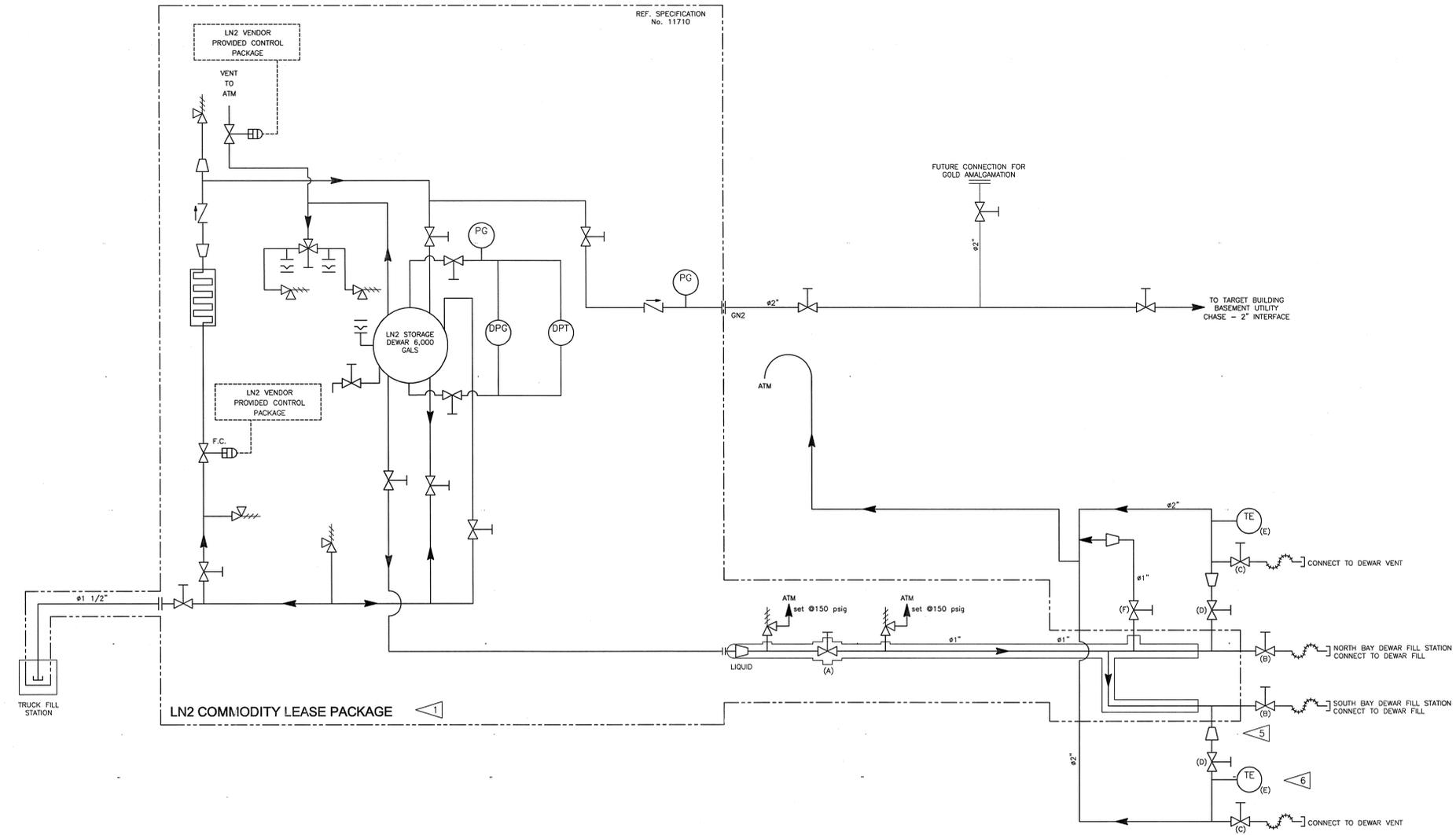


- NOTES:**
- ALL PIPING, COMPONENTS, TANKS, ETC. INSIDE DOTTED LINE BOX TO BE PROVIDED, CLEANED, TESTED AND MAINTAINED BY COMMODITY LEASE VENDOR.
 - SEE DRAWING No. HD.00.01 FOR SYMBOLS AND ABBREVIATIONS.
 - PIPING TO BE TESTED IN ACCORDANCE WITH SECTION 3.0 OF LEASE SPECIFICATION 11710.
 - PIPING TO BE COMMERCIAL OXYGEN CLEANED IN ACCORDANCE WITH SECTION 3.5 OF SPECIFICATION 11710.
 - ALL ISOLATION VALVES NOT PROVIDED BY LEASE PACKAGE SHALL BE TYPE APCO 5080XC16P, OR APPROVED EQUAL, UNLESS NOTED OTHERWISE.
 - TEMP ELEMENT TO CONSIST OF A PERMANENTLY MOUNTED RTD PROBE AND THERMOWELL, PRECISION MEASUREMENT MODEL NO. 7DGM-B6CC1/2- 0.260LSU = 1 5/8-316SS OR APPROVED EQUAL.
 - TEMP READING DEVICE TO BE A CP/BARNHART DIGI-SENSE THERMOLOGR RTD THERMOMETER, HAND HELD BATTERY POWERED TWO "AA", 0.4" H TOP LED DISPLAY, 0.2" H BOTTOM DISPLAYS, LOW POWER INDICATOR, LOW READING RANGE-330 DEG F, RTD INPUT, CONNECTOR FITTINGS AND 10' CONNECTOR CABLE OR APPROVED EQUAL.



LEGEND:

VACUUM JACKETED LINE

SOUTH DEWAR FILL STATION INSTRUCTIONS:

- PRIOR TO STARTING TO COOL DOWN VJ LINE, RAISE PRESSURE IN STORAGE DEWAR BY 50 PSI.
- VERIFY LN2 STORAGE TANK PRESSURE SHALL BE 100 psig MINIMUM. THEN CONNECT VENT AND FILL LINES OF DEWAR.
- OPEN LIQUID VALVES (A) AND (B).
- SLOWLY OPEN VENT LINE VALVE (C) AND FILL DEWAR TO DESIRE LEVEL. DEWAR IS FULL WHEN TEMPERATURE GAGE (E) IS STEADY.
- WHEN DEWAR IS FULL CLOSE LIQUID FILL VALVE (B) AND OPEN BYPASS VALVE (D).
- CLOSE VENT VALVE (C) AND DISCONNECT DEWAR.
- CLOSE LIQUID VALVE (A).

NORTH DEWAR FILL STATION INSTRUCTIONS:

