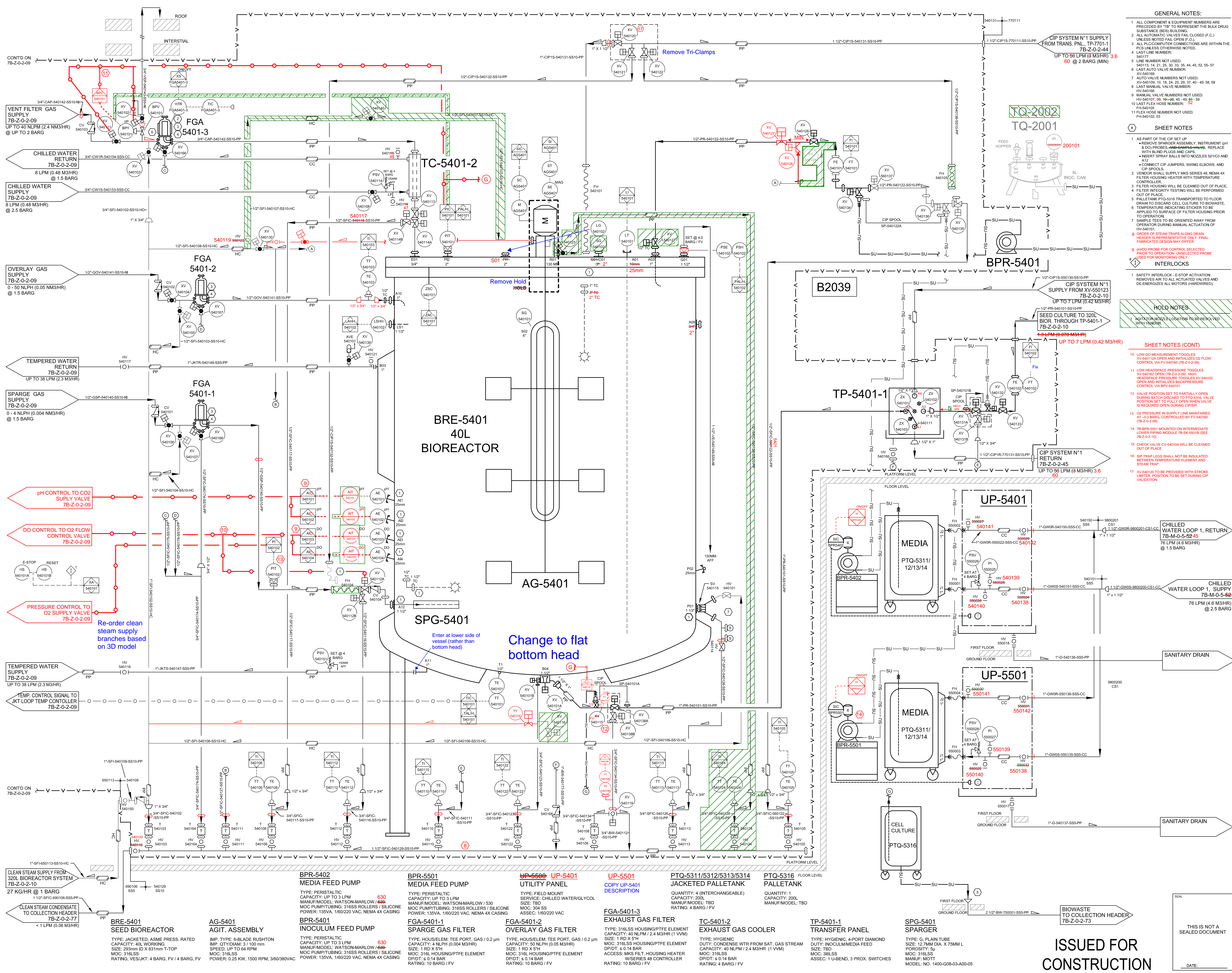


\\north.corp.takeda.com\PS&P\2019\194106\_02502408\_10 Project Drawings\Process\7B-Z-0-2-09.dwg, 6/10/21, 06:18:14 PM, mmarinho



**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 FAI OPEN (F.O.).
- ALL PLC/COMPUTER CONNECTIONS ARE WITHIN THE PCS LINE, UNLESS OTHERWISE NOTED.
- LAST LINE NUMBER: 540117
- LINE NUMBER NOT USED: 540113, 14, 21, 25, 30, 33, 35, 44, 45, 52, 55, 57
- LAST AUTO VALVE NUMBER: XV-540169
- AUTO VALVE NUMBERS NOT USED: XV-540109, 10, 18, 24, 25, 26, 37, 40, 49, 58, 59
- LAST MANUAL VALVE NUMBER: FV-540105
- MANUAL VALVE NUMBERS NOT USED: HV-540107, 09, 18, 20, 45, 48, 54, 59
- LAST FLEX HOSE NUMBER: 52
- FLEX HOSE NUMBER NOT USED: FH-540102

