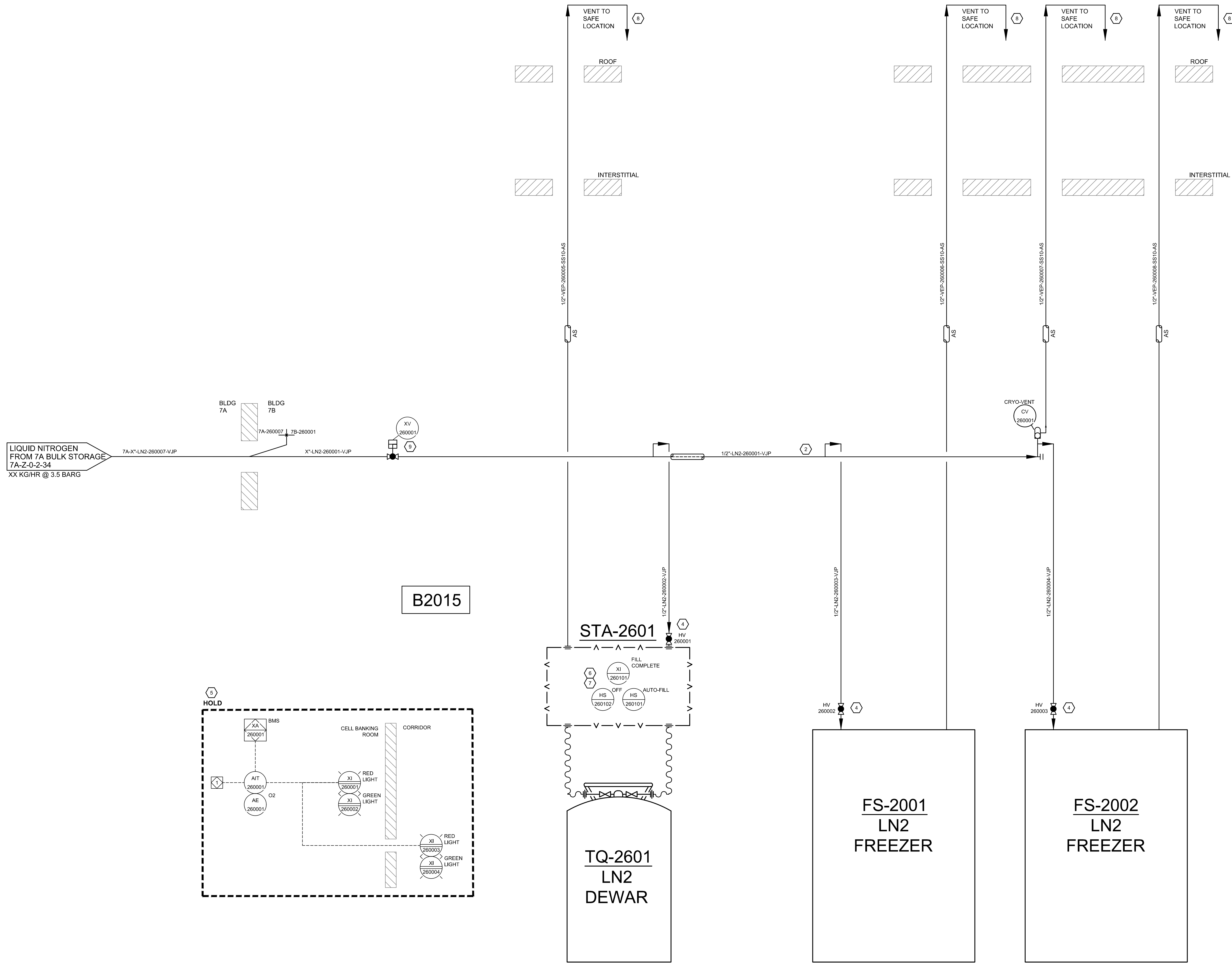


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STA-2601
LN2 AUTO-FILL STATION
TYPE: AUTOMATIC LIQUID FILL
CAPACITY: 160L - 240L DEWAR
SIZE: 660MM L X 381MM H X 254MM D
MOC: 304SS

