

**GENERAL NOTES**

1. INSTRUMENT SENSING LINES ARE SHOWN DIAGRAMMATICALLY. CONTRACTOR TO ESTABLISH EXACT ROUTING. IN GENERAL, EMBEDDED STEEL OR OTHER SUPPORTING STEEL HAS BEEN PROVIDED IN THE REACTOR AUX. BLDG., REACTOR BLDG. & FUEL HANDLING BLDG. ALONG THE CONCEPTUAL ROUTING.
2. TUBING OR PIPING SHOULD NOT BE ROUTED ACROSS EQUIPMENT REMOVAL AREAS, BELOW MONORAILS NOR ABOVE OR BELOW HATCHES.
3. INSTRUMENT SENSING LINES TO SLOPE CONTINUOUSLY TOWARD THE INSTRUMENT WHEN MOUNTED BELOW PIPE CONNECTIONS OR 5' OFF TOWARD THE PIPE CONNECTION WHEN THE INSTRUMENT IS MOUNTED ABOVE THE PIPE CONNECTION EXCEPT AS INDICATED ON THE INSTRUMENT INSTALLATION DETAILS. MINIMUM SLOPE IS  $\frac{1}{8}$ " PER FOOT.
4. TUBE RUNS SHALL BE INSTALLED WITH A MINIMUM OF SPLICING. WHEN SPLICES ARE REQUIRED, REFER TO INSTRUMENT INSTALLATION DETAILS FOR TYPES OF UNIONS OR COUPLINGS TO BE USED.
5. INSTRUMENT SENSING LINES FROM PIPE CATEGORY 1, 2, & 3 PROCESS PIPE ARE TO BE SUPPORTED FROM 2" TUBE TRAYS ("TUBE TRACK" OR EQUAL); MAXIMUM OF (2) TWO TUBES PER TRAY. THE TUBE TRAY SHALL BE BOLTED TO STRUCTURAL MEMBERS WHICH SHALL BE WELDED TO EMBEDDED STEEL PLATES IN THE WALL, FLOOR OR CEILING. ALL OTHER INSTRUMENT SENSING LINES ARE TO BE SUPPORTED SIMILARLY OR AT CONTRACTOR'S OPTION.
6. CONTRACTOR TO ROUTE INSTRUMENT DRAIN HEADER TO EQUIPMENT DRAIN LOCATED AT EACH INSTRUMENT RACK. FOR TYPE & LOCATION OF EQUIPMENT DRAINS SEE APPROPRIATE PLUMBING AND DRAINAGE DWGS.
7. SOME ELEVATIONS FOR CONTROL VALVES AND INSTRUMENT CONNECTIONS ARE APPROXIMATE. FOR EXACT ELEVATION SEE RELATED PIPING DWGS. OR VENDOR'S DRAWINGS.
8. FOR EXACT LOCATION AND ELEVATION OF INSTRUMENT SLEEVES THROUGH WALLS OR FLOORS AND EMBEDDED STEEL PLATES, SEE RELATED A-S COMPOSITE PENETRATIONS AND EMBEDDED STEEL DWGS.
9. SENSING LINES FOR SAFETY RELATED INSTRUMENTS SHALL BE RUN AS FOLLOWS:
  - A) SAFETY RELATED INSTRUMENT SENSING LINES SHALL BE SEPARATED 24 INCHES HORIZONTALLY AND 24 INCHES VERTICALLY FROM NON-SAFETY RELATED INSTRUMENT SENSING LINES.
  - B) SAFETY RELATED INSTRUMENT SENSING LINES OF DIFFERENT SAFETY TRAIN OR MEASUREMENT CHANNELS SHALL BE SEPARATED 24 INCHES HORIZONTALLY AND 24 INCHES VERTICALLY.
  - C) A PHYSICAL BARRIER PROVIDED BY AN INSTRUMENT TRAY ("TUBE TRACK" OR EQUAL) SHALL BE CONSIDERED EQUIVALENT TO THE MINIMUM PHYSICAL SEPARATION SPECIFIED ABOVE.
10. ALL LOCALLY MOUNTED INSTRUMENTS TO BE MOUNTED 4'-0" FROM FINISHED FLOOR UNLESS OTHERWISE INDICATED.
11. SAFETY RELATED OR SEISMIC CLASS I INSTRUMENTS ARE TO BE SUPPORTED FROM EMBEDDED STEEL PLATES PROVIDED IN CONCRETE WALLS OR FLOORS.
12. SEISMIC CLASS I RACKS TO BE WELDED TO EMBEDDED STEEL IN CONCRETE FLOOR AND NON SEISMIC RACKS MAY BE BOLTED TO THE FLOOR.
13. INSTRUMENT AIR HEADERS TO BE INSTALLED AS SHOWN ON RELATED PIPING DWGS. THE INSTRUMENT AIR RUNS SHOWN ON INSTRUMENT ARRANGEMENT DWGS ARE TO BE USED AS SUPPLEMENT TO THE PIPING DWGS IF AND WHERE REQUIRED.
14. INSTRUMENT INSTALLATION SHALL CONFORM TO PROJECT SPECIFICATION 3240-558.

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NUCLEAR SAFETY RELATED | WPPSS QUALITY CLASS I, II

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REV.	DATE	BY	APPROVED	EBASCO SERVICES INCORPORATED DIV. INSTRUMENTATION DR. DFD CH. A. JUSO DATE OCT. 31, 1979		APPROVED [Signature]		WASHINGTON PUBLIC POWER SUPPLY SYSTEM NUCLEAR PROJECT NO 345 INSTRUMENT LOCATION ARRANGEMENT GENERAL NOTES, SYMBOLS & REFERENCES
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