DOC NUMBER: **E-569-B7A-PRO-330-001**	CLIENT NUMBER: **PRD-MEC-LIS-002**

CLIENT:

TAKEDA/BAXALTA

PROJECT:

BURITI EPCVM PROJECT

LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B

LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B

0	30SEP2021	ISSUED FOR CONSTRUCTION	MPA	LFF	MSS
A	05JUL2021	90% DD ISSUE	MPA	CCO	MSS
REV	DATE	DESCRIPTION	EXEC	CHECK	APPROV

1. REVISION HISTORY / *HISTÓRICO DE REVISÃO*

Rev	Reason For Change / *Motivo da Revisão*
A	90% DD ISSUE
0	ISSUED FOR CONSTRUCTION

HOLD LIST / LISTA DE PENDÊNCIAS

HOLD 1 - Waiting supplier information.
HOLD 1 - Aguardando informação do fornecedor.

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 3 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.*	Fluid. / *Fluído*	Dens. / *Dens.*	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste*	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*	(mm)		(kg/m³)	From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	(barG)		
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1	AWFI	370104	SS10	PP	HOLD 1	Ambient Water For Injection/ Água para Injetáveis Ambiente	998,25	2"-CIP3S-370103-SS10-PP	TQ-3701	7B-Z-0-2-33	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	AWFI	370204	SS10	PP	HOLD 1	Ambient Water For Injection/ Água para Injetáveis Ambiente	998,25	2"-CIP3S-370203-SS10-PP	TQ-3702	7B-Z-0-2-34	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	AWFI	370304	SS10	PP	HOLD 1	Ambient Water For Injection/ Água para Injetáveis Ambiente	998,25	2"-CIP3S-370303-SS10-PP	TQ-3703	7B-Z-0-2-35	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2; 1	AWFI	510106	SS10	PP	HOLD 1	Ambient Water For Injection/ Água para Injetáveis Ambiente	998,25	TP-5101/2	TQ-5101	7B-Z-0-2-01 / 7B-Z-0-2-02	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2; 1	AWFI	510206	SS10	PP	HOLD 1	Ambient Water For Injection/ Água para Injetáveis Ambiente	998,25	TP-5101/2	3/4"-SFIC-510240-SS10-PP	7B-Z-0-2-02	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	AWFI	920105	SS10	PP	HOLD 1	Ambient Water For Injection/ Água para Injetáveis Ambiente	998,25	TC-9201	TC-9202	7B-Z-0-2-60/ 7B-Z-0-2-62/ 7B-Z-0-2-02/ 7B-Z-0-2-33/ 7B-Z-0-2-34/ 7B-Z-0-2-35	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1.1/2~~	~~AWFI~~	~~920105~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Ambient Water For Injection/ Água para Injetáveis Ambiente~~	~~998,25~~	~~TC-9201~~	~~1"-AWFI-920109-SS10-PP~~	~~7B-Z-0-2-60 / 02 / 32 / 34 / 62 / 80~~	~~20~~	~~2,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
0	~~7B~~	~~1.1/2~~	~~AWFI~~	~~920105~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Ambient Water For Injection/ Água para Injetáveis Ambiente~~	~~998,25~~	~~AMBIENT WFI SUPPLY~~	~~AMBIENT WFI LOOP~~	~~7B-Z-0-2-34 / 7B-Z-0-2-62~~	~~20~~	~~2,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
A	7B	1.1/2	AWFI	920106	SS10	PP	HOLD 1	Ambient Water For Injection/ Água para Injetáveis Ambiente	998,25	TC-9202	TQ-6401	7B-Z-0-2-60	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	AWFI	920107	SS10	PP	HOLD 1	Ambient Water For Injection/ Água para Injetáveis Ambiente	998,25	1 1/2"-AWFI-920105-SS10-PP	TP-5101/2	7B-Z-0-2-02 / 7B-Z-0-2-62	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1.1/2~~	~~AWFI~~	~~920107~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Ambient Water For Injection/ Água para Injetáveis Ambiente~~	~~998,25~~	~~1 1/2"-AWFI-920105-SS10-PP~~	~~250L / 4500L MEDIA PREP VESSEL~~	~~7B-Z-0-2-62~~	~~20~~	~~2,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
0	7B	2; 1	AWFI	920108	SS10	PP	HOLD 1	Ambient Water For Injection/ Água para Injetáveis Ambiente	998,25	1 1/2"-AWFI-920105-SS10-PP	TP-3701-1	7B-Z-0-2-62/ 7B-Z-0-2-33	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2; 1~~	~~AWFI~~	~~920109~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Ambient Water For Injection/ Água para Injetáveis Ambiente~~	~~998,25~~	~~1 1/2"-AWFI-920105-SS10-PP~~	~~TP-3701-1~~	~~7B-Z-0-2-33~~	~~20~~	~~2,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	2 ; 1	AWFI	920109	SS10	PP	HOLD 1	Ambient Water For Injection/ Água para Injetáveis Ambiente	998,25	1 1/2"-AWFI-920105-SS10-PP	TP-3702-1	7B-Z-0-2-62/ 7B-Z-0-2-34	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~AWFI~~	~~920109~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Ambient Water For Injection/ Água para Injetáveis Ambiente~~	~~998,25~~	~~1 1/2"-AWFI-920105-SS10-PP~~	~~TP-3703-1~~	~~7B-Z-0-2-35~~	~~20~~	~~2,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	2; 1.1/2	AWFI	920110	SS10	PP	HOLD 1	Ambient Water For Injection/ Água para Injetáveis Ambiente	998,25	1 1/2"-AWFI-920105-SS10-PP	TP-3703-1	7B-Z-0-2-62 / 7B-Z-0-2-35	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001 CLIENT NR: PRD-MEC-LIS-002	SHEET: 4 of 94 REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.*	Fluid. / *Fluído*	Dens. / *Dens.*	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste*	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*	(mm)		(kg/m³)	From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	(barG)		
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	~~7B~~	~~1.1/2~~	~~AWFI/CIP 1S~~	~~510206~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Ambient Water For Injection/Agua para Injetáveis Ambiente/Clean In Place Supply/Alimentação CIP~~	~~HOLD 1~~	~~TP-5101/2~~	~~1.1/2"-AWFI-510106-SS10-PP~~	~~7B-Z-0-2-02 / 7B-Z-0-2-01~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 5 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.*	Fluid. / *Fluído*	Dens. / *Dens.*	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste*	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*	(mm)		(kg/m³)	From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	(barG)		
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	~~7B~~	~~2~~	~~AWFI/CIP 3S~~	~~370103~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Ambient Water For Injection/Água para Injetáveis Ambiente/Clean In Place Supply/Alimentação CIP~~	~~HOLD 1~~	~~TP-3701-1~~	~~1 1/2"-CIP3S-370105-SS10-PP~~	~~7B-Z-0-2-33~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~2~~	~~AWFI/CIP 3S~~	~~370203~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Ambient Water For Injection/ Água para Injetáveis Ambiente / Clean In Place Supply / Alimentação CIP~~	~~HOLD 1~~	~~TP-3702-1~~	~~1 1/2"-CIP3S-370205-SS10-PP~~	~~7B-Z-0-2-34~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1~~	~~AWFI/CIP 3S~~	~~370204~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Ambient Water For Injection/ Água para Injetáveis Ambiente / Clean In Place Supply / Alimentação CIP~~	~~HOLD 1~~	~~2"-AWFI/CIP3S-370203-SS10-PP~~	~~TQ-3702~~	~~7B-Z-0-2-34~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1.1/2~~	~~AWFI/CIP 3S~~	~~370303~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Ambient Water For Injection/ Água para Injetáveis Ambiente / Clean In Place Supply / Alimentação CIP~~	~~HOLD 1~~	~~TP-3703-1~~	~~1 1/2"-CIP3S-370305-SS10-PP~~	~~7B-Z-0-2-35~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1~~	~~AWFI/CIP 3S~~	~~370304~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Ambient Water For Injection/ Água para Injetáveis Ambiente / Clean In Place Supply / Alimentação CIP~~	~~HOLD 1~~	~~1 1/2"-AWFI/CIP3S-370303-SS10-PP~~	~~TQ-3703~~	~~7B-Z-0-2-35~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 6 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.*	Fluid. / *Fluído*	Dens. / *Dens.*	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste*	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*	(mm)		(kg/m³)	From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	(barG)		
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	2	BUF	370101	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	TQ-3701	TP-3701-2	7B-Z-0-2-33	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	BUF	370102	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	TP-3701-2	TP-3701-3	7B-Z-0-2-33	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	BUF	370107	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	TP-3801-2	TQ-3701	7B-Z-0-2-33/ 7B-Z-0-2-34	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	BUF	370109	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	TP-3701-2	TP-3801-1	7B-Z-0-2-33/ 7B-Z-0-2-36	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	BUF	370111	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	TP-3701-3	TP-3701-4	7B-Z-0-2-33 / 7B-Z-0-2-37	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	BUF	370130	SS10	CC	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	PTQ-3725/26/27	CRM-3501	7B-Z-0-2-37 / 7B-Z-0-2-29	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	BUF	370131	SS10	CC	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	PTQ-3725/26/31	CRM-3601	7B-Z-0-2-37 / 7B-Z-0-2-31	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	BUF	370132	SS10	CC	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	PTQ-3720/29/30	CRM-3601	7B-Z-0-2-37 / 7B-Z-0-2-31	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	BUF	370201	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	TQ-3702	TP-3702-2	7B-Z-0-2-34	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2~~	~~BUF~~	~~370201~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Buffer Solution / Solução de Buffer~~	~~HOLD 1~~	~~TQ-3702~~	~~2"-SFIC-690137-SS5-PP~~	~~7B-Z-0-2-34~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
0	7B	2	BUF	370207	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	TP-3801-2	TQ-3702	7B-Z-0-2-34	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	BUF	370209	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	TP-3702-2	TP-3801-1	7B-Z-0-2-34/ 7B-Z-0-2-36	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	BUF	370210	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	TP-3702-3	TP-3701-3	7B-Z-0-2-34 / 7B-Z-0-2-33	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	BUF	370211	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	TP-3702-3	TP-3702-4	7B-Z-0-2-34 / 7B-Z-0-2-39	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	BUF	370212	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	TP-3702-3	TP-3702-5	7B-Z-0-2-34 / 7B-Z-0-2-40	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	BUF	370230	SS10	CC	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	PTQ-3716/17/18	CRM-3401	7B-Z-0-2-39 / 7B-Z-0-2-27	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	BUF	370231	SS10	CC	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	PTQ-3716/17/18	CRM-3402	7B-Z-0-2-39 / 7B-Z-0-2-28	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	BUF	370232	SS10	CC	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	PTQ-3716/17/18	CRM-3401	7B-Z-0-2-39 / 7B-Z-0-2-27	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	BUF	370234	SS10	CC	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	PTQ-3719/20/21	CRM-3402	7B-Z-0-2-39 / 7B-Z-0-2-28	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	BUF	370235	SS10	CC	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	PTQ-3722/23/24	CRM-3501	7B-Z-0-2-39 / 7B-Z-0-2-29	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	BUF	370301	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	TQ-3703	TP-3703-2	7B-Z-0-2-35	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	BUF	370302	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	TP-3703-2	TP-3702-3	7B-Z-0-2-35 / 7B-Z-0-2-34	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	BUF	370309	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	TP-3701-2	TP-3801-1	7B-Z-0-2-35/ 7B-Z-0-2-36	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	BUF	370307	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	TP-3801-2	TQ-3703	7B-Z-0-2-34/ 7B-Z-0-2-35	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	BUF	371001	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	BPR-3710	1"-BUF-590106-HC22-PP	7B-Z-0-2-40 / 7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	BUF	371101	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	BPR-3710	1.1/2"-BUF-590206-HC22-PP	7B-Z-0-2-40 / 7B-Z-0-2-25	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	BUF	380102	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	PIU-3801	TP-3801-2	7B-Z-0-2-36 / 7B-Z-0-2-34	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	BUF	380101	SS10	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	TP-3801-1	PIU-3801	7B-Z-0-2-36 / 7B-Z-0-2-34	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	BUF	590106	HC22	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	1"-BUF-371001-HC22-PP	1"-PR-590114-HC22-PP	7B-Z-0-2-24	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	BUF	590206	HC22	PP	HOLD 1	Buffer Solution / Solução de Buffer	HOLD 1	1"-BUF-371101-HC22-PP	1"-PR-590214-HC22-PP	7B-Z-0-2-25	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips / Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 7 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.*	Fluid. / *Fluído*	Dens. / *Dens.*	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste*	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*	(mm)		(kg/m³)	From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	(barG)		
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	~~7B~~	~~2~~	~~BUF/CIP3S~~	~~370107~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Buffer Solution / Solução de Buffer / Clean in Place Supply / Alimentação CIP~~	~~HOLD 1~~	~~TP-3801-2~~	~~TQ-3701~~	~~7B-Z-0-2-34 / 7B-Z-0-2-33~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~2~~	~~BUF/CIP3S~~	~~370109~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Buffer Solution / Solução de Buffer / Clean in Place Supply / Alimentação CIP~~	~~HOLD 1~~	~~TP-3701-2~~	~~TP-3801-1~~	~~7B-Z-0-2-33 / 7B-Z-0-2-36~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~2~~	~~BUF/CIP3S~~	~~370207~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Buffer Solution / Solução de Buffer / Clean in Place Supply / Alimentação CIP~~	~~HOLD 1~~	~~TP-3801-2~~	~~TQ-3702~~	~~7B-Z-0-2-34~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~2~~	~~BUF/CIP3S~~	~~370209~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Buffer Solution / Solução de Buffer / Clean in Place Supply / Alimentação CIP~~	~~HOLD 1~~	~~TP-3702-2~~	~~TP-3801-1~~	~~7B-Z-0-2-34 / 7B-Z-0-2-36~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~2~~	~~BUF/CIP3S~~	~~370307~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Buffer Solution / Solução de Buffer / Clean in Place Supply / Alimentação CIP~~	~~HOLD 1~~	~~TP-3801-2~~	~~TQ-3703~~	~~7B-Z-0-2-34 / 7B-Z-0-2-35~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~2~~	~~BUF/CIP3S~~	~~370309~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Buffer Solution / Solução de Buffer / Clean in Place Supply / Alimentação CIP~~	~~HOLD 1~~	~~TP-3703-2~~	~~TP-3801-1~~	~~7B-Z-0-2-35 / 7B-Z-0-2-36~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~2~~	~~BUF/CIP3S~~	~~380101~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Buffer Solution / Solução de Buffer / Clean in Place Supply / Alimentação CIP~~	~~HOLD 1~~	~~TP-3801-1~~	~~PIU-3801~~	~~7B-Z-0-2-36~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 8 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.*	Fluid. / *Fluído*	Dens. / *Dens.*	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste*	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*	(mm)		(kg/m³)	From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	(barG)		
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	~~7B~~	~~3/4~~	~~BW~~	~~540112~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Biowaste / Efluente Biológico~~	~~HOLD 1~~	~~3/4"-SFIC-540123-SS10-PP~~	~~1 1/2"-SFIC-540129-SS10-PP~~	~~7B-Z-0-2-08~~	~~80~~	~~0,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	CANCELED
0	~~7B~~	~~3/4~~	~~BW~~	~~540123~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Biowaste / Efluente Biológico~~	~~HOLD 1~~	~~3/4"-SFIC-550122-SS10-PP~~	~~1 1/2"-SFIC-550157-SS10-PP~~	~~7B-Z-0-2-10~~	~~80~~	~~0,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	CANCELED
0	~~7B~~	~~3/4~~	~~BW~~	~~540124~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Biowaste / Efluente Biológico~~	~~HOLD 1~~	~~3/4"-SFIC-540134-SS10-PP~~	~~1 1/2"-SFIC-540129-SS10-PP~~	~~7B-Z-0-2-08~~	~~80~~	~~0,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	CANCELED
0	7B	1	BW	540177	SS10	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	TP-5401-1	1 1/2"-SFIC-540129-SS10-PP	7B-Z-0-2-08	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	BW	550125	SS10	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	1 1/2"-SFIC-550124-SS10-PP	1 1/2"-BW-690107-SS5-PP	7B-Z-0-2-10	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	BW	550177	SS10	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	TP-5501-1	1 1/2"-SFIC-550157-SS10-PP	7B-Z-0-2-10	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~BW~~	~~560106~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Biowaste / Efluente Biológico~~	~~HOLD 1~~	~~TP-5601-1~~	~~2"-SFIC-560157-SS10-PP~~	~~7B-Z-0-2-12~~	~~80~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	CANCELED
0	7B	1	BW	560107	SS10	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	TP-5601-1	2"-SFIC-560157-SS10-PP	7B-Z-0-2-12	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	BW	560125	SS10	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	1"-SFIC-560124-SS10-PP	1 1/2"-BW-690108-SS5-PP	7B-Z-0-2-12	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	BW	560148	SS10	PP	HOLD 1	Bioreactor Gas Overlay / Aeração em Superfície	HOLD 1	TP-5601-4	2"-SFIC-560157-SS10-PP	7B-Z-0-2-12	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	BW	560185	SS10	PP	HOLD 1	Bioreactor Gas Overlay / Aeração em Superfície	HOLD 1	TP-5601-2	2"-SFIC-560157-SS10-PP	7B-Z-0-2-12	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~BW~~	~~560186~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Bioreactor Gas Overlay / Aeração em Superfície~~	~~HOLD 1~~	~~TP-5601-4~~	~~2"-SFIC-560157-SS10-PP~~	~~7B-Z-0-2-12~~	~~80~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	CANCELED
A	7B	1.1/2	BW	560225	SS10	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	1 1/2"-SFIC-560224-SS10-PP	1 1/2"-BW-690109-SS5-PP	7B-Z-0-2-14	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	BW	560285	SS10	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	TP-5602-4	2"-SFIC-560257-SS10-PP	7B-Z-0-2-14	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	BW	560325	SS10	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	1 1/2"-SFIC-560324-SS10-PP	1 1/2"-BW-690110-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	BW	560385	SS10	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	TP-5603-4	2"-SFIC-560357-SS10-PP	7B-Z-0-2-16	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	BW	570148	SS10	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	1.1/2"-SFIC-570148-SS10-PP	2"-SFIC-570107-SS10-PP	7B-Z-0-2-21	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	BW	580010	SS10	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	3/4"-SFIC-580010-SS10-PP	2"-SFIC-580206-SS10-PP	7B-Z-0-2-23	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	BW	580101	SS10	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	3/4"-SFIC-580101-SS10-PP	1 1/2"-SFIC-580106-SS10-PP	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	BW	580113	SS10	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	3/4"-SFIC-580104-SS10-PP	1 1/2"-SFIC-580106-SS10-PP	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	BW	580201	SS10	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	3/4"-SFIC-580201-SS10-PP	2"-SFIC-580206-SS10-PP	7B-Z-0-2-23	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	BW	580201	SS10	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	3/4"-SFIC-580204-SS10-PP	2"-SFIC-580206-SS10-PP	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~BW~~	~~640117~~	~~SS5~~	~~PP~~	~~HOLD 1~~	~~Biowaste / Efluente Biológico~~	~~HOLD 1~~	~~1"-HWFI-640116-SS10-HC~~	~~2"-BW-750010-SS5-PP~~	~~7B-Z-0-2-60 / 7B-Z-0-2-76~~	~~80~~	~~0,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1 1/2	BW	690107	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	1 1/2"-BW-550125-SS10-PP	1.1/2"-SFIC-5501078-SS5-PP	7B-Z-0-2-10	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2; 1 1/2	BW	690108	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	1 1/2"-BW-560125-SS10-PP	2"-SFIC-690108-SS5-PP	7B-Z-0-2-12	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2; 1 1/2	BW	690109	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	1 1/2"-BW-560225-SS10-PP	2"-SFIC-690109-SS5-PP	7B-Z-0-2-14	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2; 1 1/2	BW	690110	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	1 1/2"-BW-560325-SS10-PP	2"-SFIC-690110-SS5-PP	7B-Z-0-2-16	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	2.1/2	BW	750001	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	CELL CULTURE ROOM FLOOR DRAIN	4"-BW-750002-SS5-PP	7B-Z-0-2-08 / 7B-Z-0-2-73	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	4	BW	750002	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	Header	4"-BW-750003-SS5-PP	7B-Z-0-2-73	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	4	BW	750003	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	Header	4"-BW-750120-SS5-PP	7B-Z-0-2-73 / 7B-Z-0-2-76	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 9 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.*	Fluid. / *Fluído*	Dens. / *Dens.*	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste*	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*	(mm)		(kg/m³)	From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	(barG)		
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1.1/2	BW	750008	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	TQ-7701	2"-BW-750010-SS5-PP	7B-Z-0-2-43 / 7B-Z-0-2-73	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	BW	750009	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	TQ-7702	2"-BW-750010-SS5-PP	7B-Z-0-2-46 / 7B-Z-0-2-73	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	BW	750010	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	Header	2"-BW-750114-SS5-PP	7B-Z-0-2-73 / 7B-Z-0-2-76	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	2.1/2	BW	750011	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	CELL CULTURE ROOM FLOOR DRAIN	4"-BW-750002-SS5-PP	7B-Z-0-2-10 / 7B-Z-0-2-73	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	BW	750101	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	TQ-7501-1	BC-7501	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	2	BW	750102	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	TQ-7501-2	2"-BW-750101-SS5-PP	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	1.1/2	BW	750105	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	BC-7501	1"-BW-750107-SS5-PP	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	1.1/2	BW	750106	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	1 1/2"-BW-750105-SS5-PP	1"-BW-750108-SS5-PP	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	1	BW	750107	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	1 1/2"-BW-750105-SS5-PP	TQ-7501-1	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	1	BW	750108	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	1 1/2"-BW-750106-SS5-PP	TQ-7501-2	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	1.1/2	BW	750109	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	TQ-7501-1	1 1/2"-BW-750105-SS5-PP	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	1.1/2	BW	750110	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	TQ-7501-2	1 1/2"-BW-750106-SS5-PP	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	2	BW	750113	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	2"-BW-750114-SS5-PP	TQ-7501-1	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	2	BW	750114	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	2"-BW-750010-SS5-PP	TQ-7501-2	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	2	BW	750117	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	2"-BW-750118-SS5-PP	TQ-7501-1	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	2	BW	750118	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	2"-SFIC-690130-SS5-PP	TQ-7501-2	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	4	BW	750119	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	4"-BW-750120-SS5-PP	TQ-7501-1	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	4	BW	750120	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	4"-BW-750003-SS5-PP	TQ-7501-2	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	1.1/2	BW	750121	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	1 1/2"-WW2-750104-SS5-PP	TQ-7501-1	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	1.1/2	BW	750122	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	1 1/2"-BW-750121-SS5-PP	TQ-7501-2	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	2	BW	750134	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	2"-BW-751001-SS5-PP	TQ-7501-2	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	2	BW	750135	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	2"-BW-750134-SS5-PP	TQ-7501-1	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	2	BW	751001	SS5	PP	HOLD 1	Biowaste / Efluente Biológico	HOLD 1	SK-7510	2"-BW-750134-SS5-PP	7B-Z-0-2-78 / 7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	6; 4; 3	BW	751002	SS5	NI	-	Biowaste / Efluente Biológico	HOLD 1	3"-WW2-751004-SS5-PP	TQ-7510	7B-Z-0-2-43/ 7B-Z-0-2-46/ 7B-Z-0-2-49/ 7B-Z-0-2-78	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	4	BW	751003	SS5	NI	-	Biowaste / Efluente Biológico	HOLD 1	TRENCH	TQ-7510	7B-Z-0-2-76/ 7B-Z-0-2-78 7B-Z-0-2-78	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	4	BW	751005	SS5	NI	-	Biowaste / Efluente Biológico	HOLD 1	TRENCH	6"-BW-751002-SS5-NI	7B-Z-0-2-49	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	4	BW	751006	SS5	NI	-	Biowaste / Efluente Biológico	HOLD 1	TRENCH	6"-BW-751002-SS5-NI	7B-Z-0-2-46	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE: LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 10 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1/2	CA	370124	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710030-SS5-NI	SK-3701A	7B-Z-0-2-33	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	370225	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-71010-SS5-NI	SK-372/3A	7B-Z-0-2-34	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/4	CA	430006	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710011-SS5-NI	BD-4301	7B-Z-0-2-52	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	460102	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710034-SS5-NI	LV-4601	7B-Z-0-2-53	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	520118	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710029-SS5-NI	SK-5201A	7B-Z-0-2-03	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	520207	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710028-SS5-NI	SK-5202A	7B-Z-0-2-04	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	520313	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710027-SS5-NI	SK-5203A	7B-Z-0-2-05	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	540146	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710080-SS5-NI	1"-JKTR-540148-SS5-AS	7B-Z-0-2-09	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	550146	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710061-SS5-NI	1 1/2"-JKTR-550148-CS1-AS	7B-Z-0-2-11	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	550156	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710036-SS5-NI	INSTRUMENT PANEL	7B-Z-0-2-10	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	560146	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2" CA-710048-SS5-NI	2"-JKTR-560148-CS1-PP	7B-Z-0-2-13	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	560158	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710037-SS5-NI	BRE-5601	7B-Z-0-2-12	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	560246	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	PCV-560228	2"-JKTR-560248-CS1-PP	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	560259	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710038-SS5-NI	BRE-5602	7B-Z-0-2-14	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	560346	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	PCV-560328	2"-JKTR-560348-CS1-AS	7B-Z-0-2-17	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1/2	CA	563259	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710039-SS5-NI	BRE-5603	7B-Z-0-2-16	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1/2	CA	570129	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710040-SS5-NI	SK-5701/2A	7B-Z-0-2-21	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1/2	CA	590115	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710041-SS5-NI	SK-5901/2A	7B-Z-0-2-24	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1/2	CA	640126	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710014-SS5-NI	MES-6401	7B-Z-0-2-59	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2; 1/4	CA	650159	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710016-SS5-NI	CSG-6501	7B-Z-0-2-63	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CA	700001	SS10	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	2"-CAP-8400115-SS10-NI	2"-CA-700033-SS10-NI	7B-Z-0-2-71	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	CA	700032	SS10	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	2"-CAP-700001-SS10-NI (BY-PASS)	2"-CAP-700001-SS10-NI (BY-PASS)	7B-Z-0-2-71	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CA	700033	SS10	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	2"-CAP-700001-SS10-NI	2"-CA-700039-SS10-NI	7B-Z-0-2-71	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CA	700038	SS10	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	2"-CAP-700033-SS10-NI (BY-PASS)	2"-CAP-700033-SS10-NI (BY-PASS)	7B-Z-0-2-71	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2; 1 1/2; 3/4	CA	710001	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	2"-CA-840001-SS5-NI	Header	7B-Z-0-2-72	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CA	710002	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	2"-CA-710001-SS5-NI	Header	7B-Z-0-2-72	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4; 1/2	CA	710003	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1 1/2"-CA-710001-SS5-NI	Header	7B-Z-0-2-72	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1; 3/4	CA	710004	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1 1/2"-CA-710001-SS5-NI	1/2"-CA-710047-SS5-NI	7B-Z-0-2-72	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	CA	710005	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1 1/2"-CA-710001-SS5-NI	Header	7B-Z-0-2-72	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	3/4	CA	710006	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1"-CA-710004-SS5-NI	Header	7B-Z-0-2-72	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia | ips | Takeda | Hemobrás

TITLE: LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B
LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B

DOC NR: E-569-B7A-PRO-330-001
CLIENT NR: PRD-MEC-LIS-002

REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	3/4	CA	710007	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710006-SS5-NI	Header	7B-Z-0-2-72	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710008	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710003-SS5-NI	Header	7B-Z-0-2-72	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	CA	710009	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710003-SS5-NI	Header	7B-Z-0-2-72	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710010	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1"-CA-710002-SS5-NI	BKS-7501	7B-Z-0-2-72 / 7B-Z-0-2-76	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	CA	710011	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1"-CA-710002-SS5-NI	3/4"-CA-430006-SS5-NI	7B-Z-0-2-72 / 7B-Z-0-2-52	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710012	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1"-CA-710002-SS5-NI	RO-6302	7B-Z-0-2-72 / 7B-Z-0-2-56	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710013	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1"-CA-710002-SS5-NI	SK-6302	7B-Z-0-2-72 / 7B-Z-0-2-57	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710014	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1"-CA-710002-SS5-NI	1/2"-CA-640126-SS5-NI	7B-Z-0-2-72 / 7B-Z-0-2-59	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710015	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1"-CA-710002-SS5-NI	SK-6401	7B-Z-0-2-72 / 7B-Z-0-2-60	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710016	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1"-CA-710002-SS5-NI	1/2"-CA-650159-SS5-NI	7B-Z-0-2-72 / 7B-Z-0-2-63	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710017	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710001-SS5-NI	CIP-7701	7B-Z-0-2-72 / 7B-Z-0-2-43	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710018	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710001-SS5-NI	CIP-7702	7B-Z-0-2-72 / 7B-Z-0-2-46	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710019	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710001-SS5-NI	CIP-7703	7B-Z-0-2-72 / 7B-Z-0-2-49	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710020	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710009-SS5-NI	BRE-5401-JL	7B-Z-0-2-72 / 7B-Z-0-2-09	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710021	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710005-SS5-NI	BRE-5501-JL	7B-Z-0-2-72 / 7B-Z-0-2-11	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710022	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710005-SS5-NI	BRE-5601-JL	7B-Z-0-2-72 / 7B-Z-0-2-13	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710023	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710005-SS5-NI	BRE-5602-JL	7B-Z-0-2-72 / 7B-Z-0-2-15	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	710024	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710005-SS5-NI	BRE-5603-JL	7B-Z-0-2-72 / 7B-Z-0-2-17	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1/2	CA	710025	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710007-SS5-NI	SK-5102 (A/B)	7B-Z-0-2-72 / 7B-Z-0-2-02	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710026	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710007-SS5-NI	SK-5101	7B-Z-0-2-72 / 7B-Z-0-2-01	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	710027	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710007-SS5-NI	SK-5203B	7B-Z-0-2-72 / 7B-Z-0-2-05	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	710028	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710007-SS5-NI	SK-5202B	7B-Z-0-2-72 / 7B-Z-0-2-04	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	710029	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710007-SS5-NI	SK-5201B	7B-Z-0-2-72 / 7B-Z-0-2-03	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	710030	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710006-SS5-NI	SK-3701B	7B-Z-0-2-72 / 7B-Z-0-2-33	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	710031	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710006-SS5-NI	SK-3702/3B	7B-Z-0-2-72 / 7B-Z-0-2-34	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710033	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710048-SS5-NI	TO IA USERS	7B-Z-0-2-72 / 7B-Z-0-2-39	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	710034	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710008-SS5-NI	LV-4601	7B-Z-0-2-72 / 7B-Z-0-2-53	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710035	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710008-SS5-NI	3/4"-CA-900106-SS10-NI	7B-Z-0-2-72 / 7B-Z-0-2-54	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	710036	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710009-SS5-NI	INSTRUMENT PANEL	7B-Z-0-2-72 / 7B-Z-0-2-10	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	710037	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710009-SS5-NI	BRE-5601	7B-Z-0-2-72 / 7B-Z-0-2-12	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia | ips | Takeda | Hemobrás

TITLE: **LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B**
LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B

