203829-PRO-PID-5201
AREA 52 DEMO P&IDS SUMMARY

Area Number	Area Name	Existing Dwg #	New Dwg #	Dwg Title	Notes	Rev
52	Pulp Mill	0-D710-01-1		LO-LEVEL FEED/LO-SOLIDS COOKING/EMCC SINGLE VESSEL HYDRAULIC DIGESTER		0
52	Pulp Mill	0-D710-01-2	CTD-52MF-4001-1 thru 4001-6	LO-LEVEL FEED/LO-SOLIDS COOKING/EMCC SINGLE VESSEL HYDRAULIC DIGESTER		0
52	Pulp Mill	0-D710-01-3	CTD-52MF-4004	BLOW LINE PRESSURE DIFFUSER FLOWSHEET		0
52	Pulp Mill	0-D710-01-4	CTD-52MF-4005	OXYGEN DELIGNIFICATION-FIRST STAGE		0
52	Pulp Mill	0-D710-01-5	CTD-52MF-4008	OXYGEN DELIGNIFICATION-SECOND STAGE		0
52	Pulp Mill	0-D710-01-6		SCREEN ROOM		0
52	Pulp Mill	0-D710-01-7		SCREEN ROOM		0
52	Pulp Mill	0-D710-01-8		SCREEN ROOM DD WASHER		0
52	Pulp Mill	0-D710-01-9	CTD-52MF-4010	BLEACHING SYSTEM Do STAGE		0
52	Pulp Mill	0-D710-01-10	CTD-52MF-4007	BLEACHING SYSTEM Eop STAGE		0
52	Pulp Mill	0-D710-01-11	CTD-52MF-4009	BLEACHING SYSTEM D1 STAGE		0
52	Pulp Mill	0-D710-01-12	CTD-52MF-4006	BLEACHING SYSTEM D2 STAGE		0
52	Pulp Mill	0-D710-01-13		HOT WATER SYSTEM		0
52	Pulp Mill	1-D710-01-1		BLEACH PLANT WHITE LIQUOR SCRUBBER SYSTEM		0
52	Pulp Mill	1-D710-01-2		BLEACH PLANT CONDENSATE SYSTEM	ALL EQUIPMENT ABANDONED	0
52	Pulp Mill	1-D710-01-3		DIGESTER CONDESATE SYSTEM	ALL EQUIPMENT EXISTING	0
52	Pulp Mill	1-D710-01-4		BLACK LIQUOR FILTRATION SYSTEM		0
52	Pulp Mill	1-D710-01-5		WATER DISTRIBUTION		0
52	Pulp Mill	1-D710-01-7		WHITE LIQUOR OXIDATION SYSTEM	ALL EQUIPMENT ABANDONED	0
52	Pulp Mill	1-D710-01-8		DIGESTER SEALING WATER DISTRIBUTION		0
52	Pulp Mill	1-D710-01-9		O2/SR/BP SEALING WATER DISTRIBUTION		0
52	Pulp Mill	1-D710-01-10		DD WASHER SEAL WATER SYSTEM		0
52	Pulp Mill	2-D710-01-1		BROWNSTOCK SPILL COLLECTION SYSTEM	ALL EQUIPMENT EXISTING	0
52	Pulp Mill	2-D710-01-2		O2/SR/BP COOLING, SEALING AND INSTRUMENT PURGE WATER SYSTEM	ALL EQUIPMENT EXISTING	0
52	Pulp Mill	2-D710-01-3		DIGESTER COOLING, SEALING AND INSTRUMENT PURGE WATER SYSTEM	ALL EQUIPMENT EXISTING	0
52	Pulp Mill	2-D710-01-4	CTD-52MF-4019	HVLC COLLECTION SYSTEM		0
52	Pulp Mill	2-D710-01-5		NCG CONDENSER SYSTEM	ALL EQUIPMENT EXISTING	0
52	Pulp Mill	2-D710-01-6		BAROMETRIC CHILLER SYSTEM	ALL EQUIPMENT EXISTING	0
52	Pulp Mill	CTB-52MF-1		SCREEN ROOM P&ID SCREENS/CLEANER REJECTS	ALL EQUIPMENT ABANDONED	0
52	Pulp Mill	CTE-52MF-1		FIBERLINE P&ID ACID CLEANING SYSTEM	ALL EQUIPMENT EXISTING	0
52	Pulp Mill	E-D710-10-N-0100		SEWERS-FIBERLINE	ALL EQUIPMENT EXISTING	0
52	Pulp Mill	E-D710-10-N-0101		STEAM/WATER-FIBERLINE		0
52	Pulp Mill	E-D710-14-N-0100		TURPENTINE-FIBERLINE	ALL EQUIPMENT EXISTING	0
52	Pulp Mill	E-D710-20-21-N-0100		WHITE WATER-FIBERLINE	ALL EQUIPMENT EXISTING	0
52	Pulp Mill	E-D710-24-N-0100		BLACK LIQUOR -FIBERLINE	ALL EQUIPMENT EXISTING	0
52	Pulp Mill	E-D710-27-N-0100		CAUSTIC-FIBERLINE	ALL EQUIPMENT EXISTING	0
52	Pulp Mill	E-D710-28-N-0100		CLO2/H2O2-FIBERLINE	ALL EQUIPMENT ABANDONED	0
52	Pulp Mill	E-D710-52-N-0100		CHIP CONVEYOR-FIBERLINE	ALL EQUIPMENT EXISTING	0
52	Pulp Mill	E-D710-52-N-0101		CONDENSATE-FIBERLINE	ALL EQUIPMENT EXISTING	0
52	Pulp Mill	E-D710-52-N-0105		INSTRUMENT AIR DISTRIBUTION	ALL EQUIPMENT EXISTING	0
52	Pulp Mill	E-D710-52-N-0106		MILL AIR DISTRIBUTION	ALL EQUIPMENT EXISTING	0
52	Pulp Mill	E-D710-52-N-102		NCG SYSTEM FLOW SHEET-FIBERLINE		0
52	Pulp Mill	E-D710-53-N-0100	CTD-52MF-4022	BLEACHED STOCK-FIBERLINE	ALL EQUIPMENT EXISTING	0
28	Chemical	CTE-28MF-4		METHANOL STORAGE &UNLOADING	ALL EQUIPMENT ABANDONED	0
28	Chemical	CTE-28MF-5		R10 CHEMICAL FILTERS	ALL EQUIPMENT ABANDONED	0
28	Chemical	CTE-28MF-6		R10 CLO2 GENERATOR	ALL EQUIPMENT ABANDONED	0
28	Chemical	CTE-28MF-7		R10 PLANT CONDENSATE	ALL EQUIPMENT ABANDONED	0
28	Chemical	CTE-28MF-8		R10 SALTCAKE FILTER K-2	ALL EQUIPMENT ABANDONED	0
28	Chemical	CTE-28MF-9		R10 SALTCAKE FILTER K-4	ALL EQUIPMENT ABANDONED	0
28	Chemical	CTE-28MF-10		CLO2 GAS ABSORPTION	ALL EQUIPMENT ABANDONED	0
28	Chemical	CTE-28MF-15		CHEMICAL STORAGE TANKS (CLO2,H2SO4, CLO2 HEX)	ALL EQUIPMENT ABANDONED	0
28	Chemical	CTE-28MF-16		SODIUM HYPOCHLORITE	ALL EQUIPMENT ABANDONED	0
28	Chemical	CTE-28MF-17		CHLORINE DIOXIDE STORAGE TANK	ALL EQUIPMENT ABANDONED	0
28	Chemical	CTE-28MF-18		R10 CLO2 SCRUBBER	ALL EQUIPMENT ABANDONED	0

Rev No.	Date	By	Ckd.	Description
A	2/14/2020	MDB	-	ISSUED FOR APPROVAL
0	5/21/2020	MDB	-	ISSUED FOR DESIGN

