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REVISION	DATE	DESCRIPTION	BY
<p style="text-align: center;">DRAFT INTERIM P&ID REDLINES 03JUN2022</p>			
0	09AUG2021	CONSTRUCTION ISSUE	RLG
1	10AUG2021	CONSTRUCTION ISSUE	RLG
2	12AUG2021	90% DO ISSUE	RLG
3	16AUG2021	CONSTRUCTION ISSUE	RLG
4	02SEP2021	CONSTRUCTION ISSUE	RLG
5	09SEP2021	CONSTRUCTION ISSUE	RLG
6	06OCT2021	CONSTRUCTION ISSUE	RLG
7	03DEC2021	REVISED CONSTRUCTION ISSUE	RLG



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PIPING ELEMENT SYMBOLS

	STREAMS ENTERING OR LEAVING DRAWING SHEET
	STRAINER
	CONCENTRIC LINE REDUCER
	ECCENTRIC LINE REDUCER
	ORIFICE
	RUPTURE DISK (ACUUM)
	RUPTURE DISK (PRESSURE)
	DIAPHRAGM SEAL
	RUPTURE DISK (VACUUM)
	DRAIN
	T (STEAM TRAP)
	PT (PUMP/STEAM TRAP)
	VENT
	CAP
	LAME ARRESTOR
	WATER HAMMER ARRESTOR
	FLOW GLASS
	SPRAYBALL
	ROTAMETER
	ELECTRONIC FLOW METER
	AIR VENT

DRAWING SCHEDULE

PROCESS

[illegible]