DOC NR: **E-569-B7A-PRO-330-001**
CLIENT NR: **PRD-MEC-LIS-002**

REV.: **0**

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C) Normal Operating Temperature	Pressure/ *Pressão* (barG) Normal Operating Pressure	Temp. / *Temp.* (°C) Shut off Temperature	Pressure/ *Pressão* (barG) Shut off Pressure	Temp. / *Temp.* (°C) Operating Temperature + 10°C	Pressure/ *Pressão* (barG) Operating Pressure * 1.5			
0	7B	1/2	CA	710038	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710009-SS5-NI	BRE-5602	7B-Z-0-2-72 / 7B-Z-0-2-14	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	710039	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710009-SS5-NI	BRE-5603	7B-Z-0-2-72 / 7B-Z-0-2-16	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1/2	CA	710040	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710003-SS5-NI	SK-5701/2B	7B-Z-0-2-72 / 7B-Z-0-2-21	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710041	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710003-SS5-NI	SK-5901/2	7B-Z-0-2-72 / 7B-Z-0-2-24	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710042	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710047-SS5-NI	CFIL-3300	7B-Z-0-2-72 / 7B-Z-0-2-26	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710043	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710047-SS5-NI	CRM-3401	7B-Z-0-2-72 / 7B-Z-0-2-27	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710044	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710047-SS5-NI	CRM-3402	7B-Z-0-2-72 / 7B-Z-0-2-28	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710045	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710047-SS5-NI	CRM-3501	7B-Z-0-2-72 / 7B-Z-0-2-29	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710046	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710047-SS5-NI	CRM-3601	7B-Z-0-2-72 / 7B-Z-0-2-31	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~CA~~	~~710047~~	~~SS5~~	~~NI~~	-	~~Instrument Compressed Air / Ar Comprimido de Intrumento~~	~~HOLD 1~~	~~3/4"-CA-710004-SS5-NI~~	~~Header~~	~~7B-Z-0-2-72~~	~~20~~	~~6,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1/2~~	~~CA~~	~~710047~~	~~SS5~~	~~NI~~	-	~~Instrument Compressed Air / Ar Comprimido de Intrumento~~	~~HOLD 1~~	~~1/2"-CA-710003-SS5-NI~~	~~SK-5800~~	~~7B-Z-0-2-72 / 7B-Z-0-2-23~~	~~20~~	~~6,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	3/4	CA	710047	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	3/4"-CA-710004-SS5-NI	Header	7B-Z-0-2-72	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710047	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710003-SS5-NI	SK-5800	7B-Z-0-2-72 / 7B-Z-0-2-23	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	710048	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710022-SS5-NI	PCV-560128	7B-Z-0-2-13	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4; 1/2	CA	710048	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710004-SS5-NI	Header	7B-Z-0-2-72	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	710049	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710023-SS5-NI	PCV-560228	7B-Z-0-2-15	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CA	710050	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710024-SS5-NI	PCV-560328	7B-Z-0-2-17	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710061	SS5	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710021-SS5-NI	1/2"-CA-550146-SS5-NI	7B-Z-0-2-11	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CA	710080	SS10	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710020-SS5-NI	1/2"-CA-540146-SS5-NI	7B-Z-0-2-09	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	CA	900106	SS10	NI	-	Instrument Compressed Air / Ar Comprimido de Intrumento	HOLD 1	1/2"-CA-710035-SS5-NI	AT-9001	7B-Z-0-2-54	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~CA~~	~~7100057~~	~~SS5~~	~~NI~~	~~-~~	Instrument Compressed Air / Ar Comprimido de Intrumento	~~HOLD 1~~	~~1 1/2"-CA-710001-SS5-NI~~	~~Header~~	~~7B-Z-0-2-72~~	~~20~~	~~6,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 13 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	3/4	CAP	330001	SS10	NI	-	HOLD 1	1/2"-CAP-700014-SS10-NI	FGA-3300-1	7B-Z-0-2-26	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CAP	370108	SS10	NI	-	HOLD 1	1/2"-CAP-700016-SS10-NI	FGA-3701-1	7B-Z-0-2-33	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CAP	370116	SS10	NI	-	HOLD 1	1/2"-CAP-370108-SS10-NI	FGA-3701A	7B-Z-0-2-33	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CAP	370208	SS10	NI	-	HOLD 1	1/2"-CAP-700017-SS10-NI	FGA-3702-1	7B-Z-0-2-34	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CAP	370216	SS10	NI	-	HOLD 1	1/2"-CAP-370208-SS10-NI	FGA-3702-2	7B-Z-0-2-34	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CAP	370308	SS10	NI	-	HOLD 1	1/2"-CAP-700018-SS10-NI	FGA-3703-1	7B-Z-0-2-35	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CAP	460101	SS10	NI	-	HOLD 1	1/2"-CAP-700031-SS10-NI	LV-4601	7B-Z-0-2-53	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CAP	470101	SS10	NI	-	HOLD 1	1/2"-CAP-700012-SS10-NI	1"-SFI/CAP/VEP-470101-SS10-PP	7B-Z-0-2-55	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CAP	470103	SS10	NI	-	HOLD 1	1/2"-CAP-470101-SS10-NI (BY-PASS)	1/2"-CAP-470101-SS10-NI (BY-PASS)	7B-Z-0-2-55	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CAP	510128	SS10	NI	-	HOLD 1	1"-CAP-510130-SS10-NI (BY-PASS)	1"-CAP-510130-SS10-NI (BY-PASS)	7B-Z-0-2-01	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CAP	510130	SS10	NI	-	HOLD 1	1/2"-CAP-700024-SS10-NI	FGA-5101-1	7B-Z-0-2-01	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2; 3/4	CAP	510131	SS10	NI	-	HOLD 1	1"-CAP-510130-SS10-NI	FGA-5101-2	7B-Z-0-2-01	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CAP	510228	SS10	NI	-	HOLD 1	3/4"-CAP-510231-SS10-NI BY PASS	3/4"-CAP-510231-SS10-NI BY PASS	7B-Z-0-2-02	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	CAP	510230	SS10	NI	-	HOLD 1	1 1/2"-CAP-700025-SS10-NI	1.1/2"-CAP-510231-SS10-NI	7B-Z-0-2-02	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2; 3/4	CAP	510231	SS10	NI	-	HOLD 1	1 1/2"-CAP-510230-SS10-NI	FGA-5102-2	7B-Z-0-2-02	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CAP	520128	SS10	NI	-	HOLD 1	1 1/2"-CAP-700021-SS10-NI (BY-PASS)	1 1/2"-CAP-700021-SS10-NI (BY-PASS)	7B-Z-0-2-03	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CAP	520130	SS10	PP	HOLD 1	HOLD 1	FGA-5201-1	1 1/2"-CAP-700021-SS10-NI	7B-Z-0-2-03	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	CAP	520131	SS10	NI	-	HOLD 1	1 1/2"-CAP-520130-SS10-NI	FGA-5201-2	7B-Z-0-2-03	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CAP	520228	SS10	NI	-	HOLD 1	1 1/2"-CAP-520230-SS10-PP (BY-PASS)	1 1/2"-CAP-520230-SS10-PP (BY-PASS)	7B-Z-0-2-04	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CAP	520230	SS10	PP	HOLD 1	HOLD 1	FGA-5202-1	1 1/2"-CAP-700022-SS10-NI	7B-Z-0-2-04	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	CAP	520231	SS10	NI	-	HOLD 1	1 1/2"-CAP-520230-SS10-NI	FGA-5202-2	7B-Z-0-2-04	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CAP	520328	SS10	NI	-	HOLD 1	1 1/2"-CAP-520330-SS10-PP (BY-PASS)	1 1/2"-CAP-520330-SS10-PP (BY-PASS)	7B-Z-0-2-05	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1.1/2	CAP	520330	SS10	PP	HOLD 1	HOLD 1	FGA-5203-1	1 1/2"-CAP-700023-SS10-NI	7B-Z-0-2-05	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	CAP	520331	SS10	NI	-	HOLD 1	1 1/2"-CAP-520330-SS10-NI	FGA-5203-2	7B-Z-0-2-05	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	~~7B~~	~~1/2~~	~~CAP~~	~~540102~~	~~SS10~~	~~NI~~	-	~~HOLD 1~~	~~1/2"-CAP-700007-SS10-NI~~	~~1/2"-GMIX-540118-SS10-NI~~	~~7B-Z-0-2-09~~	~~20~~	~~3,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1/2	CAP	540105	SS10	NI	-	HOLD 1	1/2"-CAP-540142-SS10-NI	1/2"-GMIX-540118-SS10-NI	7B-Z-0-2-09	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 14 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1/2; 3/4	CAP	540142	SS10	NI	-	HOLD 1	1/2"-CAP-700007-SS10-NI	TC-5401-2	7B-Z-0-2-09 / 7B-Z-0-2-08	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1/2~~	~~CAP~~	~~550102~~	~~SS10~~	~~NI~~	-	~~HOLD 1~~	~~3/4"-CAP-550142-SS10-NI~~	~~1/2"-GMIX-550158-SS10-NI 1/2"-GMIX-550101-SS10-NI~~	~~7B-Z-0-2-11~~	~~20~~	~~3,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1/2; 3/4; 1	CAP	550142	SS10	NI	-	HOLD 1	1/2"-CAP-700008-SS10-NI	TC-5501-2	7B-Z-0-2-11 / 7B-Z-0-2-10	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CAP	550145	SS10	NI	-	HOLD 1	1/2"-CAP-550142-SS10-NI	1/2"-GMIX-550144-SS10-NI	7B-Z-0-2-11	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2; 1	CAP	560142	SS10	NI / PP	HOLD 1	HOLD 1	1"-CAP-700009-SS10-NI	BRE-5601	7B-Z-0-2-13 / 7B-Z-0-2-12	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CAP	560180	SS10	NI	-	HOLD 1	1"-CAP-560142-SS10-NI	3/4"-GMIX-560178-SS10-NI	7B-Z-0-2-13	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2; 1	CAP	560242	SS10	NI / PP	HOLD 1	HOLD 1	1"-CAP-700010-SS10-NI	BRE-5602	7B-Z-0-2-15 / 7B-Z-0-2-14	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CAP	560280	SS10	NI		HOLD 1	1/2"-CAP-560242-SS10-NI	3/4"-GMIX-560278-SS10-NI	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2; 1	CAP	560342	SS10	NI / PP	HOLD 1	HOLD 1	1"-CAP-700011-SS10-NI	BRE-5603 (FUTURE)	7B-Z-0-2-17 / 7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	~~7B~~	~~1/2~~	~~CAP~~	~~560379~~	~~SS10~~	~~NI~~	-	~~HOLD 1~~	~~1"-CAP-560342-SS10-NI~~	~~3/4"-GMIX-560382-SS10-NI 3/4"-GMIX-560384-SS10-NI~~	~~7B-Z-0-2-17~~	~~20~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1/2	CAP	560380	SS10	NI	-	HOLD 1	1"-CAP-560342-SS10-NI	3/4"-GMIX-560378-SS10-NI	7B-Z-0-2-17	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CAP	570128	SS10	NI	-	HOLD 1	1.1/2"-CAP-570130-SS10-NI (BY-PASS)	1.1/2"-CAP-570130-SS10-NI (BY-PASS)	7B-Z-0-2-21	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CAP	570130	SS10	NI / PP	HOLD 1	HOLD 1	1 1/2"-CAP-700030-SS10-NI	FGA-5701-1	7B-Z-0-2-21	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CAP	570228	SS10	NI	-	HOLD 1	1.1/2"-CAP-570229-SS10-NI (BY-PASS)	1.1/2"-CAP-570229-SS10-NI (BY-PASS)	7B-Z-0-2-22	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CAP	570229	SS10	NI / PP	HOLD 1	HOLD 1	1.1/2"-CAP-700029-SS10-NI	FGA-5702-1	7B-Z-0-2-22	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CAP	580017	SS10	NI	-	HOLD 1	PCV-588012	1"-HWFI-580018-SS10-HC	7B-Z-0-2-23	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CAP	580022	SS10	NI	-	HOLD 1	3/4"-CAP-700034-SS10-NI	FGA-5800-1	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CAP	590128	SS10	NI	-	HOLD 1	1 1/2"-CAP-590130-SS10-PP (BY-PASS)	1 1/2"-CAP-590130-SS10-PP (BY-PASS)	7B-Z-0-2-24	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CAP	590130	SS10	NI / PP	HOLD 1	HOLD 1	1 1/2"-CAP-700028-SS10-NI	FGA-5901-1	7B-Z-0-2-24	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	CAP	590131	SS10	NI	-	HOLD 1	1 1/2"-CAP-590130-SS10-PP	FGA-5901/2-1	7B-Z-0-2-24	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CAP	590228	SS10	NI	-	HOLD 1	1 1/2"-CAP-590230-SS10-PP (BY-PASS)	1 1/2"-CAP-590230-SS10-PP (BY-PASS)	7B-Z-0-2-25	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CAP	590230	SS10	PP	HOLD 1	HOLD 1	1.1/2"-CAP-700027-SS10-NI	FGA-5902-1	7B-Z-0-2-25	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2; 1 1/2; 3/4~~	~~CAP~~	~~700001~~	~~SS10~~	~~NI~~	-	~~HOLD 1~~	~~2"-CA-710015-SS6-NI~~	~~Header~~	~~7B-Z-0-2-71~~	~~20~~	~~6,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1/2	CAP	700002	SS10	NI	-	HOLD 1	3/4"-CAP-700039-SS10-NI	FGA-7701-2	7B-Z-0-2-71 / 7B-Z-0-2-43	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CAP	700003	SS10	NI	-	HOLD 1	3/4"-CAP-700039-SS10-NI	FGA-7702-2	7B-Z-0-2-71 / 7B-Z-0-2-46	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CAP	700004	SS10	NI	-	HOLD 1	3/4"-CAP-700039-SS10-NI	FGA-7703-2	7B-Z-0-2-71 / 7B-Z-0-2-49	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips / Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 15 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10˚C	Operating Pressure * 1.5			
0	7B	2; 1	CAP	700005	SS10	NI	-	HOLD 1	2"-CAP-700039-SS10-NI	Header	7B-Z-0-2-71	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CAP	700006	SS10	NI	-	HOLD 1	2"-CAP-700015-SS10-NI	CLN-360X	7B-Z-0-2-71 / 7B-Z-0-2-81	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CAP	700007	SS10	NI	-	HOLD 1	1 1/2"-CAP-700035-SS10-NI	1/2"-CAP-540142-SS10-NI	7B-Z-0-2-71 / 7B-Z-0-2-09	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CAP	700008	SS10	NI	-	HOLD 1	1 1/2"-CAP-700035-SS10-NI	1/2"-CAP-550142-SS10-NI	7B-Z-0-2-71 / 7B-Z-0-2-11	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CAP	700009	SS10	NI	-	HOLD 1	1 1/2"-CAP-700035-SS10-NI	1"-CAP-560142-SS10-N	7B-Z-0-2-71 / 7B-Z-0-2-13	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CAP	700010	SS10	NI	-	HOLD 1	1 1/2"-CAP-700035-SS10-NI	1"-CAP-560242-SS10-NI	7B-Z-0-2-71 / 7B-Z-0-2-15	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CAP	700011	SS10	NI	-	HOLD 1	1 1/2"-CAP-700035-SS10-NI	1"-CAP-560342-SS10-NI	7B-Z-0-2-71 / 7B-Z-0-2-17	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1/2	CAP	700012	SS10	NI	-	HOLD 1	1"-CAP-700005-SS10-NI	1/2"-CAP-470101-SS10-NI	7B-Z-0-2-71 / 7B-Z-0-2-55	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CAP	700013	SS10	NI	-	HOLD 1	1"-CAP-700005-SS10-NI	3/4"-CAP-900107-SS10-NI	7B-Z-0-2-71 / 7B-Z-0-2-54	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	CAP	700014	SS10	NI	-	HOLD 1	2"-CAP-700039-SS10-NI	3/4"-CAP-330001-SS10-NI	7B-Z-0-2-71 / 7B-Z-0-2-26	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	CAP	700015	SS10	NI	-	HOLD 1	2"-CAP-700005-SS10-NI	1 1/2"-CAP-700026-SS10-NI 1 1/2"-CAP-700035-SS10-NI	7B-Z-0-2-71	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CAP	700016	SS10	NI	-	HOLD 1	1"-CAP-700020-SS10-NI	1/2"-CAP-370108-SS10-NI	7B-Z-0-2-71 / 7B-Z-0-2-33	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CAP	700017	SS10	NI	-	HOLD 1	1"-CAP-700020-SS10-NI	1/2"-CAP-370208-SS10-NI	7B-Z-0-2-71 / 7B-Z-0-2-34	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CAP	700018	SS10	NI	-	HOLD 1	1"-CAP-700020-SS10-NI	1/2"-CAP-370308-SS10-NI	7B-Z-0-2-71 / 7B-Z-0-2-35	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CAP	700019	SS10	NI	-	HOLD 1	1.1/2"-CAP-700039-SS10-NI	1"-CAP-700020-SS10-NI 2"-CAP-700036-SS10-NI	7B-Z-0-2-71	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2; 1	CAP	700020	SS10	NI	-	HOLD 1	2"-CAP-700019-SS10-NI	Header	7B-Z-0-2-71	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	CAP	700021	SS10	NI	-	HOLD 1	2"-CAP-700036-SS10-NI	1 1/2"-CAP-520130-SS10-PP	7B-Z-0-2-71 / 7B-Z-0-2-03	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CAP	700022	SS10	NI	-	HOLD 1	2"-CAP-700036-SS10-NI	1 1/2"-CAP-520230-SS10-PP	7B-Z-0-2-71 7B-Z-0-2-04	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CAP	700023	SS10	NI	-	HOLD 1	2"-CAP-700036-SS10-NI	1 1/2"-CAP-520330-SS10-PP	7B-Z-0-2-71 / 7B-Z-0-2-05	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1/2	CAP	700024	SS10	NI	-	HOLD 1	2"-CAP-700036-SS10-NI	1"-CAP-510130-SS10-NI	7B-Z-0-2-01 / 7B-Z-0-2-71	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CAP	700025	SS10	NI	-	HOLD 1	2"-CAP-700036-SS10-NI	1 1/2"-CAP-510230-SS10-NI	7B-Z-0-2-71 / 7B-Z-0-2-02	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	CAP	700026	SS10	NI	-	HOLD 1	2"-CAP-700015-SS10-NI	Header	7B-Z-0-2-71	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CAP	700027	SS10	NI	-	HOLD 1	1 1/2"-CAP-700026-SS10-NI	1 1/2"-CAP-590230-SS10-PP	7B-Z-0-2-71 / 7B-Z-0-2-25	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CAP	700028	SS10	NI	-	HOLD 1	1 1/2"-CAP-700026-SS10-NI	1 1/2"-CAP-590130-SS10-PP	7B-Z-0-2-71 / 7B-Z-0-2-24	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CAP	700029	SS10	NI	-	HOLD 1	1 1/2"-CAP-700026-SS10-NI	1 1/2"-CAP-570229-SS10-PP	7B-Z-0-2-71 / 7B-Z-0-2-22	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CAP	700030	SS10	NI	-	HOLD 1	1 1/2"-CAP-700026-SS10-NI	1 1/2"-CAP-570130-SS10-PP	7B-Z-0-2-71 / 7B-Z-0-2-21	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips / Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 16 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1/2	CAP	700031	SS10	NI	-	HOLD 1	1"-CAP-700005-SS10-NI	1/2"-CAP-460101-SS10-NI	7B-Z-0-2-71 / 7B-Z-0-2-53	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	CAP	700034	SS10	NI	-	HOLD 1	1 1/2"-CAP-700026-SS10-NI	1/2"-SFI-580002-SS10-PP	7B-Z-0-2-71 / 7B-Z-0-2-23	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2; 1 1/2	CAP	700035	SS10	NI	-	HOLD 1	2"-CAP-700015-SS10-NI	Header	7B-Z-0-2-71	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	CAP	700036	SS10	NI	-	HOLD 1	2"-CAP-700019-SS10-NI	Header	7B-Z-0-2-71	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CAP	700037	SS10	NI		HOLD 1	2"-CAP-700015-SS10-NI	FH-700041	7B-Z-0-2-71 / 7B-Z-0-2-07	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2; 1.1/2; 3/4	CAP	700039	SS10	NI		HOLD 1	FGA-7000-2	Header	7B-Z-0-2-71	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	CAP	700040	SS10	NI		HOLD 1	2"-CAP-700005-SS10-NI	Header	7B-Z-0-2-71	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	CAP	900107	SS10	NI	-	HOLD 1	1"-CAP-700013-SS10-NI	AT-9001	7B-Z-0-2-54	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET:
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	3/4	CHE	430001	SS5	NI	-	Cleaning or Neutralizing Chemicals / Químicos p/ Limpeza ou Neutralização	HOLD 1	3/4"-CHE-430005-SS5-NI	TQ-7701-3	7B-Z-0-2-52 / 7B-Z-0-2-43	20	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	CHE	430002	SS5	NI	-	Cleaning or Neutralizing Chemicals / Químicos p/ Limpeza ou Neutralização	HOLD 1	3/4"-CHE-430005-SS5-NI	TQ-7702-3	7B-Z-0-2-52 / 7B-Z-0-2-46	20	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	CHE	430003	SS5	NI	-	Cleaning or Neutralizing Chemicals / Químicos p/ Limpeza ou Neutralização	HOLD 1	3/4"-CHE-430005-SS5-NI	TQ-7703-3	7B-Z-0-2-52 / 7B-Z-0-2-49	20	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	CHE	430004	SS5	NI	-	Cleaning or Neutralizing Chemicals / Químicos p/ Limpeza ou Neutralização	HOLD 1	3/4"-CHE-430005-SS5-NI	TQ-4601-2	7B-Z-0-2-52 / 7B-Z-0-2-53	20	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	CHE	430005	SS5	NI	-	Cleaning or Neutralizing Chemicals / Químicos p/ Limpeza ou Neutralização	HOLD 1	BD-4301	Header	7B-Z-0-2-52	20	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 18 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	~~7B~~	~~1/2~~	~~CIP~~	~~540110~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean In Place / CIP~~	~~HOLD 1~~	~~1/2"-PR-540122-SS10-PP~~	~~1/2"-PR-540122-SS10-PP~~	~~7B-Z-0-2-08~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1~~	~~CIP~~	~~580113~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean In Place / CIP~~	~~HOLD 1~~	-	-	~~7B-Z-0-2-23~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1/2~~	~~CIP~~	~~540120A~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean In Place / CIP~~	~~HOLD 1~~	~~1"-PR-540101-SS10-PP~~	~~1/2"-PR-540101-SS10-PP~~	~~7B-Z-0-2-08~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1/2~~	~~CIP~~	~~540120B~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean In Place / CIP~~	~~HOLD 1~~	~~1/2"-SFI-540106-SS10-HC~~	~~1/2"-PR-540101-SS10-PP~~	~~7B-Z-0-2-08~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1~~	~~CIP~~	~~550150A~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean In Place / CIP~~	~~HOLD 1~~	~~1 1/2"-PR-550101-SS10-PP~~	~~CIP JUMPER~~	~~7B-Z-0-2-10~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1/2~~	~~CIP~~	~~550150B~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean In Place / CIP~~	~~HOLD 1~~	~~1 1/2"-PR-550101-SS10-PP~~	~~HOLD 1~~	~~7B-Z-0-2-10~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 19 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1.1/2	CIPR	470107	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	TQ-3403	1 1/2"-CIPR-470108-SS10-PP	7B-Z-0-2-55	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIPR	470108	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	1 1/2"-CIPR-470107-SS10-PP	1 1/2"-CIP3R-770320-SS10-PP	7B-Z-0-2-55	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CIPR	510102	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	1"-PR-510102-SS10-PP	1"-CIP2R-770211-SS10-P	7B-Z-0-2-01	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 20 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1	CIPS	470105	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	1"-CIP3S-770308-SS10-PP	TQ-3404	7B-Z-0-2-55	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips / Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 21 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10˚C	Operating Pressure * 1.5			
0	~~7B~~	~~1~~	~~CIP1S~~	~~470105~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~HOLD 1~~	~~1"-CIP3S-770308-SS10-PP~~	~~TQ-340X FUTURE~~	~~7B-Z-0-2-55~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	1.1/2	CIP1S	510120	SS10	PP	HOLD 1	HOLD 1	1.1/2"-AWFI-510106-SS10-PP	1 1/2"-CIP1S-510121-SS10-PP	7B-Z-0-2-01	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIP1S	510121	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-510120-SS10-PP	TQ-5101	7B-Z-0-2-01	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP1S	510220	SS10	PP	HOLD 1	HOLD 1	1 1/2"-AWFI-510206-SS10-PP	TQ-5102	7B-Z-0-2-02	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP1S	510221	SS10	PP	HOLD 1	HOLD 1	1.1/2"-CIP1S-510220-SS10-PP	TQ-5102	7B-Z-0-2-02	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CIP1S	520113	SS10	PP	HOLD 1	HOLD 1	1"-CIP1S-770103-SS10-PP	TP-5201-1	7B-Z-0-2-03	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CIP1S	520209	SS10	PP	HOLD 1	HOLD 1	1"-CIP1S-770207-SS10-PP	TP-5202-1	7B-Z-0-2-04	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CIP1S	520307	SS10	PP	HOLD 1	HOLD 1	1"-CIP1S-770105-SS10-PP	TP-5203-1	7B-Z-0-2-05	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1 1/2; 1	CIP1S	540131	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770111-SS10-PP	BRE-5401	7B-Z-0-2-08	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CIP1S	540132	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-540131-SS10-PP	FH-540104	7B-Z-0-2-08	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	CIP1S	540138	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-540131-SS10-PP	FH-540105	7B-Z-0-2-08	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CIP1S	550129	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-550130-SS10-PP	1/2"-WW2-550129-SS10-PP	7B-Z-0-2-10	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2; 1/2	CIP1S	550130	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770112-SS10-PP	TP-5401-1	7B-Z-0-2-10 / 7B-Z-0-2-08	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIP1S	550131	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-550130-SS10-PP	FH-550101	7B-Z-0-2-10	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CIP1S	550132	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-550130-SS10-PP	FH-550104	7B-Z-0-2-10	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIP1S	560130	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770113-SS10-PP	1"-CIP1S-560132-SS10-PP	7B-Z-0-2-12	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIP1S	560131	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-560130-SS10-PP	1 1/2"-WW2-560131-SS10-PP	7B-Z-0-2-12	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2; 1	CIP1S	560132	SS10	PP	HOLD 1	HOLD 1	BRE-5601	TP-5601-4	7B-Z-0-2-12	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~CIP1S~~	~~560133~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~HOLD 1~~	~~1"-PR-560145-SS10-PP~~	~~1"-CIP1R-560133-SS10-P~~	~~7B-Z-0-2-12~~	~~80~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Cancelled
0	7B	1	CIP1S	560137	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-560130-SS10-PP	1"-PR-560151-SS10-PP	7B-Z-0-2-12	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~CIP1S~~	~~560161~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~HOLD 1~~	~~1.1/2"-CIP1S-560132-SS10-PP~~	~~1"-PR-560108-SS10-PP~~	~~7B-Z-0-2-12~~	~~80~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Cancelled
0	7B	1	CIP1S	560177	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-560130-SS10-PP	3/4"-SFIC-560127-SS10-PP	7B-Z-0-2-12	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1 1/2; 1~~	~~CIP1S~~	~~560232~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~HOLD 1~~	~~BRE-5602~~	~~TP-5602-4~~	~~7B-Z-0-2-14~~	~~80~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Cancelled
0	~~7B~~	~~1~~	~~CIP1S~~	~~560233~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~HOLD 1~~	~~1"-PR-560245-SS10-PP~~	~~1"-CIP1R-560233-SS10-PP~~	~~7B-Z-0-2-14~~	~~80~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Cancelled
0	~~7B~~	~~1~~	~~CIP1S~~	~~560277~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~HOLD 1~~	~~1.1/2"-CIP2S-560230-SS10-PP~~	~~1"-SFIC-560227-SS10-PP~~	~~7B-Z-0-2-14~~	~~80~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Cancelled
0	~~7B~~	~~1 1/2; 1~~	~~CIP1S~~	~~560283~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~HOLD 1~~	~~1"-CIP1S-560232-SS10-PP~~	~~1"-PR-560251-SS10-PP~~	~~7B-Z-0-2-14~~	~~80~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Cancelled

TESSLER engenharia / ips / Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 22 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10˚C	Operating Pressure * 1.5			
A	7B	1 1/2; 1	CIP1S	560330	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770115-SS10-PP	1.1/2"-CIP1S-560332-SS10-PP	7B-Z-0-2-16	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1 1/2	CIP1S	560331	SS10	PP	HOLD 1	HOLD 1	1.1/2"-CIP1S-560332-SS10-PP	1 1/2"-WW2-560331-SS10-PP	7B-Z-0-2-16	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1 1/2; 1	CIP1S	560332	SS10	PP	HOLD 1	HOLD 1	BRE-5603 (FUTURE)	TP-5603-4	7B-Z-0-2-16	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	CIP1S	560337	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-560332-SS10-PP	1"-PR-560351-SS10-PP	7B-Z-0-2-16	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	~~7B~~	~~1~~	~~CIP1S~~	~~560361~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~HOLD 1~~	~~1"-CIP1S-560332-SS10-PP~~	~~1"-PR-560351-SS10-PP~~	~~7B-Z-0-2-16~~	~~80~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Cancelled
A	7B	1	CIP1S	560377	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-560330-SS10-PP	3/4"-SFIC-560327-SS10-PP	7B-Z-0-2-16	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	CIP1S	561121	SS10	PP	HOLD 1	HOLD 1	1"-CIP1S-770116-SS10-PP	XV-561104A/C	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CIP1S	561221	SS10	PP	HOLD 1	HOLD 1	1"-CIP1S-561121-SS10-PP	XV-561204A/C	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CIP1S	561321	SS10	PP	HOLD 1	HOLD 1	1"-CIP1S-561121-SS10-PP	XV-561304A/C	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1.1/2	CIP1S	570113	SS10	PP	HOLD 1	HOLD 1	TP-5701/2	TQ-5701	7B-Z-0-2-21	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIP1S	570114	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIPS1-570113-SS10-PP	TQ-5701	7B-Z-0-2-21	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP1S	570120	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770108-SS10-PP	TP-5701/2	7B-Z-0-2-21	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP1S	570213	SS10	PP	HOLD 1	HOLD 1	TP-5701/2	TQ-5702	7B-Z-0-2-21 / 7B-Z-0-2-22	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP1S	570214	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIPS1-570213-SS10-PP	TQ-5702	7B-Z-0-2-22	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1.1/2~~	~~CIP1S~~	~~570223~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~HOLD 1~~	~~1 1/2"-CIPS1-570220-SS10-PP~~	~~TQ-5702~~	~~7B-Z-0-2-22~~	~~80~~	~~2,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1	CIP1S	580013	SS10	PP	HOLD 1	HOLD 1	1"-CIP1S-770110-SS10-PP	1"-PR-580003-SS10-PP	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2; 1	CIP1S	590142	SS10	PP	HOLD 1	HOLD 1	1"-CIP1S-770119-SS10-PP	TP-5901/2	7B-Z-0-2-24	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIP1S	770101	SS10	PP	HOLD 1	HOLD 1	CIP-7701	Header	7B-Z-0-2-43 / 7B-Z-0-2-44	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIP1S	770102	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770101-SS10-PP	TP-5101/2	7B-Z-0-2-44 / 7B-Z-0-2-02	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CIP1S	770103	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770101-SS10-PP	1"-CIP1S-520113-SS10-PP	7B-Z-0-2-44 / 7B-Z-0-2-03	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CIP1S	770105	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770101-SS10-PP	1"-CIP1S-520307-SS10-PP	7B-Z-0-2-44 / 7B-Z-0-2-05	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1 1/2	CIP1S	770107	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770201-SS10-PP	1"-CIP1S-520209-SS10-PP	7B-Z-0-2-47 / 7B-Z-0-2-04	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP1S	770108	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770101-SS10-PP	1 1/2"-CIP1S-570120-SS10-PP	7B-Z-0-2-44 / 7B-Z-0-2-21	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CIP1S	770110	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770101-SS10-PP	1"-CIPS1-580013-SS10-PP	7B-Z-0-2-44 / 7B-Z-0-2-23	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP1S	770111	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770112-SS10-PP	1 1/2"-CIP1S-540131-SS10-PP	7B-Z-0-2-08	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP1S	770112	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770101-SS10-PP	1 1/2"-CIP1S-550130-SS10-PP	7B-Z-0-2-44 / 7B-Z-0-2-10	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 23 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10˚C	Operating Pressure * 1.5			
0	7B	1.1/2	CIP1S	770113	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770101-SS10-PP	1 1/2"-CIP1S-560130-SS10-PP	7B-Z-0-2-44 / 7B-Z-0-2-12	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP1S	770115	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770101-SS10-PP	1 1/2"-CIP1S-560330-SS10-PP	7B-Z-0-2-44 / 7B-Z-0-2-16	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1	CIP1S	770116	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770101-SS10-PP	1 1/2"-CIP1S-561121-SS10-PP	7B-Z-0-2-44 / 7B-Z-0-2-20	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CIP1S	770119	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1S-770101-SS10-PP	1"-CIP1S-590142-SS10-PP	7B-Z-0-2-44 / 7B-Z-0-2-24	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
														HOLD 1	HOLD 1					
														HOLD 1	HOLD 1					
														HOLD 1	HOLD 1					
														HOLD 1	HOLD 1					
														HOLD 1	HOLD 1					
														HOLD 1	HOLD 1					
														HOLD 1	HOLD 1					

TESSLER engenharia / ips	7B-Z-0-2-12 / 7B-Z-	Takeda / Hemobrás	TITLE: **LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B** **LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B**	DOC NR: **E-569-B7A-PRO-330-001** / SHEET: 24 of 94 CLIENT NR: **PRD-MEC-LIS-002** / REV.: **0**

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10˚C	Operating Pressure * 1.5			
A	7B	1.1/2	CIP1R	510104	SS10	PP	HOLD 1	HOLD 1	TP5101-1	1 1/2"-CIP1R-770141-SS10-PP	7B-Z-0-2-01	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	CIP1R	510233	SS10	PP	HOLD 1	HOLD 1	TP-5102-1	2"-CIP1R-770142-SS10-PP	7B-Z-0-2-02	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CIP1R	550151	SS10	PP	HOLD 1	HOLD 1	TP-5501-1	2"-CIP1R-770132-SS10-PP	7B-Z-0-2-10	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CIP1R	560133	SS10	PP	HOLD 1	HOLD 1	1"-PR-560145-SS10-PP	1"-CIP1R-770137-SS10-PP	7B-Z-0-2-12	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	CIP1R	560134	SS10	PP	HOLD 1	HOLD 1	1"-CIP1R-560133-SS10-PP	BRE-5601	7B-Z-0-2-12	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CIP1R	560233	SS10	PP	HOLD 1	HOLD 1	1"-PR-560245-SS10-PP	1"-CIP2R-770218-SS10-PP	7B-Z-0-2-14	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	CIP1R	560234	SS10	PP	HOLD 1	HOLD 1	1"-CIP1R-560233-SS10-PP	BRE-5602	7B-Z-0-2-14	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CIP1R	560333	SS10	PP	HOLD 1	HOLD 1	1"-PR-560345-SS10-PP	1"-CIP1R-770138-SS10-PP	7B-Z-0-2-16	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	CIP1R	560334	SS10	PP	HOLD 1	HOLD 1	1"-CIP1R-560333-SS10-PP	BRE-5603	7B-Z-0-2-16	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	2	CIP1R	570104	SS10	PP	HOLD 1	HOLD 1	TQ-5701	2"-CIP1R-570130-SS10-PP	7B-Z-0-2-21	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CIP1R	570204	SS10	PP	HOLD 1	HOLD 1	TQ-5702	2"-CIP1R-570130-SS10-PP	7B-Z-0-2-22 / 7B-Z-0-2-21	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CIP1R	570130	SS10	PP	HOLD 1	HOLD 1	2"-CIP1R-570104-SS10-PP 2"-CIP1R-570204-SS10-PP	2"-CIP1R-770139-SS10-PP	7B-Z-0-2-21	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2~~	~~CIP1R~~	~~570230~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~HOLD 1~~	~~2"-CIP1R-570104-SS10-PP~~ ~~2"-CIP1R-570204-SS10-PP~~	~~2"-CIP1R-770139-SS10-PP~~	~~7B-Z-0-2-21~~	~~80~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1	CIP1R	580014	SS10	PP	HOLD 1	HOLD 1	TP-5800-1	1"-CIP1R-770140-SS10-PP	7B-Z-0-2-23 / 7B-Z-0-2-45	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2; 1	CIP1R	770106	SS10	PP	HOLD 1	HOLD 1	TP-5601-1	1"-CIP1R-770137-SS10-PP	7B-Z-0-2-12	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CIP1R	770130	SS10	PP	HOLD 1	HOLD 1	TP-3300-1	2"-CIP1R-770143-SS10-PP	7B-Z-0-2-26 / 7B-Z-0-2-45	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIP1R	770131	SS10	PP	HOLD 1	HOLD 1	TP-5401-1	2"-CIP1R-770132-SS10-PP	7B-Z-0-2-08 / 7B-Z-0-2-45	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CIP1R	770132	SS10	PP	HOLD 1	HOLD 1	2"-CIP1R-550151-SS10-PP	2"-CIP1R-770143-SS10-PP	7B-Z-0-2-10 / 7B-Z-0-2-45	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	CIP1R	770133	SS10	PP	HOLD 1	HOLD 1	TP-5601-1	2"-CIP1R-770143-SS10-PP	7B-Z-0-2-12 / 7B-Z-0-2-45	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	CIP1R	770135	SS10	PP	HOLD 1	HOLD 1	TP-5601-1	2"-CIP1R-770143-SS10-PP	7B-Z-0-2-12 / 7B-Z-0-2-45	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1	CIP1R	770137	SS10	PP	HOLD 1	HOLD 1	1"-CIP1R-560133-SS10-PP	2"-CIP1R-770143-SS10-PP	7B-Z-0-2-12 / 7B-Z-0-2-45	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CIP1R	770138	SS10	PP	HOLD 1	HOLD 1	1"-CIP1R-560333-SS10-PP	2"-CIP1R-770143-SS10-PP	7B-Z-0-2-16 / 7B-Z-0-2-45	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	2	CIP1R	770139	SS10	PP	HOLD 1	HOLD 1	2"-CIP1R-570130-SS10-PP	2"-CIP1R-770143-SS10-PP	7B-Z-0-2-21 / 7B-Z-0-2-45	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CIP1R	770140	SS10	PP	HOLD 1	HOLD 1	1"-CIPR1-580014-SS10-PP	2"-CIP1R-770143-SS10-PP	7B-Z-0-2-23 / 7B-Z-0-2-45	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIP1R	770141	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP1R-510104-SS10-PP	2"-CIP1S-770143-SS10-PP	7B-Z-0-2-01 / 7B-Z-0-2-45	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	CIP1R	770142	SS10	PP	HOLD 1	HOLD 1	2"-CIP1R-510233-SS10-PP	2"-CIP1S-770143-SS10-PP	7B-Z-0-2-02 / 7B-Z-0-2-45	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	7B-Z-0-2-12 / 7B-Z-	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001 CLIENT NR: PRD-MEC-LIS-002

REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	2	CIP1R	770143	SS10	PP	HOLD 1	HOLD 1	Header	BC-7701-2	7B-Z-0-2-45 / 7B-Z-0-2-43	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 26 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	~~7B~~	~~1~~	~~CIPR1~~	~~580014~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean in Place Return /CIP Retorno~~	~~HOLD 1~~	~~1"-CIPS2-580018-SS10-PP~~	~~1"-CIP1R-770140-SS10-PP~~	~~7B-Z-0-2-23~~	~~80~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 27 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	~~7B~~	~~1.1/2~~	~~CIPS1~~	~~570113~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean in Place Supply / *CIP Alimentação*~~	~~HOLD 1~~	~~TP-5701/2~~	~~1 1/2"-CIP1S-570114-SS10-PP~~	~~7B-Z-0-2-21~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1.1/2~~	~~CIPS1~~	~~570213~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean in Place Supply / *CIP Alimentação*~~	~~HOLD 1~~	~~TP-5701/2~~	~~1.1/2"-CIP1S-570220-SS10-PP~~	~~7B-Z-0-2-21 / 7B-Z-0-2-22~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1.1/2~~	~~CIPS1~~	~~570220~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean in Place Supply / *CIP Alimentação*~~	~~HOLD 1~~	~~1.1/2"-CIP1S-570213-SS10-PP~~	~~1.1/2"-CIP1S-570223-SS10-PP~~	~~7B-Z-0-2-22~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1~~	~~CIPS1~~	~~580013~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean in Place Supply / *CIP Alimentação*~~	~~HOLD 1~~	~~1"-CIP1S-770110-SS10-PP~~	~~1"-PR-580003-SS10-PP~~	~~7B-Z-0-2-23~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1~~	~~CIPS1~~	~~770117~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean in Place Supply / *CIP Alimentação*~~	~~HOLD 1~~	~~1"-CIP1S-770116-SS10-PP~~	~~1"-PR-561203-SS10-PP~~ ~~1"-PR-561207-SS10-PP~~	~~7B-Z-0-2-20~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1~~	~~CIPS1~~	~~770118~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean in Place Supply / *CIP Alimentação*~~	~~HOLD 1~~	~~1"-CIP1S-770116-SS10-PP~~	~~1"-PR-561307-SS10-PP~~ ~~1"-PR-561303-SS10-PP~~	~~7B-Z-0-2-20~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE: LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 28 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10˚C	Operating Pressure * 1.5			
A	7B	1	CIP2S	510105	SS10	PP	HOLD 1	HOLD 1	1"-CIP2S-770202-SS10-PP	TP-5101-1	7B-Z-0-2-01	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIP2S	510224	SS10	PP	HOLD 1	HOLD 1	TP-5102-1	1 1/2"-CIP2R-770212-SS10-PP	7B-Z-0-2-02	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP2S	510234	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP2S-770203-SS10-PP	1 1/2"-CIP2S-510236-SS10-PP	7B-Z-0-2-02	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIP2S	510236	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP2S-510234-SS10-PP	1 1/2"-PR/CIP2S-520205-SS10-PP	7B-Z-0-2-02	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2, 1 1/2	CIP2S	520120	SS10	PP	HOLD 1	HOLD 1	2"-PR-520106-SS10-PP	1.1/2"-CIP2S-520123-SS10-PP	7B-Z-0-2-03	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIP2S	520123	SS10	PP	HOLD 1	HOLD 1	2"-CIP2S-520120-SS10-P	TQ-5201	7B-Z-0-2-03	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2, 1 1/2	CIP2S	520220	SS10	PP	HOLD 1	HOLD 1	2"-PR-520206-SS10-PP	1 1/2"-CIP2S-520223-SS10-PP	7B-Z-0-2-04	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP2S	520223	SS10	PP	HOLD 1	HOLD 1	2"-CIP2S-520220-SS10-PP	TQ-5202	7B-Z-0-2-04	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2; 1 1/2	CIP2S	520320	SS10	PP	HOLD 1	HOLD 1	2"-PR-520306-SS10-PP	1.1/2"-CIP2S-520323-SS10-PP	7B-Z-0-2-05	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	2; 1 1/2	CIP2S	520323	SS10	PP	HOLD 1	HOLD 1	2"-CIP2S-520320-SS10-PP	TQ-5203 (FUTURE)	7B-Z-0-2-05	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	~~7B~~	~~1.1/2~~	~~CIP2S~~	~~560131~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~HOLD 1~~	~~1.1/2"-CIP1S-560132-SS10-PP~~	~~1 1/2"-CIP1S-560131-SS10-PP~~	~~-~~	~~80~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	CANCELED
A	7B	1.1/2	CIP2S	560230	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP2S-770205-SS10-PP	1.1/2"-CIP1S-560232-SS10-PP	7B-Z-0-2-14	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP2S	560231	SS10	PP	HOLD 1	HOLD 1	1.1/2"-CIP1S-560232-SS10-PP	1 1/2"-WW2-560231-SS10-PP	7B-Z-0-2-14	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2; 1	CIP2S	560232	SS10	PP	HOLD 1	HOLD 1	BRE-5602	TP-5602-4	7B-Z-0-2-14	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CIP2S	560237	SS10	PP	HOLD 1	HOLD 1	1.1/2"-CIP1S-560232-SS10-PP	3/4"-SFIC-560214-SS10-PP	7B-Z-0-2-14	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CIP2S	560277	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP2S-560230-SS10-PP	1"-SFIC-560227-SS10-PP	7B-Z-0-2-14	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP2S	580015	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP2S-770206-SS10-PP	TP-5800-1	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP2S	580018	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIPS2-580015-SS10-PP	TP-5800-1	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2; 1 1/2	CIP2S	590120	SS10	PP	HOLD 1	HOLD 1	1 1/2"-PR/CIP2S-590104-SS10-PP	1 1/2"-CIP2S-590121-SS10-PP	7B-Z-0-2-24	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIP2S	590121	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP2S-590120-SS10-PP	TQ-5901	7B-Z-0-2-24	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2; 1 1/2	CIP2S	590220	SS10	PP	HOLD 1	HOLD 1	1 1/2"-PR/CIP2S-590204-SS10-PP	1 1/2"-CIP2S-590221-SS10-PP	7B-Z-0-2-25	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	CIP2S	590221	SS10	PP	HOLD 1	HOLD 1	2"-CIP2S-590220-SS10-PP	TQ-5902	7B-Z-0-2-25	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP2S	770201	SS10	PP	HOLD 1	HOLD 1	CIP-7702	HEADER	7B-Z-0-2-46 / 7B-Z-0-2-47	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CIP2S	770202	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP2S-770201-SS10-PP	1"-CIP2S-510105-SS10-PP	7B-Z-0-2-01 / 7B-Z-0-2-47	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIP2S	770203	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP2S-770201-SS10-PP	1 1/2"-CIP2S-510234-SS10-PP	7B-Z-0-2-47 / 7B-Z-0-2-02	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIP2S	770205	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP2S-770201-SS10-PP	1 1/2"-CIP2S-560230-SS10-PP	7B-Z-0-2-47 / 7B-Z-0-2-14	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE: LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 29 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10˚C	Operating Pressure * 1.5			
A	7B	1.1/2	CIP2S	770206	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP2S-770201-SS10-PP	1 1/2"-CIPS2-580015-SS10-PP	7B-Z-0-2-47 / 7B-Z-0-2-23	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CIP2S	770207	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP2S-770201-SS10-PP	1"-CIP1S-770207-SS10-PP	7B-Z-0-2-47 / 7B-Z-0-2-04	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE: LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 30 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇAO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1	CIP2R	371002	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	1"-SFIC-371001-SS10-PP	1"-CIP2R-770220-SS10-PP	7B-Z-0-2-40	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CIP2R	371102	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	1"-SFIC-371102-SS10-PP	1"-CIP2R-770221-SS10-PP	7B-Z-0-2-40	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	CIP2R	520104	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	TP-5201-1	2"-CIP2R-770214-SS10-PP	7B-Z-0-2-03	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CIP2R	520207	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	TP-5202-1	2"-CIP2R-770215-SS10-PP	7B-Z-0-2-04	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CIP2R	520304	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	TP-5203-1	2"-CIP2R-770216-SS10-PP	7B-Z-0-2-05	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	2	CIP2R	590138	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	TP-5901/2	2"-CIP2R-590139-SS10-PP	7B-Z-0-2-24	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	CIP2R	590139	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	TP-5901/2	2"-CIP2R-770222-SS10-PP	7B-Z-0-2-24	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CIP2R	770204	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	TP-5601-1	2"-CIP2R-770224-SS10-PP	7B-Z-0-2-12 / 7B-Z-0-2-48	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CIP2R	770211	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	1"-CIPR-510102-SS10-PP	2"-CIP2R-770224-SS10-PP	7B-Z-0-2-01 / 7B-Z-0-2-48	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP2R	770212	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	1 1/2"-CIP2S-510224-SS10-PP	2"-CIP2R-770224-SS10-PP	7B-Z-0-2-02 / 7B-Z-0-2-48	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CIP2R	770214	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	2"-CIP2R-520104-SS10-PP	2"-CIP2R-770224-SS10-PP	7B-Z-0-2-03 / 7B-Z-0-2-48	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CIP2R	770215	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	2"-CIP2R-520207-SS10-PP	2"-CIP2R-770224-SS10-PP	7B-Z-0-2-04 / 7B-Z-0-2-48	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CIP2R	770216	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	2"-CIP2R-520304-SS10-PP	2"-CIP2R-770224-SS10-PP	7B-Z-0-2-05 / 7B-Z-0-2-48	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CIP2R	770217	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	TP-5601-1	2"-CIP2R-770224-SS10-PP	7B-Z-0-2-12 / 7B-Z-0-2-48	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CIP2R	770218	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	1"-CIP1R-560233-SS10-PP	2"-CIP2R-770224-SS10-PP	7B-Z-0-2-14 / 7B-Z-0-2-48	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2~~	~~CIP2R~~	~~770219~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean in Place Return / *CIP Retorno*~~	~~HOLD 1~~	~~2"-CIP2R-770222-SS10-PP~~	~~2"-CIP2R-770223-SS10-PP~~	~~7B-Z-0-2-48~~	~~80~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	canceled
0	7B	1	CIP2R	770220	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	1"-CIP2R-371002-SS10-PP	2"-CIP2R-770224-SS10-PP	7B-Z-0-2-40 / 7B-Z-0-2-48	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CIP2R	770221	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	1"-CIP2R-371102-SS10-PP	2"-CIP2R-770224-SS10-PP	7B-Z-0-2-40 / 7B-Z-0-2-48	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CIP2R	770222	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	2"-CIP2R-590139-SS10-PP	2"-CIP2R-770224-SS10-PP	7B-Z-0-2-24 / 7B-Z-0-2-48	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	CIP2R	770223	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	HEADER	BC-7702-2	7B-Z-0-2-48 / 7B-Z-0-2-46	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CIP2R	770224	SS10	PP	HOLD 1	Clean in Place Return / CIP Retorno	HOLD 1	HEADER	2"-CIP2R-770223-SS10-PP	7B-Z-0-2-01 / 7B-Z-0-2-48	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 31 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1.1/2	CIPS2	580015	SS10	PP	HOLD 1	Clean in Place Supply / *CIP Alimentação*	HOLD 1	1 1/2"-CIP2S-770206-SS10-PP	TP-5800-1	7B-Z-0-2-23	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CIPS2	580016	SS10	PP	HOLD 1	Clean in Place Supply / *CIP Alimentação*	HOLD 1	1 1/2"-CIPS2-580015-SS10-PP	TP-5800-1	7B-Z-0-2-23	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1.1/2~~	~~CIPS2~~	~~590220~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean in Place Supply / *CIP Alimentação*~~	~~HOLD 1~~	~~1 1/2"-PR/CIP2S-590207-SS10-PP~~	~~TQ-5902~~	~~7B-Z-0-2-25~~	~~80~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 32 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*					INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
											Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	2	370103	SS10	PP	HOLD 1	HOLD 1	TP-3701-1	1 1/2"-CIP3S-370105-SS10-PP	7B-Z-0-2-33	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2; 1 1/2	370105	SS10	PP	HOLD 1	HOLD 1	2"-CIP3S-370103-SS10-PP	TQ-3701	7B-Z-0-2-33	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	370106	SS10	PP	HOLD 1	HOLD 1	2"-CIP3S-370103-SS10-PP	TP-3801-2	7B-Z-0-2-33 / 7B-Z-0-2-34	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	370203	SS10	PP	HOLD 1	HOLD 1	TP-3702-1	2"-CIP3S-370206-SS10-PP	7B-Z-0-2-34	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2; 1 1/2	370205	SS10	PP	HOLD 1	HOLD 1	2"-CIP3S-370203-SS10-PP	1 1/2"-CIP3S-370223-SS10-PP	7B-Z-0-2-34	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	370206	SS10	PP	HOLD 1	HOLD 1	2"-CIP3S-370203-SS10-PP	TP-3801-2	7B-Z-0-2-34	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	370223	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP3S-370205-SS10-PP	TQ-3702	7B-Z-0-2-34	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	370303	SS10	PP	HOLD 1	HOLD 1	TP-3703-1	2"-CIP3S-370306-SS10-PP	7B-Z-0-2-5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	370305	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP3S-370303-SS10-PP	1"-CIP3S-370323-SS10-PP	7B-Z-0-2-35	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	370306	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP3S-370305-SS10-PP	TP-3801-2	7B-Z-0-2-35 / 7B-Z-0-2-34	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	370323	SS10	PP	HOLD 1	HOLD 1	1 1/2"-CIP3S-370305-SS10-PP	TQ-3703	7B-Z-0-2-35	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	470111	SS10	PP	HOLD 1	HOLD 1	1"-FH-470101	1"-CIP3R-470112-SS10-PP	7B-Z-0-2-55	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	470114	SS10	PP	HOLD 1	HOLD 1	1"-FH-470101	1"-FH-470106 / 1"-FH-470109	7B-Z-0-2-55	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	770301	SS10	PP	HOLD 1	HOLD 1	CIP-7703	Header	7B-Z-0-2-49 / 7B-Z-0-2-50	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	770302	SS10	PP	HOLD 1	HOLD 1	2"-CIP3S-770301-SS10-PP	TP-3701-1	7B-Z-0-2-50 / 7B-Z-0-2-33	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	770303	SS10	PP	HOLD 1	HOLD 1	2"-CIP3S-770301-SS10-PP	TP-3702-1	7B-Z-0-2-50 / 7B-Z-0-2-34	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	770304	SS10	PP	HOLD 1	HOLD 1	2"-CIP3S-770301-SS10-PP	TP-3702-3	7B-Z-0-2-50 / 7B-Z-0-2-34	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	770305	SS10	PP	HOLD 1	HOLD 1	2"-CIP3S-770301-SS10-PP	TP-3702-3	7B-Z-0-2-50 / 7B-Z-0-2-34	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	770306	SS10	PP	HOLD 1	HOLD 1	2"-CIP3S-770301-SS10-PP	TP-3702-3	7B-Z-0-2-50 / 7B-Z-0-2-34	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	770307	SS10	PP	HOLD 1	HOLD 1	2"-CIP3S-770301-SS10-PP	TP-3703-1	7B-Z-0-2-50 / 7B-Z-0-2-35	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	770308	SS10	PP	HOLD 1	HOLD 1	2"-CIP3S-770301-SS10-PP	1"-CIPS-470105-SS10-PP	7B-Z-0-2-50 / 7B-Z-0-2-55	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	770310	SS10	PP	HOLD 1	HOLD 1	2"-CIP3S-770301-SS10-PP	TP-3701-3	7B-Z-0-2-50 / 7B-Z-0-2-33	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 33 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1	CIP3R	470112	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	1"-CIP3S-470111-SS10-PP	1"-FH-470105	7B-Z-0-2-55	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP3R	470113	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	1"-CIP3S-470111-SS10-PP	TO CIP RETURN (AFTER XV-470108A)	7B-Z-0-2-55	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP3R	470115	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	HFIL-580X	TO CIP RETURN (AFTER XV-470108A)	7B-Z-0-2-55	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	CIP3R	770311	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	Header	BC-7703-2	7B-Z-0-2-51 / 7B-Z-0-2-49	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CIP3R	770320	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	1 1/2"-CIPR-470108-SS10-PP	2"-CIP3R-770311-SS10-PP	7B-Z-0-2-55 / 7B-Z-0-2-51	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	CIP3R	770321	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	TP-3701-4	2"-CIP3R-770311-SS10-PP	7B-Z-0-2-37 / 7B-Z-0-2-51	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CIP3R	770322	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	TP-3702-4	2"-CIP3R-770311-SS10-PP	7B-Z-0-2-39 / 7B-Z-0-2-51	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CIP3R	770323	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	TP-3702-5	2"-CIP3R-770311-SS10-PP	7B-Z-0-2-40 / 7B-Z-0-2-51	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CIP3R	770324	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	TP-3703-2	2"-CIP3R-770311-SS10-PP	7B-Z-0-2-35 / 7B-Z-0-2-51	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CIP3R	770325	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	TP-3702-2	2"-CIP3R-770311-SS10-PP	7B-Z-0-2-34 / 7B-Z-0-2-51	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CIP3R	770326	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	TP-3801-2	2"-CIP3R-770311-SS10-PP	7B-Z-0-2-34 / 7B-Z-0-2-51	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CIP3R	770327	SS10	PP	HOLD 1	Clean in Place Return / *CIP Retorno*	HOLD 1	TP-3701-2	2"-CIP3R-770311-SS10-PP	7B-Z-0-2-33 / 7B-Z-0-2-51	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE: LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 34 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	2.1/2	CPW	630201	SS10	NI	-	Purified Water / *Água Purificada*	995,5	TQ-6302	BC-6302-1 / BC-6302-2	7B-Z-0-2-57	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2~~	~~CPW~~	~~630201~~	~~SS10~~	~~NI~~	-	~~Purified Water / *Água Purificada*~~	~~995,5~~	~~TQ-6302~~	~~BC-6302-1 / BC-6302-2~~	~~7B-Z-0-2-57~~	~~20~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
A	7B	2	CPW	630202	SS10	NI	-	Purified Water / *Água Purificada*	995,5	BC-6302-1	2"-CPW-630204-SS10-NI	7B-Z-0-2-57	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	~~7B~~	~~2~~	~~CPW~~	~~630202~~	~~SS10~~	~~NI~~	-	~~Purified Water / *Água Purificada*~~	~~995,5~~	~~2"-CPW-630204-SS10-NI~~	~~BC-6302-1~~	~~7B-Z-0-2-57~~	~~20~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
A	7B	2	CPW	630203	SS10	NI	-	Purified Water / *Água Purificada*	995,5	BC-6302-2	2"-CPW-630204-SS10-NI	7B-Z-0-2-57	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	LOOP
A	~~7B~~	~~2~~	~~CPW~~	~~630203~~	~~SS10~~	~~NI~~	-	~~Purified Water / *Água Purificada*~~	~~995,5~~	~~2"-CPW-630204-SS10-NI~~	~~BC-6302-2~~	~~7B-Z-0-2-57~~	~~20~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
A	7B	2	CPW	630204	SS10	NI	-	Purified Water / *Água Purificada*	995,5	2"-CPW-630202-SS10-NI / 2"-CPW-630203-SS10-NI	UV-6302	7B-Z-0-2-57	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	~~7B~~	~~2~~	~~CPW~~	~~630204~~	~~SS10~~	~~NI~~	-	~~Purified Water / *Água Purificada*~~	~~995,5~~	~~UV-6302~~	~~2"-CPW-630202-SS10-NI 2"-CPW-630203-SS10-NI~~	~~7B-Z-0-2-57~~	~~20~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
0	7B	2; 1.1/2	CPW	630205	SS10	NI	-	Purified Water / *Água Purificada*	995,5	UV-6302	TC-6302	7B-Z-0-2-57 / 7B-Z-0-2-58 / 7B-Z-0-2-43 / 7B-Z-0-2-46 / 7B-Z-0-2-49 / 7B-Z-0-2-53 / 7B-Z-0-2-59 /7B-Z-0-2-63	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2~~	CPW	~~630205~~	~~SS10~~	~~NI~~	-	Purified Water / *Água Purificada*	~~995,5~~	~~UV-6302~~	~~TC-6302~~	~~7B-Z-0-2-57 / 7B-Z-0-2-58 / 7B-Z-0-2-49 / 7B-Z-0-2-53 / 7B-Z-0-2-63~~	~~20~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
A	7B	1	CPW	630206	SS10	NI	-	Purified Water / *Água Purificada*	995,5	2"-CPW-630204-SS10-NI	OG-6302	7B-Z-0-2-57	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CPW	630207	SS10	NI	-	Purified Water / *Água Purificada*	995,5	2"-CPW-630204-SS10-NI	OG-6302	7B-Z-0-2-57	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CPW	630209	SS10	NI	-	Purified Water / *Água Purificada*	995,5	OG-6302	1"-CPW-630233-SS10-NI	7B-Z-0-2-57	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	CPW	630210	SS10	NI	-	Purified Water / *Água Purificada*	995,5	TC-6302	2"-CPW-630211-SS10-NI	7B-Z-0-2-57	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	CPW	630211	SS10	NI	-	Purified Water / *Água Purificada*	995,5	1 1/2"-CPW-630210-SS10-NI	TQ-6302	7B-Z-0-2-57	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CPW	630215	SS10	NI	-	Purified Water / *Água Purificada*	995,5	RO-6302	TQ-6302	7B-Z-0-2-56 / 7B-Z-0-2-57	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CPW	630216	SS10	NI	-	Purified Water / *Água Purificada*	995,5	RO-6302	TQ-6302	7B-Z-0-2-56 / 7B-Z-0-2-57	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CPW	630217	SS10	NI	-	Purified Water / *Água Purificada*	995,5	2"-CPW-630205-SS10-NI	1 1/2"-HWFI-640109-SS10-HC	7B-Z-0-2-43 / 7B-Z-0-2-58	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CPW	630218	SS10	NI	-	Purified Water / *Água Purificada*	995,5	2"-CPW-630205-SS10-NI	1 1/2"-HWFI-640110-SS10-HC	7B-Z-0-2-46 / 7B-Z-0-2-58	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	CPW	630219	SS10	NI	-	Purified Water / *Água Purificada*	995,5	2"-CPW-630205-SS10-NI	1 1/2"-HWFI-640111-SS10-HC	7B-Z-0-2-49 / 7B-Z-0-2-58	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	CPW	630220	SS10	NI	-	Purified Water / *Água Purificada*	995,5	2"-CPW-630205-SS10-NI	CSG-6501	7B-Z-0-2-63 / 7B-Z-0-2-58	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	CPW	~~630220~~	~~SS10~~	~~NI~~	-	Purified Water / *Água Purificada*	~~995,5~~	~~2"-CPW-630205-SS10-NI~~	~~CLEAN STEAM GENERATOR CSG-6501~~	~~7B-Z-0-2-58~~	~~20~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
0	7B	3/4	CPW	630221	SS10	NI	-	Purified Water / *Água Purificada*	995,5	2"-CPW-630205-SS10-NI	MES-6401	7B-Z-0-2-58 / 7B-Z-0-2-59	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	CPW	630222	SS10	NI	-	Purified Water / *Água Purificada*	995,5	2"-CPW-630205-SS10-NI	LV-4601	7B-Z-0-2-53 /7B-Z-0-2-58	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CPW	630233	SS10	NI	-	Purified Water / *Água Purificada*	995,5	OG-6302	2"-CPW-630211-SS10-NI	7B-Z-0-2-57	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 35 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	3/4	CW1S	540153	SS5	CC	HOLD 1	998,6	1"-CW1S-540161-SS5-CC	TC-5401-2	7B-Z-0-2-09 / 7B-Z-0-2-08	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CW1S	540161	SS5	CC	HOLD 1	998,6	1.1/2"-CW1S-070045-CS1-CC	1"-JKTS-540161-SS5-AS	7B-Z-0-2-09	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CW1S	550161	SS5	CC	HOLD 1	998,6	1.1/2"-CW1S-070047-CS1-CC	1"-JKTS-550161-SS5-AS	7B-Z-0-2-11	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CW1S	560155	SS5	CC	HOLD 1	998,6	3/4"-GW0S-560153-SS5-CC	TC-AG5601	7B-Z-0-2-12	5	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CW1S	560161	CS1	CC	HOLD 1	998,6	2"-CW1S-070041-CS1-CC	PCV-560164	7B-Z-0-2-13	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CW1S	560255	SS5	CC	HOLD 1	995,4	3/4"-GW0S-560253-SS5-CC	TC-AG5602	7B-Z-0-2-14	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CW1S	560261	CS1	CC	HOLD 1	998,6	2"-CW1S-070043-CS1-CC	PCV-560264	7B-Z-0-2-15	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CW1S	560355	SS5	CC	HOLD 1	998,6	3/4"-GW0S-560353-SS5-CC	TC-AG5603	7B-Z-0-2-16	5	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CW1S	560361	CS1	CC	HOLD 1	998,6	2"-CW1S-070049-CS1-CC	PCV-560364	7B-Z-0-2-17	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	2	CW1S	630231	CS1	CC	HOLD 1	998,6	1.1/2"-CW1S-070031-CS1-CC	TC-6302	7B-Z-0-2-57	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CW1S	640127	CS1	CC	HOLD 1	998,6	3"-CW1S-070037-CS1-CC	MES-6401	7B-Z-0-2-59	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3	CW1S	640129	CS1	CC	HOLD 1	998,6	3"-CW1S-070037-CS1-CC	3"-CW1R-070038-CS1-CC	7B-Z-0-2-59	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CW1S	650157	CS1	CC	HOLD 1	998,6	1"-CW1S-070026-CS1-CC	CSG-6501	7B-Z-0-2-63	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CW1S	900104	CS1	CC	HOLD 1	998,6	2"-CW1S-070020-CS1-CC	AT-9001	7B-Z-0-2-54	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	4	CW1S	920111	CS1	CC	HOLD 1	998,6	4"-CW1S-070035-CS1-CC	TC-9201	7B-Z-0-2-60	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 36 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10˚C	Operating Pressure * 1.5			
A	7B	3/4	CW1R	540154	SS5	CC	HOLD 1	997,5	TC-5401-2	1"-CW1R-540148-SS5-CC	7B-Z-0-2-08 / 7B-Z-0-2-09	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CW1R	540148	SS5	CC	HOLD 1	997,5	1"-JKTR-540148-SS5-AS	1.1/2"-CW1R-070046-CS1-CC	7B-Z-0-2-09	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CW1R	550148	SS5	CC	HOLD 1	997,5	1"-JKTR-550148-SS5-AS	1.1/2"-CW1R-070048-CS1-CC	7B-Z-0-2-11	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CW1R	560148	CS1	CC	HOLD 1	997,5	BPCV-560133		7B-Z-0-2-13	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CW1R	560156	SS5	CC	HOLD 1	997,5	TC-AG5601	3/4"-GW0R-560154-SS5-CC	7B-Z-0-2-12	10	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CW1R	560248	CS1	CC	HOLD 1	997,5	BPCV-560233	2"-CW1R-070044-CS1-CC	7B-Z-0-2-15	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	CW1R	560256	SS5	CC	HOLD 1	995,4	TC-AG5602	3/4"-GW0R-560254-SS5-CC	7B-Z-0-2-14	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CW1R	560348	CS1	CC	HOLD 1	997,5	BPCV-560333	2"-CW1R-070050-CS1-CC	7B-Z-0-2-17	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1/2	CW1R	560356	SS5	CC	HOLD 1	997,5	TC-AG5603	3/4"-GW0R-560354-SS5-CC	7B-Z-0-2-16	10	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CW1R	630232	CS1	CC	HOLD 1	997,5	TC-6302	1.1/2"-CW1R-070032-CS1-CC	7B-Z-0-2-57	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	CW1R	640128	CS1	CC	HOLD 1	997,5	MES-6401	3"-CW1R-070038-CS1-CC	7B-Z-0-2-59	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	CW1R	650158	CS1	CC	HOLD 1	997,5	CSG-6501	1"-CW1R-070027-CS1-CC	7B-Z-0-2-63	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	CW1R	900105	CS1	CC	HOLD 1	997,5	AT-9001	2"-CW1R-070021-CS1-CC	7B-Z-0-2-54	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	4	CW1R	920112	CS1	CC	HOLD 1	997,5	TC-9201	4"-CW1R-070036-CS1-CC	7B-Z-0-2-60	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 37 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	3/4	C1B	540164	SS5	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	943	3/4"-IS1B-540164-SS5-HC	RESERVOIR X-540137	7B-Z-0-2-09	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	C1B	540165	SS5	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	943	1"-JKTS-540147-SS5-PP	RESERVOIR X-540137	7B-Z-0-2-09	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	C1B	540166	SS5	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	943	1"-C1B-540165-SS5-HC	3/4"-C1B-540164-SS5-HC	7B-Z-0-2-09	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	C1B	540167	SS5	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	943	RESERVOIR X-540137	PT-540138	7B-Z-0-2-09	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	C1B	550164	CS1	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	943	3/4"-IS1B-550164-CS1-HC	RESERVOIR X-550137	7B-Z-0-2-11	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	C1B	550165	CS1	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	943	1 1/2"-JKTS-550147-CS1-AS	RESERVOIR X-550137	7B-Z-0-2-11	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	C1B	550166	CS1	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	943	1"-C1B-550165-CS1-HC	3/4"-C1B-550164-CS1-HC	7B-Z-0-2-11	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	C1B	550167	CS1	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	943	RESERVOIR X-550137	PT-550138	7B-Z-0-2-11	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1; 3/4	C1B	560164	CS1	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	943	1"-IS1B-560164-CS1-HC	X-560137	7B-Z-0-2-13	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	C1B	560165	CS1	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	943	2"-JKTS-560147-CS1-PP	3/4"-C1B-560164-CS1-HC	7B-Z-0-2-13	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	C1B	560166	CS1	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	943	3/4"-C1B-560165-CS1-HC	3/4"-C1B-560165-CS1-HC	7B-Z-0-2-13	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	C1B	560167	CS1	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	943	X-560137	PT-560138	7B-Z-0-2-13	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1; 3/4	C1B	560264	CS1	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	HOLD 1	1"-IS1B-560264-CS1-HC	X-560237	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	C1B	560265	CS1	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	HOLD 1	2"-JKTS-560247-CS1-PP	3/4"-C1B-560264-CS1-HC	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	C1B	560266	CS1	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	HOLD 1	3/4"-C1B-560265-CS1-HC	3/4"-C1B-560265-CS1-HC	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	C1B	560267	CS1	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	HOLD 1	X-560237	PT-560238	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1; 3/4	C1B	560364	CS1	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	943	1"-IS1B-560364-CS1-HC	X-560337	7B-Z-0-2-17	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	3/4	C1B	560365	CS1	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	943	2"-JKTS-560347-CS1-PP	3/4"-C1B-560364-CS1-HC	7B-Z-0-2-17	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	3/4	C1B	560366	CS1	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	943	3/4"-C1B-560365-CS1-HC	3/4"-C1B-560365-CS1-HC	7B-Z-0-2-17	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	C1B	560367	CS1	HC	HOLD 1	Condensate (Low Press.) / *Condensado (Baixa Pressão)*	943	X-560337	PT-560338	7B-Z-0-2-17	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	DOC NR:	SHEET:
		LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	E-569-B7A-PRO-330-001	38 of 94
			CLIENT NR:	REV.:
			PRD-MEC-LIS-002	0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10˚C	Operating Pressure * 1.5			
~~A~~	~~7B~~	~~1~~	~~C4B~~	~~460102~~	~~CS1~~	~~HC~~	~~HOLD 1~~	~~915,6~~	~~LV-4601~~	~~1"-C4B-9302XX-CS1-HC~~	~~7B-Z-0-2-53~~	~~152~~	~~4,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	
0	7B	1	C4B	460104	CS1	HC	HOLD 1	915,6	LV-4601	1"-C4B-930228-CS1-HC	7B-Z-0-2-53	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	C4B	540163	SS5	HC	HOLD 1	915,6	3/4"-IS4B-540163-SS5-HC	RESERVOIR X-540137	7B-Z-0-2-09	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	C4B	540168	SS5	HC	HOLD 1	915,6	PT-540138	1"-C4B-540169-SS5-HC	7B-Z-0-2-09	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	C4B	540169	SS5	HC	HOLD 1	915,6	Header	3/4"-PC-940006-CS1-HC	7B-Z-0-2-09	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	C4B	550163	CS1	HC	HOLD 1	915,6	3/4"-IS4B-550163-SS5-HC	RESERVOIR X-550137	7B-Z-0-2-11	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	C4B	550168	CS1	HC	HOLD 1	915,6	PT-550138	1"-C4B-550169-CS1-HC	7B-Z-0-2-11	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	C4B	550169	CS1	HC	HOLD 1	915,6	Header	3/4"-PC-940008-CS1-HC	7B-Z-0-2-11	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1; 3/4	C4B	560163	CS1	HC	HOLD 1	HOLD 1	1"-IS4B-560163-CS1-HC	X-560137	7B-Z-0-2-13	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	C4B	560167	CS1	HC	HOLD 1	HOLD 1	X-560137	PT-560138	7B-Z-0-2-13	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	C4B	560168	CS1	HC	HOLD 1	HOLD 1	PT-560138	1"-C4B-560169-CS1-HC	7B-Z-0-2-13	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	C4B	560169	CS1	HC	HOLD 1	HOLD 1	Header	1"-PC-940007-CS1-HC	7B-Z-0-2-13	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	C4B	560175	CS1	HC	HOLD 1	HOLD 1	TC-5601-1	X-560137	7B-Z-0-2-13	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	C4B	560176	CS1	HC	HOLD 1	HOLD 1	1"-C4B-560175-CS1-HC (BY-PASS)	1"-C4B-560175-CS1-HC (BY-PASS)	7B-Z-0-2-13	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1; 3/4	C4B	560263	CS1	HC	HOLD 1	HOLD 1	1"-IS4B-560263-CS1-HC	X-560237	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	C4B	560267	CS1	HC	HOLD 1	HOLD 1	X-560237	PT-560238	7B-Z-0-2-15	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	C4B	560268	CS1	HC	HOLD 1	HOLD 1	PT-560238	1"-C4B-560269-CS1-HC	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	C4B	560269	CS1	HC	HOLD 1	HOLD 1	Header	1"-PC-940009-CS1-HC	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	C4B	560275	CS1	HC	HOLD 1	HOLD 1	TC-5602-1	X-560237	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	C4B	560276	CS1	HC	HOLD 1	HOLD 1	1"-C4B-560275-CS1-HC (BY-PASS)	1"-C4B-560275-CS1-HC (BY-PASS)	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1; 3/4	C4B	560363	CS1	HC	HOLD 1	HOLD 1	1"-IS4B-560363-CS1-HC	X-560337	7B-Z-0-2-17	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	C4B	560367	CS1	HC	HOLD 1	HOLD 1	X-560337	PT-560338	7B-Z-0-2-17	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1	C4B	560368	CS1	HC	HOLD 1	HOLD 1	PT-560338	1"-C4B-560369-CS1-HC	7B-Z-0-2-17	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	C4B	560369	CS1	HC	HOLD 1	HOLD 1	Header	1"-C4B-940004-CS1-HC	7B-Z-0-2-17	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	C4B	560375	CS1	HC	HOLD 1	HOLD 1	TC-5603-1	X-560337	7B-Z-0-2-17	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1	C4B	560376	CS1	HC	HOLD 1	HOLD 1	1"-C4B-560375-CS1-HC (BY-PASS)	1"-C4B-560375-CS1-HC (BY-PASS)	7B-Z-0-2-17	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 39 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10˚C	Operating Pressure * 1.5			
A	7B	3/4	C4B	640134	CS1	HC	HOLD 1	915,6	TC-6401	1 1/2"-IS4B-920202-CS1-HC	7B-Z-0-2-60	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	C4B	900102	CS1	HC	HOLD 1	915,6	AT-9001	1"-C4B-930218-CS1-HC	7B-Z-0-2-54	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	C4B	920202	CS1	HC	HOLD 1	915,6	TC-9202	1 1/2"-C4B-930202-CS1-HC	7B-Z-0-2-60	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	C4B	920203	CS1	HC	HOLD 1	915,6	1 1/2"-IS4B-920201-CS1-HC	1 1/2"-C4B-920202-CS1-HC	7B-Z-0-2-60	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	DOC NR:	SHEET:
		LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	E-569-B7A-PRO-330-001	40 of 94
			CLIENT NR:	REV.:
			PRD-MEC-LIS-002	0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10˚C	Operating Pressure * 1.5			
0	7B	1.1/2	C8B	640131	CS2	HC	HOLD 1	891,9	MES-6401	1 1/2"-C8B-930304-CS2-HC	7B-Z-0-2-59	175	8,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	C8B	640132	CS2	HC	HOLD 1	891,9	1 1/2"-IS8B-790324-CS2-HC	1 1/2"-C8B-930304-CS2-HC	7B-Z-0-2-59	175	8,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3; 1 1/4	C8B	650138	CS2	HC	HOLD 1	891,9	CSG-6501	3"-C8B-930305-CS2-HC	7B-Z-0-2-63	175	8,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3	C8B	650140	CS2	HC	HOLD 1	891,9	3"-IS8B-790325-CS2-HC	3"-C8B-930305-CS2-HC	7B-Z-0-2-63	175	8,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 41 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1	D	370110	SS10	PP	HOLD 1	Drain / *Dreno*	HOLD 1	TP-3701-1	2"-SFIC-370112-SS5-PP	7B-Z-0-2-33	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	370112	SS10	PP	HOLD 1	Drain / *Dreno*	HOLD 1	TP-3701-2	2"-SFIC-370112-SS5-PP	7B-Z-0-2-33	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	370124	SS10	PP	HOLD 1	Drain / *Dreno*	HOLD 1	TP-3701-3	2"-SFIC-370112-SS5-PP	7B-Z-0-2-33	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	370241	SS10	PP	HOLD 1	Drain / *Dreno*	HOLD 1	TP-3702-3	2"-SFIC-370219-SS10-PP	7B-Z-0-2-34	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	370242	SS10	PP	HOLD 1	Drain / *Dreno*	HOLD 1	TP-3801-2	2"-SFIC-370219-SS10-PP	7B-Z-0-2-34	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	370243	SS10	PP	HOLD 1	Drain / *Dreno*	HOLD 1	TP-3702-1	2"-SFIC-370219-SS10-PP	7B-Z-0-2-34	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	370244	SS10	PP	HOLD 1	Drain / *Dreno*	HOLD 1	TP-3702-2	2"-SFIC-370219-SS10-PP	7B-Z-0-2-34	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	370320	SS10	PP	HOLD 1	Drain / *Dreno*	HOLD 1	TP-3703-2	2"-SFIC-370219-SS10-PP	7B-Z-0-2-35	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	510237	SS10	PP	HOLD 1	Drain / *Dreno*	HOLD 1	TP-5101/2	2"-SFIC-510235-SS10-PP	7B-Z-0-2-02	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	520116	SS5	AS	HOLD 1	Drain / *Dreno*	HOLD 1	UP-5201	SANITARY DRAIN	7B-Z-0-2-03	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	520203	SS5	AS	HOLD 1	Drain / *Dreno*	HOLD 1	UP-5202	SANITARY DRAIN	7B-Z-0-2-03	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	520353	SS5	AS	HOLD 1	Drain / *Dreno*	HOLD 1	UP-5203	SANITARY DRAIN	7B-Z-0-2-03	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	540136	SS5	PP	HOLD 1	Drain / *Dreno*	HOLD 1	UP-5401	SANITARY DRAIN	7B-Z-0-2-08	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	540137	SS5	PP	HOLD 1	Drain / *Dreno*	HOLD 1	UP-5501	SANITARY DRAIN	7B-Z-0-2-08	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	540170	CS1	AS	HOLD 1	Drain / *Dreno*	HOLD 1	1"-JKTS-540147-SS5-PP	1"-D-540172-CS1-NI	7B-Z-0-2-09	5	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	540171	CS1	AS	HOLD 1	Drain / *Dreno*	HOLD 1	1"-JKTS-540161-SS5-AS	1"-D-540172-CS1-NI	7B-Z-0-2-09	5	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	540172	CS1	AS	HOLD 1	Drain / *Dreno*	HOLD 1	Header	SANITARY DRAIN	7B-Z-0-2-09	5	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	D	550170	CS1	AS	HOLD 1	Drain / *Dreno*	HOLD 1	1 1/2"-JKTS-550147-CS1-AS	1"-D-550172-CS1-AS	7B-Z-0-2-11	5	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	D	550171	CS1	AS	HOLD 1	Drain / *Dreno*	HOLD 1	1 1/2"-JKTS-550161-CS1-AS	1"-D-550172-CS1-AS	7B-Z-0-2-11	5	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	550172	CS1	AS	HOLD 1	Drain / *Dreno*	HOLD 1	Header	SANITARY DRAIN	7B-Z-0-2-11	5	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	D	560170	CS1	AS	HOLD 1	Drain / *Dreno*	HOLD 1	2"-JKTS-560147-CS1-PP	1"-D-560172-CS1-AS	7B-Z-0-2-13	5	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	560171	CS1	AS	HOLD 1	Drain / *Dreno*	HOLD 1	2"-JKTS-560161-CS1-AS	1"-D-560172-CS1-AS	7B-Z-0-2-13	5	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	D	560172	CS1	AS	HOLD 1	Drain / *Dreno*	HOLD 1	Header	SANITARY DRAIN	7B-Z-0-2-13	5	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	560270	CS1	AS	HOLD 1	Drain / *Dreno*	HOLD 1	2"-JKTS-560247-CS1-PP	1"-D-560272-CS1-AS	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	560271	CS1	AS	HOLD 1	Drain / *Dreno*	HOLD 1	2"-JKTS-560261-CS1-AS	1"-D-560272-CS1-AS	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	D	560272	CS1	AS	HOLD 1	Drain / *Dreno*	HOLD 1	Header	SANITARY DRAIN	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	D	560370	CS1	AS	HOLD 1	Drain / *Dreno*	HOLD 1	2"-JKTS-560347-CS1-PP	1"-D-560372-CS1-AS	7B-Z-0-2-17	5	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	D	560371	CS1	AS	HOLD 1	Drain / *Dreno*	HOLD 1	2"-JKTS-560361-CS1-AS	1"-D-560372-CS1-AS	7B-Z-0-2-17	5	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1	D	560372	CS1	AS	HOLD 1	Drain / Dreno	HOLD 1	Header	SANITARY DRAIN	7B-Z-0-2-17	5	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1	D	630223	SS5	NI	-	Drain / *Dreno*	HOLD 1	RO-6302 Break Tank	SAN	7B-Z-0-2-56	20	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 42 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	2	D	630224	SS5	NI	-	Drain / *Dreno*	HOLD 1	RO-6302 Reverse Osmosis Unit	SAN	7B-Z-0-2-56	20	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	D	630225	SS5	NI	-	Drain / *Dreno*	HOLD 1	RO-6302	SAN	7B-Z-0-2-56	20	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	D	630226	SS5	NI	-	Drain / *Dreno*	HOLD 1	RO-6302 Sample	SAN	7B-Z-0-2-56	20	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2 1/2~~	~~D~~	~~640123~~	~~SS5~~	~~PP~~	~~HOLD 1~~	~~Drain / *Dreno*~~	~~HOLD 1~~	~~Header~~	~~CC-6401~~	~~7B-Z-0-2-59~~	~~85~~	~~0,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	2	D	640125	SS5	PP	HOLD 1	Drain / *Dreno*	HOLD 1	CC-6401	SANITARY DRAIN	7B-Z-0-2-59	43	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	D	640138	SS5	PP	HOLD 1	Drain / *Dreno*	HOLD 1	2"-VEP-640135-CS2-PP	1/2"-D-640139-SS5-PP	7B-Z-0-2-59	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	D	640139	SS5	PP	HOLD 1	Drain / *Dreno*	HOLD 1	1.1/2"-VEP-640119-SS5-PP	SANITARY DRAIN	7B-Z-0-2-59	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
~~0~~	~~7B~~	~~1 1/2~~	~~D~~	~~650141~~	~~SS5~~	~~CC~~	~~HOLD 1~~	Drain / *Dreno*	~~HOLD 1~~	~~TC-6501~~	~~SANITARY DRAIN~~	~~7B-Z-0-2-64~~	~~20~~	~~0,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~Canceled~~
~~0~~	~~7B~~	~~1 1/2~~	~~D~~	~~650142~~	~~SS5~~	~~NI~~	~~-~~	Drain / *Dreno*	~~HOLD 1~~	~~TC-6502~~	~~SANITARY DRAIN~~	~~7B-Z-0-2-64~~	~~20~~	~~0,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~Canceled~~
~~0~~	~~7B~~	~~1 1/2~~	~~D~~	~~650143~~	~~SS5~~	~~NI~~	~~-~~	Drain / *Dreno*	~~HOLD 1~~	~~TC-6503~~	~~SANITARY DRAIN~~	~~7B-Z-0-2-64~~	~~20~~	~~0,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~Canceled~~
A	7B	1 1/2	D	650151	SS5	PP	HOLD 1	Drain / *Dreno*	HOLD 1	CC-6501	SAN	7B-Z-0-2-63	43	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	D	650160	SS5	PP	HOLD 1	Drain / *Dreno*	HOLD 1	3"-VEP-650146-CS2-PP	SAN	7B-Z-0-2-63	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	D	650161	SS5	PP	HOLD 1	Drain / *Dreno*	HOLD 1	4"-VEP-650152-SS5-PP	SAN	7B-Z-0-2-63	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2 1/2	D	770313	SS5	NI	-	Drain / *Dreno*	HOLD 1	CC-7703	SAN	7B-Z-0-2-49	43	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
~~A~~	~~7B~~	~~1~~	~~D~~	~~1900XX~~	~~CS1~~	~~AS~~	~~HOLD 1~~	Drain / *Dreno*	~~HOLD 1~~	~~1"-D-540172-CS1-AS~~	~~SANITARY DRAIN~~	~~7B-Z-0-2-09~~	~~5~~	~~0,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~Canceled~~
~~A~~	~~7B~~	~~1~~	~~D~~	~~1900XX~~	~~CS1~~	~~AS~~	~~HOLD 1~~	Drain / *Dreno*	~~HOLD 1~~	~~1"-D-550172-CS1-AS~~	~~SANITARY DRAIN~~	~~7B-Z-0-2-11~~	~~5~~	~~0,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~Canceled~~