TQ-2601
LN2 TANK
TYPE: LEASED DEWAR
CAPACITY: 240L
SIZE: 660MM DIA. X 1511MM H
MOC: VENDOR STANDARD

FS-2001
-80°C FREEZER
TYPE: LIQ. N2
CAPACITY: TBD
SIZE: TBD
MOC: VENDOR STANDARD

FS-2002
-80°C FREEZER
TYPE: LIQ. N2
CAPACITY: TBD
SIZE: TBD
MOC: VENDOR STANDARD

Robert L. De Souza Jr.
**ISSUED FOR
CONSTRUCTION**

SEAL
THIS IS NOT A
SEALED DOCUMENT
DATE: _____

GENERAL NOTES:

- ALL COMPONENT & EQUIPMENT NUMBERS ARE PRECEDED BY "7B" TO REPRESENT THE BULK DRUG SUBSTANCE (BDS) BUILDING.
- ALL AUTOMATIC VALVES FAIL CLOSED (F.C.) UNLESS NOTED FAIL OPEN (F.O.).
- ALL PLC/COMPUTER CONNECTIONS ARE WITHIN THE PCS UNLESS OTHERWISE NOTED.
- LAST LINE NUMBER: 260008
- LINE NUMBER NOT USED: NONE
- LAST AUTO VALVE NUMBER: XV-260001
- AUTO VALVE NUMBERS NOT USED: NONE
- LAST MANUAL VALVE NUMBER: HV-260003
- MANUAL VALVE NUMBERS NOT USED: NONE

SHEET NOTES

- DELETED
- VACUUM JACKETED PIPE - STAINLESS STEEL ASTM A312, TYPE 304. FINAL DESIGN BY CRYOGENIC CONTRACTOR.
- DELETED
- MANUAL VALVES WITH BONNET EXTENSIONS FOR CRYOGENIC SERVICE.
- HOLD PENDING ASPHYXIATION ASSESSMENT CHART ADP105 OR EQUIVALENT TO BE SPECIFIED AND PROVIDED BY CRYOGENIC CONTRACTOR. CONTROLS INSIDE VENDOR BOX ARE DESIGN INTENT. FINAL DESIGN DETAILS TO BE PROVIDED BY VENDOR.
- VENT TO A SAFE LOCATION. PROVIDE SCREENING ON THE VENT DISCHARGE.
- CRYOGENIC CONTRACTOR TO PROVIDE A HIGH FLOW SWITCH AND QUICK DUMP VALVE IN THE EVENT OF RUNAWAY FLOW.

5

HOLD

INTERLOCKS

- LOW OXYGEN LEVEL IN CELL BANKING ROOM TURNS ON ALARM AND LIGHT AND ENGAGES EMERGENCY EXHAUST FAN.

ips

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721 Arbor Way
Suite 100
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www.ipsdb.com

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REVISION	DATE	DESCRIPTION	BY
A	28MAY2020	90% BD ISSUE	JJR
B	27NOV2020	DESIGN ISSUE	JJR
C	12FEB2021	90% DO ISSUE	RLD
D	12MAY2021	90% DO ISSUE	RLD
E	09SEP2021	CONSTRUCTION ISSUE	RLD

TESSLER
engenharia

R. Dr. Cesário Mota Júnior, 424 - Vila Buarque, São Paulo - SP, 01221-020

REVISION HISTORY

1 REV. 0 - NONE.

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CLIENT

Takeda

Hemobrás
Empresa Brasileira de Hemoderivados e Diagnóstico

BURITI EPCMV

DRAWING TITLE

**P&I DIAGRAM
DRUG SUBSTANCE
LIQUID NITROGEN
DISTRIBUTION**

ENGINEER	ARCHITECT	DESIGNER	IPS PROJECT #
JJR	BJE	BRB	ITD19439.01
DRAWN BY	REVIEWED BY	SCALE	CADD FILE NAME
BRB	GJC	NONE	7B-Z-0-2-74

XREF FILE(S)

DRAWING NUMBER

7B-Z-0-2-74