= ABANDON

= DEMO

= RELOCATE

= PRE-OUTAGE DEMO

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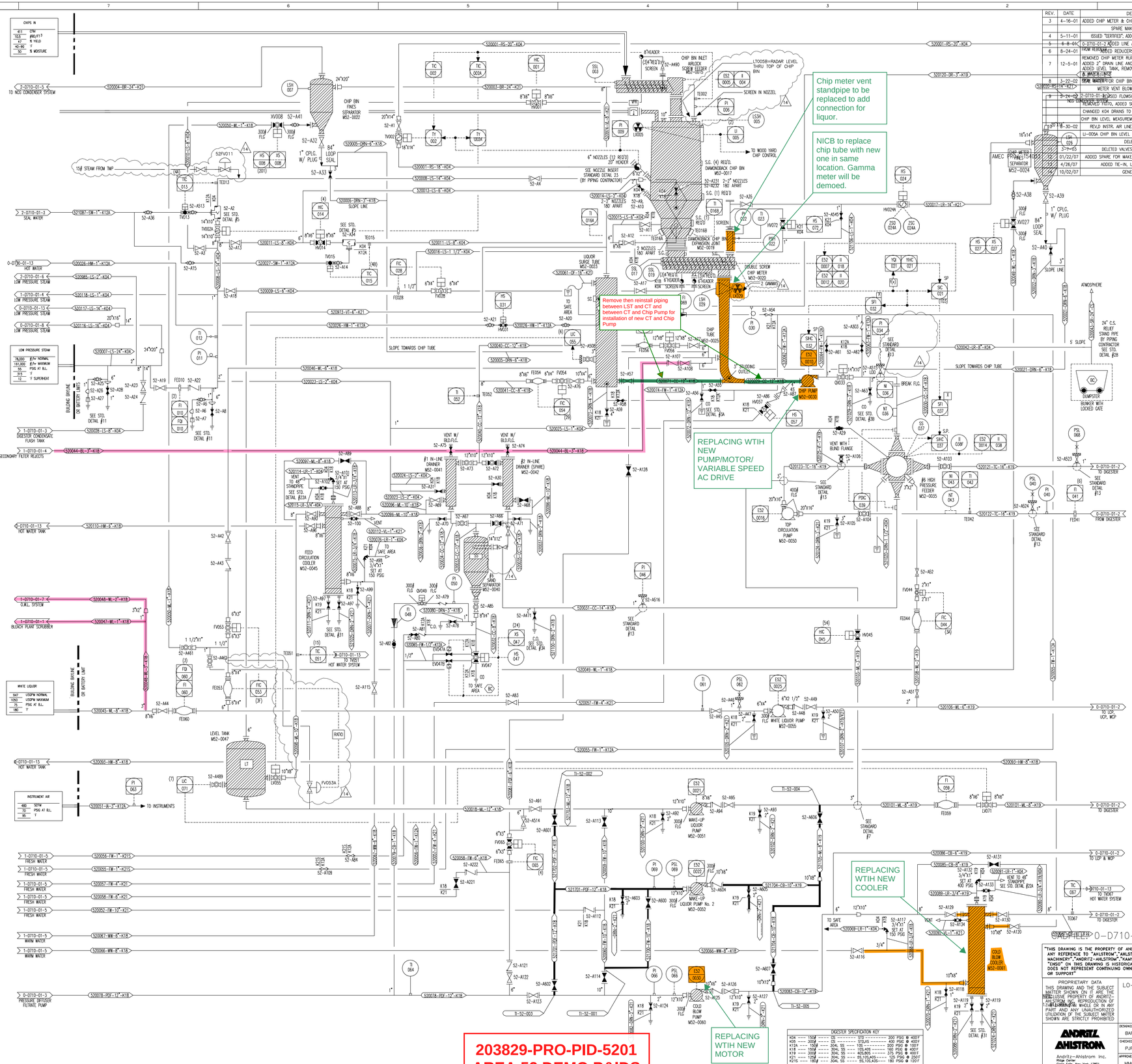
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-16-01	ADDED CHIP METER & CHP BIN FINES SEPARATORS. DELETED SPARE MAKE-UP LIQUOR PUMP	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED". ADDED MOTOR & EQUIPMENT NUMBERS	WT/PGH	PJP	MMC
5	8-8-01	0-D710-01-2 ADDED LINE AND INSTRUMENT TAGS	PGH/WT	PJP	MMC
6	8-24-01	FROM ROTARY REDUCERS AT PUMPS, REV'D LINES	WT	PJP	MMC
7	12-5-01	REMOVED CHIP METER RUPTURE DISC, ADDED 1" STEAM LINE. ADDED 2" DRAIN LINE AND REDUCERS, RESIZED REDUCERS. ADDED LEVEL TANK, REMOVED INSTRUMENT, REVISED STEAM & WATER LINES	JLW/WT	PJP	MMC
8	3-20-02	ADDED FOR CHIP BIN DESUPERHEATING AUTOMATED CHIP SEAL WATER	PGH	PJP	MMC
		METER VENT BLOW BACK, GENERAL REVISIONS			
9	3-24-02	2-D710-01-1 REVISED FLOWSHEET PER PIPING LAYOUT NGO CONSULTANTS	PGH	PJP	MMC
		REMOVED PHOTO, ADDED SRV SIZES AND SET PRESSURES.			
		CHANGED K04 DRAINS TO K21, ADDED STEAM PURGE, ADDED			
		CHIP BIN LEVEL MEASUREMENT, 520013 WAS 2",ADD 6"x2"RED.			
10	9-30-02	REV.D INSTR. AIR LINE SPEC. REV'D DRAINS. DELETED	JLW	PJP	MMC
		LI-0006A CHIP BIN LEVEL MEAS., PGC039 TED TO SHC-037.			
		DELETED S7-021.			
11	3-7-03	DELETED VALVES 52-A491 AND 52-A492	JLW	PJP	MMC
12	01/22/07	ADDED SPARE FOR MAKEUP LIQUOR & COLD BLOW PUMPS	DFC	AES	
13	4/26/07	ADDED TIE-IN, LINE, AND VALVE NUMBERS	DFC	AES	
14	10/02/07	GENERAL REVISIONS	LSJ	RRB	RRB



