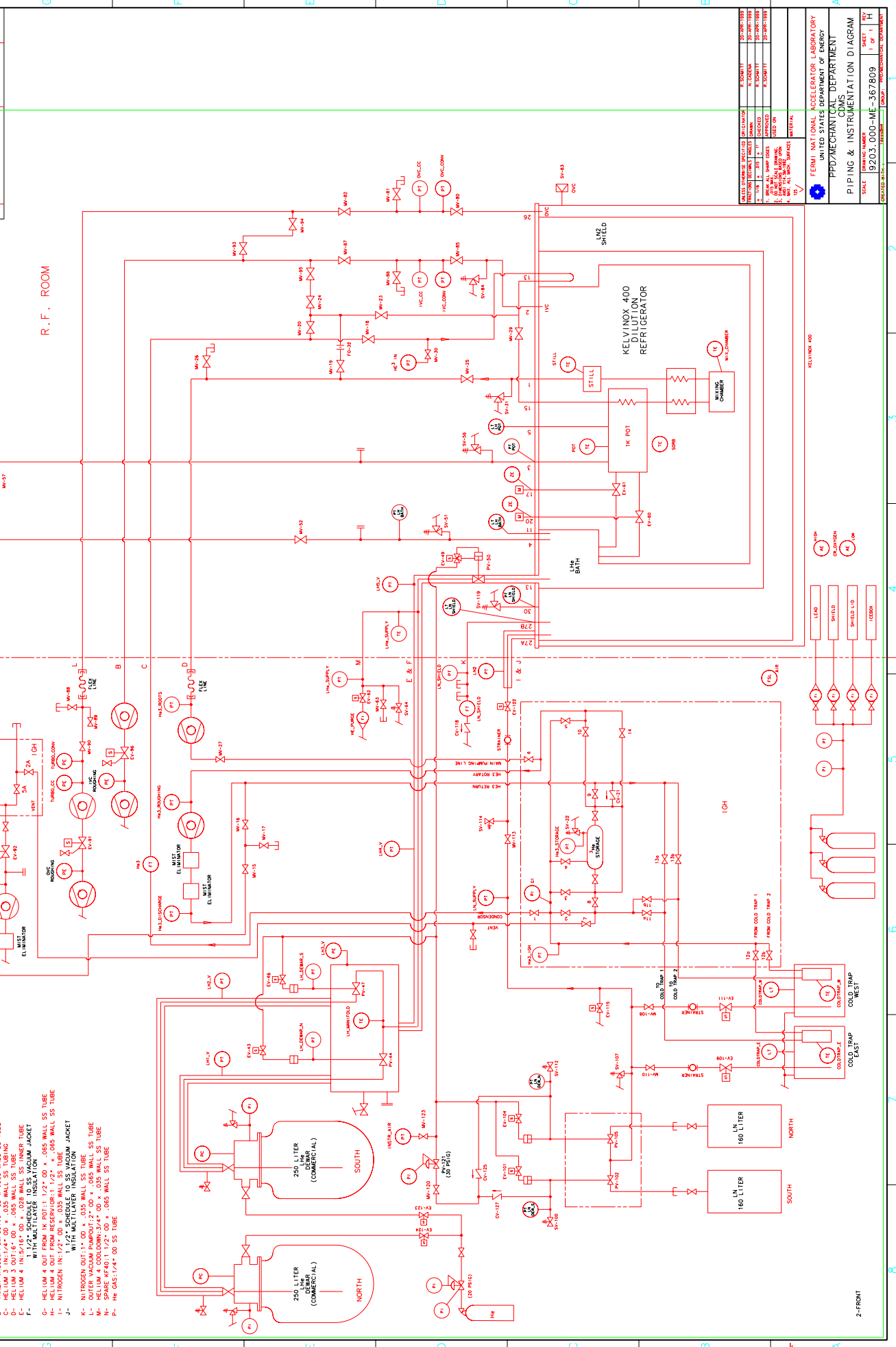


REV	DESCRIPTION	DRAWN	DATE
A	(ADD) WITH ALL INSTRUMENTATION	N. COHEN	2/17/08
B	REV. REVISIONS AND 1/2" DIA. TUBING	N. COHEN	6/17/08
C	VALVE SIZES AND TUBING SIZES	R. L. SCHMITT	8/11/08
D	REVISED AND CORRECTED SOME PIPING	N. COHEN	12/16/08
E	REVISED AND CORRECTED SOME PIPING	N. COHEN	4/24/09
F	REVISED AND CORRECTED SOME PIPING	N. COHEN	6/24/09
G	REVISIONS TO THE HEAT EXCHANGER	N. COHEN	8/17/09
H	REVISIONS TO THE HEAT EXCHANGER	N. COHEN	1/16/09
I	REVISIONS TO THE HEAT EXCHANGER	N. COHEN	1/17/09
J	REVISIONS TO THE HEAT EXCHANGER	N. COHEN	2/17/09



- LEGEND**
- B- INNER VACUUM PUMPOUT: 1/8" OD x .065 WALL SS TUBE
 - C- HELIUM 3 IN: 1/4" OD x .035 WALL SS TUBING
 - D- HELIUM 4 IN: 5/16" OD x .028 WALL SS INNER JACKET
 - E- HELIUM 4 IN: 5/16" OD x .028 WALL SS OUTER JACKET
 - F- HELIUM 4 IN: 5/16" OD x .028 WALL SS OUTER JACKET
 - G- HELIUM 4 OUT FROM RESERVOIR: 1/2" OD x .065 WALL SS TUBE
 - H- HELIUM 4 OUT FROM RESERVOIR: 1/2" OD x .035 WALL SS TUBE
 - I- NITROGEN IN: 1/2" OD x .035 WALL SS TUBE
 - J- NITROGEN OUT: 1/2" OD x .035 WALL SS TUBE
 - K- NITROGEN OUT: 1/2" OD x .035 WALL SS TUBE
 - L- HELIUM 4 COOLDOWN: 3/4" OD x .035 WALL SS TUBE
 - M- HELIUM 4 COOLDOWN: 3/4" OD x .035 WALL SS TUBE
 - N- HELIUM 4 COOLDOWN: 3/4" OD x .035 WALL SS TUBE
 - P- HE GAS: 1/4" OD SS TUBE

APPROVED	DATE
N. COHEN	2/17/08
R. L. SCHMITT	6/17/08
N. COHEN	12/16/08
N. COHEN	4/24/09
N. COHEN	6/24/09
N. COHEN	8/17/09
N. COHEN	1/16/09
N. COHEN	1/17/09
N. COHEN	2/17/09

FEDERAL NATIONAL ACCELERATOR LABORATORY
 UNITED STATES DEPARTMENT OF ENERGY
 PPZ/MECHANICAL DEPARTMENT
 CDMS

PIPING & INSTRUMENTATION DIAGRAM

SCALE: DRAWING NUMBER: 9203.000-ME-367809 SHEET NO. 17 OF 17

PROJECT NO. 9203.000-ME-367809