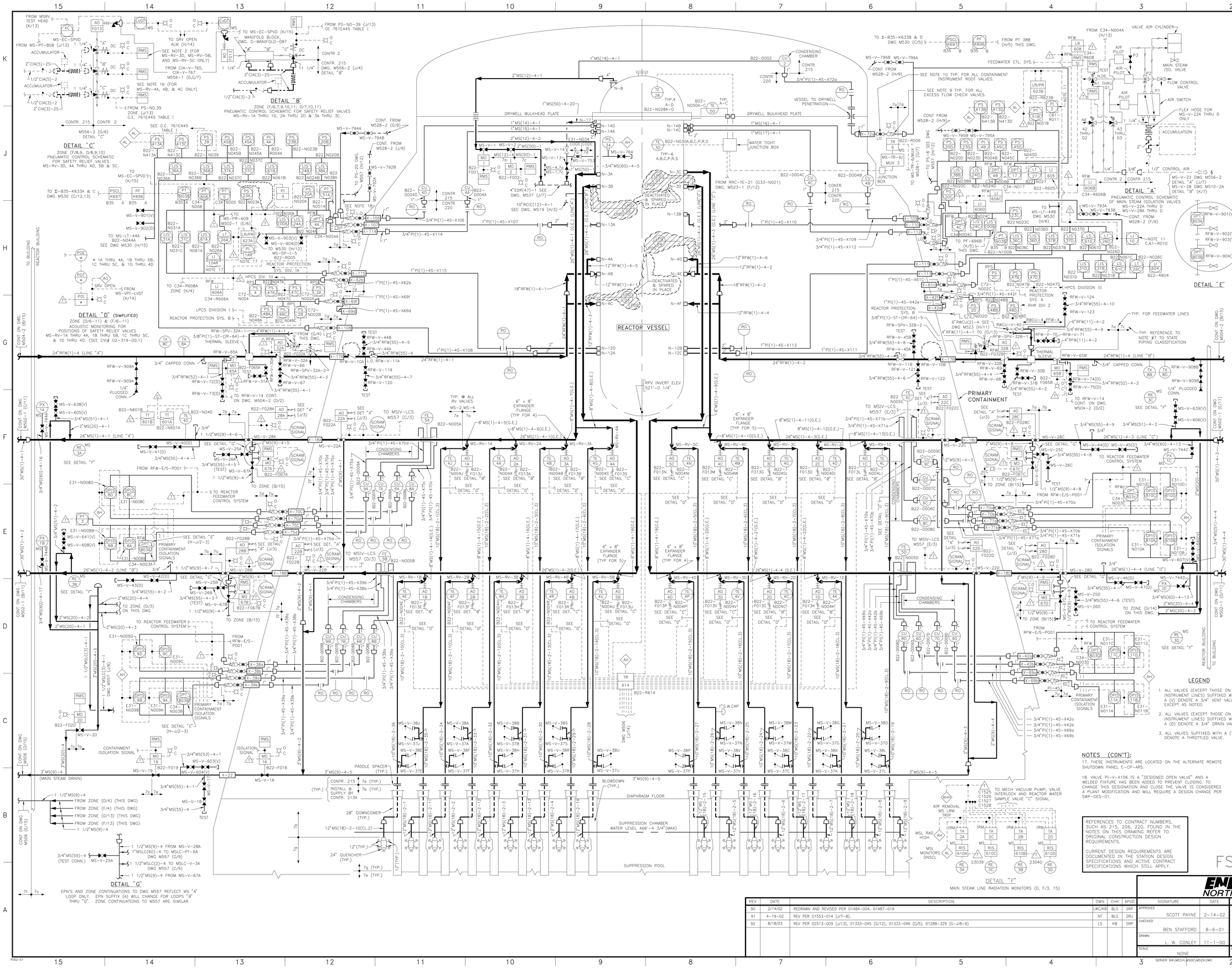

NOTES:

