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PRD-AIC-LIS-046

CLIENT:

TAKEDA/BAXALTA

PROJECT

**BURITI EPCMV PROJECT** 

# INTEGRATED PROJECT SERVICES INSTRUMENTS & AUTOMATION APPROVED SUPPLIER LIST

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|-----|-----------|------------------------|------|-------|---------|
|     |           |                        |      |       |         |
|     |           |                        |      |       |         |
|     |           |                        |      |       |         |
|     |           |                        |      |       |         |
|     |           |                        |      |       |         |
| 0   | 28SEP2021 | ISSUE FOR CONSTRUCTION | MAV  | MAF   | RSP     |
| В   | 09JUN2021 | 90% DD ISSUE           | MAV  | MAF   | RSP     |
| Α   | 05MAY2021 | 90% DD ISSUE           | MAV  | MAF   | RSP     |
| REV | DATE      | DESCRIPTION            | EXEC | CHECK | APPROV. |



**APPROVED SUPPLIER LIST** 







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#### 1. REVISION HISTORY

| Rev. | Reason for change  |  |  |
|------|--|--|--|
| Α    | 90% DD ISSUE   |  |  |
| В    | <ul> <li>Updated item 2.2</li> <li>Updated item 4.1</li> <li>Updated item 4.2</li> <li>Updated item 5</li> <li>Note: This document replaces PRD-AIC-URS-020 document from BD.</li> </ul> |  |  |
| 0    | <ul> <li>Revised item 3.1</li> <li>Revised to indicate only one instrument manufacturer</li> <li>Added Solenoid Valve Bank, Coriolis Flowmeter, Load Cells and Bench Scale.</li> </ul>   |  |  |

#### 2. PROJECT DESCRIPTION

- 2.1 Takeda has re-negotiated a licensing and tech transfer agreement (LTTA) with the Brazilian state- owned company Hemobrás (HB) to transfer the technology of Takeda's recombinant FVIII (rFVIII) product ADVATE from Takeda to Hemobrás. Hemobrás is planning to construct a vertically integrated facility for manufacturing of rFVIII at the Hemobrás owned site at Goiana, Pernambuco (PE), Brazil (Project Buriti).
- 2.2 The scope of Project Buriti is to design, build and qualify a new vertically integrated rFVIII Manufacturing facility, and includes implementation of all needed support buildings and Systems (Drug Product, Drug Substance, Boilers, Emergency Generators and Wastewater Treatment plant) on an existing brownfield site. It is expected that the new facility is completely self-contained and the existing Goiana site provides only basic utility supply (city water, gas, power) and logistics (access road, site security). The project also must account for operation's waste management (specifically process waste). The site's capacity layout for ADVATE manufacturing shall be based on three 2500L chemostat bioreactors, even though only equipment for a two bioreactor operation should be implemented at first.

#### 3. SCOPE

3.1 This document is a guide to be used for selecting instruments & automation manufacturers as well as system integrator suppliers.









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## 4. INSTRUMENTS SUPPLIERS

# 4.1 Non-sanitary (Black Utilities areas)

|   | NON-SANITARY           |  |  |
|---|------------------------|--|--|
| INSTRUMENT TYPE                             | Manufacturer           | Model  |  |
| LEVEL SWITCH                                | Endress + Hauser (E+H) | Ref. FTL51   |  |
| LEVEL TRANSMITTER                           | Endress + Hauser (E+H) | Ref.: Micropilot<br>FMR532                                       |  |
| PRESSURE GAUGE                              | WIKA                   | Ref. 232.50  |  |
| TEMPERATURE GAUGE                           | WIKA                   | Ref.: R52+TW10   |  |
| DIFFERENTIAL PRESSURE GAUGE                 | WIKA                   | Ref. 732.51  |  |
| TEMPERATURE AND HUMIDITY TRANSMITTER - HVAC | CONTEMP                | S501   |  |
| MAGNETIC FLOWMETER                          | Endress + Hauser (E+H) | Ref.:<br>Proline Promag P300                                     |  |
| VORTEX FLOWMETER                            | Endress + Hauser (E+H) | Ref.:<br>Proline Prowirl F200                                    |  |
| PRESSURE TRANSMITTER                        | Endress + Hauser (E+H) | Ref. PMP75   |  |
| TEMPERATURE TRANSMITTER                     | Endress + Hauser (E+H) | Ref.: TM411  |  |
| ON-OFF VALVE                                | FISHER                 | Ref.: FISHER Vee-Ball V300 + Fisher 2052 Actuator and DVC6200    |  |
| PRESSURE CONTROL VALVE                      | FISHER                 | Ref.: FISHER easy-e ED Control + Fisher 667 Actuator and DVC6200 |  |
| TEMPERATURE CONTROL VALVE                   | FISHER                 | Ref.: easy-e ED Control + Fisher 667 Actuator and DVC6200        |  |
| MOTORIZED CONTROL VALVE                     | AUMA                   | Ref. AUMA –<br>Actuator SA<br>3-ph 380 VAC                       |  |
| SAFETY VALVE                                | SPIRAX SARCO           | Ref.: SV80H  |  |
| PRESSURE REDUCING VALVE                     | SPIRAX SARCO           | Ref.: SRV 461  |  |









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| RUPTURE DISK           | BS&B          | Ref.: Model D                     |
|------------------------|---------------|-----------------------------------|
| DAMPER ACTUATOR - HVAC | Belimo        | ZG-JSLA                           |
| TOWER LIGHTS           | Schmersal ace | TLC-60 C-<br>VD/AM/VM-BZ<br>24VDC |
| E-STOP                 | Schmersal ace | Ref.: BC321C                      |
| PUSH BUTTON            | Schmersal ace | Ref.: Clean Series<br>IP69K       |
| DISCONNECT SWITCH      | Schmersal ace | Ref.: LB Series                   |
| SELECTOR SWITCH        | Schmersal ace | Ref.: EWS Series                  |