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 43 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1	DW	770312	PP1	NI	-	Industrial Water / *Água Industrial*	997,17	1"-DW-610051-PP1-NI	CC-7703	7B-Z-0-2-02	25	2,83	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	DW	900103	PP1	NI	-	Industrial Water / *Água Industrial*	997,17	3/4"-DW-610021-PP1-NI	AT-9001	7B-Z-0-2-54	25	2,3	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 44 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10˚C	Operating Pressure * 1.5			
0	7B	03/abr	GCO2	230001	SS10	NI	-	HOLD 1	X-2301	FGA2300-2	7B-Z-0-2-70	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	GCO2	230002	SS10	NI	-	HOLD 1	FGA2300-2	1/2"-GCO2-540141-SS10-NI	7B-Z-0-2-70 / 7B-Z-0-2-09	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	GCO2	230003	SS10	NI	-	HOLD 1	3/4"-GCO2-230002-SS10-NI	PCV-560361	7B-Z-0-2-70 / 7B-Z-0-2-17	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1/2	GCO2	230004	SS10	NI	-	HOLD 1	3/4"-GCO2-230002-SS10-NI	PCV-560261	7B-Z-0-2-70 / 7B-Z-0-2-15	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	GCO2	230005	SS10	NI	-	HOLD 1	3/4"-GCO2-230002-SS10-NI	PCV-560161	7B-Z-0-2-70 / 7B-Z-0-2-13	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	GCO2	230006	SS10	NI	-	HOLD 1	3/4"-GCO2-230001-SS10-NI	1/2"-GCO2-550141-SS10-NI	7B-Z-0-2-70 / 7B-Z-0-2-11	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GCO2	230007	SS10	NI	-	HOLD 1	3/4"-GCO2-230001-SS10-NI	3/4"-GCO2-230008-SS10-NI	7B-Z-0-2-70	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GCO2	230008	SS10	NI	-	HOLD 1	FGA2300-1	FGA2300-2	7B-Z-0-2-70	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	GCO2	230009	SS10	NI	-	HOLD 1	1/2"-GCO2-230002-SS10-NI	AGR-2001	7B-Z-0-2-70 / 7B-Z-0-2-07	20	Unknown	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GCO2	230010	SS10	NI	-	HOLD 1	3/4"-GCO2-230008-SS10-NI	3/4"-GCO2-230002-SS10-NI	7B-Z-0-2-70	20	Unknown	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	GCO2	540141	SS10	NI	-	HOLD 1	1/2"-GCO2-230002-SS10-NI	1/2"-GOV-540141-SS10-NI	7B-Z-0-2-09	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	GCO2	550141	SS10	NI	-	HOLD 1	1/2"-GCO2-230006-SS10-NI	1/2"-GOV-550141-SS10-NI	7B-Z-0-2-11	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	GCO2	560141	SS10	NI	-	HOLD 1	PCV-560161	3/4"-GOV-560141-SS10-NI	7B-Z-0-2-13	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	GCO2	560241	SS10	NI	-	HOLD 1	PCV-560261	3/4"-GOV-560141-SS10-NI	7B-Z-0-2-13	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	GCO2	560341	SS10	NI	-	HOLD 1	PCV-560361	3/4"-GOV-560341-SS10-NI	7B-Z-0-2-17	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 45 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1/2	GMIX	540118	SS10	NI	-	Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*	HOLD 1	1/2"-GMIX-540158-SS10-NI	1/2"-GOV-540141-SS10-NI	7B-Z-0-2-09	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	GMIX	540158	SS10	NI	-	Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*	HOLD 1	3/4"-CAP-540142-SS10-NI	1/2"-GMIX-540118-SS10-NI	7B-Z-0-2-09	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	GMIX	540159	SS10	NI	-	Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*	HOLD 1	1/2"-GMIX-540158-SS10-NI	1/2"-GOP-540140-SS10-NI	7B-Z-0-2-09	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1/2~~	~~GMIX~~	~~550101~~	~~SS10~~	~~NI~~	~~-~~	~~Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*~~	~~HOLD 1~~	~~1/2"-GMIX-550158-SS10-NI~~	~~1/2"-GCO2-550141-SS10-NI~~	~~7B-Z-0-2-11~~	~~20~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1/2	GMIX	540118	SS10	NI	-	Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*	HOLD 1	1/2"-GMIX-550158-SS10-NI	1/2"-GOV-550141-SS10-NI	7B-Z-0-2-09	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	GMIX	550158	SS10	NI	-	Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*	HOLD 1	3/4"-CAP-550142-SS10-NI	1/2"-GMIX-550144-SS10-NI	7B-Z-0-2-11	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	GMIX	550159	SS10	NI	-	Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*	HOLD 1	1/2"-GMIX-550158-SS10-NI	1/2"-GOP-550140-SS10-NI	7B-Z-0-2-11	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~GMIX~~	~~560101~~	~~SS10~~	~~NI~~	~~-~~	~~Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*~~	~~HOLD 1~~	~~3/4"-GMIX-560182-SS10-NI~~	~~3/4"-GOV-560141-SS10-NI~~	~~7B-Z-0-2-13~~	~~20~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	3/4	GMIX	560178	SS10	NI	-	Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*	HOLD 1	3/4"-GMIX-560182-SS10-NI	3/4"-GOV-560141-SS10-NI	7B-Z-0-2-13	20	1,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	GMIX	560179	SS10	NI	-	Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*	HOLD 1	3/4"-GMIX-560182-SS10-NI	3/4"-GSP-560140-SS10-NI	7B-Z-0-2-13	20	1,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GMIX	560182	SS10	NI	-	Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*	HOLD 1	1"-CAP-560142-SS10-NI	3/4"-GMIX-560178-SS10-NI	7B-Z-0-2-13	20	1,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GMIX	560278	SS10	NI		Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*	HOLD 1	3/4"-GMIX-560282-SS10-NI	3/4"-GOV-560241-SS10-NI	7B-Z-0-2-15	20	1,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GMIX	560279	SS10	NI		Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*	HOLD 1	3/4"-GMIX-560282-SS10-NI	3/4"-GSP-560240-SS10-NI	7B-Z-0-2-15	20	1,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GMIX	560378	SS10	NI	-	Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*	HOLD 1	3/4"-GMIX-560382-SS10-NI	3/4"-GOV-560341-SS10-NI	7B-Z-0-2-17	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	GMIX	560379	SS10	NI	-	Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*	HOLD 1	3/4"-GMIX-560382-SS10-NI	3/4"-GSP-560340-SS10-NI	7B-Z-0-2-17	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	GMIX	560282	SS10	NI		Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*	HOLD 1	1"-CAP-560242-SS10-NI	3/4"-GMIX-560278-SS10-N	7B-Z-0-2-15	20	1,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GMIX	560382	SS10	NI	-	Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*	HOLD 1	1"-CAP-560342-SS10-NI	3/4"-GMIX-560378-SS10-NI	7B-Z-0-2-17	20	2,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	~~7B~~	~~3/4~~	~~GMIX~~	~~560383~~	~~SS10~~	~~NI~~	~~-~~	~~Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*~~	~~HOLD 1~~	~~3/4"-GMIX-560384-SS10-NI~~	~~3/4"-GSP-560340-SS10-NI~~	~~7B-Z-0-2-17~~	~~20~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~3/4~~	~~GMIX~~	~~560384~~	~~SS10~~	~~NI~~	~~-~~	~~Bioreactor Gas Mixture / *Mistura de Gás do Bioreator*~~	~~HOLD 1~~	~~1"-CAP-560342-SS10-NI~~	~~3/4"-GMIX-560382-SS10-NI~~	~~7B-Z-0-2-17~~	~~20~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 46 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	~~7B~~	~~1/2~~	~~GOP~~	~~230007~~	~~SS10~~	~~NI~~	-	~~Oxigen Gas / *Gás Oxigênio*~~	~~HOLD 1~~	~~1/2"-GOP-240002-SS10-NI (BY PASS)~~	~~1/2"-GOP-240002-SS10-NI (BY PASS)~~	~~7B-Z-0-2-70~~	~~20~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	CANCELED
0	~~7B~~	~~1/2~~	~~GOP~~	~~230007~~	~~SS10~~	~~NI~~	-	~~Oxigen Gas / *Gás Oxigênio*~~	~~HOLD 1~~	~~1/2"-GOP-240002-SS10-NI (BY PASS)~~	~~1/2"-GOP-240002-SS10-NI (BY PASS)~~	~~7B-Z-0-2-70~~	~~20~~	~~2,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	CANCELED
0	7B	3/4	GOP	240001	SS10	NI	-	Oxigen Gas / *Gás Oxigênio*	HOLD 1	X-2401	FGA2400-1	7B-Z-0-2-70	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	GOP	240002	SS10	NI	-	Oxigen Gas / *Gás Oxigênio*	HOLD 1	FGA-2400-2	1/2"-GOP-540140-SS10-NI	7B-Z-0-2-70 / 7B-Z-0-2-09	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	GOP	240003	SS10	NI	-	Oxigen Gas / *Gás Oxigênio*	HOLD 1	3/4"-GOP-240002-SS10-NI	PCV-560360	7B-Z-0-2-70 /7B-Z-0-2-17	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1/2	GOP	240004	SS10	NI	-	Oxigen Gas / *Gás Oxigênio*	HOLD 1	3/4"-GOP-240002-SS10-NI	PCV-560260	7B-Z-0-2-70 / 7B-Z-0-2-15	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	GOP	240005	SS10	NI	-	Oxigen Gas / *Gás Oxigênio*	HOLD 1	3/4"-GOP-240002-SS10-NI	PCV-560160	7B-Z-0-2-70 / 7B-Z-0-2-13	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	GOP	240006	SS10	NI	-	Oxigen Gas / *Gás Oxigênio*	HOLD 1	3/4"-GOP-240002-SS10-NI	1/2"-GOP-550140-SS10-NI	7B-Z-0-2-70 / 7B-Z-0-2-11	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GOP	240007	SS10	NI	-	Oxigen Gas / *Gás Oxigênio*	HOLD 1	3/4"-GOP-240001-SS10-NI	3/4"-GOP-240008-SS10-NI	7B-Z-0-2-70	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GOP	240008	SS10	NI	-	Oxigen Gas / *Gás Oxigênio*	HOLD 1	FGA2400-1	FGA2400-2	7B-Z-0-2-70	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GOP	240010	SS10	NI	-	Oxigen Gas / *Gás Oxigênio*	HOLD 1	3/4"-GOP-240008-SS10-NI	3/4"-GOP-240002-SS10-N	7B-Z-0-2-70	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	GOP	540140	SS10	NI	-	Oxigen Gas / *Gás Oxigênio*	HOLD 1	1/2"-GOP-240002-SS10-NI	1/2"-GSP-540140-SS10-NI	7B-Z-0-2-09	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	GOP	550140	SS10	NI	-	Oxigen Gas / *Gás Oxigênio*	HOLD 1	1/2"-GOP-240006-SS10-NI	1/2"-GSP-550140-SS10-NI	7B-Z-0-2-11	20	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	GOP	560140	SS10	NI	-	Oxigen Gas / *Gás Oxigênio*	HOLD 1	PCV-560160	3/4"-GSP-560140-SS10-NI	7B-Z-0-2-13	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	GOP	560240	SS10	NI	-	Oxigen Gas / Gás Oxigênio	HOLD 1	PCV-560260	3/4"-GSP-560240-SS10-NI	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	GOP	560340	SS10	NI	-	Oxigen Gas / *Gás Oxigênio*	HOLD 1	PCV-560360	3/4"-GSP-560340-SS10-NI	7B-Z-0-2-17	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 47 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1/2	GOV	540141	SS10	NI	-	Bioreactor Gas Overlay / *Aeração em Superfície*	HOLD 1	1/2"-GCO2-540141-SS10-NI	BRE-5401	7B-Z-0-2-09 / 7B-Z-0-2-08	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	GOV	550141	SS10	NI	-	Bioreactor Gas Overlay / *Aeração em Superfície*	HOLD 1	1/2"-GCO2-550141-SS10-NI	BRE-5501	7B-Z-0-2-11 / 7B-Z-0-2-10	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GOV	560141	SS10	NI / PP	HOLD 1	Bioreactor Gas Overlay / *Aeração em Superfície*	HOLD 1	1/2"-GCO2-560141-SS10-NI	BRE-5601	7B-Z-0-2-13 / 7B-Z-0-2-12	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GOV	560241	SS10	NI / PP	HOLD 1	Bioreactor Gas Overlay / *Aeração em Superfície*	HOLD 1	1/2"-GCO2-560241-SS10-NI	BRE-5602	7B-Z-0-2-15 / 7B-Z-0-2-14	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GOV	560341	SS10	NI / PP	HOLD 1	Bioreactor Gas Overlay / *Aeração em Superfície*	HOLD 1	1/2"-GCO2-560341-SS10-NI	BRE-5603 (FUTURE)	7B-Z-0-2-17 / 7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE: LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 48 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1/2	GSP	540140	SS10	NI	-	Bioreactor Sparge Gas / *Aeração em Submersão*	HOLD 1	1/2"-GOP-540140-SS10-NI	SPG-5401	7B-Z-0-2-09 / 7B-Z-0-2-08	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	GSP	550140	SS10	NI	-	Bioreactor Sparge Gas / *Aeração em Submersão*	HOLD 1	1/2"-GOP-550140-SS10-NI	SPG-5401	7B-Z-0-2-11 / 7B-Z-0-2-10	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GSP	560140	SS10	NI / PP	HOLD 1	Bioreactor Sparge Gas / *Aeração em Submersão*	HOLD 1	3/4"-GOP-560140-SS10-NI	SPG-5601	7B-Z-0-2-13 / 7B-Z-0-2-12	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GSP	560240	SS10	NI / PP	HOLD 1	Bioreactor Sparge Gas / *Aeração em Submersão*	HOLD 1	3/4"-GOP-560240-SS10-NI	SPG-5602	7B-Z-0-2-15 / 7B-Z-0-2-14	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GSP	560340	SS10	NI / PP	HOLD 1	Bioreactor Sparge Gas / *Aeração em Submersão*	HOLD 1	3/4"-GOP-560340-SS10-NI	SPG-5603 (FUTURE)	7B-Z-0-2-17 / 7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 49 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1 1/2	GW0S	370120	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	1 1/2"-GW0S-9800143-CS1-CC	TQ-3701	7B-Z-0-2-33	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0S	370220	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	2"-GW0S-9800147-CS1-CC	TQ-3702	7B-Z-0-2-34	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0S	370320	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	2"-GW0S-9800151-CS1-CC	TQ-3703	7B-Z-0-2-35	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	GW0S	510110	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	1"-GW0S-9800155-CS1-CC	TQ-5101	7B-Z-0-2-01	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0S	510210	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	2"-GW0S-9800145-CS1-CC	TQ-5102	7B-Z-0-2-02	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0S	520110	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	2"-GW0S-9800135-CS1-CC	TQ-5201	7B-Z-0-2-03	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	GW0S	520121	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	1.1/2"-GW0S-980094-CS1-CC	PTQ-5315	7B-Z-0-2-03	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0S	520210	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	2"-GW0S-9800137-CS1-CC	TQ-5202	7B-Z-0-2-04	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	GW0S	520221	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	1.1/2"-GW0S-980096-CS1-CC	PTQ-5315	7B-Z-0-2-04	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0S	520310	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	2"-GW0S-9800139-CS1-CC	TQ-5203 (FUTURE)	7B-Z-0-2-05	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1.1/2	GW0S	520321	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	1.1/2"-GW0S-980098-CS1-CC	PTQ-5315	7B-Z-0-2-05	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	GW0S	540151	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	1"-GW0S-9800200-CS1-CC	PTQ-5311/12/13/14	7B-Z-0-2-08	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	GW0S	550135	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	1"-GW0S-540151-SS5-CC	PTQ-5311/12/13/15	7B-Z-0-2-08	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~GW0S~~	~~550021~~	~~SS5~~	~~CC~~	~~HOLD 1~~	~~Propylene Glycol Supply / *Propileno Glicol Alimentação*~~	~~HOLD 1~~	~~1"-GW0S-9800200-CS1-CC~~	~~MEDIA~~	~~7B-Z-0-2-08~~	~~5~~	~~2,5~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1~~	~~GW0S~~	~~550023~~	~~SS5~~	~~CC~~	~~HOLD 1~~	~~Propylene Glycol Supply / *Propileno Glicol Alimentação*~~	~~HOLD 1~~	~~1"-GW0S-98002XX-CS1-CC~~	~~MEDIA~~	~~7B-Z-0-2-08 / 7B-M-0-5-52~~	~~5~~	~~2,5~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	3/4	GW0S	550153	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	3/4"-GW0R-9800127-CS1-CC	TC-5501-2	7B-Z-0-2-10	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	GW0S	560153	SS5	CC	HOLD 1	Propylene Glycol Supply / Propileno Glicol Alimentação	HOLD 1	3/4"-GW0S-9800126-CS1-CC	TC-5601-2	7B-Z-0-2-12	5	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	GW0S	560253	SS5	CC	HOLD 1	Propylene Glycol Supply / Propileno Glicol Alimentação	HOLD 1	3/4"-GW0S-9800129-CS1-CC	TC-5602-2	7B-Z-0-2-14	5	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	GW0S	560353	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	3/4"-GW0S-9800131-CS1-CC	TC-5603-2	7B-Z-0-2-16	5	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	GW0S	561111	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	1"-GW0S-561112-SS5-CC	TC-5611-1	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	GW0S	561112	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	1"-GW0S-9800256-CS1-CC	3/4"-GW0S-561311-SS5-CC	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GW0S	561211	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	1"-GW0S-561112-SS5-CC	TC-5612-1	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GW0S	561311	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	1"-GW0S-561112-SS5-CC	TC-5613-1	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	2	GW0S	570110	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	2"-GW0S-9800107-CS1-CC	TQ-5701	7B-Z-0-2-21	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1/2~~	~~GW0S~~	~~570115~~	~~SS5~~	~~CC~~	~~HOLD 1~~	~~Propylene Glycol Supply / *Propileno Glicol Alimentação*~~	~~HOLD 1~~	~~2"-GW0R-570112-SS5-CC~~	~~1/2"-WW2-570116-SS5-NI~~	~~7B-Z-0-2-21~~	~~5~~	~~2,5~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	2	GW0S	570210	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	2"-GW0S-9800121-CS1-CC	TQ-5702	7B-Z-0-2-22	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1/2~~	~~GW0S~~	~~570215~~	~~SS5~~	~~CC~~	~~HOLD 1~~	~~Propylene Glycol Supply / *Propileno Glicol Alimentação*~~	~~HOLD 1~~	~~2"-GW0R-570212-SS5-CC~~	~~1/2"-WW2-570216-SSI-NI~~	~~7B-Z-0-2-22~~	~~5~~	~~2,5~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	2	GW0S	590110	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	2"-GW0S-9800104-CS1-CC	TQ-5901	7B-Z-0-2-24	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0S	590210	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	2"-GW0S-9800117-CS1-CC	TQ-5902	7B-Z-0-2-25	5	2,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 50 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1 1/2	GW0R	370121	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	TQ-3701	1 1/2"-GW0R-9800144-CS1 - CC	7B-Z-0-2-33	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0R	370221	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	TQ-3702	2"-GW0R-9800148-CS1-CC	7B-Z-0-2-34	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0R	370321	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	TQ-3703	2"-GW0R-9800152-CS1-CC	7B-Z-0-2-35	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	GW0R	510109	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	1"-GW0R-510112-SS5-CC (BY-PASS)	1"-GW0R-510112-SS5-CC (BY-PASS)	7B-Z-0-2-01	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	GW0R	510112	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	TQ-5101	1"-GW0R-9800156-CS1-CC	7B-Z-0-2-01	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	GW0R	510209	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	2"-GW0R-510212-SS5-CC	2"-GW0R-510212-SS5-CC	7B-Z-0-2-02	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0R	510212	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	TQ-5102	2"-GW0R-9800146-CS1-CC	7B-Z-0-2-02	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	GW0R	520111	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	2"-GW0R-520112-SS5-CC (BY-PASS)	2"-GW0R-520112-SS5-CC (BY-PASS)	7B-Z-0-2-03	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0R	520112	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	TQ-5201	2"-GW0R-9800136-CS1-CC	7B-Z-0-2-03	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	GW0R	520122	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	PTQ-5315	1.1/2"-GW0R-980095-CS1-CC	7B-Z-0-2-03	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	GW0R	520211	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	2"-GW0R-520212-SS5-CC (BY-PASS)	2"-GW0R-520212-SS5-CC (BY-PASS)	7B-Z-0-2-04	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0R	520212	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	TQ-5202	2"-GW0R-9800138-CS1-CC	7B-Z-0-2-04	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	GW0R	520222	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	PTQ-5315	1.1/2"-GW0R-980097-CS1-CC	7B-Z-0-2-04	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	GW0R	520311	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	2"-GW0R-520312-SS5-CC (BY-PASS)	2"-GW0R-520312-SS5-CC (BY-PASS)	7B-Z-0-2-05	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0R	520312	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	TQ-5203	2"-GW0R-9800140-CS1-CC	7B-Z-0-2-05	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1.1/2	GW0R	520322	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	PTQ-5312	1.1/2"-GW0R-980099-CS1-CC	7B-Z-0-2-05	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	GW0R	540150	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	PTQ-5311/12/13/14	1"-GW0R-9800201-CS1-CC	7B-Z-0-2-08	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	GW0R	550136	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	PTQ-5311/12/13/14	1"-GW0R-540150-SS5-CC	7B-Z-0-2-08	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~GW0R~~	~~550022~~	~~SS5~~	~~CC~~	~~HOLD 1~~	~~Propylene Glycol Return / *Propileno Glicol Retorno*~~	~~HOLD 1~~	~~MEDIA~~	~~1"-GW0R-9800201-CS1-CC~~	~~7B-Z-0-2-08~~	~~10~~	~~1,5~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1~~	~~GW0R~~	~~550024~~	~~SS5~~	~~CC~~	~~HOLD 1~~	~~Propylene Glycol Return / *Propileno Glicol Retorno*~~	~~HOLD 1~~	~~MEDIA~~	~~1"-GW0R-98002XX-CS1-CC~~	~~7B-Z-0-2-08 / 7B-M-0-5-52~~	~~10~~	~~1,5~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	3/4	GW0R	550154	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	TC-5501-2	3/4"-GW0R-9800128-CS1-CC	7B-Z-0-2-10	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	GW0R	560154	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	TC-5601-2	3/4"-GW0R-9800125-CS1-C	7B-Z-0-2-12	10	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	GW0R	560254	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	TC-5602-2	3/4"-GW0R-9800130-CS1-CC	7B-Z-0-2-14	10	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GW0R	560354	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	TC-5603-2	3/4"-GW0R-9800132-CS1-CC	7B-Z-0-2-16	10	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	GW0R	561110	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	TC-5611-1	HOLD 1	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GW0R	561210	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	TC-5612-1	HOLD 1	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	GW0R	561310	SS5	CC	HOLD 1	Propylene Glycol Supply / *Propileno Glicol Alimentação*	HOLD 1	TC-5613-1	HOLD 1	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 51 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1/2	GW0R	570111	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	2"-GW0R-570112-SS5-CC (BY-PASS)	2"-GW0R-570112-SS5-CC (BY-PASS)	7B-Z-0-2-21	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0R	570112	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	TQ-5701	2"-GW0R-9800108-CS1-CC	7B-Z-0-2-21	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1/2~~	~~GW0R~~	~~570117~~	~~SS5~~	~~CC~~	~~HOLD 1~~	~~Propylene Glycol Return / *Propileno Glicol Retorno*~~	~~HOLD 1~~	~~TC-5701~~	~~2"-GW0S-570110-SS5-CC~~	~~7B-Z-0-2-21~~	~~10~~	~~1,5~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	1/2	GW0R	570211	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	2"-GW0R-570212-SS5-CC (BY-PASS)	2"-GW0R-570212-SS5-CC (BY-PASS)	7B-Z-0-2-22	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0R	570212	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	TQ-5702	2"-GW0R-9800122-CS1-CC	7B-Z-0-2-22	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1/2~~	~~GW0R~~	~~570217~~	~~SS5~~	~~CC~~	~~HOLD 1~~	~~Propylene Glycol Return / *Propileno Glicol Retorno*~~	~~HOLD 1~~	~~TC-5702~~	~~2"-GW0S-570210-SS5-CC~~	~~7B-Z-0-2-22~~	~~10~~	~~1,5~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	1/2	GW0R	590111	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	2"-GW0R-590112-SS5-CC (BY-PASS)	2"-GW0R-590112-SS5-CC (BY-PASS)	7B-Z-0-2-24	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0R	590112	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	TQ-5901	2"-GW0R-9800105-CS1-CC	7B-Z-0-2-24	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	GW0R	590211	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	2"-GW0R-590212-SS5-CC (BY-PASS)	2"-GW0R-590212-SS5-CC (BY-PASS)	7B-Z-0-2-25	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	GW0R	590212	SS5	CC	HOLD 1	Propylene Glycol Return / *Propileno Glicol Retorno*	HOLD 1	TQ-5902	2"-GW0R-9800118-CS1-CC	7B-Z-0-2-25	10	1,5	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 52 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1	HWFI	580018	SS10	HC	HOLD 1	973	2"-HWFI-640105-SS10-HC	TP-5800-2	7B-Z-0-23	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	4	HWFI	640101	SS10	HC	HOLD 1	973	TQ-6401	4"-HWFI-640102-SS10-HC	7B-Z-0-2-60	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3~~	~~HWFI~~	~~640101~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~973~~	~~TQ-6401~~	~~BC-6401-1 / BC-6401-2~~	~~7B-Z-0-2-60~~	~~80~~	~~0,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	4	HWFI	640102	SS10	HC	HOLD 1	973	4"-HWFI-640102-SS10-HC	BC-6401-1 / BC-6401-2	7B-Z-0-2-60	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	~~2 1/2~~	~~HWFI~~	~~640102~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~973~~	~~BC-6401-1~~	~~2 1/2"-HWFI-640104-SS10-HC~~	~~7B-Z-0-2-60~~	~~80~~	~~2,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	3	HWFI	640103	SS10	HC	HOLD 1	973	BC-6401-2 / BC-6401-1	2"-HWFI-640104-SS10-HC	7B-Z-0-2-60	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2 1/2~~	~~HWFI~~	~~640103~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~973~~	~~BC-6401-2~~	~~2 1/2"-HWFI-640104-SS10-HC~~	~~7B-Z-0-2-60~~	~~80~~	~~2,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~2~~	~~HWFI~~	~~640104~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~973~~	~~3"-HWFI-640103-SS10-HC~~	~~TC-6401~~	~~7B-Z-0-2-60~~	~~80~~	~~2,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	2	HWFI	640104	SS10	HC	HOLD 1	973	3"-HWFI-640103-SS10-HC	TC-6401	7B-Z-0-2-60	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2; 1 1/2	HWFI	640105	SS10	HC	HOLD 1	973	TC-6401	TQ-6401	7B-Z-0-2-60 / 7B-Z-0-2-61/ 7B-Z-0-2-49 / 7B-Z-0-2-53 / 7B-Z-0-2-23	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	LOOP
0	~~7B~~	~~2 1/2~~	~~HWFI~~	~~640106~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~973~~	~~3"-HWFI-640103-SS10-HC~~	~~1 1/2"-HWFI-640107-SS10-HC~~ ~~1 1/2"-HWFI-640108-SS10-HC~~	~~7B-Z-0-2-60~~	~~80~~	~~2,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	2 1/2	HWFI	640106	SS10	HC	HOLD 1	973	2 1/2"-HWFI-640104-SS10-HC	1 1/2"-HWFI-640107-SS10-HC 1 1/2"-HWFI-640108-SS10-HC	7B-Z-0-2-60	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	HWFI	640107	SS10	HC	HOLD 1	973	2 1/2"-HWFI-640106-SS10-HC	TQ-6401	7B-Z-0-2-60	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2 1/2~~	~~HWFI~~	~~640107~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~973~~	~~2 1/2"-HWFI-640106-SS10-HC~~	~~TQ-6401~~	~~7B-Z-0-2-60~~	~~80~~	~~2,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	1 1/2	HWFI	640108	SS10	HC	HOLD 1	973	2 1/2"-HWFI-640106-SS10-HC	TQ-6401	7B-Z-0-2-60	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2 1/2~~	~~HWFI~~	~~640108~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~973~~	~~2 1/2"-HWFI-640106-SS10-HC~~	~~TQ-6401~~	~~7B-Z-0-2-60~~	~~80~~	~~2,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1 1/2	HWFI	640109	SS10	PP	HOLD 1	973	2"-HWFI-640105-SS10-HC	TQ-7701	7B-Z-0-2-43 / 7B-Z-0-2-61	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	HWFI	640110	SS10	PP	HOLD 1	973	2"-HWFI-640105-SS10-HC	TQ-7702	7B-Z-0-2-46 / 7B-Z-0-2-61	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	HWFI	640111	SS10	HC	HOLD 1	973	2"-HWFI-640105-SS10-HC	TQ-7703	7B-Z-0-2-49 / 7B-Z-0-2-61	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	HWFI	640112	SS10	PP	HOLD 1	973	2"-HWFI-640105-SS10-HC	HARVEST FILTER FLUSH STATION TP-6800-2	7B-Z-0-2-23 / 7B-Z-0-2-61	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1	HWFI	640113	SS10	PP	HOLD 1	973	2"-HWFI-640105-SS10-HC	LV-4601	7B-Z-0-2-53 /7B-Z-0-2-61	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	HWFI	640116	SS10	HC	HOLD 1	973	MES-6401	TQ-6401	7B-Z-0-2-59 / 7B-Z-0-2-60	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	HWFI	920101	SS10	HC	HOLD 1	973	4"-HWFI-640101-SS10-HC	BC-9201-1 / BC-9201-2	7B-Z-0-2-60	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~4; 3~~	~~HWFI~~	~~920101~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~973~~	~~3"-HWFI-640101-SS10-HC~~	~~BC-9201-1 / BC-9201-2~~	~~7B-Z-0-2-60~~	~~80~~	~~0,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 53 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*			From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
												Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10˚C	Operating Pressure * 1.5			
A	7B	1 1/2	HWFI	920102	SS10	HC	HOLD 1	973	BC-9201-1	1 1/2"-HWFI-920104-SS10-HC	7B-Z-0-2-60	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	HWFI	920103	SS10	HC	HOLD 1	973	BC-9201-2	1 1/2"-HWFI-920104-SS10-HC	7B-Z-0-2-60	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	HWFI	920104	SS10	HC	HOLD 1	973	1 1/2"-HWFI-920102-SS10-HC 1 1/2"-HWFI-920103-SS10-HC	TC-9201	7B-Z-0-2-60	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 54 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	3/4	IS1B	540164	SS5	HC	HOLD 1	Plant Steam (Low Press) / *Vapor Industrial (Baixa Pressão)*	1,12	3/4"-IS4B-550164-SS5-HC	1"-JKTR-540148-SS4-AS	7B-Z-0-2-09	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	IS1B	550164	CS1	HC	HOLD 1	Plant Steam (Low Press) / *Vapor Industrial (Baixa Pressão)*	1,12	3/4"-IS4B-550164-CS1-HC	1 1/2"-JKTR-550148-CS1-AS	7B-Z-0-2-11	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	IS1B	560164	CS1	HC	HOLD 1	Plant Steam (Low Press) / *Vapor Industrial (Baixa Pressão)*	HOLD 1	PCV-560142	2"-JKTR-560148-CS1-PP	7B-Z-0-2-13	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	IS1B	560264	CS1	HC	HOLD 1	Plant Steam (Low Press) / *Vapor Industrial (Baixa Pressão)*	HOLD 1	PCV-560242	2"-JKTR-560248-CS1-PP	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	IS1B	560364	CS1	HC	HOLD 1	Plant Steam (Low Press) / *Vapor Industrial (Baixa Pressão)*	HOLD 1	PCV-560342	2"-JKTR-560348-CS1-AS	7B-Z-0-2-17	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 55 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1 1/2	IS4B	460103	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	2,68	1 1/2"-IS4B-790230-CS1-HC	LV-4601	7B-Z-0-2-53	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	IS4B	540163	SS5	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	2,68	3/4"-IS4B-790228-CS1-HC	3/4"-IS1B-540164-SS5-HC	7B-Z-0-2-09	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	IS4B	540173	SS5	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	HOLD 1	3/4"-IS4B-540163-SS5-HC	PT-540138	7B-Z-0-2-09	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	IS4B	550163	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	2,68	3/4"-IS4B-790211-CS1-HC	3/4"-IS1B-550164-SS5-HC	7B-Z-0-2-11	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	IS4B	550173	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	2,68	3/4"-IS4B-550163-CS1-HC	PT-550138	7B-Z-0-2-11	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	IS4B	560163	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	HOLD 1	1"-IS4B-790226-CS1-HC	3/4"-C4B-560163-CS1-HC	7B-Z-0-2-13	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	IS4B	560173	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	HOLD 1	1"-IS4B-560174-CS1-HC	PT-560138	7B-Z-0-2-13	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	IS4B	560174	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	HOLD 1	1"-IS4B-560163-CS1-HC	TC-5601-1	7B-Z-0-2-13	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	IS4B	560184	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	HOLD 1	1"-IS4B-560174-CS1-HC	PCV-560142	7B-Z-0-2-13	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	IS4B	560263	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	HOLD 1	1"-IS4B-790225-CS1-HC	3/4"-C4B-560263-CS1-HC	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	IS4B	560273	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	HOLD 1	1"-IS4B-560274-CS1-HC	PT-560238	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	IS4B	560274	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	HOLD 1	1"-IS4B-560263-CS1-HC	TC-5602-1	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	IS4B	560284	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	HOLD 1	1"-IS4B-560274-CS1-HC	1"-IS1B-560264-CS1-HC	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	IS4B	560363	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	HOLD 1	1"-IS4B-790224-CS1-HC	3/4"-C4B-560363-CS1-HC	7B-Z-0-2-17	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1/2	IS4B	560373	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	HOLD 1	1"-IS4B-560374-CS1-HC	PT-560338	7B-Z-0-2-17	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1	IS4B	560374	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	HOLD 1	1"-IS4B-560363-CS1-HC	TC-5603-1	7B-Z-0-2-17	152	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	~~7B~~	~~1~~	~~IS4B~~	~~560381~~	~~CS1~~	~~HC~~	~~HOLD 1~~	~~Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*~~	~~HOLD 1~~	~~1"-IS4B-560374-CS1-HC~~	~~1"-IS1B-560264-CS1-HC~~	~~7B-Z-0-2-17~~	~~152~~	~~2,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	CANCELED
0	7B	1	IS4B	560384	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	HOLD 1	1"-IS4B-560374-CS1-HC	PCV-560342	7B-Z-0-2-17	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	3/4	IS4B	640133	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	2,68	1 1/2"-IS4B-920201-CS1-HC	TC-6401	7B-Z-0-2-60	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	IS4B	900101	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	2,68	1"-IS4B-790222-CS1-HC	AT-9001	7B-Z-0-2-54	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	IS4B	920201	CS1	HC	HOLD 1	Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*	2,68	1 1/2"-IS4B-790215-CS1-HC	TC-9202	7B-Z-0-2-60	152	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1 1/2~~	~~IS4B~~	~~920202~~	~~CS1~~	~~HC~~	~~HOLD 1~~	~~Plant Steam (Medium Press)/ Vapor Industrial *(Méd.Pressão)*~~	~~2,68~~	~~TC-9202~~	~~1 1/2"-C4B-930206-CS1-HC~~	~~7B-Z-0-2-60~~	~~152~~	~~4,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	CANCELED

