LEVEL
(1PV-7898-CC)
BYPASS SWITCH AND INDICATION
CHECK SOURCE CONTROL SWITCH
ANALOG RECORDED BY RB-5
POWER BUS B
RB-L3
STEAM GENERATOR BLOWDOWN SAMPLE
10⁻⁶ TO 2.5 X 10⁻² 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 120°F
S9740-RM
S9739-RM
S9742-RM
S9741-RM
RB-L4
SPENT FUEL COOLING WATER
10⁻⁶ TO 7.5 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
S9743-RM
S9744-RM
S9747-RM
S9745-RM
S9749-RM
S9746-RM
S9748-RM
RB-L5
LIQUID WASTE EFFLUENT
10⁻⁶ TO 2.5 X 10⁻² 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
S9750-RM
S9751-RM
S9752-RM
S9754-RM
S9753-RM
RB-LP
NOBLE RECYCLE
10⁻⁶ TO 2.5 X 10⁻²
μ Ci/cc, CS-137
4 PI SHIELDED SCINTILLATION
DETECTOR
FLOW INDICATION
LO-FLOW ALARM DEFEATED
CHECK SOURCE REMOTE ACTUATED
S9755-RM
S9756-RM
S9757-RM
S9759-RM
S9758-RM
RB-L3 RATEMETER
5 DECADE 10 TO 10⁵ CPM
ALARMS: ALERT, HIGH AND FAIL
INTERLOCK, BLOWDOWN VALVES
526, 525, AND 541
ON HI-LEVEL
CHECK SOURCE CONTROL SWITCH
ANALOG RECORDED BY RB-3
POWER BUS A
RB-L4 RATEMETER
5 DECADE 10 TO 10⁵ CPM
ALARMS: ALERT, HIGH AND FAIL
CHECK SOURCE CONTROL SWITCH
ANALOG RECORDED BY RB-6
POWER BUS B
RB-L5
METER AND TRIP LITE (DRY CONTACT)
LOCATED ON THE
RPS – LIQUID PANEL (RPS-007)
DWG. 91803C30
RB-L5 RATEMETER
5 DECADE 10 TO 10⁵ CPM
ALARMS: ALERT, HIGH AND FAIL
INTERLOCK, CLOSE LIQUID
WASTE DISCHARGE VALVE (WDV-010)
ON HI-LEVEL
BYPASS SWITCH AND INDICATION
CHECK SOURCE CONTROL SWITCH
ANALOG RECORDED BY RB-6
POWER BUS B
RB-LP
ALARM TRIP LIGHT (DRY CONTACT)
LOCATED ON RPS
– LIQUID PANEL (RPS-007)
DWG. 91803C30
RB-LP RATEMETER
5 DECADE 10 TO 10⁵ CPM
ALARMS: ALERT, HIGH AND FAIL
INTERLOCK, DIVERT WATER
FROM WDHX TO DOMOH RECYCLE
SYSTEM ON HI-LEVEL
VIA (WDV-010)
BYPASS SWITCH AND INDICATION
CHECK SOURCE CONTROL SWITCH
ANALOG RECORDED BY RB-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 DECADES. (RB-LP 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 UTILIZES SEPARATE POWER SUPPLY (DIESEL BACKED), EXCEPT RB-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 RECORDED 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. RB-L1 VALVES AND PIPING MEET SAFETY CLASS 2.
13. ⚠ DENOTES LINE IS SAFETY CLASS 2.
14. ⚠ DENOTES LINE IS SAFETY CLASS 2a.
15. DEFINED ELEMENTS REQUIRE CERTIFICATE OF COMPLIANCE OF MATERIALS PER ASME CODE SECTION III (NB-2000). APPLIES TO RB-L2A, RB-L2B, RB-L4, RB-L5, AND RB-L6.
16. FOR PANEL LAYOUT, SEE VENDOR DWG. 18E-66-762-1.
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.W. IS NUCLEAR SAFETY RELATED DOCUMENT. SECTION XI, NI 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
N.C. MECHANICAL
RADIATION MONITORING SYSTEM DIAGRAM
LIQUID
DESIGN ENGINEERING
V.C. SUMMER NUCLEAR STATION, JENKINSVILLE, S.C.
DESIGNED JMH CHECKED MGR APPROVED ROB
DRAWING NUMBER D-806-005 SHT. NUMBER/REV. 8
XB080001
NO. DATE BY REVISION CHKD. BY APPROVAL
8 8/5/98 JMH REVISED PER CCSS-98-0408 MGR MWD
7 8/27/96 ABJ REVISED PER MRF-22177 MGR TRC
6 8/09/93 JTS REVISED PER MRF-22769 MGR JEC
5 07/29/91 JMH REVISED AS PER CCSS-93-3243 MGR ROB
1/4"= 1'-0"