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# 4.2 Sanitary (Clean areas)

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| INICTEL INVENT TYPE                                | SANITARY                    |                                  |  |
|--|-----------------------------|----------------------------------|--|
| INSTRUMENT TYPE                                    | Manufacturer                | Model                            |  |
| LEVEL SWITCH                                       | Endress + Hauser (E+H)      | Ref. FTL51H                      |  |
| PRESSURE GAUGE                                     | WIKA                        | Ref. PG43SA-S                    |  |
| TEMPERATURE GAUGE                                  | WIKA                        | Ref. R52+TW60                    |  |
| DIFFERENTIAL PRESSURE GAUGE                        | WIKA                        | Ref.732.51 (WIKA)                |  |
| MAGNETIC FLOWMETER                                 | Endress + Hauser (E+H)      | Ref. Proline Promag H300         |  |
| VORTEX FLOWMETER                                   | Endress + Hauser (E+H)      | Ref. Proline Prowirl F200        |  |
| CORIOLIS FLOWMETER                                 | Endress + Hauser (E+H)      | Ref. Proline Promass F 300       |  |
| PRESSURE TRANSMITTER                               | Endress + Hauser (E+H)      | Ref. PMP75                       |  |
| TEMPERATURE TRANSMITTER                            | Endress + Hauser (E+H)      | Ref. TM411                       |  |
| SAFETY VALVE                                       | PENTAIR SÜDMO<br>(TETRALON) | Ref.: SVP                        |  |
| DIAPHRAGM VALVE                                    | GEMÜ                        | Ref.: 687 + 4241                 |  |
| DEAD-LEG VALVE                                     | GEMÜ                        | Ref. 600 04-03.KL /<br>650 03-01 |  |
| PRESSURE REDUCING VALVE                            | STERIFLOW                   | Ref.: Mark 96 Series             |  |
| RUPTURE DISK AND BDI,<br>INTEGRAL TO GCR-SMS MODEL | BS&B                        | Ref.: GCR-SMS (BS&B)             |  |
| ANALYSER O2  | NOVATECH                    | Ref. Dual Probe 1732             |  |
| CONDUCTIVITY ANALYZER<br>(Sensor + Transmitter)    | Endress + Hauser (E+H)      | Ref.CLS16D / CM442               |  |
| DISSOLVED OZONE ANALYSER O3                        | DRAGER                      | Ref.: PointGard 2100             |  |
| TOC ANALYZER<br>(Sensor + Transmitter)             | METTLER TOLEDO              | Ref.M800 / 6000TOCi              |  |









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| DO ANALYSER (CO2)  | METTLER TOLEDO | Ref.: InPro5500i + M800                |
|--|----------------|--|
| pH ANALYSER  | METTLER TOLEDO | Ref. M800 / pHure LE Anlg              |
| EMS MONITOR (PDIT)   | testo          | testo 6383                             |
| EMS MONITOR (PDIT/TIT/MIT)   | testo          | testo 6383                             |
| EMS DATA PROBE (Connected to EMS MONITOR) (HUMIDITY AND TEMPERATURE) | testo          | testo 6610                             |
| SOLENOID VALV BANK (Profinet port)                                   | Festo          | CPX Terminal + Valve<br>terminal MPA-S |
| WEIGH MODULE   | METTLER TOLEDO | Ref.: SWB505 MultiMount<br>+ IND570    |
| BECH SCALE (Formulation)   | METTLER TOLEDO | Ref.: ICS689g<br>(ethernet interface)  |









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# 5. SYSTEM & EQUIPMENT SUPPLIER

| SYSTEM&EQUIPMENT             | SUPPLIER                                     |  |
|------------------------------|--|--|
| CCTV SYSTEM                  | Hikvision - AcuSense Series NVR              |  |
|                              | Hikvision - Série Pro (EasyIP) Netwok Camera |  |
| ACCESS CONTROL SYSTEM        | PCSC - IQ Series                             |  |
|                              | PCSC - LiNC-NXG software                     |  |
| FIRE ALARM SYSTEM            | NOTIFIER - NFS2 Series                       |  |
| ASPIRATION SMOKE DETECTOR    | NOTIFIER                                     |  |
| PLC HARDWARE                 | SIEMENS - 1500 Series                        |  |
|                              | SIEMENS - ET200SP Series                     |  |
| SERVER HARDWARE              | DELL - PowerEdge R540                        |  |
| THIN-CLIENT IN CONTROL ROOM  | DELL – Wyse (Screen)                         |  |
| PCS SOFTWARE SCADA           | AVEVA-SYSTEM PLATFORM                        |  |
| BMS SOFTWARE SCADA           | AVEVA-SYSTEM PLATFORM                        |  |
| EMS SOFTWARE SCADA           | AVEVA-SYSTEM PLATFORM                        |  |
| HMI CLEAN ROOM               | SIEMENS - IPC477 Series                      |  |
| DATA SWITCH                  | AREVA - JL256A Series                        |  |
| ACCESS POINT                 | AREVA - 510 Series                           |  |
|                              | INFOENG                                      |  |
|                              | SPI  |  |
| AUTOMATION SERVICES PROVIDER | IASTECH                                      |  |
|                              | Liquid Consulting                            |  |
|                              | PPI-Multitask                                |  |
|                              | Grafcet                                      |  |