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 56 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1 1/2	IS8B	640130	CS2	HC	HOLD 1	Plant Steam (High Press.) / *Vapor Industrial (Alta Pressão)*	4,6	1 1/2"-IS8B-790324-CS2-HC	MES-6401	7B-Z-0-2-59	175	8,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3; 2	IS8B	650137	CS2	HC	HOLD 1	Plant Steam (High Press.) / *Vapor Industrial (Alta Pressão)*	4,6	3"-IS8B-790325-CS2-HC	CSG-6501	7B-Z-0-2-59	175	8,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 57 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1	JKTS	540147	SS5	PP	HOLD 1	Jacket Water Supply / *Alimentação de Água (Camisa)*	HOLD 1	TC-5401-1	BRE-5401	7B-Z-0-2-09 / 7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~JKTS~~	~~540148~~	~~SS5~~	~~AS / PP~~	~~HOLD 1~~	~~Jacket Water Supply / *Alimentação de Água (Camisa)*~~	~~HOLD 1~~	~~BRE-5401~~	~~1"-CW1R-540148-SS5-CC~~	~~7B-Z-0-2-08 / 7B-Z-0-2-09~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1~~	~~JKTS~~	~~540160~~	~~SS5~~	~~AS~~	~~HOLD 1~~	~~Jacket Water Supply / *Alimentação de Água (Camisa)*~~	~~HOLD 1~~	~~1"-JKTR-540148-SS5-AS~~	~~1"-JKTS-540161-SS5-AS~~	~~7B-Z-0-2-09~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	1	JKTS	540161	SS5	AS	HOLD 1	Jacket Water Supply / *Alimentação de Água (Camisa)*	HOLD 1	1"-CW1S-540161-SS5-CC	BC-5401-1	7B-Z-0-2-09	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	JKTS	540162	SS5	AS	HOLD 1	Jacket Water Supply / *Alimentação de Água (Camisa)*	HOLD 1	BC-5401-1	TC-5401-1	7B-Z-0-2-09	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	JKTS	550147	CS1 / SS5	AS / PP	HOLD 1	Jacket Water Supply / *Alimentação de Água (Camisa)*	HOLD 1	TC-5501-1	BRE-5501	7B-Z-0-2-11 / 7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	JKTS	550161	SS5	AS	HOLD 1	Jacket Water Supply / *Alimentação de Água (Camisa)*	HOLD 1	1"-CW1S-550161-SS5-CC	BC-5501-1	7B-Z-0-2-11	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	JKTS	550162	SS5	AS	HOLD 1	Jacket Water Supply / *Alimentação de Água (Camisa)*	HOLD 1	BC-5501-1	TC-5501-1	7B-Z-0-2-11	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	JKTS	560147	CS1 / SS5	AS / PP	HOLD 1	Jacket Water Supply / *Alimentação de Água (Camisa)*	HOLD 1	TC-5601-1	BRE-5601	7B-Z-0-2-13 / 7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	JKTS	560161	CS1	AS	HOLD 1	Jacket Water Supply / *Alimentação de Água (Camisa)*	HOLD 1	PCV-560164	BC-5601-1	7B-Z-0-2-13	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	JKTS	560162	CS1	AS	HOLD 1	Jacket Water Supply / *Alimentação de Água (Camisa)*	HOLD 1	BC-5601-1	TC-5601-1	7B-Z-0-2-13	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2~~	~~JKTS~~	~~560183~~	~~CS1~~	~~AS~~	~~HOLD 1~~	~~Jacket Water Supply / *Alimentação de Água (Camisa)*~~	~~HOLD 1~~	~~2"-CW1S-560183-CS1-CC~~	~~560183~~	~~7B-Z-0-2-13~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	2	JKTS	560247	CS1 / SS5	AS / PP	HOLD 1	Jacket Water Supply / *Alimentação de Água (Camisa)*	HOLD 1	TC-5602-1	BRE-5602	7B-Z-0-2-15 / 7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	JKTS	560261	CS1	AS	HOLD 1	Jacket Water Supply / *Alimentação de Água (Camisa)*	HOLD 1	PCV-560264	BC-5602-1	7B-Z-0-2-15	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	JKTS	560262	CS1	AS	HOLD 1	Jacket Water Supply / *Alimentação de Água (Camisa)*	HOLD 1	BC-5602-1	TC-5602-1	7B-Z-0-2-15	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	JKTS	560347	CS1 / SS5	AS / PP	HOLD 1	Jacket Water Supply / *Alimentação de Água (Camisa)*	HOLD 1	TC-5603-1	BRE-5603	7B-Z-0-2-17 / 7B-Z-0-2-16	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	2	JKTS	560361	CS1	AS	HOLD 1	Jacket Water Supply / *Alimentação de Água (Camisa)*	HOLD 1	PCV-560364	BC-5603-1	7B-Z-0-2-17	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	2	JKTS	560362	CS1	AS	HOLD 1	Jacket Water Supply / *Alimentação de Água (Camisa)*	HOLD 1	BC-5603-1	TC-5603-1	7B-Z-0-2-17	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE: LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 58 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1	JKTR	540148	SS5	AS / PP	HOLD 1	Jacket Water Return / *Retorno de Água (Camisa)*	HOLD 1	BRE-5401	1"-CW1R-540148-CS1-CC	7B-Z-0-2-08/ 7B-Z-0-2-09	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	JKTR	540160	SS5	AS	HOLD 1	Jacket Water Return / *Retorno de Água (Camisa)*	HOLD 1	1"-JKTR-540148-CS1-AS	1"-JKTS-540161-CS1-AS	7B-Z-0-2-09	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	JKTR	550148	SS5 / CS1	PP	HOLD 1	Jacket Water Return / *Retorno de Água (Camisa)*	HOLD 1	BRE-5501	1 1/2"-CW1R-550148-CS1-CC	7B-Z-0-2-10 / 7B-Z-0-2-11	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	JKTR	550160	CS1	AS	HOLD 1	Jacket Water Return / *Retorno de Água (Camisa)*	HOLD 1	1 1/2"-JKTR-550148-CS1-AS	1 1/2"-JKTS-550161-CS1-AS	7B-Z-0-2-11	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1 1/2~~	~~JKTR~~	~~550161~~		~~AS~~	~~HOLD 1~~	~~Jacket Water Return / *Retorno de Água (Camisa)*~~	~~HOLD 1~~	~~1 1/2"-JKTR-550160-CS1-AS~~	~~BC-5501-1~~	~~7B-Z-0-2-11~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1 1/2~~	~~JKTR~~	~~550162~~	~~CS1~~	~~AS~~	~~HOLD 1~~	~~Jacket Water Return / *Retorno de Água (Camisa)*~~	~~HOLD 1~~	~~BC-5501-1~~	~~TC-5501-1~~	~~7B-Z-0-2-11~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	2	JKTR	560148	SS5 / CS1	AS / PP	HOLD 1	Jacket Water Return / *Retorno de Água (Camisa)*	HOLD 1	BRE-5601	BPCV-560133	7B-Z-0-2-12 / 7B-Z-0-2-13	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	JKTR	560160	CS1	AS	HOLD 1	Jacket Water Return / *Retorno de Água (Camisa)*	HOLD 1	2"-JKTR-560148-CS1-AS	2"-JKTS-560161-CS1-AS	7B-Z-0-2-13	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	JKTR	560248	CS1 / SS5	AS / PP	HOLD 1	Jacket Water Return / *Retorno de Água (Camisa)*	HOLD 1	BRE-5602	BPCV-560233	7B-Z-0-2-14 / 7B-Z-0-2-15	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	JKTR	560260	CS1	AS	HOLD 1	Jacket Water Return / *Retorno de Água (Camisa)*	HOLD 1	2"-JKTR-560248-CS1-AS	2"-JKTS-560261-CS1-AS	7B-Z-0-2-15	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	JKTR	560348	CS1 / SS5	AS / PP	HOLD 1	Jacket Water Return / *Retorno de Água (Camisa)*	HOLD 1	BRE-5603	BPCV-560333	7B-Z-0-2-16 / 7B-Z-0-2-17	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	2	JKTR	560360	CS1	AS	HOLD 1	Jacket Water Return / *Retorno de Água (Camisa)*	HOLD 1	2"-JKTR-560348-CS1-AS	2"-JKTS-560361-CS1-AS	7B-Z-0-2-17	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE

TESSLER engenharia / ips / Takeda / Hemobrás	TITLE: LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 59 of 94
		CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	X; 1/2	LN2	260001	VJP	HOLD 1	HOLD 1	Liquid Nitrogen / *Nitrogênio Líquido*	HOLD 1	7A-X"-LN2-260007-VJP	DISTRIBUITION	7B-Z-0-2-74	-200	Unknown	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	LN2	260002	VJP	HOLD 1	HOLD 1	Liquid Nitrogen / *Nitrogênio Líquido*	HOLD 1	1/2"-LN2-260001-VJP	STA-2601	7B-Z-0-2-74	-200	Unknown	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	LN2	260003	VJP	HOLD 1	HOLD 1	Liquid Nitrogen / *Nitrogênio Líquido*	HOLD 1	1/2"-LN2-260001-VJP	FS-2001	7B-Z-0-2-74	-200	Unknown	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	LN2	260004	VJP	HOLD 1	HOLD 1	Liquid Nitrogen / *Nitrogênio Líquido*	HOLD 1	1/2"-LN2-260001-VJP	FS-2002	7B-Z-0-2-74	-200	Unknown	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia | ips | Takeda | Hemobrás

TITLE: **LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B**
LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B

DOC NR: **E-569-B7A-PRO-330-001**
CLIENT NR: **PRD-MEC-LIS-002**

REV.: **0**

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1	PR	330007	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR/CIP1S-590102-SS10-PP	TP-3300-1	7B-Z-0-2-26	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	PR	510101	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TQ-5101	TP-5101-1	7B-Z-0-2-01	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	510102	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TP-5101-1	SP-510102C	7B-Z-0-2-01	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	PR	510201	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TQ-5102	TP-5102-1	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	PR	510202	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TP-5102-1	FLQ-5102-1	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	PR	520101	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TQ-5201	TP-5201-1	7B-Z-0-2-03	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	520102	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TP-5201-1	1"-PR-560145-SS10-PP	7B-Z-0-2-03 / 7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	PR	520105	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1 1/2"-PR-510202-SS10-PP	1 1/2"-PR-520106-SS10-PP	7B-Z-0-2-03 / 7B-Z-0-2-02	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	PR	520106	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1 1/2"-PR-520105-SS10-PP	TQ-5201	7B-Z-0-2-03	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	PR	520201	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TQ-5202	TP-5202-1	7B-Z-0-2-04	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	520202	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TP-5202-1	1"-PR-560245-SS10-PP	7B-Z-0-2-04 / 7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	PR	520205	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1 1/2"-PR-510202-SS10-PP	1 1/2"-PR-520206-SS10-PP	7B-Z-0-2-04 / 7B-Z-0-2-02	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	PR	520206	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1 1/2"-PR-520105-SS10-PP	TQ-5202	7B-Z-0-2-04	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	PR	520301	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TQ-5203 (FUTURE)	TP-5203-1	7B-Z-0-2-05	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	PR	520302	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TP-5203-1	1"-PR-560345-SS10-PP	7B-Z-0-2-05 / 7B-Z-0-2-16	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1.1/2	PR	520305	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1 1/2"-PR-510202-SS10-PP	1 1/2"-PR-520206-SS10-PP	7B-Z-0-2-05 / 7B-Z-0-2-02	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	PR	520306	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1 1/2"-PR-520105-SS10-PP	TQ-5203	7B-Z-0-2-05	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1; 1/2	PR	540101	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	BRE-5401	BRE-5501	7B-Z-0-2-08 / 7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	PR	540122	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1/2"-CIP1S-540138-SS10-PP	BRE-5401	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	PR	550101	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	BRE-5501	TP-5501-1	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	PR	550150	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TP-5501-1	TP-5601-2	7B-Z-0-2-10 / 7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	PR	560101	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	BRE-5601	TP-5601-1	7B-Z-0-2-12	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	PR	~~560108~~	~~SS10~~	~~PP~~	~~HOLD 1~~	Process / *Processo*	~~HOLD 1~~	~~TP-5601-2~~	~~1"-PR-560145-SS10-PP~~	~~7B-Z-0-2-12~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	1	PR	560145	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-520102-SS10-PP	BRE-5601	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	PR	560150	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TP-5601-1	TP-5601-2	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	560151	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TP-5601-2	1"-PR-560145-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	560152	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	BRE-5601	1"-PR-561120-SS10-PP	7B-Z-0-2-12 / 7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2~~	PR	~~560179~~	~~SS10~~	~~PP~~	~~HOLD 1~~	Process / *Processo*	~~HOLD 1~~	~~BRE-5601~~	~~TP-5601-1~~	~~7B-Z-0-2-12~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1	PR	560181	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	2"-PR-560101-SS10-PP	1"-PR-560152-SS10-PP	7B-Z-0-2-12	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	PR	560201	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	BRE-5602	TP-5601-1	7B-Z-0-2-14 / 7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

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TITLE: **LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B**
LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B

DOC NR: **E-569-B7A-PRO-330-001**
CLIENT NR: **PRD-MEC-LIS-002**

REV.: **0**

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1	PR	560245	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-560202-SS10-PP	BRE-5602	7B-Z-0-2-14	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	PR	560251	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TP-5601-2	1"-PR-560245-SS10-PP	7B-Z-0-2-12 / 7B-Z-0-2-14	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	560252	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	BRE-5602	1"-PR-561209-SS10-PP	7B-Z-0-2-14 / 7B-Z-0-2-20	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	PR	560281	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	2"-PR-560201-SS10-PP	1"-PR-560252-SS10-PP	7B-Z-0-2-14	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	PR	560301	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	BRE-5603	TP-5601-1	7B-Z-0-2-16 / 7B-Z-0-2-12	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1	PR	560345	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-520302-SS10-PP	BRE-5603 (FUTURE)	7B-Z-0-2-16	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1	PR	560351	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TP-5601-2	1"-PR-560345-SS10-PP	7B-Z-0-2-12 / 7B-Z-0-2-16	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	PR	560352	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	BRE-5603 (FUTURE)	1"-PR-561309-SS10-PP	7B-Z-0-2-16 / 7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	~~7B~~	~~1~~	PR	~~560380~~	~~SS10~~	~~PP~~	~~HOLD 1~~	Process / *Processo*	~~HOLD 1~~	~~2"-PR-560301-SS10-PP~~	~~1"-PR-560352-SS10-PP~~	~~7B-Z-0-2-16~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1	PR	560381	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	2"-PR-560301-SS10-PP	1"-PR-560352-SS10-PP	7B-Z-0-2-16	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	561101	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TC-5611-1	1"-PR-570121-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	561103	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-CIP1S-561121-SS10-PP	1"-PR-570121-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	561105	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TC-5611-1	1"-PR-570221-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	561107	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-CIP1S-561121-SS10-PP	1"-PR-570221-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	561120	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-560152-SS10-PP	TC-5611-1	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	561201	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TC-5612-1	1"-PR-570123-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	561203	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-CIPS1-561221-SS10-PP	1"-PR-570123-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	561205	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TC-5612-1	1"-PR-570223-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	561207	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-CIPS1-561221-SS10-PP	1"-PR-570223-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	561209	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-560252-SS10-PP	TC-5612-1	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	561301	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TC-5613-1	1"-PR-570125-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	PR	561303	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-CIPS1-561321-SS10-PP	1"-PR-570125-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	PR	561305	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TC-5613-1	1"-PR-570225-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	PR	561307	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-CIPS1-561321-SS10-PP	1"-PR-570225-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	PR	561309	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-560352-SS10-PP	TC-5613-1	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	PR	570102	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TQ-5701	1"-PR-580115-SS10-PP	7B-Z-0-2-21 / 7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	PR	570121	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-561101-SS10-PP	TQ-5701	7B-Z-0-2-20 / 7B-Z-0-2-21	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	570123	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-561201-SS10-PP	1"-PR-570121-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	PR	570125	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-561301-SS10-PP	1"-PR-570121-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1	PR	570202	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TQ-5702	1"-PR-580215-SS10-PP	7B-Z-0-2-22 / 7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

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TITLE: **LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B**
LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B

DOC NR: **E-569-B7A-PRO-330-001**
CLIENT NR: **PRD-MEC-LIS-002**

REV.: **0**

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1	PR	570221	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-561105-SS10-PP	TQ-5702	7B-Z-0-2-20 / 7B-Z-0-2-22	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	570223	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-561205-SS10-PP	1"-PR-570121-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	570225	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-561305-SS10-PP	1"-PR-570121-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1	PR	580003	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-580115-SS10-PP 1"-PR-580215-SS10-PP	1"-PR-580203-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2; 1	PR	580012	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-580108-SS10-PP 1"-PR-580208-SS10-PP	TP-5800-1	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	580103	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-580003-SS10-PP	HFIL-5801	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	PR	580108	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	FLQ-5801-2	1"-PR-580012-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	PR	580115	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-570102-SS10-PP	1"-PR-580003-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	PR	580203	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-580003-SS10-PP	HFIL-5802	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	PR	580208	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	FLQ-5802-2	1"-PR-580012-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	PR	580215	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1"-PR-570202-SS10-PP	1"-PR-580003-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	PR	590101	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TQ-5901	TP-5901/2	7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	PR	590104	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1.1/2"-PR/CIP2S-590104-SS10-PP	TQ-5901	7B-Z-0-2-24	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	PR	590114	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1 1/2"-CIP2S-590120-SS10-PP	TQ-5901	7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	PR	590201	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	TQ-5902	TP-5901/2	7B-Z-0-2-25 / 7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	PR	590204	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1 1/2"-CIP2S-590220-SS10-PP	TQ-5902	7B-Z-0-2-25	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	PR	590214	SS10	PP	HOLD 1	Process / *Processo*	HOLD 1	1 1/2"-CIP2S-590220-SS10-PP	TQ-5902	7B-Z-0-2-25	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