0-D710-01-1.DWG

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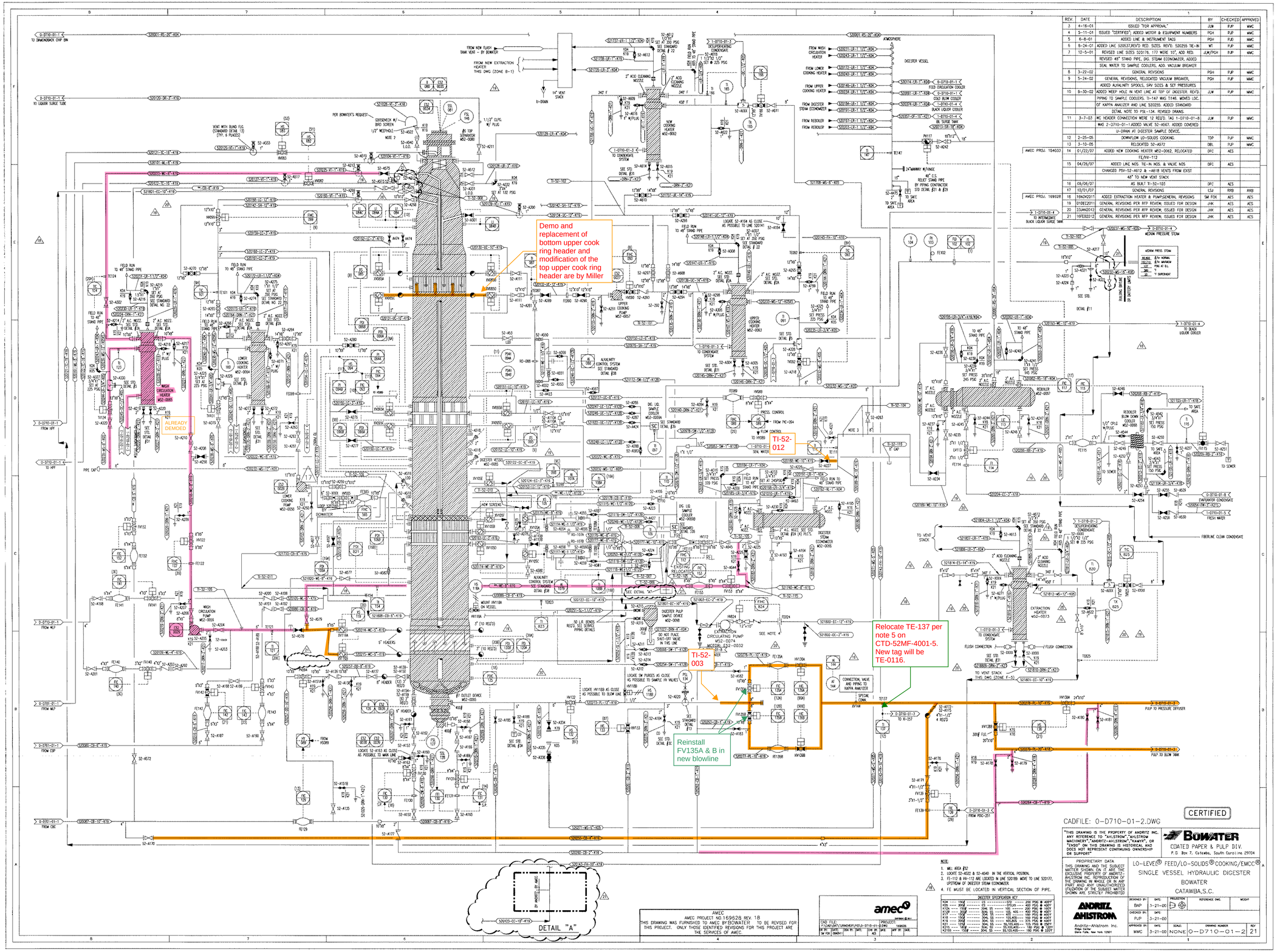
P.O. Box 7, Catawba, South Carolina 29704

LO-LEVEL® FEED/LO-SOLIDS® COOKING/EMCC®
SINGLE VESSEL HYDRAULIC DIGESTER
BOWATER
CATAWBA,S.C.

ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Page Street
Glens Falls, New York 12801

DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
BAP	3-21-00			
CHECKED BY:	DATE:			
PJP	3-21-00			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	3-21-00	NONE	O-D710-01-1	14



REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-16-01	ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED", ADDED MOTOR & EQUIPMENT NUMBERS	PGH	PJP	MMC
5	6-8-01	ADDED LINE & INSTRUMENT TAGS	PGH	PJP	MMC
6	8-24-01	ADDED LINE 520537,REV'D RED. SIZES. REV'D. 520255 TIE-IN	WT	PJP	MMC
7	12-5-01	REVISED LINE SIZES 520176, 177 WERE 10", ADD RED.	JLW/PGH	PJP	MMC
		REVISED 48" STAND PIPE, DIG. STEAM ECONOMIZER, ADDED			
		SEAL WATER TO SAMPLE COOLERS, ADD VACUUM BREAKER			
8	3-22-02	GENERAL REVISIONS	PGH	PJP	MMC
9	5-24-02	GENERAL REVISIONS, RELOCATED VACUUM BREAKER,	PGH	PJP	MMC
		ADDED ALKALINITY SPOOLS, SRV SIZES & SET PRESSURES			
10	9-30-02	ADDED WEEP HOLE IN VENT LINE AT TOP OF DIGESTER. REV'D.	JLW	PJP	MMC
		PIPING TO SAMPLE COOLERS. 11-147 WAS 11146. MOVED LOC.			
		OF KAPPA ANALYZER AND LINE 520255. ADDED STANDARD			
		DETAIL NOTE TO PSL-1134. REVISED DRAINS.			
11	3-7-03	MC HEADER CONNECTION WERE 12 REQ'D. TAG 1-0710-01-8	JLW	PJP	MMC
		WAS 2-0710-01-1 ADDED VALVE 52-A567. ADDED COVERED			
		U-DRAIN AT DIGESTER SAMPLE DEVICE.			
12	2-25-05	DOWNFLOW LO-SOLIDS COOKING.	TDP	PJP	MMC
13	3-10-05	RELOCATED 52-A572	DBL	PJP	MMC
14	01/22/07	ADDED NEW COOKING HEATER MS2-0062, RELOCATED	DFC	AES	
		FE/IW-112			
15	04/26/07	ADDED LINE NOS. TIE-IN NOS. & VALVE NOS	DFC	AES	
		CHANGED PSV-52-A612 & -A618 VENTS FROM EXIST			
		48" TO NEW VENT STACK			
16	08/06/07	AS BUILT 11-52-103	DFC	AES	
17	10/01/07	GENERAL REVISIONS	LSJ	RRB	RRB
18	19NOV2011	ADDED EXTRACTION HEATER & PUMP;GENERAL REVISIONS	SM FOX	AES	AES
19	01DEC2011	GENERAL REVISIONS PER RFP REVIEW; ISSUED FOR DESIGN	JHK	AES	AES
20	23JAN2012	GENERAL REVISIONS PER RFP REVIEW; ISSUED FOR DESIGN	JHK	AES	AES
21	16FEB2012	GENERAL REVISIONS PER RFP REVIEW; ISSUED FOR DESIGN	JHK	AES	AES