1. FOR ALL INITIATION SIGNALS SEE G.E. NUCLEAR BOILER SYSTEM B22–1040, DOCUMENT #761E445, TABLE IV & V.
2. THIS EQUIPMENT IS NORMALLY CONTROLLED FROM THE MAIN CONTROL ROOM. IF THE MAIN CONTROL ROOM MUST BE VACATED, THIS CONTROL POINT MAY BE ISOLATED AND CONTROL TRANSFERRED TO THE ALTERNATE REMOTE SHUTDOWN PANEL, E–CD–ARS.
3. (DELETED)
4. ALL PIPING SYSTEMS IDENTIFIED BY THE PREFIX "PI" SHALL BE SUPPLIED AND INSTALLED BY CONTRACT #220.
5. (DELETED)
6. (DELETED)
7. PIPING, VALVES, AND ASSOCIATED COMPONENTS ON THIS DWG SHALL BE CLASSIFIED AS FOLLOWS (BREAK POINTS ARE INDICATED ON THE FLOW DIAGRAM):

   a. PROCESS (FEEDWATER OR STEAM) AND INSTRUMENT PIPING WITHIN THE PRIMARY CONTAINMENT AND OUT THROUGH THE OUTERMOST ISOLATION VALVES, EXCEPT SAFETY/RELIEF VALVE DISCHARGE.

      SEISMIC CATEGORY I
      QUALITY CLASS I
      CODE GROUP A

   b. MAIN STEAM PROCESS PIPING BEYOND THE OUTERMOST CONTAINMENT ISOLATION VALVES, EXCEPT BRANCH LINES BEYOND THE FIRST VALVE THAT IS NORMALLY CLOSED OR CAPABLE OF TIMELY ACTUATION. SAFETY/RELIEF DISCHARGE PIPING AS NOTED. INSTRUMENTATION TO THE INSTRUMENT OR AS NOTED TO THE FIRST VALVE THAT IS CAPABLE OF TIMELY ACTUATION.

      SEISMIC CATEGORY I
      QUALITY CLASS I
      CODE GROUP B

   c. FEEDWATER PIPING BEYOND THE OUTERMOST CONTAINMENT ISOLATION VALVES. PIPING DOWNSTREAM OF THE FIRST VALVE CAPABLE OF TIMELY ACTUATION ON BRANCH LINES THAT CONNECT TO THE MAIN STEAM LINE BETWEEN PRIMARY CONTAINMENT AND TURBINE STOP VALVE.

      SEISMIC CATEGORY II ⊕
      QUALITY CLASS II
      CODE GROUP D

   ⊕ THE FEEDWATER PIPING, STEAM PIPING, AND THEIR PIPE SUPPORTS IN THE STEAM TUNNEL ARE TO BE DESIGNED TO SEISMIC CATEGORY I LOADS.

   d. INSTRUMENTATION CONNECTED TO PRIMARY CONTAINMENT. INSTRUMENT PIPING OUTBOARD OF THE SECOND ISOLATION VALVES ON LINES THAT PENETRATE PRIMARY CONTAINMENT.

      SEISMIC CATEGORY I
      QUALITY CLASS I
      CODE GROUP B

   e. DOWNCOMERS AND SAFETY/RELIEF VALVE DISCHARGE PIPING AS NOTED.

      SEISMIC CATEGORY I
      QUALITY CLASS I
      CODE GROUP C

      CODE STAMP NOT REQUIRED FOR DOWNCOMERS

      ⊕ SEE SECTION 15Q, WNP–2 SPEC

   f. LINE 1 1/2"MS(9)–4 DOWNSTREAM OF MS–V–67A, B, C & D THROUGH THE REACTOR BUILDING WALL IS,

      SEISMIC CATEGORY II ⊕
      QUALITY CLASS II
      CODE GROUP D
      ⊕ SUPPORTED SEISMIC CATEGORY I

      IN THE TURBINE BUILDING THIS LINE IS,

      SEISMIC CATEGORY II
      QUALITY CLASS II
      CODE GROUP D

   g. MSRV QUENCHERS AND DOWNCOMERS AS NOTED SHALL BE CLASSIFIED AS FOLLOWS:

      SEISMIC CATEGORY I
      QUALITY CLASS I

      CODE GROUP: B FOR MATERIAL FABRICATION AND INSTALLATION ONLY. CODE STAMP NOT REQUIRED.

8. ALL INSTRUMENT ROOT VALVES NOT LABELED WILL BE 3/4" GLOBE VALVES UNLESS SPECIFICALLY NOTED OTHERWISE.
9. EXCESS FLOW CHECK VALVES SHALL BE TAGGED AS FOLLOWS: PI–EFC–X (PENETRATION NO).
10. CONTAINMENT INSTRUMENTATION ROOT VALVES SHALL BE TAGGED AS FOLLOWS: PI–V–X (PENETRATION NO).
11. THESE INSTRUMENTS ARE LOCATED ON REMOTE SHUTDOWN PANEL.
12. ALL INSTRUMENTATION ON THIS DRAWING TO BE IDENTIFIED BY A PREFIX "MS" UNLESS OTHERWISE NOTED.
13. ALL INSTRUMENT LINES ARE DESIGNED BY CODE & LINE NUMBER.