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TITLE: **LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B**
LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B

DOC NR: **E-569-B7A-PRO-330-001**
CLIENT NR: **PRD-MEC-LIS-002**

REV.: **0**

REV./ *REV.*	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1	PR/CIP1S	590102	SS10	PP	HOLD 1	Process /Clean in Place Supply / *Processo / CIP Alimentação*	HOLD 1	TP-5901/2	1"-PR-330007-SS10-PP	7B-Z-0-2-24 / 7B-Z-0-2-26	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

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TITLE: **LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B**
LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B

DOC NR: **E-569-B7A-PRO-330-001** | SHEET: 64 of 94
CLIENT NR: **PRD-MEC-LIS-002** | REV.: **0**

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	~~7B~~	~~1 1/2; 1~~	PR / CIP2S	~~590106~~	~~SS10~~	~~PP~~	~~HOLD 1~~	Process /Clean in Place Supply / *Processo / CIP Alimentação*	~~HOLD 1~~	~~1 1/2"-PR/CIP2S-590104-SS10-PP~~	~~TQ-5901~~	~~7B-Z-0-2-24~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1 1/2~~	~~PR / CIP2S~~	~~520105~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Process /Clean in Place Supply / *Processo / CIP Alimentação*~~	~~HOLD 1~~	~~1 1/2"-PR-510202-SS10-PP~~	~~1 1/2"-PR/CIP2S-520106-SS10-PP~~	~~7B-Z-0-2-02 / 7B-Z-0-2-03~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1 1/2~~	~~PR / CIP2S~~	~~520106~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Process /Clean in Place Supply / *Processo / CIP Alimentação*~~	~~HOLD 1~~	~~1 1/2"-PR/CIP2S-520105-SS10-PP~~	~~TQ-5201~~	~~7B-Z-0-2-03~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1 1/2~~	~~PR / CIP2S~~	~~520205~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Process /Clean in Place Supply / *Processo / CIP Alimentação*~~	~~HOLD 1~~	~~1 1/2"-PR-510202-SS10-PP~~	~~1 1/2"-PR/CIP2S-520206-SS10-PP~~	~~7B-Z-0-2-02 / 7B-Z-0-2-04~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1 1/2~~	~~PR / CIP2S~~	~~520206~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Process /Clean in Place Supply / *Processo / CIP Alimentação*~~	~~HOLD 1~~	~~1 1/2"-PR/CIP2S-520205-SS10-PP~~	~~TQ-5202~~	~~7B-Z-0-2-04~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1 1/2~~	~~PR / CIP2S~~	~~520305~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Process /Clean in Place Supply / *Processo / CIP Alimentação*~~	~~HOLD 1~~	~~FUTURE 3RD / MEDIA HOLD TANK SUPPLY / LINE~~	~~1 1/2"-PR/CIP2S-520306-SS10-PP~~	~~7B-Z-0-2-02 / 7B-Z-0-2-05~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1 1/2~~	~~PR / CIP2S~~	~~520306~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Process /Clean in Place Supply / *Processo / CIP Alimentação*~~	~~HOLD 1~~	~~1 1/2"-PR/CIP2S-520305-SS10-PP~~	~~TQ-5203 (FUTURE)~~	~~7B-Z-0-2-05~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	1 1/2	PR / CIP2S	580019	SS10	PP	HOLD 1	Process /Clean in Place Supply / *Processo / CIP Alimentação*	HOLD 1	TP-5800-1	1 1/2"-PR/CIP2S-590204-SS10-PP	7B-Z-0-2-23	120	1,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	PR / CIP2S	580020	SS10	PP	HOLD 1	Process /Clean in Place Supply / *Processo / CIP Alimentação*	HOLD 1	TP-5800-1	1 1/2"-PR/CIP2S-590104-SS10-PP	7B-Z-0-2-23	120	1,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	PR / CIP2S	590104	SS10	PP	HOLD 1	Process /Clean in Place Supply / *Processo / CIP Alimentação*	HOLD 1	1 1/2"-PR/CIP2S-580020-SS10-PP	1 1/2"-PR-590104-SS10-PP	7B-Z-0-2-23 / 7B-Z-0-2-24	120	1,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	PR / CIP2S	590204	SS10	PP	HOLD 1	Process /Clean in Place Supply / *Processo / CIP Alimentação*	HOLD 1	1 1/2"-PR/CIP2S-580019-SS10-PP	1 1/2"-PR-590204-SS10-PP	7B-Z-0-2-23 / 7B-Z-0-2-25	120	1,0	~~HOLD 1~~	~~HOLD 1~~	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1 1/2; 1~~	PR / CIP2S	~~590207~~	~~SS10~~	~~PP~~	~~HOLD 1~~	Process /Clean in Place Supply / *Processo / CIP Alimentação*	~~HOLD 1~~	~~1 1/2"-PR/CIP2S-590204-SS10-PP~~	~~TQ-5902~~	~~7B-Z-0-2-25~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled

TESSLER engenharia / ips / Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 65 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	3/4	SFI	330001	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	FGA-3300-1	1"-PR-330007-SS10-PP	7B-Z-0-2-26	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFI	330003	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1"-SFI-650123-SS10-HC	3/4"-CAP-330001-SS10-NI	7B-Z-0-2-26	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFI	330005	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-330001-SS10-HC	1"-PR-330007-SS10-PP	7B-Z-0-2-26	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFI	370114	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1"-SFI-650132-SS10-HC	FGA-3701-2	7B-Z-0-2-33	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFI	370115	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1/2"-SFI-370116-SS10-PP	3/4"-SFIC-370117-SS10-PP	7B-Z-0-2-33	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFI	370116	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	FGA-3701-2	3/4"-SFIC-370118-SS10-PP	7B-Z-0-2-33	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFI	370214	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1"-SFI-650131-SS10-HC	FGA-3702-2	7B-Z-0-2-34	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFI	370215	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1/2"-SFI-370216-SS10-PP	3/4"-SFIC-370217-SS10-PP	7B-Z-0-2-34	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFI	370216	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	FGA-3702-2	3/4"-SFIC-370317-SS10-PP	7B-Z-0-2-34 / 7B-Z-0-2-35	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFI	370316	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1/2"-SFI-370216-SS10-PP	3/4"-SFIC-370318-SS10-PP	7B-Z-0-2-35	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	SFI	470102	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1"-SFI-650126-SS10-HC	1"-SFI/CAP/VEP-470101-SS10-PP	7B-Z-0-2-55	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	510131	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	FGA-5101-2	1"-PR-510102-SS10-PP	7B-Z-0-2-01	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFI	510132	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-510131-SS10-PP	1"-PR-510152-SS10-PP	7B-Z-0-2-01	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFI	510142	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1"-SFI-650136-SS10-HC	1"-SFI-510146-SS10-HC	7B-Z-0-2-01	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFI	510146	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1"-SFI-510142-SS10-HC	1 1/2"-CIP1S-510120-SS10-PP	7B-Z-0-2-01	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	SFI	510150	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1"-SFI-510146-SS10-HC	FGA-5101-2	7B-Z-0-2-01	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~SFI~~	~~510151~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~1"-SFI-510146-SS10-HC~~	~~FGA-5101-1~~	~~7B-Z-0-2-01~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	3/4	SFI	510152	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-510131-SS10-PP	1"-PR-510102-SS10-PP	7B-Z-0-2-01	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	510231	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	FGA-5102-2	1.1/2"-PR-510202-SS10-PP	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	510232	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-510231-SS10-PP	1 1/2"-PR-510202-SS10-PP	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFI	510242	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650133-SS10-HC	2"-SFI-510246-SS10-HC	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFI	510246	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-510242-SS10-HC	1 1/2"-CIP1S-510220-SS10-PP	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	SFI	510250	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-510246-SS10-HC	FGA-5102-2	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~SFI~~	~~510251~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~2"-SFI-510246-SS10-HC~~	~~FGA-5102-1~~	~~7B-Z-0-2-02~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	3/4	SFI	510257	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-510231-SS10-PP	1 1/2"-PR-510202-SS10-PP	7B-Z-0-2-02	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFI	520103	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650128-SS10-HC	2"-SFI-520146-SS10-HC	7B-Z-0-2-03	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFI	520131	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	FGA-5201-2	1"-PR-520102-SS10-PP	7B-Z-0-2-03	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	SFI	520146	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-520103-SS10-HC	2"-CIP2S-520120-SS10-PP	7B-Z-0-2-03	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	520147	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-520146-SS10-HC	TQ-5201	7B-Z-0-2-03	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	SFI	520150	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-520146-SS10-HC	FGA-5201-2	7B-Z-0-2-03	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips / Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 66 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	~~7B~~	~~1~~	~~SFI~~	~~520151~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~2"-SFI-520146-SS10-HC~~	~~FGA-5201-1~~	~~7B-Z-0-2-03~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	2	SFI	520203	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650104-SS10-HC	2"-SFI-520246-SS10-HC	7B-Z-0-2-04	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFI	520231	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	FGA-5202-2	1"-PR-520202-SS10-PP	7B-Z-0-2-04	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	SFI	520246	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-520203-SS10-HC	2"-CIP2S-520220-SS10-PP	7B-Z-0-2-04	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	520247	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-520246-SS10-HC	TQ-5202	7B-Z-0-2-04	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	SFI	520250	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-520246-SS10-HC	FGA-5202-2	7B-Z-0-2-04	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~SFI~~	~~520251~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~2"-SFI-520246-SS10-HC~~	~~FGA-5202-1~~	~~7B-Z-0-2-04~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	2	SFI	520303	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650103-SS10-HC	2"-SFIC-520346-SS10-PP	7B-Z-0-2-05	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	3/4	SFI	520331	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	FGA-5203-2	1"-PR-520302-SS10-PP	7B-Z-0-2-05	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	~~7B~~	~~1~~	~~SFI~~	~~520341~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~2"-PR-520301-SS10-PP~~	~~1"-WW2-520241-SS10-PP~~	~~7B-Z-0-2-05~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	2	SFI	520346	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-520347-SS10-HC	2"-CIP2S-520320-SS10-PP	7B-Z-0-2-05	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	SFI	520347	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-520346-SS10-HC	TQ-5203 (FUTURE)	7B-Z-0-2-05	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	SFI	520350	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-520346-SS10-HC	FGA-5203-2	7B-Z-0-2-05	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	~~7B~~	~~1~~	~~SFI~~	~~520351~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~2"-SFI-520346-SS10-HC~~	~~FGA-5203-1~~	~~7B-Z-0-2-05~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1; 3/4	SFI	540102	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1"-SFI-540102-SS10-HC	3/4"-CAP-540142-SS10-NI	7B-Z-0-2-08	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFI	540103	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1"-SFI-540102-SS10-HC	1/2"-GOV-540141-SS10-NI	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFI	540104	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1"-SFI-540102-SS10-HC	1/2"-GSP-540140-SS10-NI	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFI	540106	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1"-SFI-540102-SS10-HC	BRE-5401	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFI	540107	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1/2"-SFI-540108-SS10-HC	BRE-5401	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFI	540108	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1"-SFI-540102-SS10-HC	1/2"-PR-540122-SS10-PP	7B-Z-0-2-08	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFI	540109	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1"-SFI-650113-SS10-HC	BRE-5401	7B-Z-0-2-08	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1/2~~	~~SFI~~	~~540128~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~1"-SFI-540102-SS10-HC~~	~~1/2"-PR-540122-SS10-PP~~	~~7B-Z-0-2-08~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	1 1/2; 3/4	SFI	550102	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1 1/2"-SFI-550109-SS10-HC	FGA-5501-3	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFI	550103	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1 1/2"-SFI-550102-SS10-HC	FGA-5501-2	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFI	550104	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1 1/2"-SFI-550103-SS10-HC	FGA-5501-1	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFI	550105	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1 1/2"-SFI-550102-SS10-HC	1/2"-PR-540101-SS10-PP	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFI	550106	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1 1/2"-SFI-550102-SS10-HC	BRE-5501	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFI	550107	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1"-SFI-550105-SS10-HC	BRE-5501	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	SFI	550109	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1 1/2"-SFI-650113-SS10-HC	1 1/2"-SFI-550102-SS10-HC	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFI	550114	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1/2"-SFI-550106-SS10-HC	3/4"-SFIC-550122-SS10-PP	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 67 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	2; 1	SFI	560102	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650116-SS10-HC	FGA-5601-2	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	SFI	560103	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-560105-SS10-HC	TC-AG5601 / BRE-5601	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFI	560104	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-560102-SS10-HC	FGA-5601-1	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFI	560105	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-560102-SS10-HC	3/4"-SFI-560103-SS10-HC	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	560106	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-560102-SS10-HC	FGA-5601-2	7B-Z-0-2-12	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFI	560109	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-560103-SS10-HC	BRE-5601	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFI	560110	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-560103-SS10-HC	BRE-5601	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFI	560111	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-560103-SS10-HC	BRE-5601	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFI	560112	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-560103-SS10-HC	BRE-5601	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFI	560135	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650116-SS10-HC	2"-SFI-560102-SS10-HC	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFI	560136	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	TC-AG5601	BRE-5601	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~SFI~~	~~560181~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~2"-SFI-560102-SS10-HC~~	~~FGA-5601-2~~	~~7B-Z-0-2-12~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	2; 1	SFI	560202	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-560235-SS10-PP	FGA-5602-3	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4; 1/2	SFI	560203	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-560205-SS10-HC	TC-AG5602 BRE-5602	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFI	560204	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-560202-SS10-HC	FGA-5602-1	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFI	560205	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-560202-SS10-HC	3/4"-SFI-560203-SS10-HC	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFI	560206	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-560202-SS10-HC	FGA-5602-2	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFI	560209	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-560203-SS10-HC	BRE-5602	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFI	560210	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-560203-SS10-HC	BRE-5602	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFI	560211	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-560203-SS10-HC	BRE-5602	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFI	560212	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-560203-SS10-HC	BRE-5602	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFI	560235	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650117-SS10-HC	1"-SFIC-560202-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFI	560236	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	TC-AG5602	BRE-5602	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2; 1	SFI	560302	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-560335-SS10-PP	FGA-5603-3	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	3/4; 1/2	SFI	560303	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-560305-SS10-HC	TC-AG5603 / BRE-5603	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	SFI	560304	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-560302-SS10-HC	FGA-5603-1	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	3/4	SFI	560305	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-560302-SS10-HC	3/4"-SFI-560303-SS10-HC	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	SFI	560306	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-560302-SS10-HC	FGA-5603-2	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1/2	SFI	560309	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-560303-SS10-HC	BRE-5603 (FUTURE)	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1/2	SFI	560310	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-560303-SS10-HC	BRE-5603 (FUTURE)	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 68 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1/2	SFI	560311	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-560303-SS10-HC	BRE-5603 (FUTURE)	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1/2	SFI	560312	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-560303-SS10-HC	BRE-5603 (FUTURE)	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	2	SFI	560335	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650118-SS10-HC	2"-SFI-560302-SS10-HC	7B-Z-0-2-16	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1/2	SFI	560336	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	TC-AG5603	BRE-5603 (FUTURE)	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	~~7B~~	~~2~~	~~SFI~~	~~560378~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~2"-SFI-650117-SS10-HC~~	~~2"-SFI-560302-SS10-HC~~ ~~1"-SFIC-560302-SS10-PP~~	~~7B-Z-0-2-16~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	3/4	SFI	561122	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-570142-SS10-HC	XV-561101D	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	561123	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-570142-SS10-HC	XV-561101B	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	561222	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-570142-SS10-HC	XV-561201D	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	561223	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-570142-SS10-HC	XV-561201B	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	561322	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-570142-SS10-HC	XV-561301D	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	SFI	561323	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-570142-SS10-HC	XV-561301B	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	2	SFI	570105	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-570144-SS10-HC	2"-SFI-570146-SS10-HC	7B-Z-0-2-21	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	SFI	570109	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-570146-SS10-HC	2"-CIP1R-570104-SS10-PP	7B-Z-0-2-21	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	570142	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-570149-SS10-HC	Header	7B-Z-0-2-20	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	570143	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-570146-SS10-HC	TQ-5701	7B-Z-0-2-21	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	SFI	570144	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650107-SS10-HC	2"-SFI-570205-SS10-HC	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	SFI	570146	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-570105-SS10-HC	1.1/2"-CIPS1-570113-SS10-PP	7B-Z-0-2-21	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	570149	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-570144-SS10-HC	2"-SFI-570142-SS10-HC	7B-Z-0-2-20 / 7B-Z-0-2-21	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~SFI~~	~~570151~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~2"-SFI-570146-SS10-HC~~	~~FGA-5701-1~~	~~7B-Z-0-2-21~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~2~~	~~SFI~~	~~570152~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~2"-SFI-650107-SS10-HC~~	~~2"-SFI-570146-SS10-HC~~	~~7B-Z-0-2-21~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	2	SFI	570205	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-570144-SS10-HC	2"-SFI-570246-SS10-HC	7B-Z-0-2-21 / 7B-Z-0-2-22	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFI	570206	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-570246-SS10-HC	TQ-5702	7B-Z-0-2-22	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	SFI	570209	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-570246-SS10-HC	2"-CIP1R-570204-SS10-PP	7B-Z-0-2-22	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	~~7B~~	~~1~~	~~SFI~~	~~570244~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~1"-SFI-570246-SS10-HC~~	~~FGA-5702-1~~	~~7B-Z-0-2-22~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	~~7B~~	~~2~~	~~SFI~~	~~570245~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~2"-SFI-570246-SS10-HC~~	~~1.1/2"-CIPS1-570220-SS10-PP~~	~~7B-Z-0-2-22~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	2; 1; 3/4	SFI	570246	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-570205-SS10-HC	1.1/2"-CIP1S-570213-SS10-PP	7B-Z-0-2-22	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~SFI~~	~~570248~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~3/4"-SFI-510246-SS10-HC~~	~~Header~~	~~7B-Z-0-2-22 / 7B-Z-0-2-20~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~3/4~~	~~SFI~~	~~570249~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~3/4"-SFI-570248-SS10-HC~~	~~1"-PR-561105-SS10-PP~~	~~7B-Z-0-2-20~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~3/4~~	~~SFI~~	~~570250~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~3/4"-SFI-570248-SS10-HC~~	~~1"-PR-561101-SS10-PP~~	~~7B-Z-0-2-20~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~3/4~~	~~SFI~~	~~570251~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~3/4"-SFI-570248-SS10-HC~~	~~1"-PR-561205-SS10-PP~~	~~7B-Z-0-2-20~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled

TESSLER engenharia / ips / Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 69 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	~~7B~~	~~3/4~~	~~SFI~~	~~570252~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~3/4"-SFI-570248-SS10-HC~~	~~1"-PR-561201-SS10-PP~~	~~7B-Z-0-2-20~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~3/4~~	~~SFI~~	~~570253~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~3/4"-SFI-570248-SS10-HC~~	~~1"-PR-561305-SS10-PP~~	~~7B-Z-0-2-20~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~3/4~~	~~SFI~~	~~570254~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~3/4"-SFI-570248-SS10-HC~~	~~1"-PR-561301-SS10-PP~~	~~7B-Z-0-2-20~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1	SFI	580001	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1"-SFI-650147-SS10-HC	FGA-5800-1	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	580005	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-580102-SS10-PP	3/4"-SFI-580023-SS10-HC	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~SFI~~	~~580011~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~3/4"-SFI-580107-SS10-PP~~	~~1"-CIPS1-580013-SS10-PP~~	~~7B-Z-0-2-23~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	3/4	SFI	580023	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-580005-SS10-HC	1"-PR-580215-SS10-PP	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	580024	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-580102-SS10-HC	3/4"-SFI-580027-SS10-PP	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	580025	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-580024-SS10-HC	3/4"-SFI-580026-SS10-PP	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	580026	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-580025-SS10-HC	2"-SFIC-580206-SS10-PP	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	580027	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-580024-SS10-HC	3/4"-SFI-580026-SS10-PP	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFI	580102	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	FGA-5800-1	1"-PR-580103-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~SFI~~	~~580107~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~3/4"-SFI-580005-SS10-PP~~	~~1"-CIPS1-580013-SS10-PP~~	~~7B-Z-0-2-23~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	3/4	SFI	580111	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-580102-SS10-HC	1"-PR-580108-SS10-HC	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~SFI~~	~~580112~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~3/4"-SFIC-580111-SS10-PP~~	~~3/4"-SFI-580207-SS10-PP~~	~~7B-Z-0-2-23~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	3/4	SFI	580202	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-580102-SS10-PP	1"-PR-580203-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	580211	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-582102-SS10-HC	1"-PR-580208-SS10-HC	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~SFI~~	~~580207~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~3/4"-SFI-580102-SS10-PP~~	~~3/4"-SFIC-580211-SS10-PP~~	~~7B-Z-0-2-23~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	2	SFI	590103	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-590109-SS10-HC	2"-SFI-590203-SS10-HC	7B-Z-0-2-24 / 7B-Z-0-2-25	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFI	590107	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-590103-SS10-HC	TQ-5901	7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	SFI	590109	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650108-SS10-HC	2"-SFI-590103-SS10-HC	7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~SFI~~	~~590131~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~FGA-5901-2~~	~~2"-PR-590201-SS10-PP~~	~~7B-Z-0-2-24~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	3/4	SFI	590132	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-590232-SS10-PP	2"-PR-590101-SS10-PP	7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	SFI	590145	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-590103-SS10-HC	1"-CIP-590120-SS10-PP	7B-Z-0-2-24	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	SFI	590146	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-590103-SS10-HC	1"-BUF-590106-HC22-PP	7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFI	590150	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-590146-SS10-HC	FGA-5901/2-1	7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~SFI~~	~~590151~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~2"-SFI-590146-SS10-HC~~	~~FGA-5901-1~~	~~7B-Z-0-2-24~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	2	SFI	590203	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-590103-SS10-HC	2"-SFI-590246-SS10-HC	7B-Z-0-2-24 / 7B-Z-0-2-25	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~SFI~~	~~590206~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~TQ-5902~~	~~2"-SFI-590246-SS10-HC~~	~~7B-Z-0-2-25~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	3/4	SFI	590207	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"SFI-590246-SS10-HC	TQ-5902	7B-Z-0-2-25	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 70 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	3/4	SFI	590232	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	FGA-5901/2-1	2"-PR-590201-SS10-PP	7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	SFI	590245	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-590246-SS10-HC	1 1/2"-BUF-590206-HC22-PP	7B-Z-0-2-25	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFI	590246	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-590203-SS10-HC	1.1/2"-CIP2S-590220-SS10-PP	7B-Z-0-2-24 / 7B-Z-0-2-25	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2~~	~~SFI~~	~~590248~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~2"-SFI-590246-SS10-HC~~	~~2"-CIP2S-590220-SS10-PP~~	~~7B-Z-0-2-25~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	~~7B~~	~~1~~	~~SFI~~	~~590251~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~1"-SFI-590246-SS10-HC~~	~~FGA-5902-1~~	~~7B-Z-0-2-25~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1	SFI	650147	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,65	2"-SFI-650106-SS10-HC	1"-SFI-580001-SS10-HC	7B-Z-0-2-23 / 7B-Z-0-2-64	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	4	SFI	650101	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,65	CSG-6501	Header	7B-Z-0-2-63 / 7B-Z-0-2-64	144	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFI	650103	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650142-SS10-HC	2"-SFI-520303-SS10-HC	7B-Z-0-2-64 / 7B-Z-0-2-05	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	2	SFI	650104	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650142-SS10-HC	2"-SFI-520203-SS10-HC	7B-Z-0-2-64 / 7B-Z-0-2-04	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2; 1/2	SFI	650105	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	4"-SFI-650101-SS10-HC	TC-6502	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	~~7B~~	~~2; 1/2~~	~~SFI~~	~~650105~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~4"-SFI-650101-SS10-HC~~	~~TC-6502~~	~~7B-Z-0-2-64~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
0	7B	2; 3; 3/4	SFI	650106	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650105-SS10-HC	Header	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFI	650107	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650106-SS10-HC	2"-SFI-570144-SS10-HC	7B-Z-0-2-64 / 7B-Z-0-2-21	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2~~	~~SFI~~	~~650108~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~2"-SFI-650106-SS10-HC~~	~~2"-SFI-590109-SS10-HC~~	~~7B-Z-0-2-64 / 7B-Z-0-2-24~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	2	SFI	650109	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650106-SS10-HC	Header	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2; 1	SFI	650113	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650148-SS10-HC	1"-SFIC-540109-SS10-PP	7B-Z-0-2-64 / 7B-Z-0-2-10 / 7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	SFI	650116	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650148-SS10-HC	2"-SFI-560135-SS10-HC	7B-Z-0-2-64 / 7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	SFI	650117	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650148-SS10-HC	2"-SFI-560235-SS10-HC	7B-Z-0-2-64 / 7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	SFI	650118	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650148-SS10-HC	2"-SFI-560335-SS10-HC	7B-Z-0-2-64 / 7B-Z-0-2-16	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	2	SFI	650119	SS10	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650105-SS10-HC	Header	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2; 1; 3/4	SFI	650120	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650119-SS10-PP	TC-6503	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	~~7B~~	~~1 1/2; 1; 1/2~~	~~SFI~~	~~650120~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~2"-SFI-650119-SS10-PP~~	~~TC-6503~~	~~7B-Z-0-2-64~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
0	7B	1	SFI	650121	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1 1/2"-SFI-650120-SS10-HC	CRM-3501	7B-Z-0-2-64 / 7B-Z-0-2-29	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFI	650122	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1.1/2"-SFI-650120-SS10-HC	CRM-3401	7B-Z-0-2-64 / 7B-Z-0-2-27	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFI	650123	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1 1/2"-SFI-650120-SS10-HC	1"-SFI-330002-SS10-HC	7B-Z-0-2-64 / 7B-Z-0-2-26	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFI	650124	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1.1/2"-SFI-650120-SS10-HC	CRM-3402	7B-Z-0-2-64 / 7B-Z-0-2-28	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	SFI	650125	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1 1/2"-SFI-650120-SS10-HC	CRM-3601	7B-Z-0-2-64 / 7B-Z-0-2-31	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	SFI	650126	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1 1/2"-SFI-650120-SS10-HC	1"-SFI-470102-SS10-HC	7B-Z-0-2-64 / 7B-Z-0-2-55	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFI	650127	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,65	2"-SFI-650119-SS10-PP	AT-9001	7B-Z-0-2-64 / 7B-Z-0-2-54	144	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFI	650128	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650142-SS10-HC	2"-SFI-520103-SS10-HC	7B-Z-0-2-64 / 7B-Z-0-2-03	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 71 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	~~7B~~	~~2~~	~~SFI~~	~~650128~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~2"-SFI-650142-SS10-HC~~	~~2"-SFI-520103-SS10-HC~~	~~7B-Z-0-2-64 / 7B-Z-0-2-03~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
A	7B	2; 1 1/2; 1/2	SFI	650129	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	4"-SFI-650101-SS10-HC	TC-6501	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2; 1 1/2; 1/2~~	~~SFI~~	~~650129~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~4"-SFI-650101-SS10-HC~~	~~TC-6501~~	~~7B-Z-0-2-64~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
A	7B	2	SFI	650130	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650129-SS10-HC	Header	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFI	650131	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650130-SS10-HC	1"-SFI-370214-SS10-HC	7B-Z-0-2-64 / 7B-Z-0-2-34	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFI	650132	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650130-SS10-HC	1"-SFI-370114-SS10-HC	7B-Z-0-2-64 / 7B-Z-0-2-33	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFI	650133	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650130-SS10-HC	2"-SFI-510242-SS10-HC	7B-Z-0-2-64 / 7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	SFI	650134	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,65	4"-SFI-650101-SS10-HC	1 1/2"-SFI-750116-SS5-HC	7B-Z-0-2-64 / 7B-Z-0-2-76	144	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFI	650135	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650109-SS10-HC	3/4"-SFI-750007-SS5-PP	7B-Z-0-2-64 / 7B-Z-0-2-73	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFI	650136	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650129-SS10-HC	1"-SFI-510142-SS10-HC	7B-Z-0-2-64 / 7B-Z-0-2-01	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2; 1 1/2	SFI	650142	SS5	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	4"-SFI-650101-SS10-HC	Header	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2; 1 1/2~~	~~SFI~~	~~650142~~	~~SS5~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~4"-SFI-650101-SS10-HC~~	~~Header~~	~~7B-Z-0-2-64~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
A	7B	1	SFI	650147	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650106-SS10-HC	1"-SFI-580001-SS10-HC	7B-Z-0-2-64 / 7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2; 1 1/2	SFI	650148	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	2"-SFI-650105-SS10-HC	Header	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2; 1 1/2~~	~~SFI~~	~~650148~~	~~SS10~~	~~HC~~	~~HOLD 1~~	~~Clean Steam / *Vapor Limpo*~~	~~1,12~~	~~2"-SFI-650105-SS10-HC~~	~~Header~~	~~7B-Z-0-2-64~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
A	7B	3/4	SFI	750007	SS5	PP	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	3/4"-SFI-650135-SS10-HC	2"-VEP-750004-SS5-PP	7B-Z-0-2-73	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	SFI	750115	SS5	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1 1/2"-SFI-750116-SS5-HC	TQ-7501-1	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	1.1/2	SFI	750116	SS5	HC	HOLD 1	Clean Steam / *Vapor Limpo*	1,12	1 1/2"-SFI-650134-SS10-HC	TQ-7501-2	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 72 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	3/4	SFIC	330002	SS10	HC	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FGA-3300-1	1 1/2"-SFIC-330008-SS10-PP	7B-Z-0-2-26	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	330004	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-330007-SS10-PP	1 1/2"-SFIC-330008-SS10-PP	7B-Z-0-2-26	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	330006	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-330007-SS10-PP	1 1/2"-SFIC-330008-SS10-PP	7B-Z-0-2-26	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	SFIC	330008	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	1.1/2"-SFIC-330011-SS5-PP 1 1/2"-WW2-330009-SS5-AS	7B-Z-0-2-26	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	SFIC	330011	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-SFIC-330008-SS10-PP	3/4"-SFIC-690115-SS10-PP 1 1/2"-WW2-330009-SS5-AS	7B-Z-0-2-26	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	330013	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FLQ-3300-1	1 1/2"-SFIC-330008-SS10-PP	7B-Z-0-2-26	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	330014	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-330013-SS10-PP	1 1/2"-SFIC-330008-SS10-PP	7B-Z-0-2-26	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	370117	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFI-370115-SS10-PP	2"-SFIC-370112-SS5-PP	7B-Z-0-2-33	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	370118	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFI-370116-SS10-PP	2"-SFIC-370112-SS5-PP	7B-Z-0-2-33	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFIC	370123	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FGA-3701-2	2"-SFIC-370112-SS5-PP	7B-Z-0-2-33	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	370133	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-BUF-370130-SS10-CC	3/4"-SFIC-370136-SS10-PP	7B-Z-0-2-37	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	370134	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-BUF-370131-SS10-CC	3/4"-SFIC-370136-SS10-PP	7B-Z-0-2-37	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	370135	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-BUF-370132-SS10-CC	3/4"-SFIC-370136-SS10-PP	7B-Z-0-2-37	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	370136	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-370133-SS10-PP	3/4"-SFIC-690120-SS5-PP	7B-Z-0-2-37	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	370137	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	TP-3701-4	3/4"-SFIC-690120-SS5-PP	7B-Z-0-2-37	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	370217	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFI-370215-SS10-PP	2"-SFIC-370219-SS10-PP	7B-Z-0-2-34	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	370218	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFI-370216-SS10-PP	2"-SFIC-370219-SS10-PP	7B-Z-0-2-34	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFIC	370240	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FGA-3702-2	2"-SFIC-370219-SS10-PP	7B-Z-0-2-34	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	370219	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690140-SS5-PP	7B-Z-0-2-35 / 7B-Z-0-2-34	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	370233	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-BUF-370232-SS10-CC	3/4"-SFIC-370239-SS10-PP	7B-Z-0-2-39	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	370235	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-BUF-370235-SS10-CC	3/4"-SFIC-370239-SS10-PP	7B-Z-0-2-39	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	370236	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-BUF-370230-SS10-CC	3/4"-SFIC-370239-SS10-PP	7B-Z-0-2-39	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	370237	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-BUF-370231-SS10-CC	3/4"-SFIC-370239-SS10-PP	7B-Z-0-2-39	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	370238	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-BUF-370234-SS10-CC	3/4"-SFIC-370239-SS10-PP	7B-Z-0-2-39	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	370239	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-370236-SS10-PP	3/4"-SFIC-690121-SS5-PP	7B-Z-0-2-39	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	370240	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	TP-3702-4	3/4"-SFIC-690121-SS5-PP	7B-Z-0-2-39	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	370317	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFI-370216-SS10-PP	2"-SFIC-370219-SS10-PP	7B-Z-0-2-35	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	370318	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFI-370316-SS10-PP	2"-SFIC-370219-SS10-PP	7B-Z-0-2-35	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	371001	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-BUF-371001-HC22-PP	1"-SFIC-371002-SS10-PP	7B-Z-0-2-40	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	SFIC	371002	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-SFIC-371001-SS10-PP	1 1/2"-SFIC-371103-SS10-PP	7B-Z-0-2-40	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 73 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	3/4	SFIC	371003	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	TP-3702-5	1 1/2"-SFIC-371103-SS10-PP	7B-Z-0-2-40	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	SFIC	371102	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	XV-371101	1 1/2"-SFIC-371103-SS10-PP	7B-Z-0-2-40	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	SFIC	371103	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	1"-SFIC-690122-SS5-PP	7B-Z-0-2-40	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	470109	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-SFI/CAP/VEP-470101-SS10-PP	3/4"-SFIC-690123-SS10-PP	7B-Z-0-2-55	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	470110	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-CIPR-470107-SS10-PP	3/4"-SFIC-690123-SS10-PP	7B-Z-0-2-55	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	0,5	SFIC	510103	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-PR-510101-SS10-PP	3/4"-WW2-510122-SS10-PP	7B-Z-0-2-01	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1; 3/4	SFIC	510118	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-PR-510101-SS10-PP	3/4"-WW2-510122-SS10-PP	7B-Z-0-2-01	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	510127	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-510102-SS10-PP	1 1/2"-SFIC-510135-SS10-PP	7B-Z-0-2-01	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1,5	SFIC	510135	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	1 1/2"-SFIC-690101-SS5-PP	7B-Z-0-2-01	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	510140	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-AWFI-510106-SS10-PP	1 1/2"-SFIC-510135-SS10-PP	7B-Z-0-2-01	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	510143	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FLQ-5101-1	1 1/2"-SFIC-510135-SS10-PP	7B-Z-0-2-01	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFIC	510144	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FLQ-5101-2	1 1/2"-SFIC-510135-SS10-PP	7B-Z-0-2-01	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	510145	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FLQ-5101-2	3/4"-WW2-510145-SS10-PP	7B-Z-0-2-01	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1; 3/4	SFIC	510146	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-SFI-510146-SS10-HC	1 1/2"-SFIC-510135-SS10-PP	7B-Z-0-2-01	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	510149	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-CIPR-510102-SS10-PP	1 1/2"-SFIC-690101-SS5-PP	7B-Z-0-2-01	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	510153	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFI-510152-SS10-PP	1"-WW2-510154-SS10-PP	7B-Z-0-2-01	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	510155	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FLQ-5101-2	1"-WW2-510156-SS10-PP	7B-Z-0-2-01	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFIC	510203	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FGA-5102-2	2"-SFIC-510235-SS10-PP	7B-Z-0-2-02	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	510227	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-PR-510202-SS10-PP	2"-SFIC-510235-SS10-PP	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	510235	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690102-SS5-PP	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	510238	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-PR/CIP2S-520205-SS10-PP	3/4"-SFIC-510248-SS10-PP	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	510239	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-CIP2S-510234-SS10-PP	3/4"-SFIC-510249-SS10-PP	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	510240	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-AWFI-510206-SS10-PP	2"-SFIC-510235-SS10-PP	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	510241	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-PR-510201-SS10-PP	2"-SFIC-510235-SS10-PP	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	510243	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FLQ-5102-1	2"-SFIC-510235-SS10-PP	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	510244	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FLQ-5102-2	2"-SFIC-510235-SS10-PP	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	510245	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-PR-510202-SS10-PP	2"-SFIC-510235-SS10-PP	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	SFIC	510246	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFI-510246-SS10-HC	2"-SFIC-510235-SS10-PP	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	510248	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-510238-SS10-PP	2"-SFIC-510235-SS10-PP	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	510249	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-PR/CIP2S-520205-SS10-PP	2"-SFIC-510235-SS10-PP	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 74 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	3/4	SFIC	510251	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	1 1/2"-CAP-510231-SS10-NI	2"-SFIC-510235-SS10-PP	7B-Z-0-2-02	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	510253	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	FLQ-5102-1	1"-WW2-510254-SS10-PP	7B-Z-0-2-02	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	510255	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	FLQ-5102-2	1"-WW2-510256-SS10-PP	7B-Z-0-2-02	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	520127	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-520102-SS10-PP	2"-SFIC-520129-SS10-PP	7B-Z-0-2-03	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	520129	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	Header	7B-Z-0-2-03	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	520140	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-PR-520106-SS10-PP	2"-SFIC-520129-SS10-PP	7B-Z-0-2-03	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	520141	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-PR-520101-SS10-PP	2"-SFIC-520129-SS10-PP	7B-Z-0-2-03	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	SFIC	520146	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFI-520146-SS10-HC	2"-SFIC-520129-SS10-PP	7B-Z-0-2-03	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	520149	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	TQ-5201	2"-SFIC-520129-SS10-PP	7B-Z-0-2-03	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	520151	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	1 1/2"-CAP-520130-SS10-PP	2"-SFIC-520129-SS10-PP	7B-Z-0-2-03	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFIC	520152	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	FGA-5201-2	2"-SFIC-520129-SS10-PP	7B-Z-0-2-03	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	520153	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	TQ-5201	2"-SFIC-520129-SS10-PP	7B-Z-0-2-03	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	520227	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-520202-SS10-PP	2"-SFIC-520229-SS10-PP	7B-Z-0-2-04	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	SFIC	520229	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	Header	7B-Z-0-2-04	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	520240	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-PR-520206-SS10-PP	2"-SFIC-520229-SS10-PP	7B-Z-0-2-04	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	520241	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-PR-520201-SS10-PP	2"-SFIC-520229-SS10-PP	7B-Z-0-2-04	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	520246	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	2"-SFI-520246-SS10-HC	2"-SFIC-520229-SS10-PP	7B-Z-0-2-04	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	520249	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	TQ-5202	2"-SFIC-520229-SS10-PP	7B-Z-0-2-04	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	520251	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	1 1/2"-CAP-520230-SS10-PP	2"-SFIC-520229-SS10-PP	7B-Z-0-2-04	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFIC	520252	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	FGA-5202-2	2"-SFIC-520229-SS10-PP	7B-Z-0-2-04	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	520253	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	TQ-5202	2"-SFIC-520229-SS10-PP	7B-Z-0-2-04	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	520327	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-520302-SS10-PP	2"-SFIC-520329-SS10-PP	7B-Z-0-2-05	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	2	SFIC	520329	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	Header	7B-Z-0-2-05	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	SFIC	520340	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-PR-520306-SS10-PP	2"-SFIC-520329-SS10-PP	7B-Z-0-2-05	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	SFIC	520341	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-PR-520301-SS10-PP	2"-SFIC-520329-SS10-PP	7B-Z-0-2-04	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	520346	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFI-520346-SS10-HC	2"-SFIC-520329-SS10-PP	7B-Z-0-2-05	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	SFIC	520349	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	TQ-5203 (FUTURE)	2"-SFIC-520329-SS10-PP	7B-Z-0-2-05	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	SFIC	520351	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	1 1/2"-CAP-520330-SS10-PP	2"-SFIC-520329-SS10-PP	7B-Z-0-2-05	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFIC	520352	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	FGA-5203-2	2"-SFIC-520329-SS10-PP	7B-Z-0-2-05	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	520355	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	TQ-5203 (FUTURE)	2"-SFIC-520329-SS10-PP	7B-Z-0-2-05	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 75 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	3/4	SFIC	540102	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-SFIC-540109-SS10-PP	1 1/2"-SFIC-540129-SS10-PP	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~SFIC~~	~~540109~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / *Condensado de Vapor Limpo*~~	~~1,12~~	~~1"-SFI-650113-SS10-HC~~	~~3/4"-SFIC-540102-SS10-PP~~	~~7B-Z-0-2-08~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	3/4	SFIC	540111	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-PR-540101-SS10-PP	1 1/2"-SFIC-540129-SS10-PP	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	540112	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-540134-SS10-PP	1 1/2"-SFIC-540129-SS10-PP	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFIC	540115	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	TC-5401-2	1/2"-SFIC-540117-SS10-PP	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	SFIC	540116	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-GSP-540140-SS10-PP	1 1/2"-SFIC-540129-SS10-PP	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	SFIC	540117	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFIC-540115-SS10-PP	1 1/2"-SFIC-540129-SS10-PP	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	540123	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	BRE-5401	1 1/2"-SFIC-540129-SS10-PP	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	540126	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	BRE-5401	1 1/2"-SFIC-540129-SS10-PP	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFIC	540127	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFI-540108-SS10-HC	1 1/2"-SFIC-540129-SS10-PP	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4, 1/2	SFIC	540128	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	BRE-5401	1 1/2"-SFIC-540129-SS10-PP	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1.1/2	SFIC	540129	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	1 1/2"-SFIC-690106-SS5-PP	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	540134	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-540101-SS10-PP	1 1/2"-SFIC-540129-SS10-PP	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4, 1/2	SFIC	540174	SS10	PP	HOLD 1	Clean Steam Condensate / Condensado de Vapor Limpo	1,12	FGA-5401-1	1 1/2"-SFIC-540129-SS10-PP	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFIC	540175	SS10	PP	HOLD 1	Clean Steam Condensate / Condensado de Vapor Limpo	1,12	FGA-5401-3	3/4"-SFIC-540174-SS10-PP	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFIC	540176	SS10	PP	HOLD 1	Clean Steam Condensate / Condensado de Vapor Limpo	1,12	FGA-5401-2	3/4"-SFIC-540174-SS10-PP	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	550102	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-SFI-550109-SS10-HC	1 1/2"-SFIC-550157-SS10-PP	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFIC	550110	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	BRE-5501	1 1/2"-SFIC-550127-SS10-PP	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	550113	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-SFI-550105-SS10-HC	1 1/2"-SFIC-550157-SS10-PP	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFIC	550115	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	TC-5501-2	3/4"-SFIC-550127-SS10-PP	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4; 1/2	SFIC	550116	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-GSP-550140-SS10-PP	1 1/2"-SFIC-550157-SS10-PP	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	550117	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-550127-SS10-PP	1 1/2"-SFIC-550157-SS10-PP	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	550122	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	BRE-5501	1 1/2"-SFIC-550157-SS10-PP	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2; 3/4	SFIC	550124	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-PR-550101-SS10-PP	1 1/2"-SFIC-550157-SS10-PP	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4; 1/2	SFIC	550126	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	BRE-5501	1 1/2"-SFIC-550157-SS10-PP	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	550127	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	1 1/2"-SFIC-550157-SS10-PP	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1/2~~	~~SFIC~~	~~550128~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / *Condensado de Vapor Limpo*~~	~~1,12~~	~~BRE-5501~~	~~1 1/2"-SFIC-550127-SS10-PP~~	~~7B-Z-0-2-10~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	1,5	SFIC	550157	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	1 1/2"-SFIC-690107-SS5-PP	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	550174	SS10	PP	HOLD 1	Clean Steam Condensate / Condensado de Vapor Limpo	1,12	FGA-5501-3	3/4"-550176-SS10-PP	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	550175	SS10	PP	HOLD 1	Clean Steam Condensate / Condensado de Vapor Limpo	1,12	FGA-5501-2	3/4"-550176-SS10-PP	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 76 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	3/4, 1/2	SFIC	550176	SS10	PP	HOLD 1	Clean Steam Condensate / Condensado de Vapor Limpo	1,12	FGA-5501-1	1 1/2"-SFIC-550157-SS10-PP	7B-Z-0-2-10	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2; 1	SFIC	560102	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFI-560102-SS10-HC	2"-SFIC-560157-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	SFIC	560108	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FGA-5601-1	2"-SFIC-560157-SS10-PP	7B-Z-0-2-12	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFIC	560113	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FGA-5601-3	3/4"-SFIC-560108-SS10-PP	7B-Z-0-2-12	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	560114	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-CIP1S-560137-SS10-PP	2"-SFIC-560157-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	SFIC	560115	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	BRE-5601	2"-SFIC-560157-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	560116	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-GSP-560140-SS10-PP	2"-SFIC-560157-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4; 1/2	SFIC	560117	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFI-560109-SS10-HC	3/4"-SFIC-560126-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFIC	560118	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFI-560110-SS10-HC	3/4"-SFIC-560117-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFIC	560119	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFI-560111-SS10-HC	3/4"-SFIC-560117-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFIC	560120	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFI-560112-SS10-HC	3/4"-SFIC-560117-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFIC	560121	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	TC-AG5601	1/2"-SFIC-560128-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4; 1/2	SFIC	560122	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-PR-540122-SS10-PP	1 1/2"-SFIC-540129-SS10-PP	7B-Z-0-2-08	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4; 1/2~~	~~SFIC~~	~~560122~~	~~SS10~~	~~PP~~	~~HOLD 1~~	Clean Steam Condensate / *Condensado de Vapor Limpo*	~~1,12~~	~~BRE-5601~~	~~2"-SFIC-560157-SS10-PP~~	~~7B-Z-0-2-12~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	3/4	SFIC	560123	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFI-560103-SS10-HC	2"-SFIC-560157-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2; 1	SFIC	560124	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-PR-560101-SS10-PP	2"-SFIC-560157-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4; 1/2	SFIC	560126	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	BRE-5601	2"-SFIC-560157-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1; 3/4	SFIC	560127	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-560152-SS10-PP	2"-SFIC-560157-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4; 1/2	SFIC	560128	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	BRE-5601	2"-SFIC-560157-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFIC	560129	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	TC-AG5601	1/2"-SFIC-560128-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2~~	~~SFIC~~	~~560137~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / *Condensado de Vapor Limpo*~~	~~1,12~~	~~2"-SFI-650116-SS10-HC~~	~~1"-SFIC-560102-SS10-PP~~	~~7B-Z-0-2-12~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1/2	SFIC	560138	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FGA-5601-2	3/4"-SFIC-560108-SS10-PP	7B-Z-0-2-12	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	560139	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-560145-SS10-PP	3/4"-SFIC-560114-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1 3/4~~	~~SFIC~~	~~560144~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / Condensado de Vapor Limpo~~	~~1,12~~	~~FGA-5601-1~~	~~2"-SFIC-560157-SS10-PP~~	~~7B-Z-0-2-12~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	2	SFIC	560157	SS10	PP	HOLD 1	Clean Steam Condensate / Condensado de Vapor Limpo	1,12	Header	2"-SFIC-690108-SS5-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	560158	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	BRE-5601	2"-SFIC-560157-SS10-PP	7B-Z-0-2-12	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~SFIC~~	~~560159~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / Condensado de Vapor Limpo~~	~~1,12~~	~~FGA-5601-3~~	~~3/4"-SFIC-560144-SS10-PP~~	~~7B-Z-0-2-12~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~3/4~~	~~SFIC~~	~~560165~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / Condensado de Vapor Limpo~~	~~1,12~~	~~FGA-5601-2~~	~~1"-SFIC-560159-SS10-PP~~	~~7B-Z-0-2-12~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	3/4	SFIC	560186	SS10	PP	HOLD 1	Clean Steam Condensate / Condensado de Vapor Limpo	1,12	1"-PR-560152-SS10-PP	3/4"-SFIC-560127-SS10-PP	7B-Z-0-2-12	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2; 1	SFIC	560202	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFI-560202-SS10-PP	2"-SFIC-560257-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 77 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	3/4; 1/2	SFIC	560208	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FGA-5602-2	2"-SFIC-560257-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	SFIC	560213	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FGA-5602-3	3/4"-SFIC-560208-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	560214	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-CIP1S-560237-SS10-PP	2"-SFIC-560257-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	SFIC	560215	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	BRE-5602	2"-SFIC-560257-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	560216	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-GSP-560240-SS10-PP	2"-SFIC-560257-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4; 1/2	SFIC	560217	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFI-560209-SS10-HC	3/4"-SFIC-560226-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFIC	560218	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFI-560210-SS10-HC	3/4"-SFIC-560217-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFIC	560219	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFI-560211-SS10-HC	3/4"-SFIC-560217-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFIC	560220	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFI-560212-SS10-HC	3/4"-SFIC-560217-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFIC	560221	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	TC-AG5602	1/2"-SFIC-560228-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	560223	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFI-560203-SS10-HC	2"-SFIC-560257-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2; 1	SFIC	560224	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-PR-560201-SS10-PP	2"-SFIC-560257-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4; 1/2	SFIC	560226	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	BRE-5602	2"-SFIC-560257-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1; 3/4	SFIC	560227	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-560252-SS10-PP	2"-SFIC-560257-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	SFIC	560228	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	BRE-5602	2"-SFIC-560257-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFIC	560229	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	TC-AG5602	1/2"-SFIC-560228-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1/2~~	~~SFIC~~	~~560237~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / *Condensado de Vapor Limpo*~~	~~1,12~~	~~1"-PR-560252-SS10-PP~~	~~3/4"-SFIC-560227-SS10-PP~~	~~7B-Z-0-2-14~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1/2	SFIC	560238	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FGA-5602-2	3/4"-SFIC-560208-SS10-PP	7B-Z-0-2-14	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	560239	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-560245-SS10-PP	3/4"-SFIC-560214-SS10-PP	7B-Z-0-2-14	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4"~~	~~SFIC~~	~~560244~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / *Condensado de Vapor Limpo*~~	~~HOLD 1~~	~~FGA-5602-2~~	~~3/4"-SFIC-560208-SS10-PP~~	~~7B-Z-0-2-14~~	~~20~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	2	SFIC	560257	SS10 / SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	Header	2"-SFIC-690109-SS5-PP	7B-Z-0-2-14	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	560258	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	BRE-5602	2"-SFIC-560257-SS10-PP	7B-Z-0-2-14	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	560286	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	1"-PR-560252-SS10-PP	3/4"-SFIC-560227-SS10-PP	7B-Z-0-2-14	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2; 1	SFIC	560302	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	2"-SFI-560302-SS10-PP	2"-SFIC-560357-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4; 1/2	SFIC	560308	SS10	PP	HOLD 1	Clean Steam Condensate / Condensado de Vapor Limpo	HOLD 1	FGA-5603-1	2"-SFIC-560357-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	SFIC	560313	SS10	PP	HOLD 1	Clean Steam Condensate / Condensado de Vapor Limpo	HOLD 1	FGA-5603-3	3/4"-SFIC-560308-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	SFIC	560314	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	1"-CIP1S-560337-SS10-PP	2"-SFIC-560357-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4; 1/2	SFIC	560315	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	BRE-5603	2"-SFIC-560357-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	3/4	SFIC	560316	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	3/4"-GSP-560340-SS10-PP	2"-SFIC-560357-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	3/4; 1/2	SFIC	560317	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	1/2"-SFI-560309-SS10-HC	3/4"-SFIC-560326-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 78 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1/2; 3/4	SFIC	560318	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	1/2"-SFI-560310-SS10-HC	3/4"-SFIC-560317-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1/2	SFIC	560319	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	1/2"-SFI-560311-SS10-HC	3/4"-SFIC-560317-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1/2	SFIC	560320	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	1/2"-SFI-560312-SS10-HC	3/4"-SFIC-560317-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1/2	SFIC	560321	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	TC-AG5603	1/2"-SFIC-560328-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	3/4	SFIC	560323	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	3/4"-SFI-560303-SS10-HC	2"-SFIC-560357-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1 1/2; 1	SFIC	560324	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	2"-PR-560301-SS10-PP	2"-SFIC-560357-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	3/4; 1/2	SFIC	560326	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	BRE-5603 (FUTURO)	2"-SFIC-560357-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1; 3/4	SFIC	560327	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	1"-PR-560352-SS10-PP	2"-SFIC-560357-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4; 1/2	SFIC	560328	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	BRE-5603 (FUTURE)	1/2"-SFIC-560321-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1/2	SFIC	560329	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	TC-AG5603	1/2"-SFIC-560328-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1/2	SFIC	560331	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	TC-AG5603	1/2"-SFIC-560328-SS10-PP	7B-Z-0-2-16	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1/2	SFIC	560338	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	FGA-5603-2	3/4"-SFIC-560308-SS10-PP	7B-Z-0-2-16	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	3/4	SFIC	560339	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	1"-PR-560345-SS10-PP	3/4"-SFIC-560314-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	~~7B~~	~~1~~	~~SFIC~~	~~560344~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / Condensado de Vapor Limpo~~	~~1,12~~	~~FGA-5603-3~~	~~3/4"-SFIC-560308-SS10-PP~~	~~7B-Z-0-2-16~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~3/4~~	~~SFIC~~	~~560350~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / Condensado de Vapor Limpo~~	~~1,12~~	~~1"-PR-560352-SS10-PP~~	~~3/4"-SFIC-560327-SS10-PP~~	~~7B-Z-0-2-16~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	2	SFIC	560357	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690110-SS5-PP	7B-Z-0-2-16	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	3/4	SFIC	560358	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	BRE-5603 (FUTURE)	2"-SFIC-560357-SS10-PP	7B-Z-0-2-16	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	SFIC	560386	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	HOLD 1	1"-PR-560352-SS10-PP	3/4"-SFIC-560327-SS10-PP	7B-Z-0-2-16	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1/2	SFIC	561102	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-561101-SS10-PP	1/2"-SFIC-561108-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4; 1/2	SFIC	561104	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-561103-SS10-PP	1"-SFIC-561119-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFIC	561106	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-561105-SS10-PP	1/2"-SFIC-561108-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFIC	561108	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-561107-SS10-PP	1/2"-SFIC-561104-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	SFIC	561119	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	1"-SFIC-690111-SS5-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFIC	561202	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-561201-SS10-PP	1/2"-SFIC-561208-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4; 1/2	SFIC	561204	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-561203-SS10-PP	1"-SFIC-561119-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFIC	561206	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-561205-SS10-PP	1/2"-SFIC-561208-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFIC	561208	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-561207-SS10-PP	1/2"-SFIC-561204-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFIC	561302	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-561301-SS10-PP	1/2"-SFIC-561308-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1/2; 3/4	SFIC	561304	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-561303-SS10-PP	1"-SFIC-561119-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1/2	SFIC	561306	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-561305-SS10-PP	1/2"-SFIC-561308-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 79 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1/2	SFIC	561308	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-561307-SS10-PP	1/2"-SFIC-561304-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	2	SFIC	570106	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690112-SS5-PP	7B-Z-0-2-21	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	2	SFIC	570107	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690112-SS5-PP	7B-Z-0-2-22 / 7B-Z-0-2-21	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	3/4	SFIC	570118	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	TQ-5701	2"-SFIC-570106-SS10-PP	7B-Z-0-2-21	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	570122	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-570121-SS10-PP	1"-SFIC-561119-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	570124	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-570123-SS10-PP	1"-SFIC-561119-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	570126	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-570125-SS10-PP	1"-SFIC-561119-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	SFIC	570142	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFI-570149-SS10-HC	1"-SFIC-561119-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	570146	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	TQ-5701	2"-SFIC-570106-SS10-PP	7B-Z-0-2-21	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	3/4	SFIC	570147	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1.1/2-CAP-570130-SS10-PP	2"-SFIC-570106-SS10-PP	7B-Z-0-2-21	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	SFIC	570148	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-CIP1R-570130-SS10-PP	2"-SFIC-570107-SS10-PP	7B-Z-0-2-21	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	3/4	SFIC	570206	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	TQ-5702	2"-SFIC-570107-SS10-PP	7B-Z-0-2-22	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	570218	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	TQ-5702	2"-SFIC-570107-SS10-PP	7B-Z-0-2-22	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	570222	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-570221-SS10-PP	1"-SFIC-561119-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	570224	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-570223-SS10-PP	1"-SFIC-561119-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	570226	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-570225-SS10-PP	1"-SFIC-561119-SS10-PP	7B-Z-0-2-20	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	2; 1	SFIC	570246	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFI-570205-SS10-HC	2"-SFIC-570107-SS10-PP	7B-Z-0-2-22	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	570247	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1.1/2-CAP-570229-SS10-PP	2"-SFIC-570107-SS10-PP	7B-Z-0-2-22	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	580002	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-CIPS1-580003-SS10-PP	2"-SFIC-580206-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	580004	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-580003-SS10-PP	2"-SFIC-580206-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	580006	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-580003-SS10-PP	2"-SFIC-580206-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	SFIC	580007	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FGA-5800-1	1 1/2"-SFIC-580106-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	580008	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-580003-SS10-PP	2"-SFIC-580206-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	580010	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-580003-SS10-PP	3/4"-BW-580010-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	580011	SS10	HC	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFI-580023-SS10-HC	1"-PR-580215-SS10-PP	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	580101	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-580103-SS10-PP	3/4"-BW-580101-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	580104	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FLQ-5801-1	3/4"-BW-580113-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	580105	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	HFIL-5801	1 1/2"-SFIC-580106-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	SFIC	580106	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-580206-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	580109	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FLQ-5801-2	3/4"-WW-580114-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 80 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	3/4	SFIC	580110	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-580108-SS10-HC	3/4"-WW2-580110-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~SFIC~~	~~580111~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / *Condensado de Vapor Limpo*~~	~~1,12~~	~~3/4"-SFI-580112-SS10-PP~~	~~3/4"-WW2-580111-SS10-PP~~	~~7B-Z-0-2-23~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	3/4	SFIC	580201	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-PR-580203-SS10-PP	3/4"-BW-580201-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	580204	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FLQ-5802-1	3/4"-BW-580213-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	580205	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	HFIL-5802	2"-SFIC-580206-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	580206	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690143-SS5-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	580209	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FLQ-5802-2	2"-SFIC-580206-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	580210	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1.1/2"-PR-580106-SS10-PP	3/4"-WW2-580210-SS10-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~SFIC~~	~~580211~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / *Condensado de Vapor Limpo*~~	~~1,12~~	~~1 1/2"-PR/CIP2S-580019-SS10-PP~~	~~3/4"-WW2-580211-SS10-PP~~	~~7B-Z-0-2-23~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	2	SFIC	590129	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690114-SS5-PP	7B-Z-0-2-25 / 7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4; 1/2	SFIC	590133	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FGA-5901/2-1	2"-SFIC-590129-SS10-PP	7B-Z-0-2-24	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	590140	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1.1/2"-PR-590104-SS10-PP	2"-SFIC-590129-SS10-PP	7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	590141	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-PR-590101-SS10-PP	2"-SFIC-590129-SS10-PP	7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	590143	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-PR-590101-SS10-PP	2"-SFIC-590129-SS10-PP	7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	590144	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFI-5901074-SS10-HC	2"-SFIC-590129-SS10-PP	7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2; 1	SFIC	590146	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFI-590146-SS10-HC	2"-SFIC-590129-SS10-PP	7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2; 3/4	SFIC	590151	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1.1/2"CAP-590130-SS10-PP	2"-SFIC-590129-SS10-PP	7B-Z-0-2-24	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~2; 1~~	~~SFIC~~	~~590205~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / *Condensado de Vapor Limpo*~~	~~1,12~~	~~2"-SFI-590246-SS10-HC~~	~~2"-SFIC-590129-SS10-PP~~	~~7B-Z-0-2-25~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	3/4	SFIC	590240	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-PR-590204-SS10-PP	2"-SFIC-590129-SS10-PP	7B-Z-0-2-25	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	590241	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-PR-590201-SS10-PP	1"-WW2-590252-SS10-PP	7B-Z-0-2-25	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	590243	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-PR-590201-SS10-PP	2"-SFIC-590129-SS10-PP	7B-Z-0-2-24	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	590243	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFI-590207-SS10-HC	2"-SFIC-590129-SS10-PP	7B-Z-0-2-25	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	590246	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFI-590246-SS10-HC	2"-SFIC-590129-SS10-PP	7B-Z-0-2-25	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~SFIC~~	~~590247~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / *Condensado de Vapor Limpo*~~	~~1,12~~	~~TQ-5902~~	~~2"-SFIC-590129-SS10-PP~~	~~7B-Z-0-2-25~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	
0	7B	1.1/2; 3/4	SFIC	590251	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-CAP-590230-SS10-PP	2"-SFIC-590129-SS10-PP	7B-Z-0-2-25	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	4; 1	SFIC	650102	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	4"-SFI-650101-SS10-HC	1"-WW2-650153-SS5-PP	7B-Z-0-2-63	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	650105	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1/2"-SFI-650105-SS10-HC	1"-SFIC-690147-SS5-PP	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	~~7B~~	~~1/2~~	~~SFIC~~	~~650105~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / *Condensado de Vapor Limpo*~~	~~1,12~~	~~1/2"-SFI-650105-SS10-HC~~	~~1/2"-SFI-690147-SS5-PP~~	~~7B-Z-0-2-64~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
0	7B	3/4	SFIC	650120	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFI-650120-SS10-HC	3/4"-SFIC-690127-SS5-PP	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	Duplicate
0	7B	1.1/2; 3/4	SFIC	650120	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-SFI-650120-SS10-HC	1"-SFIC-690124-SS5-PP	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 81 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1	SFIC	650128	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFI-650119-SS10-PP	1"-SFIC-690124-SS5-PP	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~SFIC~~	~~650128~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / *Condensado de Vapor Limpo*~~	~~1,12~~	~~2"-SFI-650119-SS10-PP~~	~~2"-SFI-690143-SS5-PP~~	~~7B-Z-0-2-64~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
0	7B	3/4	SFIC	650129	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFI-650129-SS10-HC	3/4"-SFIC-690125-SS5-PP	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1/2~~	~~SFIC~~	~~650129~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / *Condensado de Vapor Limpo*~~	~~1,12~~	~~1/2"-SFI-650129-SS10-HC~~	~~3/4"-SFIC-690125-SS5-PP~~	~~7B-Z-0-2-64~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	
0	7B	2; 3/4	SFIC	650142	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFI-650142-SS10-HC	3/4"-SFIC-690142-SS5-PP	7B-Z-0-2-64	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2; 3/4	SFIC	650144	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFI-650105-SS10-HC	1"-SFIC-690126-SS5-PP	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	650145	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFI-650119-SS10-PP	1"-SFIC-690144-SS5-PP	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2; 3/4	SFIC	650148	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFI-650148-SS10-HC	1"-SFIC-690126-SS5-PP	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~SFIC~~	~~650148~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / *Condensado de Vapor Limpo*~~	~~1,12~~	~~2"-SFI-650105-SS10-HC~~	~~1"-SFIC-690126-SS5-PP~~	~~7B-Z-0-2-64~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Duplicate
0	7B	3; 3/4	SFIC	650149	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3"-SFI-650106-SS10-HC	1"-SFIC-690146-SS5-HC	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1,5	SFIC	690101	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690137-SS5-PP	7B-Z-0-2-01 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690102	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFIC-510235-SS10-PP	2"-SFIC-690137-SS5-PP	7B-Z-0-2-02 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690103	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFIC-520129-SS5-PP	2"-SFIC-690136-SS5-PP	7B-Z-0-2-03 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	SFIC	690104	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFIC-520229-SS5-PP	2"-SFIC-690136-SS5-PP	7B-Z-0-2-04 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	SFIC	690105	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFIC-520329-SS5-PP	2"-SFIC-690136-SS5-PP	7B-Z-0-2-05 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1.1/2	SFIC	690106	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-SFIC-540129-SS10-PP	2"-SFIC-690134-SS5-PP	7B-Z-0-2-08 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	SFIC	690107	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-BW-550125-SS10-PP	2"-SFIC-690134-SS5-PP	7B-Z-0-2-10 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690108	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-BW-690108-SS5-PP	2"-SFIC-690135-SS5-PP	7B-Z-0-2-12 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690109	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-BW-690109-SS5-PP	2"-SFIC-690135-SS5-PP	7B-Z-0-2-14 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690110	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-BW-690110-SS10-PP	2"-SFIC-690135-SS5-PP	7B-Z-0-2-16 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	1	SFIC	690111	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-SFIC-561119-SS10-PP	2"-SFIC-690132-SS5-PP	7B-Z-0-2-20 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690112	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFIC-570106-SS10-PP	2"-SFIC-690133-SS5-PP	7B-Z-0-2-21 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690113	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	HFIL-5803	2"-SFIC-690132-SS5-PP	7B-Z-0-2-23 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690114	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFIC-590129-SS10-PP	2"-SFIC-690133-SS5-PP	7B-Z-0-2-24 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	690115	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-SFIC-330011-SS10-PP	2"-SFIC-690131-SS5-PP	7B-Z-0-2-26 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	690116	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-330013-SS10-PP	2"-SFIC-690131-SS5-PP	7B-Z-0-2-27 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	690117	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-330014-SS10-PP	2"-SFIC-690131-SS5-PP	7B-Z-0-2-28 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	690118	SS10	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	CRM-3501	2"-SFIC-690131-SS5-PP	7B-Z-0-2-29 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	690119	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	CRM-3601	2"-SFIC-690130-SS5-PP	7B-Z-0-2-31 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	690120	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-370137-SS10-PP	2"-SFIC-690138-SS5-PP	7B-Z-0-2-37 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 82 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	3/4	SFIC	690121	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-370240-SS10-PP	2"-SFIC-690138-SS5-PP	7B-Z-0-2-39 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	SFIC	690122	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1 1/2"-SFIC-371103-SS10-PP	2"-SFIC-690138-SS5-PP	7B-Z-0-2-40 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	690123	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-470110-SS5-PP	2"-SFIC-690130-SS5-PP	7B-Z-0-2-55 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	690124	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690130-SS5-PP	7B-Z-0-2-64 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	690125	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-650129-SS10-PP	2"-SFIC-690130-SS5-PP	7B-Z-0-2-64 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	690126	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690130-SS5-PP	7B-Z-0-2-64 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	690127	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-650120-SS10-PP	2"-SFIC-690130-SS5-PP	7B-Z-0-2-64 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	690128	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-690129-SS5-PP	2"-SFIC-690132-SS5-PP	7B-Z-0-2-73 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	690129	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-750006-SS5-PP	3/4"-SFIC-690128-SS5-PP	7B-Z-0-2-73	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690130	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-BW-750118-SS5-PP	7B-Z-0-2-77 / 7B-Z-0-2-76	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690131	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690130-SS5-PP	7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690132	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690130-SS5-PP	7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690133	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690132-SS5-PP	7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690134	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690132-SS5-PP	7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690135	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690132-SS5-PP	7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690136	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690132-SS5-PP	7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690137	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690130-SS5-PP	7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690138	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	Header	2"-SFIC-690130-SS5-PP	7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690139	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFIC-370112-SS5-PP	2"-SFIC-690137-SS5-PP	7B-Z-0-2-33 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690140	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFIC-370219-SS10-PP	2"-SFIC-690137-SS5-PP	7B-Z-0-2-34 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	690142	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFI-650142-SS10-HC	2"-SFIC-690130-SS5-PP	7B-Z-0-2-64 / 7B-Z-0-2-77	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	SFIC	690143	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	1"-SFIC-650128-SS10-PP	1"-SFIC-690124-SS5-PP	7B-Z-0-2-64	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	SFIC	690143	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	2"-SFIC-580206-SS10-PP	2"-SFIC-690113-SS5-PP	7B-Z-0-2-23	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	690144	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-650145-SS10-PP	1"-SFIC-690124-SS5-PP	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	690145	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-650148-SS10-PP	1"-SFIC-690126-SS5-PP	7B-Z-0-2-64	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	690146	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFIC-650149-SS10-PP	1"-SFIC-690126-SS5-PP	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	SFIC	690147	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	3/4"-SFI-650105-SS10-HC	1"-SFIC-690126-SS5-PP	7B-Z-0-2-64	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	SFIC	750006	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FGA-7500-1	3/4"-SFIC-690129-SS5-PP	7B-Z-0-2-73	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	SFIC	750123	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FGA-7501-2	TQ-7501-1	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	3/4	SFIC	750124	SS5	PP	HOLD 1	Clean Steam Condensate / *Condensado de Vapor Limpo*	1,12	FGA-7501-1	TQ-7501-2	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 83 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1	SFI/CAP/ VEP	470101	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo* / Clean Compressed Air / *Ar Comprimido de Processo* / Process Vent / *Vent de Processo*	HOLD 1	1/2"-CAP-470101-SS10-NI	FGA-3403	7B-Z-0-2-55	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1/2	SFI/CAP/ VEP	470106	SS10	HC	HOLD 1	Clean Steam / *Vapor Limpo* / Clean Compressed Air / *Ar Comprimido de Processo* / Process Vent / *Vent de Processo*	HOLD 1	1"-SFI/CAP/VEP-470101-SS10-PP	TQ-3403	7B-Z-0-2-55	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 84 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	~~7B~~	~~3/4~~	~~SFIC/CIP 2R~~	~~371001~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Clean Steam Condensate / Condensado de Vapor Limpo~~	~~HOLD 1~~	~~BPR-3710~~	~~1"-SFIC-371002-SS10-PP~~	~~7B-Z-0-2-40~~	~~120~~	~~1,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE: LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 85 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	2	TWS	750130	CS1	NI	-	Tower Water Supply	995,3	2"-TWS-9400XX-CS1-NI	TC-7501	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE: LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 86 of 94
			CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	2	TWS	750131	CS1	NI	-	Tower Water Return	993	TC-7501	2"-TWR-9400XX-CS1-NI	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 87 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	~~7B~~	~~1 1/2~~	~~VE~~	~~340101~~	~~SS5~~	~~NI~~	-	~~Process Vent / *Vent de Processo*~~	~~HOLD 1~~	~~TQ-3401~~	~~FLOOR~~	~~7B-Z-0-2-55~~	~~20~~	~~4,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	CANCELED
0	~~7B~~	~~1 1/2~~	~~VE~~	~~340201~~	~~SS5~~	~~NI~~	-	~~Process Vent / *Vent de Processo*~~	~~HOLD 1~~	~~TQ-3402~~	~~FLOOR~~	~~7B-Z-0-2-55~~	~~20~~	~~4,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	CANCELED
0	~~7B~~	~~1 1/2~~	~~VE~~	~~340301~~	~~SS5~~	~~NI~~	-	~~Process Vent / *Vent de Processo*~~	~~HOLD 1~~	~~TQ-3403~~	~~FLOOR~~	~~7B-Z-0-2-55~~	~~20~~	~~4,0~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	CANCELED
0	7B	1 1/2	VE	341101	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	TQ-3411	FLOOR	7B-Z-0-2-80	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	VE	370122	SS10	NI	-	Process Vent / *Vent de Processo*	HOLD 1	TQ-3701	150MM A.F.F.	7B-Z-0-2-33	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	VE	370222	SS10	NI	-	Process Vent / *Vent de Processo*	HOLD 1	TQ-3702	6" A.F.F.	7B-Z-0-2-34	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	VE	370322	SS10	NI	-	Process Vent / *Vent de Processo*	HOLD 1	TQ-3703	6" A.F.F.	7B-Z-0-2-35	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	VE	510108	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	TQ-5101	6"-A.F.F.	7B-Z-0-2-01	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	VE	510208	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	TQ-5102	150MM A.F.F.	7B-Z-0-2-02	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	VE	520108	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	TQ-5201	6" A.F.F.	7B-Z-0-2-03	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	VE	520208	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	TQ-5202	6" A.F.F.	7B-Z-0-2-04	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	VE	520308	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	TQ-5203 (FUTURE)	6" A.F.F.	7B-Z-0-2-05	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	VE	540124	SS5	PP	-	Process Vent / *Vent de Processo*	HOLD 1	PSV-540142	VENT TO SAFE LOCATION OUTSIDE	7B-Z-0-2-09	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	VE	540139	SS5	PP	-	Process Vent / *Vent de Processo*	HOLD 1	RESERVOIR X-540137	VENT	7B-Z-0-2-09	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	VE	540149	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	BRE-5401	150MM AFF	7B-Z-0-2-08	37	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	VE	550128	SS5	PP	-	Process Vent / *Vent de Processo*	HOLD 1	PSV-550142	VENT TO SAFE LOCATION OUTSIDE	7B-Z-0-2-11	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	VE	550133	SS5	PP	-	Process Vent / *Vent de Processo*	HOLD 1	RESERVOIR X-530137	VENT	7B-Z-0-2-11	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	VE	550149	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	BRE-5501	150MM AFF	7B-Z-0-2-10	37	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	VE	560149	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	BRE-5601	150MM AFF	7B-Z-0-2-12	37	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	VE	560150	CS1	PP	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	PSV-560142	VENT TO SAFE LOCATION OUTSIDE	7B-Z-0-2-13	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	VE	~~560187~~	~~CS1~~	~~PP~~	~~HOLD 1~~	Process Vent / Vent de Processo	~~HOLD 1~~	~~PSV-560142~~	~~ROOF~~	~~7B-Z-0-2-13~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	2	VE	560249	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	BRE-5602	150MM AFF	7B-Z-0-2-14	37	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	VE	560250	CS1	PP	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	PSV-560242	VENT TO SAFE LOCATION OUTSIDE	7B-Z-0-2-15	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	~~7B~~	~~1~~	VE	~~560344~~	~~CS1~~	~~PP~~	~~HOLD 1~~	Process Vent / *Vent de Processo*	~~HOLD 1~~	~~1"-IS4B-560381-CS1-HC~~	~~ROOF~~	~~7B-Z-0-2-17~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	2	VE	560349	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	BRE-5603	150MM AFF	7B-Z-0-2-16	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	7B	1	VE	560350	CS1	PP	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	PSV-560342	VENT TO SAFE LOCATION OUTSIDE	7B-Z-0-2-17	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	2	VE	570108	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	TQ-5701	6" A.F.F.	7B-Z-0-2-21	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 88 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	2	VE	570208	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	TQ-5702	6" A.F.F.	7B-Z-0-2-22	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	VE	590108	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	TQ-5901	6" A.F.F.	7B-Z-0-2-24	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	VE	590208	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	TQ-5902	6" A.F.F.	7B-Z-0-2-25	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	VE	630213	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	FGA-6302	ODU-6302	7B-Z-0-2-57	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	VE	900109	SS10	NI	-	Process Vent / *Vent de Processo*	HOLD 1	AT-9001	VENT TO SAFE LOCATION	7B-Z-0-2-54	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	VE	900110	SS10	NI	-	Process Vent / *Vent de Processo*	HOLD 1	AT-9001	VENT TO SAFE LOCATION	7B-Z-0-2-54	20	6,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	VE	340X01	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	TQ-340X	FLOOR	7B-Z-0-2-55	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001 CLIENT NR: PRD-MEC-LIS-002	SHEET: 89 of 94 REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1	VEP	230001	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	1/2"-GCO2-230001-SS10-NI	VENT TO SAFE LOCATION	7B-Z-0-2-70	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	VEP	240001	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	3/4"-GOP-240001-SS10-NI	VENT TO SAFE LOCATION	7B-Z-0-2-70	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1/2~~	~~VEP~~	~~260002~~	~~SS10-VJP~~	~~AS~~	~~HOLD 1~~	~~Process Vent / *Vent de Processo*~~	~~HOLD 1~~	~~1/2"-LN2-260001-VJP~~	~~VENT TO SAFE LOCATION~~	~~7B-Z-0-2-74~~	~~-200~~	~~Unknown~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1/2	VEP	260005	SS10	AS	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	STA-2601	SAFE LOCATION	7B-Z-0-2-74	-200	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	VEP	260006	SS10	AS	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	FS-2001	SAFE LOCATION	7B-Z-0-2-74	-200	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	VEP	260007	SS10	AS	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	CV-260001	SAFE LOCATION	7B-Z-0-2-74	-200	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	VEP	260008	SS10	AS	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	FS-2002	SAFE LOCATION	7B-Z-0-2-74	-200	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2; 1	VEP	470104	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	1"-SFI/CAP/VEP-470101-SS10-PP	SAFE LOCATION	7B-Z-0-2-55	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	VEP	510119	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	1"-CAP-510130-SS10-NI	ROOF	7B-Z-0-2-01	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	VEP	510219	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	1.1/2"-CAP-510231-SS10-NI	ROOF	7B-Z-0-2-02	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	VEP	520119	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	1 1/2"-CAP-520130-SS10-PP	ROOF	7B-Z-0-2-03	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	VEP	520219	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	1 1/2"-CAP-520230-SS10-PP	ROOF	7B-Z-0-2-04	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	VEP	520319	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	1 1/2"-CAP-520330-SS10-PP	ROOF	7B-Z-0-2-05	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	7B	3/4	VEP	540143	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	3/4"-CAP-540142-SS10-PP	ROOF	7B-Z-0-2-08	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	VEP	550143	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	3/4"-CAP-550142-SS10-PP	ROOF	7B-Z-0-2-10	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	VEP	560143	SS10 / SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	1 1/2"-CAP-560142-SS10-PP	ROOF	7B-Z-0-2-12	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	VEP	560243	SS10 / SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	1 1/2"-CAP-560242-SS10-NI	ROOF	7B-Z-0-2-14	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	VEP	560343	SS10 / SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	1 1/2"-CAP-560342-SS10-PP	ROOF	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
A	~~7B~~	~~2~~	~~VEP~~	~~560349~~	~~SS10 / SS5~~	~~NI~~	~~-~~	~~Process Vent / *Vent de Processo*~~	~~HOLD 1~~	~~BRE-5603 (FUTURE)~~	~~150MM AFF~~	~~7B-Z-0-2-16~~	~~37~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	FUTURE
A	7B	1 1/2	VEP	570119	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	1 1/2"-CAP-570130-SS10-PP	ROOF	7B-Z-0-2-21	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	VEP	570219	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	1 1/2"-CAP-570229-SS10-PP	ROOF	7B-Z-0-2-22	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	VEP	590119	SS10 / SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	1 1/2"-CAP-590130-SS10-PP	ROOF	7B-Z-0-2-24	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	VEP	590219	SS10 / SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	1 1/2"-CAP-590230-SS10-PP	ROOF	7B-Z-0-2-25	20	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	VEP	630212	SS5	PP	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	TQ-6302	ABOVE FINISHED FLOOR	7B-Z-0-2-57	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	VEP	630214	SS5	NI	-	Process Vent / *Vent de Processo*	HOLD 1	ODU-6302	VENT TO SAFE LOCATION	7B-Z-0-2-57	20	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	VEP	640114	SS5	PP	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	TQ-6401	ROUTE LINE	7B-Z-0-2-60	20	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	VEP	640115	SS5	PP	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	FGA-6401	VENT TO SAFE LOCATION	7B-Z-0-2-60	100	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 90 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1 1/2	VEP	640119	SS5	PP	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	MES-6401	VENT TO SAFE LOCATION	7B-Z-0-2-59	175	8,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	VEP	640135	CS2	PP	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	MES-6401	VENT TO SAFE LOCATION	7B-Z-0-2-59	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2 1/2	VEP	650139	SS10 / SS5	PP	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	4"-SFI-650101-SS10-HC	VENT TO SAFE LOCATION	7B-Z-0-2-63	144	3,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3	VEP	650146	CS2	PP	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	CSG-6501	VENT TO SAFE LOCATION	7B-Z-0-2-63	175	8,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	4	VEP	650152	CS2	PP	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	CSG-6501	VENT TO SAFE LOCATION	7B-Z-0-2-63	175	8,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	VEP	750004	SS5	PP	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	4"-BW-750002-SS5-PP	FGA-7500-1	7B-Z-0-2-73	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	VEP	750005	SS5	PP	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	FGA-7500-1	VENT TO SAFE LOCATION	7B-Z-0-2-73	100	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	VEP	750129	SS10	NI	-	Process Vent / *Vent de Processo*	HOLD 1	FGA-7501-1	VENT TO SAFE LOCATION	7B-Z-0-2-76	100	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	VEP	750125	SS10	NI	-	Process Vent / *Vent de Processo*	HOLD 1	TQ-7501-1	FGA-7501-1	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
0	7B	1 1/2	VEP	750126	SS10	NI	-	Process Vent / *Vent de Processo*	HOLD 1	TQ-7501-2	FGA-7501-2	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	ON HOLD
A	7B	1 1/2	VEP	750133	SS10	NI	-	Process Vent / *Vent de Processo*	HOLD 1	FGA-7501-2	VENT TO SAFE LOCATION	7B-Z-0-2-76	100	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	VEP	800004	SS10	PP	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	TQ-8001	VENT TO SAFE LOCATION	7B-Z-0-2-69	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	VEP	800042	SS10	PP	HOLD 1	Process Vent / *Vent de Processo*	HOLD 1	3"-WW2-800003-SS5-P	VENT TO SAFE LOCATION	7B-Z-0-2-65	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 91 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1 1/2	WW2	330009	SS5	AS	HOLD 1	Process Waste / Efluente de Processo	HOLD 1	1 1/2"-SFIC-330008-SS10-PP	1 1/2"-WW2-800014-SS5-AS	7B-Z-0-2-26	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	WW2	330012	SS10	PP	HOLD 1	Process Waste / Efluente de Processo	HOLD 1	3/4"-SFIC-330004-SS10-PP	1 1/2"-SFIC-330008-SS10-PP	7B-Z-0-2-26	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	WW2	330015	SS10	PP	HOLD 1	Process Waste / Efluente de Processo	HOLD 1	TP-3300-1	1 1/2"-SFIC-330008-SS10-PP	7B-Z-0-2-26	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	WW2	370113	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	2"-BUF-370101-SS10-PP	1 1/2"-WW2-800045-SS5-NI	7B-Z-0-2-33	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	WW2	370125	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	TP-3701-4	3/4"-SFIC-690121-SS5-PP	7B-Z-0-2-37	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	WW2	370213	SS10	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	2"-BUF-370201-SS10-PP	2"-WW2-800046-SS10-NI	7B-Z-0-2-34	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	WW2	370313	SS10	HC	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	2"-BUF-370301-SS10-PP	2"-WW2-800044-SS5-NI	7B-Z-0-2-35	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	WW2	371003	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	TP-3702-5	1.1/2"-SFIC-371103-SS5-PP	7B-Z-0-2-40	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	WW2	371004	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	TP-3702-5	1"-SFIC-690122-SS5-PP	7B-Z-0-2-40	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	WW2	371102	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1"-BUF-371101-HC22-PP	1.1/2"-SFIC-371103-SS5-PP	7B-Z-0-2-40	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	WW2	380103	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	TP-3801-1	2"-WW2-800052-SS5-NI	7B-Z-0-2-36	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	WW2	510122	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	3/4"-SFIC-510118-SS10-PP	1 1/2"-SFIC-510135-SS10-PP	7B-Z-0-2-01	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	WW2	510145	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	3/4"-SFIC-510145-SS10-PP	1 1/2"-SFIC-510135-SS10-PP	7B-Z-0-2-01	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	WW2	510154	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1"-SFIC-510153-SS10-PP	1 1/2"-SFIC-510135-SS10-PP	7B-Z-0-2-01	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	WW2	510156	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1"-SFIC-510155-SS10-PP	1 1/2"-SFIC-510135-SS10-PP	7B-Z-0-2-01	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	WW2	520114	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	TP-5201-1	2"-SFIC-520129-SS10-PP	7B-Z-0-2-03	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~WW2~~	~~520141~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Process Waste / *Efluente de Processo*~~	~~HOLD 1~~	~~1"-SFIC-520141-SS10-PP~~	~~2"-SFIC-520129-SS10-PP~~	~~7B-Z-0-2-03~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1	WW2	510242	SS10	HC	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	2"-SFI-650133-SS10-HC	2"-SFI-510246-SS10-HC	7B-Z-0-2-02	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	WW2	510245	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1"-SFIC-510245-SS10-PP	2"-SFIC-510235-SS10-PP	7B-Z-0-2-02	120	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	WW2	510246	SS10	HC	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	2"-SFI-510242-SS10-HC	1 1/2"-CIP1S-510220-SS10-PP	7B-Z-0-2-02	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	WW2	510247	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	TP-5102-1	2"-SFIC-510235-SS10-PP	7B-Z-0-2-02	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	WW2	510252	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	3/4"-SFIC-510241-SS10-PP	2"-SFIC-510235-SS10-PP	7B-Z-0-2-02	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	WW2	510254	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1"-SFIC-510253-SS10-PP	2"-SFIC-520129-SS10-PP	7B-Z-0-2-02	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	WW2	520256	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1"-SFIC-510255-SS10-PP	2"-SFIC-510235-SS10-PP	7B-Z-0-2-02	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	WW2	520142	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1"-SFIC-520141-SS10-PP	2"-SFIC-520129-SS10-PP	7B-Z-0-2-03	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	WW2	520214	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	TP-5202-1	2"-SFIC-520229-SS10-PP	7B-Z-0-2-04	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~WW2~~	~~520241~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Process Waste / *Efluente de Processo*~~	~~HOLD 1~~	~~1"-SFIC-520241-SS10-PP~~	~~1"-SFIC-520229-SS10-PP~~	~~7B-Z-0-2-04~~	~~120~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1	WW2	520242	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1"-SFIC-520241-SS10-PP	2"-SFIC-520229-SS10-PP	7B-Z-0-2-04	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	WW2	520342	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1"-SFIC-520341-SS10-PP	2"-SFIC-520329-SS10-PP	7B-Z-0-2-05	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	WW2	550129	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1.1/2"-CIP1S-550130-SS10-PP	1.1/2"-SFIC-550157-SS10-PP	7B-Z-0-2-10	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 92 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
0	7B	1.1/2	WW2	560131	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1 1/2"-CIP1S-560131-SS10-PP	2"-SFIC-560157-SS10-PP	7B-Z-0-2-12	80	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	WW2	560231	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1 1/2"-CIP1S-560231-SS10-PP	2"-SFIC-560257-SS10-PP	7B-Z-0-2-14	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	WW2	560331	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1 1/2"-CIP1S-560331-SS10-PP	2"-SFIC-560357-SS10-PP	7B-Z-0-2-16	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	~~7B~~	~~1/2~~	~~WW2~~	~~570116~~	~~SS5~~	~~NI~~	-	~~Process Waste / *Efluente de Processo*~~	~~HOLD 1~~	~~TC-5701~~	~~1/2"-WW2-800022-SS5-NI~~	~~7B-Z-0-2-21~~	~~10~~	~~0,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~1/2~~	~~WW2~~	~~570216~~	~~SS5~~	~~NI~~	-	~~Process Waste / *Efluente de Processo*~~	~~HOLD 1~~	~~TC-5702~~	~~1/2"-WW2-570116-SS5-NI~~	~~7B-Z-0-2-22 / 7B-Z-0-2-21~~	~~10~~	~~0,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	~~7B~~	~~3/4~~	~~WW2~~	~~580101~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Process Waste / *Efluente de Processo*~~	~~HOLD 1~~	~~3/4"-SFIC-580101-SS10-PP~~	~~1 1/2"-SFIC-580106-SS10-PP~~	~~7B-Z-0-2-23~~	~~100~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	3/4	WW2	580110	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	3/4"-SFIC-580110-SS10-PP	1 1/2"-SFIC-580106-SS10-PP	7B-Z-0-2-23	100	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~WW2~~	~~580111~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Process Waste / *Efluente de Processo*~~	~~HOLD 1~~	~~3/4"-SFIC-580111-SS10-PP~~	~~1"-SFIC-580021-SS10-PP~~	~~7B-Z-0-2-23~~	~~100~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	3/4	WW2	580114	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	3/4"-SFIC-580109-SS10-PP	2"-SFIC-580106-SS10-PP	7B-Z-0-2-23	100	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	WW2	580210	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	3/4"-SFIC-580210-SS10-PP	2"-SFIC-580206-SS10-PP	7B-Z-0-2-23	100	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3/4~~	~~WW2~~	~~580211~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Process Waste / *Efluente de Processo*~~	~~HOLD 1~~	~~3/4"-SFIC-580211-SS10-PP~~	~~1"-SFIC-580021-SS10-PP~~	~~7B-Z-0-2-23~~	~~100~~	~~1,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	3/4	WW2	580214	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	3/4"-SFIC-580209-SS10-PP	2"-SFIC-580206-SS10-PP	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	WW2	590113	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	TP-5901/2	2"-SFIC-590129-SS10-PP	7B-Z-0-2-24	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~WW2~~	~~590141~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Process Waste / *Efluente de Processo*~~	~~HOLD 1~~	~~1"-SFIC-590141-SS10-PP~~	~~2"-SFIC-590129-SS10-PP~~	~~7B-Z-0-2-24~~	~~80~~	~~0,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1	WW2	590152	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1"-SFIC-590141-SS10-PP	2"-SFIC-590129-SS10-PP	7B-Z-0-2-24	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1~~	~~WW2~~	~~590241~~	~~SS10~~	~~PP~~	~~HOLD 1~~	~~Process Waste / *Efluente de Processo*~~	~~HOLD 1~~	~~1"-SFIC-590241-SS10-PP~~	~~2"-SFIC-590129-SS10-PP~~	~~7B-Z-0-2-25~~	~~80~~	~~0,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	1	WW2	590252	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1"-SFIC-590241-SS10-PP	2"-SFIC-590129-SS10-PP	7B-Z-0-2-25	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	WW2	630208	SS10	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	OG-6302	2 1/2"-WW2-630229-SS5-NI	7B-Z-0-2-57	20	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	FUTURE
0	~~7B~~	~~1 1/2~~	~~WW2~~	~~630208~~	~~SS5~~	~~NI~~	-	~~Process Waste / *Efluente de Processo*~~	~~HOLD 1~~	~~OG-6302~~	~~J~~	~~7B-Z-0-2-57~~	~~20~~	~~0,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
0	7B	2 1/2	WW2	630229	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	SK-6302	2 1/2"-WW2-640123-SS5-PP	7B-Z-0-2-57 / 7B-Z-0-2-59	20	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	WW2	630230	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	RO-6302	2 1/2"-WW2-640123-SS5-PP	7B-Z-0-2-56 / 7B-Z-0-2-59	80	4,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	WW2	640117	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1"-HWFI-640116-SS10-HC	2 1/2"-WW2-640118-SS5-PP	7B-Z-0-2-59 / 7B-Z-0-2-60	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2 1/2	WW2	640118	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	SK-6401	2 1/2"-WW2-640123-SS5-PP	7B-Z-0-2-59 / 7B-Z-0-2-60	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	WW2	640120	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	MES-6401	2 1/2"-WW2-640123-SS5-PP	7B-Z-0-2-59	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1	WW2	640122	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	MES-6401	2 1/2"-WW2-640123-SS5-PP	7B-Z-0-2-59	25	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2.1/2	WW2	640123	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	Header	CC-6401	7B-Z-0-2-59	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	WW2	640124	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	MES-6401	2 1/2"-WW2-640123-SS5-PP	7B-Z-0-2-59	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	WW2	650133	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	2"-SFI-650130-SS10-HC	2"-SFI-510242-SS10-HC	7B-Z-0-2-02 / 7B-Z-0-2-64	100	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1	WW2	650153	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1"-SFIC-650102-SS10-PP	1 1/2"-WW2-650156-SS5-PP	7B-Z-0-2-63	100	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	WW2	650154	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	CSG-6501 SAMPLE	1 1/2"-WW2-650156-SS5-PP	7B-Z-0-2-63	25	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 93 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	1	WW2	650155	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	CSG-6501 WASTE OUTLET	1 1/2"-WW2-650156-SS5-PP	7B-Z-0-2-63	100	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	WW2	650156	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1"-WW2-650153-SS5-PP	CC-6501	7B-Z-0-2-63	100	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	WW2	690113	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	HFIL-5803	2"-SFIC-690113-SS5-PP	7B-Z-0-2-23	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	WW2	750103	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	3"-BW-750105-SS5-PP	TC-7501	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1.1/2	WW2	750104	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	TC-7501	1 1/2"-WW2-800020-SS5-NI	7B-Z-0-2-76	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3	WW2	751004	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	2"-WW2-770109-SS5-PP	3"-BW-751002-SS5-NI	7B-Z-0-2-43	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3	WW2	751005	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	2"-WW2-770209-SS5-PP	6"-BW-751002-SS5-NI	7B-Z-0-2-46	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	WW2	770109	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	CIP-7701	3"-WW2-751004-SS5-PP	7B-Z-0-2-43	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	WW2	770209	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	CIP-7702	3"-WW2-751005-SS5-PP	7B-Z-0-2-46	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	WW2	770309	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	CIP-7703	2"-WW2-800009-SS5-PP	7B-Z-0-2-49	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3	WW2	800001	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	BC-8000-1 / BC-8000-2	PROCESS WASTE TO COLLECTION TANK - TBD	7B-Z-0-2-69	20	TBD	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3	WW2	800003	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	Header	TQ-8001	7B-Z-0-2-65 / 7B-Z-0-2-69	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	WW2	800005	SS5	AS	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	2"-CIP1R-770143-SS10-PP	3"-WW2-800007-SS5-AS	7B-Z-0-2-45	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3	WW2	800006	SS5	AS	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	2"-CIP1R-770139-SS10-PP	3"-WW2-800007-SS5-AS	7B-Z-0-2-45	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~3~~	~~WW2~~	~~800007~~	~~SS5~~	~~PP~~	~~HOLD 1~~	~~Process Waste / *Efluente de Processo*~~	~~HOLD 1~~	~~2"-WW2-770109-SS5-PP~~	~~2 1/2"-WW2-800010-SS5-PP~~	~~7B-Z-0-2-43~~	~~80~~	~~0,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	3	WW2	800007	SS5	AS	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	Header	3"-WW2-800003-SS5-PP	7B-Z-0-2-45 / 7B-Z-0-2-48 / 7B-Z-0-2-65	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	WW2	800008	SS5	AS	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1 1/2"-CIP2R-770212-SS10-PP	3"-WW2-800007-SS5-AS	7B-Z-0-2-48	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	WW2	800009	SS5	AS	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	2"-CIP2R-770215-SS10-PP	3"-WW2-800007-SS5-AS	7B-Z-0-2-48	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	WW2	800009	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	2"-WW2-770309-SS5-PP	2 1/2"-WW2-800010-SS5-PP	7B-Z-0-2-49	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	WW2	800010	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	2"-WW2-800009-SS5-PP	CC-7703	7B-Z-0-2-49	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	WW2	800010	SS5	AS	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	2"-CIP2R-770214-SS10-PP	3"-WW2-800007-SS5-AS	7B-Z-0-2-48	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	WW2	800011	SS5	AS	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	2"-CIP2R-770216-SS10-PP	3"-WW2-800007-SS5-AS	7B-Z-0-2-48	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2	WW2	800012	SS5	AS	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	2"-CIP2R-770222-SS10-PP	3"-WW2-800007-SS5-AS	7B-Z-0-2-48	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	WW2	800014	SS5	AS	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1 1/2"-WW3-330009-SS5-AS	3"-WW2-800007-SS5-AS	7B-Z-0-2-26 / 7B-Z-0-2-45	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	WW2	800020	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	1 1/2"-WW2-750104-SS5-PP	2 1/2"-WW2-800021-SS5-PP	7B-Z-0-2-76 / 7B-Z-0-2-69	20	1,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2 1/2	WW2	800021	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	Header	PROCESS WASTE TO COLLECTION TANK TBD	7B-Z-0-2-66 / 7B-Z-0-2-69	80	TBD	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	~~7B~~	~~1/2~~	~~WW2~~	~~800022~~	~~SS5~~	~~NI~~	~~-~~	~~Process Waste / *Efluente de Processo*~~	~~HOLD 1~~	~~1/2"-WW2-570116-SS5-NI~~	~~3"-WW2-800003-SS5-PP~~	~~7B-Z-0-2-21 / 7B-Z-0-2-65~~	~~10~~	~~0,0~~	HOLD 1	HOLD 1	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	~~HOLD 1~~	Canceled
A	7B	3/4	WW2	800024	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	CRM-3401	2 1/2"-WW2-800021-SS5-PP	7B-Z-0-2-27 / 7B-Z-0-2-66	20	TBD	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	WW2	800025	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	CRM-3402	2 1/2"-WW2-800021-SS5-PP	7B-Z-0-2-28 / 7B-Z-0-2-66	20	TBD	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3/4	WW2	800026	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	CRM-3501	2 1/2"-WW2-800021-SS5-PP	7B-Z-0-2-29 / 7B-Z-0-2-66	20	TBD	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	