AMEC PROJ. 154033

AMEC PROJ. 169628

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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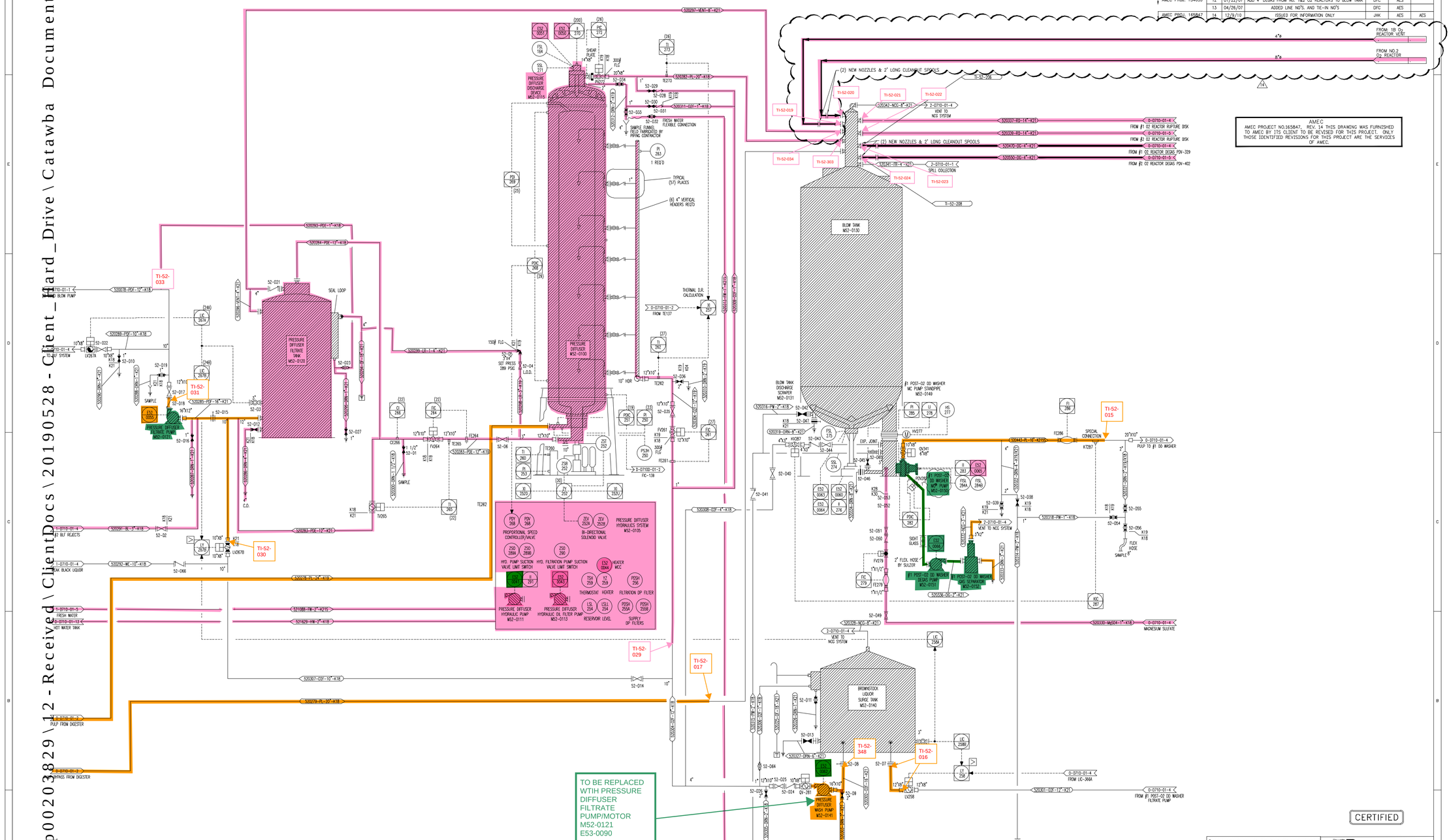
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-16-01	ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED"; ADDED MOTOR AND EQUIPMENT NUMBERS	WT	PJP	MMC
5	6-8-01	ADDED LINE & INSTRUMENT TAGS	WT	PJD	MMC
6	8-24-01	ADDED REDUCERS AT PRESSURE DIFFUSER WASH PUMP	WT/PCH	PJP	MMC
7	12-5-01	RELOCATED SPECIAL CONN; ADDED 2 REDUCERS; VALVE WAS N.C., ADDED SHT No. REMOVED HOLD, ADDED CONTROL VALVE SIZES	WT	PJP	MMC
8	3-22-02	REVISED LINE & VALVE TAGS, BALL VALVES WERE KNIFE GATES	PGH	PJP	MMC
9	5-24-02	GENERAL REVISIONS, ADDED SRV SIZE AND SET PRESSURE,	PGH	PJP	MMC
		ADDED 52108B, DELETED 52-020, ADDED 52-066			
10	8-30-02	ADDED SIGHT GLASS & SPEC CHANGES	JLW	PJP	MMC
11	2-25-05	RELOCATION OF #1 POST-O2 DDW	PGH	PJP	MMC
AMEC PROJ. 154033 12	01/22/07	ADD 4" DEGAS FROM No. 1&2 O2 REACTORS TO BLOW TANK	DFC	AES	
13	04/26/07	ADDED LINE NO'S. AND TIE-IN NO'S	DFC	AES	
AMEC PROJ. 165847 14	12/9/10	ISSUED FOR INFORMATION ONLY	JHK	AES	AES



AMEC
AMEC PROJECT NO.165847, REV. 14 THIS DRAWING WAS FURNISHED TO AMEC BY ITS CLIENT TO BE REVISED FOR THIS PROJECT. ONLY THOSE IDENTIFIED REVISIONS FOR THIS PROJECT ARE THE SERVICES OF AMEC.

NOTE:
1. MILL AREA 52.

SPECIFICATION KEY			
K14 --- 150# ------- CS -------CF8 ------ 200 PSIG @ 400T			
K15 --- 300# ------- CS -------CF3,VS ------ 400 PSIG @ 400T			
K16 --- 150# ------- 304L SS ---=105,KOS ---- 140 PSIG @ 400T			
K19 --- 300# ------- 304L SS ---=405,BOS ---- 375 PSIG @ 400T			
K21 --- 125# ------- 304L SS ---=55,125,AOS --- 125 PSIG @ 250T			
K21S --- 150# ------- 304L SS --- 55,150,AOS--- 180 PSIG @ 150T			
K27 --- 125# ------- 316L SS ---=55,125,AOS --- 125 PSIG @ 250T			
K28 --- 150# ------- 316L SS ---=105,KOS ---- 175 PSIG @ 200T			
K30 --- 300# ------- 316L SS --- 405,BOS ---- 375 PSIG @ 400T			

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BLOW LINE PRESSURE DIFFUSER FLOWSHEET

BOWATER
CATAWBA,S.C.

ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Ridge Center
Glens Falls, New York 12801

DESIGNED BY:	DATE:	PROJECTION:	REFERENCE DWG.	WEIGHT
BAP	3-21-00			
CHECKED BY:	DATE:			
PJP	3-21-00			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	3-21-00	NONE	O-D710-01-3	14

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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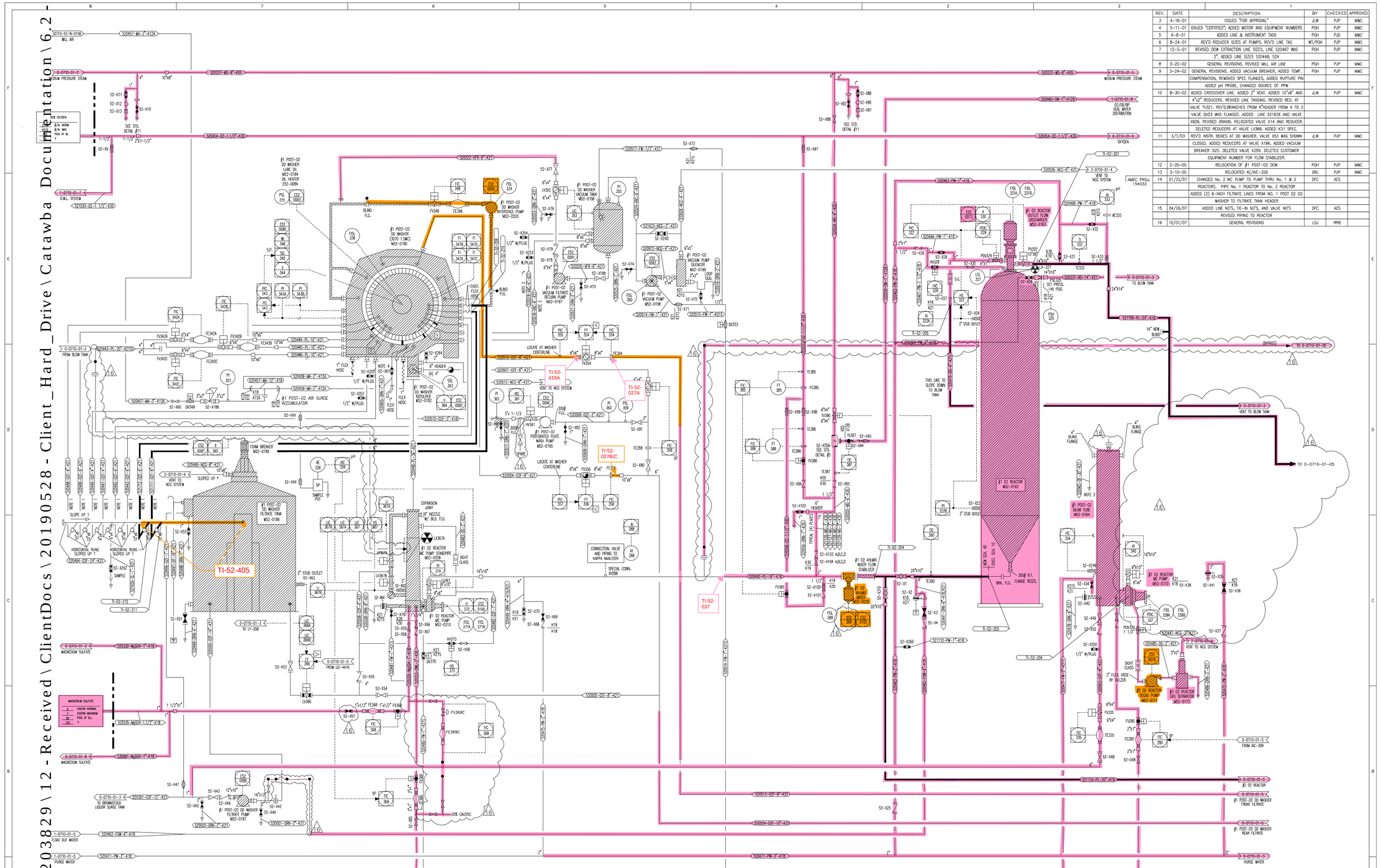

REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-16-01	ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED", ADDED MOTOR AND EQUIPMENT NUMBERS	PGH	PJP	MMC
5	6-8-01	ADDED LINE & INSTRUMENT TAGS	PGH	PJD	MMC
6	8-24-01	REV'D REDUCER SIZES AT PUMPS. REV'D LINE TAG	WT/PGH	PJP	MMC
7	12-5-01	REVISED DOW EXTRACTION LINE SIZES, LINE 520447 WAS 2". ADDED LINE SIZES 520448, 524	PGH	PJP	MMC
8	3-22-02	GENERAL REVISIONS, REVISED MILL AIR LINE	PGH	PJP	MMC
9	5-24-02	GENERAL REVISIONS, ADDED VACUUM BREAKER, ADDED TEMP. COMPENSATION, REMOVED SPEC FLANGES, ADDED RUPTURE PIN ADDED pH PROBE, CHANGED SOURCE OF PPM	PGH	PJP	MMC
10	8-30-02	ADDED CROSSOVER LINE. ADDED 2" VENT. ADDED 10"x8" AND 4"x2" REDUCERS. REVISED LINE TAGGING. REVISED RED. AT VALVE TV321. REV'D.BRANCHES FROM 6"HEADER FROM 4 TO 3 VALVE QV23 WAS FLANGED. ADDED LINE 521626 AND VALVE X626. REVISED DRAINS. RELOCATED VALVE X14 AND REDUCER. DELETED REDUCERS AT VALVE LV366. ADDED K31 SPEC.	JLW	PJP	MMC
11	3/7/03	REV'D INSTR. BOXES AT DD WASHER. VALVE X53 WAS SHOWN CLOSED. ADDED REDUCERS AT VALVE X186. ADDED VACUUM BREAKER SIZE. DELETED VALVE X259. DELTED CUSTOMER EQUIPMENT NUMBER FOR FLOW STABILIZER.	JLW	PJP	MMC
12	2-25-05	RELOCATION OF #1 POST-02 DOW	PGH	PJP	MMC
13	3-10-05	RELOCATED AE/AIC-326	DBL	PJP	MMC
14	01/22/07	CHANGED No. 2 MC PUMP TO PUMP THRU No. 1 & 2 REACTORS. PIPE No. 1 REACTOR TO No. 2 REACTOR ADDED (2) 6-INCH FILTRATE LINES FROM NO. 1 POST 02 DD WASHER TO FILTRATE TANK HEADER	DFC	AES	
15	04/26/07	ADDED LINE NO'S, TIE-IN NO'S, AND VALVE NO'S REVISED PIPING TO REACTOR	DFC	AES	
16	10/01/07	GENERAL REVISIONS	LSJ	RRB	

AMEC PROJ. 154033

NOTES:

1. DO NOT INSTALL ELBOWS IN VERTICAL DROP FROM DD WASHER TO FILTRATE HEADER.
2. VACUUM FILTRATE LINES FROM DD WASHER TO VACUUM TANK MUST BE SLOPED DOWNWARD.
3. WILL AREA #52
4. VALVE X61 LOCATED ON FAR END OF PPM HEADER.
5. ABANDON #1 POST-02 BLOW TUBE M52-0164 IN PLACE.
6. BREAK FLANGES TO ALLOW PUMP SUCTION PECC TO BE REMOVED.
7. NOW 20" K19 SPEC LINE FROM M52-0220 THRU M52-0170 TO NO. 1 REACTOR TO BE 304L SS SCH. 40S

SPECIFICATION KEY

K04	150#	CS	STD	200 PSIG	@ 400F
K05	300#	CS	STD,XS	400 PSIG	@ 400F
K109	300#	304L SS	10S, 40S	175 PSIG	@ 300F
K18	150#	304L SS	10S,40S	160 PSIG	@ 400F
K19	150#	304L SS	10S,40S	125 PSIG	@ 300F
K21	125#	304L SS	5S,10S,40S	125 PSIG	@ 250F
K215	180#	304L SS	5S,10S,40S	180 PSIG	@ 120F
K215S	150#	304L SS	5S,10S,40S	180 PSIG	@ 220F
K28	150#	316L SS	40S,10s	175 PSIG	@ 300F
K30	300#	316L SS	40S,80s	375 PSIG	@ 400F
K31	125#	317L SS	5S,10S,40S	125 PSIG	@ 250F

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CADFILE: 0-D710-01-4.DWG

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OXYGEN DELIGNIFICATION – FIRST STAGE

BOWATER
CATAWBA,S.C.

ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Ridge Center
Glens Falls, New York 12801

DESIGNED (BY)	DATE	PROJECTION	REFERENCE DWG.	WEIGHT
BAP	3-21-00			
CHECKED (BY)	DATE			
PJP	3-21-00			
APPROVED (BY)	DATE	SCALE	DRAWING NUMBER	REV
MMC	3-21-00	NONE	0-D710-01-4	16

