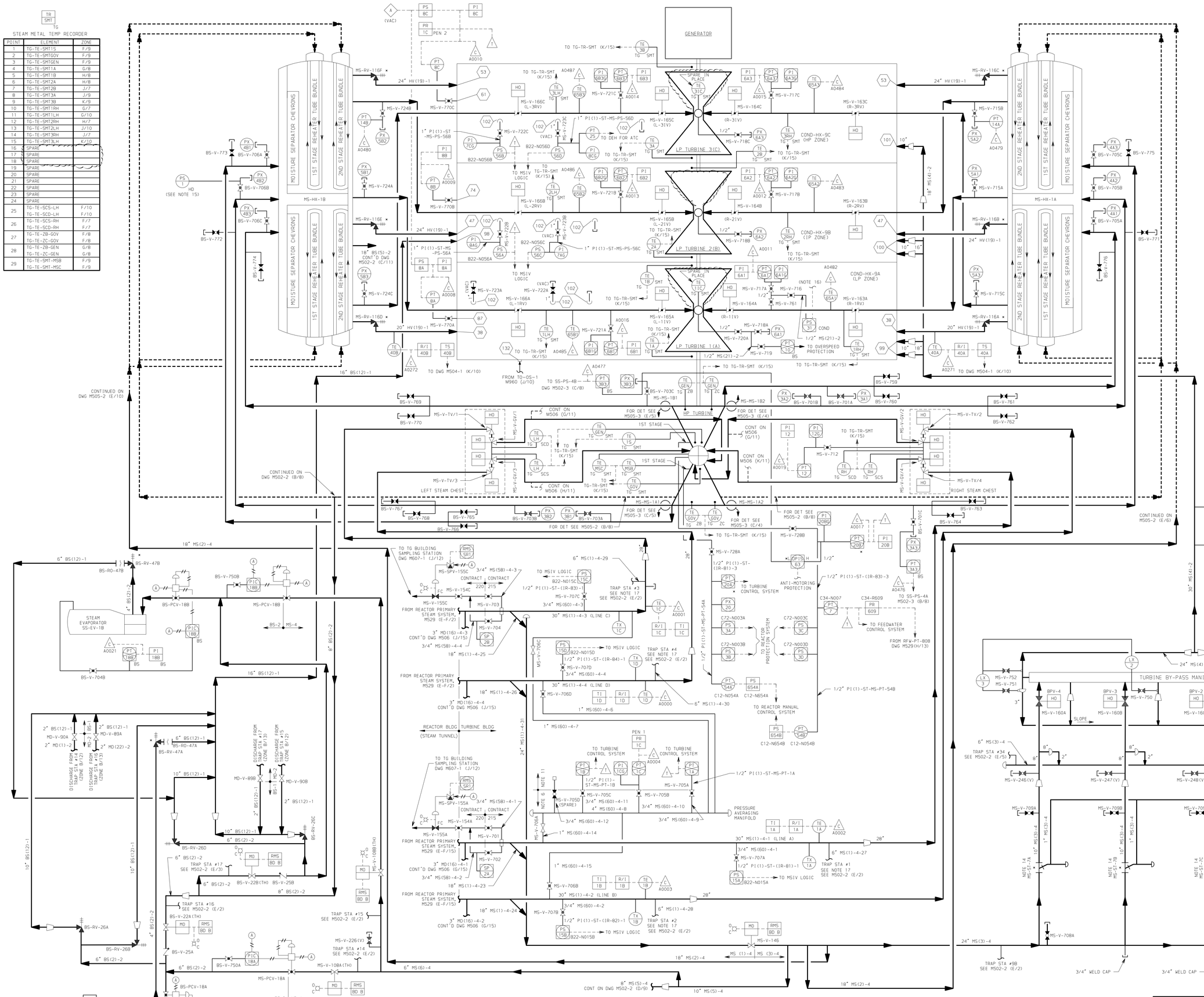
TR
SMT
TG

STEAM METAL TEMP RECORDER

| POINT | ELEMENT | ZONE |
|---|---|---|
| 1 | TG-TE-SMT1S | F/9 |
| 2 | TG-TE-SMTGOV | F/9 |
| 3 | TG-TE-SMTGEN | F/9 |
| 4 | TG-TE-SMT1A | G/8 |
| 5 | TG-TE-SMT1B | H/8 |
| 6 | TG-TE-SMT2A | H/8 |
| 7 | TG-TE-SMT2B | J/7 |
| 8 | TG-TE-SMT3A | J/9 |
| 9 | TG-TE-SMT3B | K/9 |
| 10 | TG-TE-SMT1RH | G/7 |
| 11 | TG-TE-SMT1LH | G/10 |
| 12 | TG-TE-SMT2RH | H/7 |
| 13 | TG-TE-SMT2LH | J/10 |
| 14 | TG-TE-SMT3RH | J/7 |
| 15 | TG-TE-SMT3LH | K/10 |
| 16 | SPARE | |
| 17 | SPARE | |
| 18 | SPARE | |
| 19 | SPARE | |
| 20 | SPARE | |
| 21 | SPARE | |
| 22 | SPARE | |
| 23 | SPARE | |
| 24 | SPARE | |
| 25 | TG-TE-SCS-LH<br>TG-TE-SCD-LH | F/10<br>F/10 |
| 26 | TG-TE-SCS-RH<br>TG-TE-SCD-RH | F/7<br>F/7 |
| 27 | TG-TE-ZB-GOV<br>TG-TE-ZC-GOV | F/8<br>F/8 |
| 28 | TG-TE-ZB-GEN<br>TG-TE-ZC-GEN | G/8<br>G/8 |
| 29 | TG-TE-SMT-MSB<br>TG-TE-SMT-MSC | F/9<br>F/9 |




