



- NOTES:
- 1- ALL DIMENSIONS ARE FOR REFERENCE ONLY.
 - 2- FIELD MEASUREMENTS WILL DETERMINE ACTUAL PATH AND DISTANCES.
 - 3- ALL VALVES ARE EXTENDED STEM.
 - 4- ALL LINES ARE VACUUM JACKETED UNLESS SPECIFIED.
 - 5- BRANCH LINES MAY BE CONNECTED TO THE MANIFOLD VERTICALLY AS AN OPTION. MINIMUM CLEARANCE FROM MEZZANINE FLOOR TO BRANCH LINE IS 92".

- LEGENDS:
- C = VALVE CONTROL RACK UTILITY LOCATION (RELAY RACK 05ID-AR-RR02)
 - TT = TEMPERATURE TRANSMITTER
 - RV = RELIEF VALVE
 - KF = KEEP FULL
 - CD = COOL DOWN
 - 3V = 3 WAY VALVE
 - NC = NORMALLY CLOSE

NO.	REVISIONS	BY	CHKD	DATE
1	RELOCATED VALVES FROM INSIDE OF BLDG. TO OUTSIDE OF BLDG.	M.J.M	R.J.F.	11/10/98
SV#	CHANGE DESCRIPTION	BY	CHKD	DATE

ITEM	DWG/PART NUMBER	NOMENCLATURE OR DESCRIPTION	MATERIAL / SPEC	QTY
PARTS LIST				
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES		THIS DRAWING IS THE PROPERTY OF		
DECIMALS ANGLES		ARGONNE NATIONAL LABORATORY		
X 0.1 (2.5)		ADVANCED PHOTON SOURCE		
XX 0.01 (0.25)		LIQUID NITROGEN DISTRIBUTION SYSTEM MODULE -B-		
XXX 0.005 (0.13)		SURFACE FINISH		
SURFACE ROUGHNESS 125		REMOVE ALL BUMPS AND BRICK SHARP EDGES 33 MAX.		
SURFACE TEXTURE TO BE IN ACCORDANCE WITH LATEST ANSI B46.1		DIMENSIONS & TOLERANCING IN ACCORDANCE WITH LATEST ANSI Y14.5		
DO NOT SCALE DRAWING		MATERIAL		
LOG NUMBER		SCALE (1:20)		
Q7220000-01		SIZE C		
DRAWN BY		DRAWING NUMBER		
CORCUERA		Q7-220000-01		
DATE		SHEET 14		
8/28/98		C		
CHIEF DESIGN ENGINEER		DATE		
D. SHU		10/08/98		
CHECKED BY		TITLE		
BOB FERRY		ADVANCED PHOTON SOURCE		
DATE		PROJECT MGR.		
10/08/98		DATE		
DESIGNER		DATE		
A. CORCUERA		DATE		
RESPONSIBLE ENGINEER		DATE		
BOB FERRY		DATE		
DATE		DATE		
8/28/98		DATE		
APPROVE/D/RELEASED		DATE		
BOB FERRY		DATE		
DATE		DATE		
10/08/98		DATE		