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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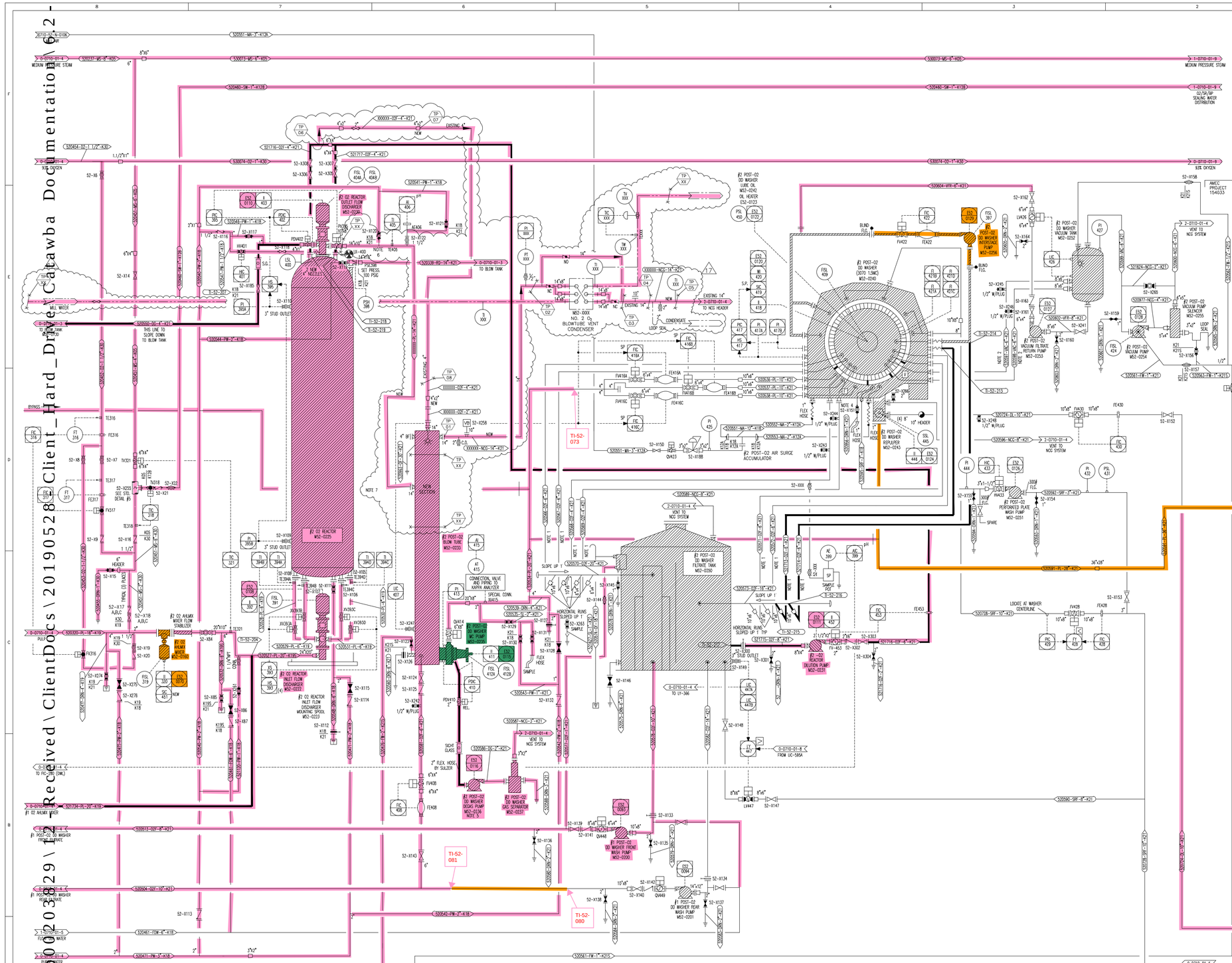
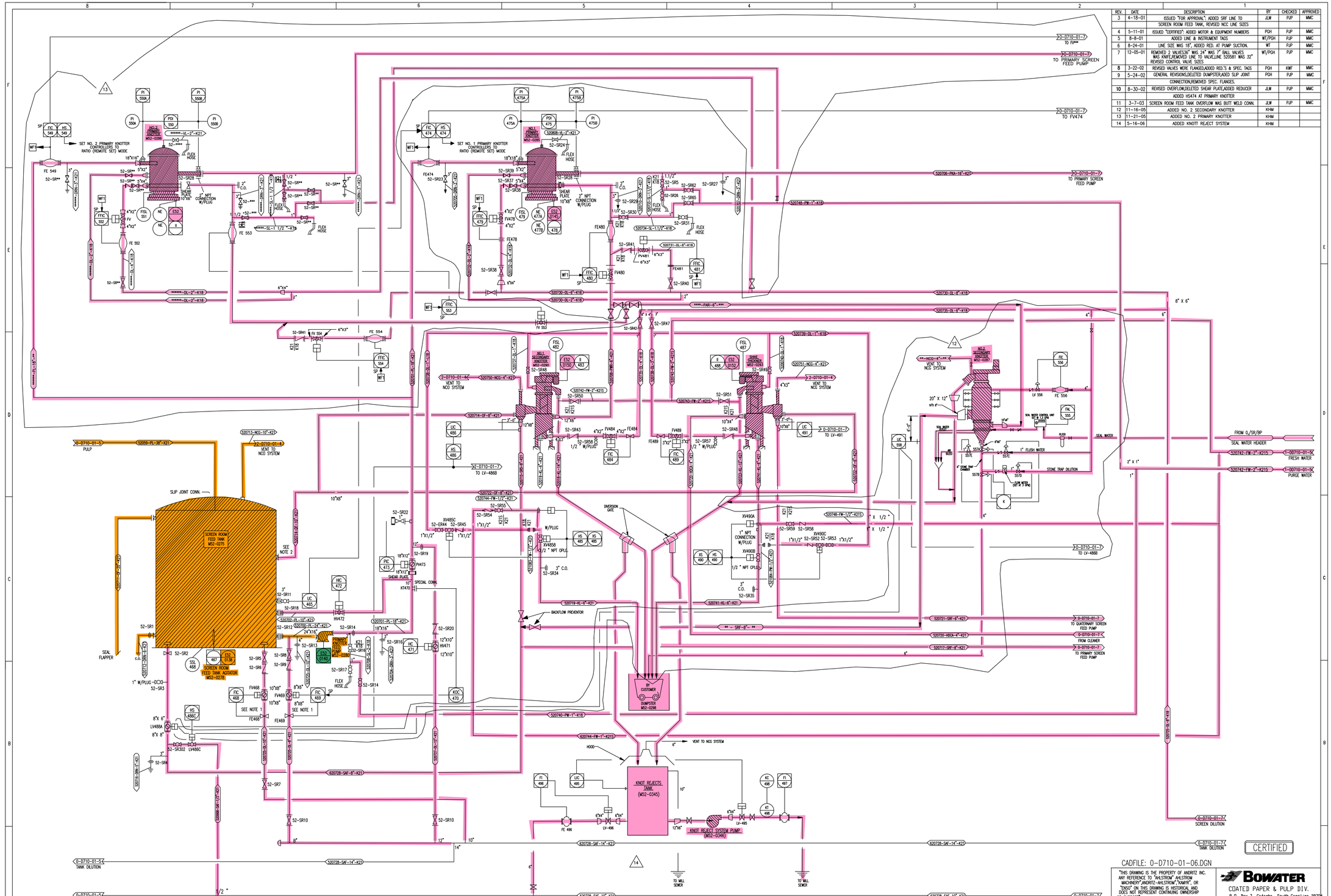

#2 POST-02 DO WASHER (3070 1.5MC) MS2-0240
#2 POST-02 DO WASHER FILTRATE TANK MS2-0250
#2 POST-02 DO WASHER FILTRATE PUMP MS2-0256
#2 POST-02 DO WASHER VACUUM TANK MS2-0252
#2 POST-02 VACUUM PUMP SILENCER MS2-0255
#2 POST-02 VACUUM PUMP MS2-0254
#2 POST-02 VACUUM FILTRATE RETURN PUMP MS2-0253
#2 POST-02 PERFORATED PLATE WASH PUMP MS2-0251
#2 POST-02 DO WASHER REACTOR DILUTION PUMP MS2-0221
#2 POST-02 DO WASHER FRONT WASH PUMP MS2-0100
#1 POST-02 DO WASHER REAR WASH PUMP MS2-0001
#2 POST-02 DO WASHER DEGAS PUMP MS2-0236 NOTE 5
#2 POST-02 DO WASHER GAS SEPARATOR MS2-0237
#2 POST-02 AIR SURGE ACCUMULATOR
#2 POST-02 BLOW TUBE MS2-0233
#2 POST-02 DO WASHER LUBE OIL MS2-0242 OIL HEATER ES2-0123
#2 O2 REACTOR MS2-0225
#2 O2 REACTOR OUTLET FLOW DISCHARGER MS2-0226
#2 O2 REACTOR INLET FLOW DISCHARGER MS2-0223
#2 O2 REACTOR INLET FLOW DISCHARGER MS2-0222
#2 O2 AHLMIX MIXER FLOW STABILIZER
#2 O2 AHLMIX MIXER MS2-0160
#2 O2 AHLMIX MIXER
#2 O2 AHLMIX
#1 POST-02 DO WASHER FRONT SHOWER
#1 POST-02 DO WASHER REAR SHOWER
#1 POST-02 DO WASHER
#2 POST-02 DO WASHER
#2 POST-02 DO WASHER (3070 1.5MC) OIL HEATER
#2 POST-02 DO WASHER LUBE OIL
#2 POST-02 DO WASHER
#2 POST-02 DO WASHER
#2 POST-02 DO WASHER

REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-18-01	ISSUED "FOR APPROVAL", ADDED SRF LINE TO SCREEN ROOM FEED TANK, REVISED NCC LINE SIZES	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED"; ADDED MOTOR & EQUIPMENT NUMBERS	PGH	PJP	MMC
5	8-8-01	ADDED LINE & INSTRUMENT TAGS	WT/PGH	PJP	MMC
6	8-24-01	LINE SIZE WAS 18", ADDED RED. AT PUMP SUCTION.	WT	PJP	MMC
7	12-05-01	REMOVED 2 VALVES36" WAS 24" WAS 7" BALL VALVES WAS KNIFE,REMOVED LINE TO VALVE,LINE 520581 WAS 32" REVISED CONTROL VALVE SIZES	WT/PGH	PJP	MMC
8	3-22-02	REVISED VALVES WERE FLANGED,ADDED RED.'S & SPEC. TAGS	PGH	KWF	MMC
9	5-24-02	GENERAL REVISIONS,DELETED DUMPSTER,ADED SLIP JOINT CONNECTION,REMOVED SPEC. FLANGES.	PGH	PJP	MMC
10	8-30-02	REVISED OVERFLOW,DELETED SHEAR PLATE,ADDED REDUCER ADDED HS474 AT PRIMARY KNOTTER	JLW	PJP	MMC
11	3-7-03	SCREEN ROOM FEED TANK OVERFLOW WAS BUTT WELD CONN.	JLW	PJP	MMC
12	11-16-05	ADDED NO. 2 SECONDARY KNOTTER	KHM		
13	11-21-05	ADDED NO. 2 PRIMARY KNOTTER	KHM		
14	5-16-06	ADDED KNOTT REJECT SYSTEM	KHM		



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P.O. Box 7, Catawba, South Carolina 29704

SCREEN ROOM

BOWATER
CATAWBA, S.C.

ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Box 1220 Stn. B
Ont. Ont. New York 12801

DESIGNED BY	DATE	PROJECTION	REFERENCE DWG.	WEIGHT
BAP	3-21-00			
CHECKED BY	DATE			
PJP	3-21-00			
APPROVED BY	DATE	SCALE	DRAWING NUMBER	REV
MMC	3-21-00	NONE	0-D710-01-6	14

NOTES:
1. VALVE TO BE LOCATED BELOW LEVEL IN SCREEN ROOM FEED TANK.
2. TIE-IN TO BE LOCATED ABOVE LEVEL IN SCREEN ROOM FEED TANK.
3. MILL AREA 52

SPECIFICATION KEY

K18	150#	304L SS	125 ASS	150 PSG @400°F
K21	125#	304L SS	125 FSS,ASS	125 PSG @ 100°F
K215	150#	304L SS	125 FSS,ASS	150 PSG @ 100°F

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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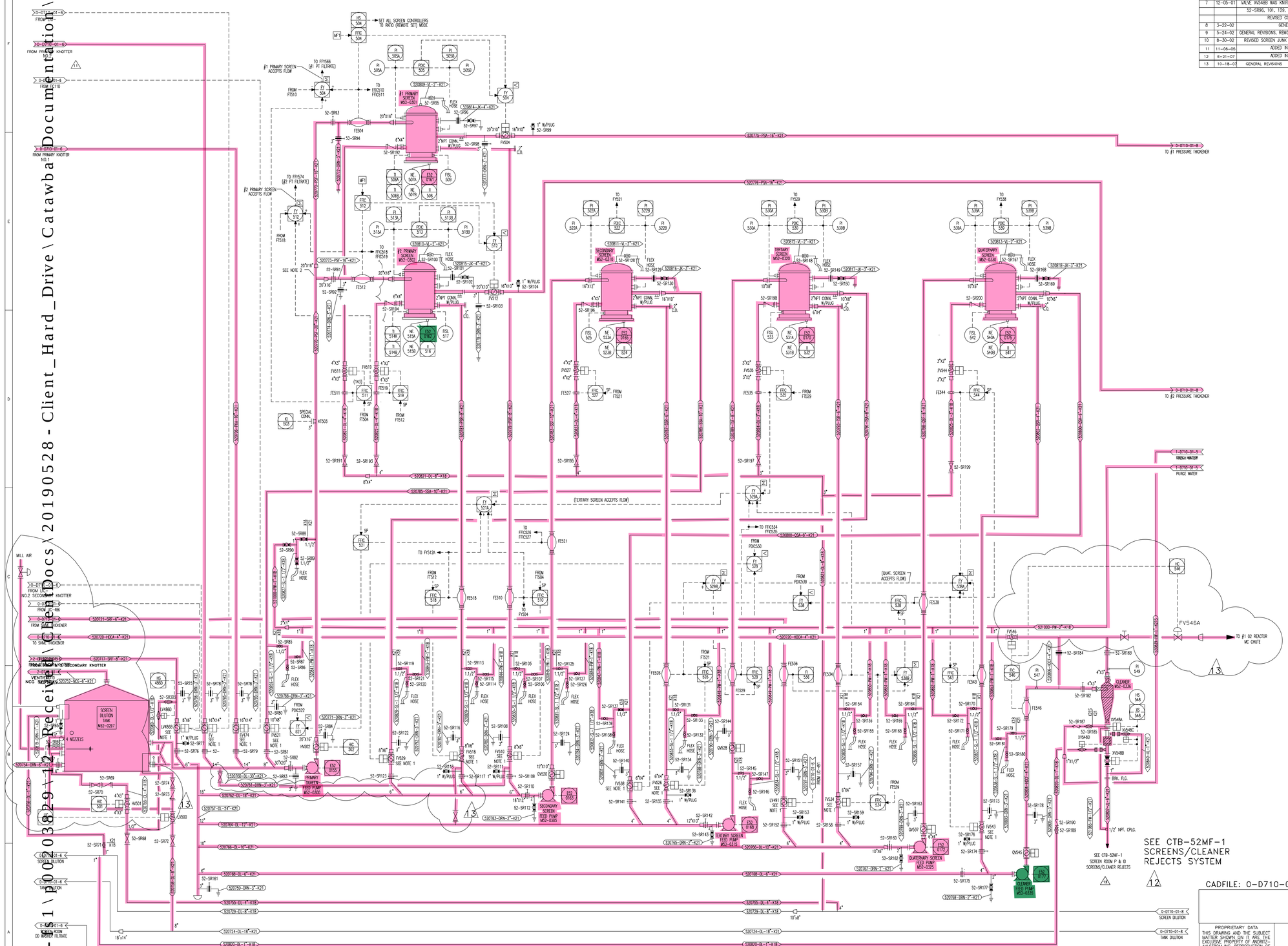
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-16-01	ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED"; ADDED MOTOR & EQUIPMENT NUMBERS	PGH	PJP	MMC
5	6-8-01	ADDED LINE & INSTRUMENT TAGS	WT/PGH	PJP	MMC
6	8-24-01	REVD. REDUCERS AT PUMPS; REVD. LINE TAGS	WT	PJP	MMC
7	12-05-01	VALVE XV5488 WAS KNIFE GATE, RELOCATED LINES, VALVES 52-SR96, 101, 129, 149, 168 WERE BALL VALVES, REVISED CONTROL VALVE SIZES	WT/PGH	PJP	MMC
8	3-22-02	GENERAL REVISIONS	PGH	KWF	MMC
9	5-24-02	GENERAL REVISIONS; REMOVED SPEC. FLG., ADDED BRK. FLG.	PGH	PJP	MMC
10	8-30-02	REVISED SCREEN JUNK LINES; REVISED TANK OVERFLOW	JLW	PJP	MMC
11	11-06-05	ADDED INSTRUMENT TAGGING	KHM		
12	6-21-07	ADDED INSTRUMENT TAGGING	RRB		
13	10-18-07	GENERAL REVISIONS	LSJ	RRB	RRB



NOTES:

1. VALVE TO BE LOCATED BELOW LEVEL IN SCREEN DILUTION TANK.
2. THE PIPING SPLIT AND VALVES TO BE SYMMETRICAL.

SPECIFICATION KEY

K18	150#	304L SS	105,405	150 PSIG @ 400°F
K21	125#	304L SS	85,105,405	125 PSIG @ 250°F
K215	150#	304L SS	55,105,405	150 PSIG @ 120°F

CADFILE: 0-D710-01-7.DWG

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SCREEN ROOM

BOWATER
CATAWBA,S.C.