**SHEET NOTES**

- AS PART OF THE CIP SET UP:
  - REMOVE SPARGER ASSEMBLY, INSTRUMENT (H) AND PROBE AND DISCONNECT. REPLACE WITH BLIND PLUGS AND CAPS.
  - INSERT SPRAY BALLS INTO NOZZLES S01C01 AND A12.
  - CONNECT OF JUMPERS, SWING ELBOWS, AND CIP SPOOLS.
- VENDOR SHALL SUPPLY LMS SERIES 48, NEMA 4X FILTER HOUSING HEATER WITH TEMPERATURE CONTROLLER.
- FILTER HOUSING WILL BE CLEANED OUT OF PLACE.
- FILTER INTEGRITY TESTING WILL BE PERFORMED OUT OF PLACE.
- PALLETTANK PTO-5316 TRANSPORTED TO FLOOR DRAIN TO DISCARD CELL CULTURE TO BIOWASTE.
- TEMPERATURE INDICATING STICKER TO BE APPLIED TO SURFACE OF FILTER HOUSING PRIOR TO OPERATION.
- SAMPLE TEES TO BE ORIENTED AWAY FROM OPERATOR DURING MANUAL ACTIVATION OF HV-540101.
- ORDER OF STEAM TRAPS ALONG DRAIN HEADER IS REPRESENTATIVE ONLY. FINAL FABRICATED DESIGN MAY DIFFER.
- UNDO PROBE FOR CONTROL. SELECTED PRIOR TO OPERATION. UNSELECTED PROBE (USED FOR MONITORING ONLY).

**INTERLOCKS**

- SAFETY INTERLOCK: E-STOP ACTIVATION REMOVES AIR TO ALL ACTIVATED VALVES AND DE-ENERGIZES ALL MOTORS (HARDWIRED).

**HOLD NOTES**

- AQUATOR NOZZLE LOCATION TO BE RESOLVED WITH VENDOR.

**SHEET NOTES (CONT)**

- LOW DO MEASUREMENT TOGGLES: XV-540112A OPEN AND INITIALIZE O2 FLOW CONTROL, VIA FV-540106 (7B-Z-0-2-09).
- LOW HEADSPACE PRESSURE TOGGLES: XV-540102 OPEN (7B-Z-0-2-09). HIGH HEADSPACE PRESSURE TOGGLES: XV-540102 OPEN AND INITIALIZE BACKPRESSURE CONTROL, VIA BPR-540101.
- VALVE POSITION SET TO PARTIALLY OPEN DURING BATCH DISCARD TO PTO-5316. VALVE POSITION SET TO FULLY OPEN WHEN VALVE IS REQUIRED OPEN DURING CIP/SIP.
- O2 PRESSURE IN SUPPLY LINE MAINTAINED AT 0.3 BARG, CONTROLLED BY FV-540109 (7B-Z-0-2-09).
- 7B-BPR-5501 MOUNTED ON INTERMEDIATE LOWER PIPING MODULE 7B-BK-5501B (SEE 7B-Z-0-2-10).
- CHECK VALVE CV-540104 WILL BE CLEANED OUT OF PLACE.
- SIP TRAP LINES SHALL NOT BE INSULATED BETWEEN TEMPERATURE ELEMENT AND STEAM TRAP.
- XV-540101 TO BE PROVIDED WITH STROKE LIMITER. POSITION TO BE SET DURING CIP VALIDATION.

**Integrated Project Services**  
Engineering  
Design/Build  
Compliance  
Consulting

721 Arbor Way  
Suite 100  
BLUE BELL, PA 19422  
PHONE: (610) 828-4090  
FAX: (610) 828-3656  
www.ipsdb.com

REVISION	DATE	BY	DESCRIPTION
A	28AUG2020	JJR	90% BD ISSUE
B	27NOV2020	JJR	DESIGN ISSUE
C	12FEB2021	RJD	30% BD ISSUE
D	19MAY2021	RJD	50% BD ISSUE
E	03AUG2021	RJD	90% BD ISSUE
F	16AUG2021	RJD	CONSTRUCTION ISSUE

**DRAFT**  
**INTERIM P&ID REDLINES**  
13JUL2022

**TESSLER**  
engenharia

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

**REVISION HISTORY**

- REV. D - CHANGED XV-540138 FROM ZDL TO BLOCK-BODY ARRANGEMENT (ADDED XV-540138B).
- REV. D - ADDED XV-540115.
- REV. D - REMOVED XV-540138B AND XV-540117.
- REV. D - SPLIT UP-5500 INTO UP-5401 AND UP-5501.
- REV. D - CHANGED XV-540137 FROM DIAPHRAGM TO ANGLE-SEAT GLOBE.

**CONFIDENTIAL**  
THE INFORMATION CONTAINED HEREIN MAY NOT BE USED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION OF INTEGRATED PROJECT SERVICES.

**BURITI EPCMV**

**P&I DIAGRAM**  
**DRUG SUBSTANCE**  
**40L BIOREACTOR, BRE-5401**  
**VESSEL**

ENGINEER	ARCHITECT	DESIGNER	IPS PROJECT #
JJR	BJE	RBN	ITD19439.01
DRAWN BY	REVIEWED BY	SCALE	CADD FILE NAME
RBN	CLJC	NONE	7B-Z-0-2-09

XREF FILE(S)	DRAWING NUMBER
REVISION 0 A	7B-Z-0-2-08

**ISSUED FOR CONSTRUCTION**

THIS IS NOT A SEALED DOCUMENT

DATE: \_\_\_\_\_