## NOTES:

1. ALL TEMPERATURE WELL CONNECTIONS TO BE 1 1/2" UNLESS SPECIFICALLY NOTED OTHERWISE.
2. ALL INSTRUMENTATION ON THIS DRAWING TO BE IDENTIFIED BY PREFIX "MS" UNLESS SPECIFICALLY NOTED OTHERWISE.
   (EXAMPLE:) BS
3. ALL INSTRUMENT ROOT VALVES TO BE 3/4" GLOBE VALVES UNLESS SPECIFICALLY NOTED OTHERWISE.
4. ALL ITEMS MARKED * ARE FURNISHED WITH ASSOCIATED EQUIPMENT.
5. ALL PIPING, VALVES AND ASSOCIATED COMPONENTS ON THIS DRAWING EXCEPT RPS/MSIV LOGIC INSTRUMENTS, MS(1)-4, MD(16)-4, MS(58)-1 AND MS(60)-1 SYSTEMS SHALL BE CLASSIFIED AS FOLLOWS:
   QUALITY CLASS II
   SEISMIC CATEGORY II
   CODE GROUP D
6. ALL PIPING, VALVES AND ASSOCIATED COMPONENTS ON THIS DRAWING IN THE RPS/MSIV LOGIC INSTRUMENTATION, MS(1)-4 (EXCEPT FOR LINES AT MS-T-1A, MS-T-1B, MS-T-1C AND MS-T-1D AS SHOWN ON M502-2 (E/2)), MD(16)-4, MS(58)-1 AND MS(60)-1 (EXCEPT AS NOTED IN NOTE 11) SHALL BE CLASSIFIED AS FOLLOWS:
   QUALITY CLASS I
   SEISMIC CATEGORY I
   CODE GROUP B
   Ø EXCEPT AS NOTED ON M619 INSTRUMENT CONNECTION DIAGRAMS.
7. (100) NUMBERS IN HEXAGON DENOTE ITEM NUMBERS FOR WECO CONDENSER NOZZLE CONNECTIONS.
8. (DELETED)
9. (DELETED)
10. THESE COMPUTER INPUT POINTS ARE NOT USED.
11. PIPING DOWNSTREAM OF ROOT VALVES MS-V-705A, -705B, -705C & -705D SHALL BE CLASSIFIED AS FOLLOWS:
    QUALITY CLASS II
    SEISMIC CATEGORY II
    CODE GROUP D
12. (DELETED)
13. ALL INSTRUMENT LINES ARE DESIGNATED BY CODE & LINE NUMBER. EXAMPLE: LINES ORIGINATING OUTSIDE CONTAINMENT.
    1/2" PI(1)-ST (H22-P021)-A6
    CODE DESIGNATION — LINE NUMBER
14. MS-ST-7A, -7B, -7C & -7D HAVE THE STRAINER BASKET REMOVED.
15. SEE MS05-2 (ZONE E/2 & E/14) FOR HD-PS-1 SIGNAL INPUTS TO HD-SPV-28, -128, -29 & -129. SEE MS05-3 (ZONE F/7) FOR HD-PS-1 INPUTS TO HD-LIC-5A22 & HD-LIC-5B22.
16. TO COND-SPV-30A, -30B & -30C ON DRAWING M504-1 (K/3) AND TO MD-SPV-75, -76, -77, -78, -79, -80, -81, -82, -85, -86 & -87 ON DRAWING M506 (G-K/7-12).
17. TRAP LINES THAT ATTACH TO THE MAIN STEAM LINES MS(1)-4 IN THE TURBINE BUILDING ARE CLASSIFIED PER NOTE 6 OUT THROUGH THE FIRST VALVE. PIPING DOWNSTREAM OF THE FIRST VALVE IS CLASSIFIED AS FOLLOWS:
    QUALITY CLASS II
    SEISMIC CATEGORY II
    (SUPPORTED SEISMIC I)
    CODE GROUP D

## LEGEND:

1. ALL VALVES SUFFIXED WITH A (V) DENOTE A 3/4" VENT VALVE.
2. ALL VALVES SUFFIXED WITH A (D) DENOTE A 3/4" DRAIN VALVE.
3. ALL VALVES SUFFIXED WITH A (TH) DENOTE A THROTTLED VALVE.

FSAR FIG.

| REV | DATE | DESCRIPTION | DWN | CHK | APVD |
|---|---|---|---|---|---|
| 25 | 2-8-02 | REV PER 01487-007 (E/2, G/5,10-11, H/1). | NT | HL | SRP |
| 26 | 04-19-02 | REV PER 01607-003 (C/10) | JFT | BLS | DRJ |
| 27 | 6-27-03 | REV PER 02417-003 (D/10) | CMO | KB | DRJ |
| 28 | 4-7-05 | REV PER 03633 (B/13, E/13) | H.AL | HL | SRP |
| 29 | 7-8-05 | REV PER 03970-006 (H-K/8), 03970-007 (J/15) | PL | HL | SRP |

ENERGY NORTHWEST
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COLUMBIA GENERATING STATION

| SIGNED | | DATE |
|---|---|---|
| APPROVED | JE PARKER | 3-11-87 |
| ENGINEER | JE PARKER | 3-11-87 |
| DESIGN SUPV | JR MILLER | 3-11-87 |
| CHECKED | S R PAYNE | 4-24-86 |
| DRAWN | D JACOBSEN | 4-23-86 |

TITLE
FLOW DIAGRAM
MAIN & EXHAUST STEAM SYSTEM
TURBINE GENERATOR BUILDING

DRAWING # M502
SCALE N/A REV. 29 SHEET 1 OF 3

TOP TIER