DRAWING SCHEDULE

IPS DRAWING NUMBER	CLIENT DRAWING NUMBER	DRAWING TITLE	DATE ISSUED	DESIGNED	CHECKED	APPROVED	REVISIONS
7B-2-0-245		PID - DRUG SUBSTANCE - CP SYS N.3 CP-7703 RETURN - MEDIA AND FERM AREA	X	X	X	X	
7B-2-0-246		PID - DRUG SUBSTANCE - CP SYS N.3 CP-7703 RETURN - MEDIA AND FERM AREA	X	X	X	X	
7B-2-0-247		PID - DRUG SUBSTANCE - CP SYS N.3 CP-7702 SUPPLY - MEDIA AND FERM AREA	X	X	X	X	
7B-2-0-248		PID - DRUG SUBSTANCE - CP SYS N.3 CP-7703 RETURN - MEDIA AND FERM AREA	X	X	X	X	
7B-2-0-249		PID - DRUG SUBSTANCE - CP SYS N.3 CP-7703 BUFFER AREA	X	X	X	X	
7B-2-0-250		PID - DRUG SUBSTANCE - CP SYS N.3 CP-7703 SUPPLY - BUFFER AREA	X	X	X	X	
7B-2-0-251		PID - DRUG SUBSTANCE - CP SYS N.3 CP-7703 RETURN - BUFFER AREA	X	X	X	X	
7B-2-0-252		PID - DRUG SUBSTANCE - CP CLEANING CHEMICAL STORAGE (TOTES) & DIST.	X	X	X	X	
7B-2-0-253		PID - DRUG SUBSTANCE - PARTS WASHEN LV-4001	X	X	X	X	
7B-2-0-254		PID - DRUG SUBSTANCE - AUTOCLAVE AT-0001	X	X	X	X	
7B-2-0-255		PID - DRUG SUBSTANCE - PORTABLE VESSEL CIP/SIP STATION STA-T001	X	X	X	X	
7B-2-0-256		PID - DRUG SUBSTANCE - PURIFIED WATER (ROCI) SYSTEM RO-0302	X	X	X	X	
7B-2-0-257		PID - DRUG SUBSTANCE - PURIFIED WATER STORAGE TANK TG-0302	X	X	X	X	
7B-2-0-258		PID - DRUG SUBSTANCE - PURIFIED WATER DISTRIBUTION	X	X	X	X	
7B-2-0-259		PID - DRUG SUBSTANCE - WP STILL MES-601	X	X	X	X	
7B-2-0-260		PID - DRUG SUBSTANCE - HOT WP STORAGE TANK TG-0401	X	X	X	X	
7B-2-0-261		PID - DRUG SUBSTANCE - HOT WP DISTRIBUTION	X	X	X	X	
7B-2-0-262		PID - DRUG SUBSTANCE - HOTTAMBERT AMBIENT WP DISTRIBUTION	X	X	X	X	
7B-2-0-263		PID - DRUG SUBSTANCE - CLEAN STEAM GENERATOR CGG-6001	X	X	X	X	
7B-2-0-264		PID - DRUG SUBSTANCE - CLEAN STEAM DISTRIBUTION	X	X	X	X	
7B-2-0-265		PID - DRUG SUBSTANCE - PROCESS WASTE COLLECTION HEADER (ATMOSPHERIC)	X	X	X	X	
7B-2-0-266		PID - DRUG SUBSTANCE - PROCESS WASTE COLLECTION HEADER (PRESSURIZED)	X	X	X	X	
7B-2-0-267		PID - DRUG SUBSTANCE - PROCESS WASTE COLLECTION TREATMENT UNIT	X	X	X	X	
7B-2-0-268		PID - DRUG SUBSTANCE - PROCESS WASTE CHEMICAL STORAGE & DISTRIBUTION	X	X	X	X	
7B-2-0-269		PID - DRUG SUBSTANCE - PROCESS WASTE COLLECTION LIFT STATION	X	X	X	X	
7B-2-0-270		PID - DRUG SUBSTANCE - CO2 & O2 STORAGE AND DISTRIBUTION	X	X	X	X	
7B-2-0-271		PID - DRUG SUBSTANCE - CLEAN COMPRESSED AIR DISTRIBUTION	X	X	X	X	
7B-2-0-272		PID - DRUG SUBSTANCE - COMPAIRED AIR DISTRIBUTION	X	X	X	X	
7B-2-0-273		PID - DRUG SUBSTANCE - BIOWASTE COLLECTION HEADERS	X	X	X	X	
7B-2-0-274		PID - DRUG SUBSTANCE - LIQUID NITROGEN DISTRIBUTION	X	X	X	X	
7B-2-0-275		PID - DRUG SUBSTANCE - HEAT EXCHANGER PROCESS WASTE HANDLING	X	X	X	X	
7B-2-0-276		PID - DRUG SUBSTANCE - BIO-MILL SYSTEM BCS-7501	X	X	X	X	
7B-2-0-277		PID - DRUG SUBSTANCE - PROCESS BIOWASTE COLLECTION HEADERS	X	X	X	X	
7B-2-0-278		PID - BIO WASTE LIFT STATION SL-7501	X	X	X	X	
7B-2-0-279		SFARI					
7B-2-0-280		PID - DRUG SUBSTANCE - COLUMN PACKING SKID K3411	X	X	X	X	
7B-2-0-281		PID - DRUG SUBSTANCE - AEA COLUMN PACKING	X	X	X	X	
7B-2-0-282		PID - DRUG SUBSTANCE - HETP TEST SKID LARGE X3401-1	X	X	X	X	
7B-2-0-283		PID - DRUG SUBSTANCE - HETP TEST SKID SMALL X3401-2	X	X	X	X	
7B-2-1-301		GA - DRUG SUBSTANCE - GROUND FLOOR PLAN	X	X	X	X	
7B-2-3-001 PA		GA - DRUG SUBSTANCE - FIRST FLOOR PLAN	X	X	X	X	

Diagram illustrating four styles of radial diaphragm valves:

- BLOCK BODY DIAPHRAGM**: A valve with a single block body and a diaphragm.
- RADIAL DIAPHRAGM STYLE SAMPLE VALVE**: A valve with a sample port and a diaphragm.
- RADIAL DIAPHRAGM TANK OUTLET VALVE W/INTEGRAL CIP/SIP PORT**: A valve with a tank outlet and an integral CIP/SIP port.
- RADIAL DIAPHRAGM**: A standard radial diaphragm valve.