- PRIOR TO STARTING TO COOL DOWN VJ LINE, RAISE PRESSURE IN STORAGE DEWAR BY 50 PSI.
- VERIFY LN2 STORAGE TANK PRESSURE SHALL BE 100 psig MINIMUM. THEN CONNECT VENT AND FILL LINES OF DEWAR.
- OPEN LIQUID VALVES (A) AND (B) AND OPEN VENT VALVE (F) 1/4 TURN.
- SLOWLY OPEN VENT LINE VALVE (C) AND FILL DEWAR TO DESIRE LEVEL. DEWAR IS FULL WHEN TEMPERATURE GAGE (E) IS STEADY.
- WHEN DEWAR IS FULL CLOSE LIQUID FILL VALVE (B) AND OPEN BYPASS VALVE (D).
- CLOSE VENT VALVE (C) AND DISCONNECT DEWAR.
- CLOSE LIQUID VALVE (A) AND VENT VALVE (F).

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NUMBER OF SECTION OR DETAIL:

DRAWING ON WHICH SECTION OR DETAIL IS SHOWN OR TAKEN: _____

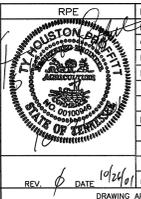
SECTION AND DETAIL KEY

THIS DOCUMENT CONTROLLED BY _____

CHANGE CONTROL SYSTEM _____

ENGINEERING PROCEDURE: SNS-ENG-0001

REV	DATE	DESCRIPTION	TP	SPK	DSN	CHK	DEPT	DATE	PE	DATE	PJ	DATE	REQ	DATE	UTB	DATE	RPE	RPE NO	DATE	REV	WRS	AK	WRS	BNJ	MP	ED
0		CERTIFIED FOR CONSTRUCTION - 102601																								



DSN	T. PROFFIT	102601
DRW	J.H. TOWNSEND	102601
CHK	S.P. KNARD	102601
DEPT		
PE	<i>W. Jones</i>	11/15/01
PJ	<i>R. Deane</i>	11/15/01
REQ		

108030700-P8E-8700-A067

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Oak Ridge National Laboratory
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U.S. GOVERNMENT CONTRACT DE-AC05-00OR22725
UT-BATTELLE, LLC - Oak Ridge, Tennessee

PROJECT NAME:
**SPALLATION NEUTRON SOURCE
TARGET UTILITY BUILDING
LIQUID NITROGEN
STORAGE AND TRANSFER P & ID**

1	48	49	50	PLANT	BLDG	FL	SH.	OF	TYPE	CLASS
3	P	X	X	8	8700		1	1	D	U
51	52	53	WBS							
NC	NA	83	1.8.3.7						P7.50.31	REV 0