TESSLER engenharia / ips	Takeda / Hemobrás	TITLE:	LINE LIST - PROCESS AND CLEAN UTILITIES - BUILDING 7B LISTA DE LINHAS - PROCESSO E CLEAN UTILITIES - PRÉDIO 7B	DOC NR: E-569-B7A-PRO-330-001	SHEET: 94 of 94
				CLIENT NR: PRD-MEC-LIS-002	REV.: 0

REV./ REV.	LINE NUMBER ID / *IDENTIFICAÇÃO DA LINHA*						INSUL. / *ISOL.* (mm)	Fluid. / *Fluído*	Dens. / *Dens.* (kg/m³)	LINE INTERCONNECTION / *EXTREMIDADES DA LINHA*		P&ID / *Fluxograma*	Typical Operating /		Operating / Operação		Design/*Projeto*		Pressure Test / *Pressão de Teste* (barG)	Test Fluid / *Fluído de Teste*	NOTES / *NOTAS*
	Building / *Prédio*	Diam. / *Diâm.* (pol)	Fluid / *Fluído*	Number/ *Número*	Espec. / *Espec.*	Insul. Type / *Tipo Isol.*				From / *De*	To / *Para*		Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)	Temp. / *Temp.* (°C)	Pressure/ *Pressão* (barG)			
													Normal Operating Temperature	Normal Operating Pressure	Shut off Temperature	Shut off Pressure	Operating Temperature + 10°C	Operating Pressure * 1.5			
A	7B	3/4	WW2	800027	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	CRM-3601	2 1/2"-WW2-800021-SS5-PP	7B-Z-0-2-31 / 7B-Z-0-2-66	20	TBD	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	WW2	800028	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	TC-6501	3"-WW2-800003-SS5-PP	7B-Z-0-2-64 / 7B-Z-0-2-65	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	WW2	800029	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	TC-6502	3"-WW2-800003-SS5-PP	7B-Z-0-2-64 / 7B-Z-0-2-65	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1 1/2	WW2	800030	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	TC-6503	3"-WW2-800003-SS5-PP	7B-Z-0-2-64 / 7B-Z-0-2-65	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	WW2	800031	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	TQ-7701	2 1/2"-WW2-800021-SS5-PP	7B-Z-0-2-43 / 7B-Z-0-2-66	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	WW2	800032	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	TQ-7702	2 1/2"-WW2-800021-SS5-PP	7B-Z-0-2-46 / 7B-Z-0-2-66	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	WW2	800033	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	TQ-7703	2 1/2"-WW2-800021-SS5-PP	7B-Z-0-2-49 / 7B-Z-0-2-66	80	2,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	WW2	800039	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	X-3410	2 1/2"-WW2-800021-SS5-PP	7B-Z-0-2-32 / 7B-Z-0-2-66	20	TBD	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	3/4	WW2	800039	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	CLN-360X	HOLD	7B-Z-0-2-81 / 7B-Z-0-2-65	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2 1/2	WW2	800040	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	LV-4601	3"-WW2-800043-SS5-PP	7B-Z-0-2-53 /7B-Z-0-2-65	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2 1/2	WW2	800041	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	B2001 CLEAN EQUIP PREP	3"-WW2-800043-SS5-PP	7B-Z-0-2-62 / 7B-Z-0-2-65	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3	WW2	800043	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	Header	3"-WW2-800003-SS5-PP	7B-Z-0-2-65	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	WW2	800044	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	2"-WW2-370313-SS10-HC	3"-WW2-800047-SS5-NI	7B-Z-0-2-35 / 7B-Z-0-2-65	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	1 1/2	WW2	800045	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	1 1/2"-WW2-370113-SS5-NI	3"-WW2-800047-SS5-NI	7B-Z-0-2-33 / 7B-Z-0-2-65	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	WW2	800046	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	2"-WW2-370213-SS5-NI	3"-WW2-800047-SS5-NI	7B-Z-0-2-34 / 7B-Z-0-2-65	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	3	WW2	800047	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	Header	3"-WW2-800003-SS5-PP	7B-Z-0-2-65	20	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2 1/2	WW2	800050	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	SEALED DRAIN	3"-WW2-800003-SS5-PP	7B-Z-0-2-32 / 7B-Z-0-2-65	20	TBD	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2 1/2	WW2	800051	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	B2021 PRE-WASH	3"-WW2-800043-SS5-PP	7B-Z-0-2-62 / 7B-Z-0-2-65	80	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
A	7B	2	WW2	800052	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	PIU-3801	3"-WW2-800047-SS5-NI	7B-Z-0-2-36 / 7B-Z-0-2-65	8	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	2 1/2	WW2	800053	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	AT-9001	3"-WW2-800043-SS5-PP	7B-Z-0-2-54 / 7B-Z-0-2-65	100	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	WW2	900111	SS5	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	2"-WW2-900112-SS10-NI	2 1/2"-WW2-800053-SS5-PP	7B-Z-0-2-54	100	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	
0	7B	1/2	WW2	900112	SS10	PP	HOLD 1	Process Waste / *Efluente de Processo*	HOLD 1	1 1/2"-VE-900109-SS10-NI 2"-VE-900110-SS10-NI	2"-WW2-900111-SS10-NI	7B-Z-0-2-54	100	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD
A	7B	2	WW2	900113	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	AT-9001	2 1/2"-WW2-800053-SS5-PP	7B-Z-0-2-54	20	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD
A	7B	2	WW2	900114	SS5	NI	-	Process Waste / *Efluente de Processo*	HOLD 1	AT-9001	2 1/2"-WW2-800053-SS5-PP	7B-Z-0-2-54	20	0,0	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD 1	HOLD