    A.) EXAMPLE: LINES ORIGINATING OUTSIDE CONTAINMENT,

    1/2"PI(1)–ST – (H22–P021)–A6
    CODE DESIGNATION — LINE NUMBER

    B.) EXAMPLE: LINES ORIGINATING INSIDE CONTAINMENT,

    1/2"PI(1)–4S – X106
    CODE DESIGNATION — LINE NUMBER

    C.) EXAMPLE: CONTINUATION OF THE LINE OUTSIDE CONTAINMENT IS DESIGNATED AS FOLLOWS, WITH LINE NUMBERS NOT SHOWN.

    1/2"PI(1)–4S – X106
    CODE DESIGNATION — LINE NUMBER

14. ASME CODE CASE N–241 MAY BE APPLIED TO 10" & 12"MS(18)–2 BELOW ELEVATION 466'–0 3/4".
15. CODE BREAK DEFINITIONS FOR THERMOWELLS ARE SHOWN ON M610, "INSTALLATION OF THERMOWELLS & SAMPLE PROBES."
16. THIS EQUIPMENT IS NORMALLY CONTROLLED FROM THE MAIN CONTROL ROOM. IF THE MAIN CONTROL ROOM MUST BE VACATED, THIS CONTROL POINT MAY BE ISOLATED AND CONTROL TRANSFERRED TO THE REMOTE SHUTDOWN PANEL C61–P001.

(NOTES CONTINUED ON LEFT)

LEGEND

1. ALL VALVES (EXCEPT THOSE ON INSTRUMENT LINES) SUFFIXED WITH A (V) DENOTE A 3/4" VENT VALVE EXCEPT AS NOTED.
2. ALL VALVES (EXCEPT THOSE ON INSTRUMENT LINES) SUFFIXED WITH A (D) DENOTE A 3/4" DRAIN VALVE.
3. ALL VALVES SUFFIXED WITH A (TH) DENOTE A THROTTLED VALVE.

NOTES (CON'T):

17. THESE INSTRUMENTS ARE LOCATED ON THE ALTERNATE REMOTE SHUTDOWN PANEL E–CP–ARS.
18. VALVE PI–V–X106 IS A "DESIGNED OPEN VALVE" AND A WELDED FIXTURE HAS BEEN ADDED TO PREVENT CLOSING. TO CHANGE THIS DESIGNATION AND CLOSE THE VALVE IS CONSIDERED A PLANT MODIFICATION AND WILL REQUIRE A DESIGN CHANGE PER SWP–DES–01.

REFERENCES TO CONTRACT NUMBERS, SUCH AS 215, 206, 220, FOUND IN THE NOTES ON THIS DRAWING REFER TO ORIGINAL CONSTRUCTION DESIGN REQUIREMENTS.

CURRENT DESIGN REQUIREMENTS ARE DOCUMENTED IN THE STATION DESIGN SPECIFICATIONS AND ACTIVE CONTRACT SPECIFICATIONS WHICH STILL APPLY.

FSAR FIG.

REV	DATE	DESCRIPTION	DWN	CHK	APVD
90	2/14/02	REDRAWN AND REVISED PER 01484–004, 01487–019	LWC/KB	BLS	SRP
91	4–19–02	REV PER 01553–014 (J/7–8).	NT	BLS	DRJ
92	8/18/03	REV PER 02513–009 (J/13), 01333–045 (G/12), 01333–046 (G/5), 01288–329 (G–J/8–9)	LS	KB	SRP

ENERGY NORTHWEST — COLUMBIA GENERATING STATION

SIGNATURE	DATE	TITLE
APPROVED SCOTT PAYNE	2–14–02	FLOW DIAGRAM NUCLEAR BOILER–MAIN STEAM SYSTEM REACTOR BUILDING
CHECKED BEN STAFFORD	8–6–01	
DRAWN L. W. CONLEY	11–1–00	
SCALE NONE	DWG NO. M529	REV. 92

SERVER B:\MECH\M500\M529.DWG

TOP TIER