ACTUATORS

		
DIAPHRAGM	ON/OFF	AIR MOTOR
		
MOTOR	SOLENOID	ELECTRIC

ABBREVIATIONS

<u>SYMB.</u>	<u>DEFINITION</u>
A	ANCHOR
AF	ABOVE FINISHED FLOOR
AFM	ABOVE FINISHED MEZZANINE
BW	BUFF WELD
CS	CARBON STEEL
CU	COPPER
CVS	CONTROL VALVE STATION
F	FAULT
FO	FAUL OPEN
FGS	FROM CENTER OF STEEL
G	GUIDE
H	HIGH
LC	LOW CARBON
L	LOW CARBON STAINLESS STEEL
LG	LIGHT GLASS
LP	LOW POINT
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
PP	POLYPROPYLENE
PVC	POLY VINYL CHLORIDE
PVDF	POLY VINYLIDENE FLUORIDE
RAC	RUN ABOVE CEILING
RATC	RUN AT CEILING
RBF	RUN ABOVE FLOOR
RBCW	RUN BELOW CRAWLK
RSF	RUN BELOW FLOOR
RTS	RUN TIGHT TO STEEL
SP	SAMPLING POINT
SS	STAINLESS STEEL
TC	TO CLAMP
VTR	VENT THRU ROOF






FILTER SANITARY FILTER FILTER FILTER

C F L

F = PARTICULATE
C = COALESCING
L = LUBRICATOR

INDUSTRIAL
FILTER

TANK CONN.

	19mm
	25mm
	NA CONNECT
	HYGIENIC CLAMP
	FLANGE

PIPING SPECIALTIES

<u>SYMBOL</u>	<u>DEFINITION</u>	<u>SYMBOL</u>	<u>DEFINITION</u>
AV	AUTOMATIC AIR VENT	HB	HOSE BARB
AS	BREATHING AIR STATION	MXV	MIXING LINE
FP	BLOWING PREVENTER	MXS	MIXING STATION
FP	BALANCING VALVE	OCU	QUICK CONNECT UNIT
FP	CHEMICAL FEED PISTON	SD	SUCTION DEFUSER
PE	DRIP PAN ELBOW	SG	SIGHT GLASS
J	ENGINEERED ITEM	SEP	SEPARATOR
J	EXPANSION JOINT	STR	STRAINER
XH	EXHAUST HEAD	TK	TANK (EXPANSION)
LT	FILTER	VB	VACUUM BREAKER
LC	FLEXIBLE CONNECTOR	VMF	VALVE MANIFOLD
H	FLEXIBLE HOSE		

Figure 10: Typical Air Actuated Valve Control - Vendor PLC

R ID

LATION (NI IF NOT REQUIRED)
G MATERIAL CLASS
ENTIAL NUMBER
PMENT NUMBER (SEQUENTIAL)
PMENT NUMBER (TYPE)
G SERVICE DESIGNATION
G SIZE

The diagram illustrates the Drawing Numbering Standard, showing various symbols and their corresponding meanings:

- INDICATES DETAIL LETTER (APPLIES ONLY WHERE INDICATED ON DRAWINGS)**: A circle with an 'X' inside.
- INDICATES DRAWING ON WHICH DETAIL APPEARS**: A circle with 'TYP' and an 'X' inside.
- INDICATES TYPICAL DETAIL (APPLIES TO ALL CONTRACT DRAWINGS)**: A circle with an 'X' inside.
- INDICATES DRAWING ON WHICH DETAIL APPEARS**: A circle with an 'X' inside.
- INDICATES SECTION NUMBER**: A circle with an 'X' inside.
- INDICATES ON WHICH DRAWING SECTION APPEARS**: A circle with an 'X' inside.
- INDICATES REVISION & NUMBER**: A triangle with an 'X' inside.
- MATCH LINE**: A dashed line.
- LOCATION POINT FOR COORDINATION BETWEEN FLOOR PLANS & PIPING DIAGRAMS (NUMBER)**: A square with an 'X' inside.
- CONNECT NEW TO EXISTING**: A circle with a cross inside.
- TERMINATION POINT OF DEMOLITION**: A square with a cross inside.
- CONNECT TO MANUFACTURER'S PREPARED CONNECTION**: A circle with a cross inside.
- POINT OF BEAM PENETRATION**: A circle with a cross inside.
- PREPURCHASED EQUIPMENT**: A square with a cross inside.
- SHEET NOTE NUMBER (SN)**: A circle with an 'X' inside.

SEAL

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DRAWING TITLE

**PROCESS INDEX
DRUG SUBSTANCE
BUILDING 7B**

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

ISSUED FOR
CONSTRUCTION

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7B-Z-0-0-01