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Andritz-Ahlstrom Inc.
Ridge Center
Glens Falls, New York 12801

DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
BAP	3-21-00			
CHECKED BY:	DATE:			
PJP	3-21-00			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV.
MMC	3-21-00	NONE	0-D710-01-7	13

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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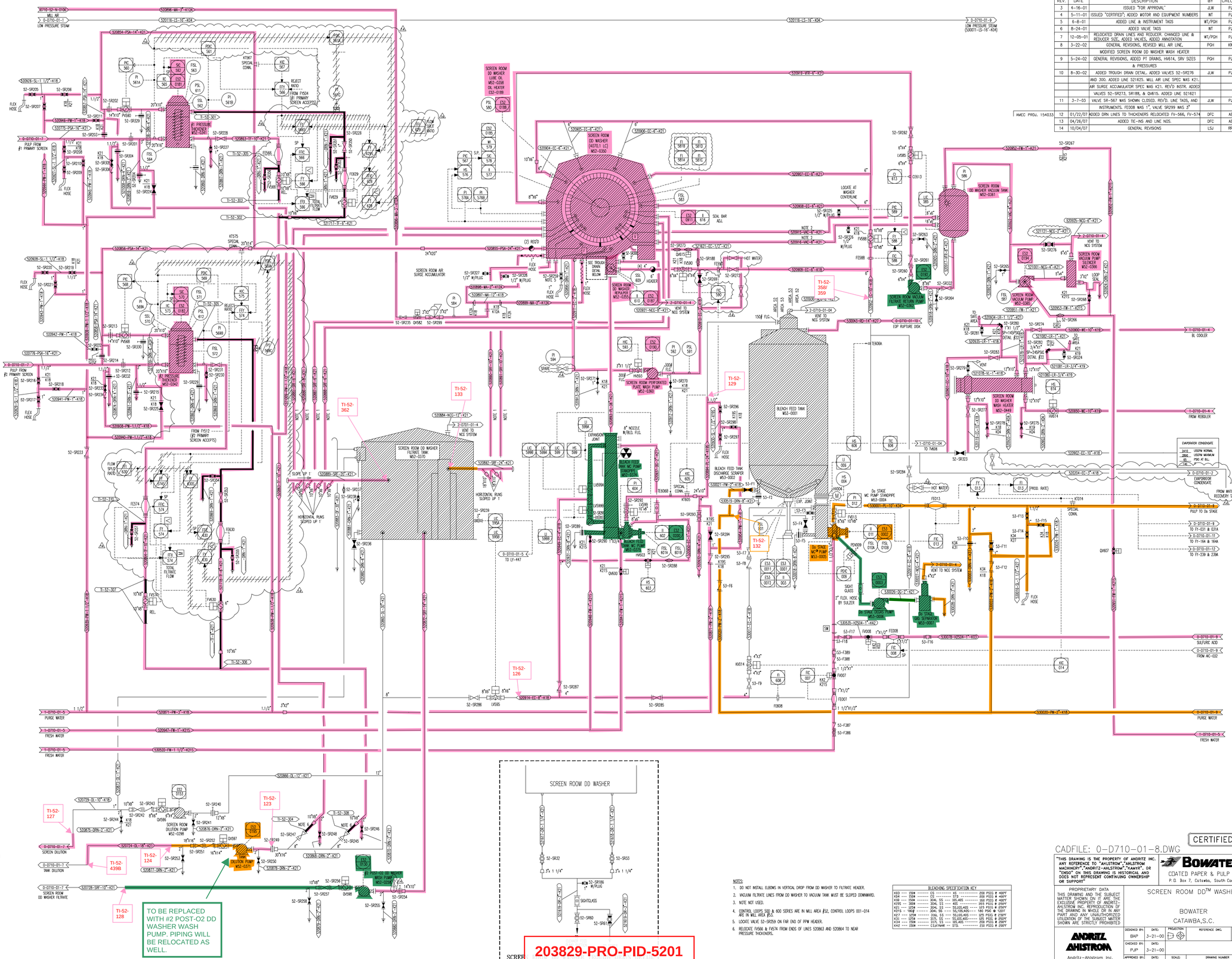
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-16-01	ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED", ADDED MOTOR AND EQUIPMENT NUMBERS	WT	PJP	MMC
5	6-8-01	ADDED LINE & INSTRUMENT TAGS	WT/PGH	PJD	MMC
6	8-24-01	ADDED VALVE TAGS	WT	PJP	MMC
7	12-05-01	RELOCATED DRAIN LINES AND REDUCER; CHANGED LINE & REDUCER SIZE, ADDED VALVES, ADDED ANNOTATION	WT/PGH	PJP	MMC
8	3-22-02	GENERAL REVISIONS, REVISED MILL AIR LINE, MODIFIED SCREEN ROOM DD WASHER WASH HEATER	PGH	KWF	MMC
9	5-24-02	GENERAL REVISIONS, ADDED PT DRAINS, HV614, SRV SIZES & PRESSURES	PGH	PJP	MMC
10	8-30-02	ADDED TROUGH DRAIN DETAIL. ADDED VALVES 52-SR276 AND 300. ADDED LINE 521625. MILL AIR LINE SPEC WAS K21. AIR SURGE ACCUMULATOR SPEC WAS K21. REV'D INSTR. ADDED VALVES 52-SR273, & CV615. ADDED LINE 521621	JLW	PJP	MMC
11	3-7-03	VALVE SR-567 WAS SHOWN CLOSED. REV'D. LINE TAGS, AND INSTRUMENTS. FE008 WAS 1", VALVE SR299 WAS 3"	JLW	PJP	MMC
12	01/22/07	AMEC PROJ. 154033 ADDED DRN LINES TO THICKENERS RELOCATED FV-566, FV-574	DFC	AES	
13	04/26/07	ADDED TIE-INS AND LINE NOS.	DFC	AES	
14	10/04/07	GENERAL REVISIONS	LSJ	RRB	RRB



NOTES:

1. DO NOT INSTALL ELBOWS IN VERTICAL DROP FROM DD WASHER TO FILTRATE HEADER.
2. VACUUM FILTRATE LINES FROM DD WASHER TO VACUUM TANK MUST BE SLOPED DOWNWARD.
3. NOTE NOT USED.
4. CONTROL LOOPS 500 & 600 SERIES ARE IN MILL AREA #52, CONTROL LOOPS 001-014 ARE IN MILL AREA #53.
5. LOCATE VALVE 52-SR259 ON FAR END OF PPW HEADER.
6. RELOCATE FV566 & FV574 FROM ENDS OF LINES 520863 AND 520864 TO NEAR PRESSURE THICKENERS.

BLEACHING SPECIFICATION KEY

KB3	150#	CS	XS	200 PSIG @ 400°F
KB4	150#	CS	STD	400 PSIG @ 400°F
K1B	150#	304L SS	10S,40S	350 PSIG @ 400°F
K1PG	300#	304L SS	40S	255 PSIG @ 275°F
K21	150#	304L SS	10,10S,40S	150 PSIG @ 100°F
K2B	150#	304L SS	10,10S,40S	180 PSIG @ 275°F
K27	125#	316L SS	10,10S,40S	125 PSIG @ 275°F
K31	125#	317L SS	10,10S,40S	125 PSIG @ 250°F
K34	150#	317L SS	10S,40S	200 PSIG @ 250°F
K4Z	150#	CS,XYLMR	STD	230 PSIG @ 250°F

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SCREEN ROOM DD™ WASHER

BOWATER
CATAWBA, S.C.

ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Pulp & Paper
Glens Falls, New York 12801

DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
BAP	3-21-00			
CHECKED BY:	DATE:			
PJP	3-21-00			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	3-21-00	NONE	0-D710-01-8	14

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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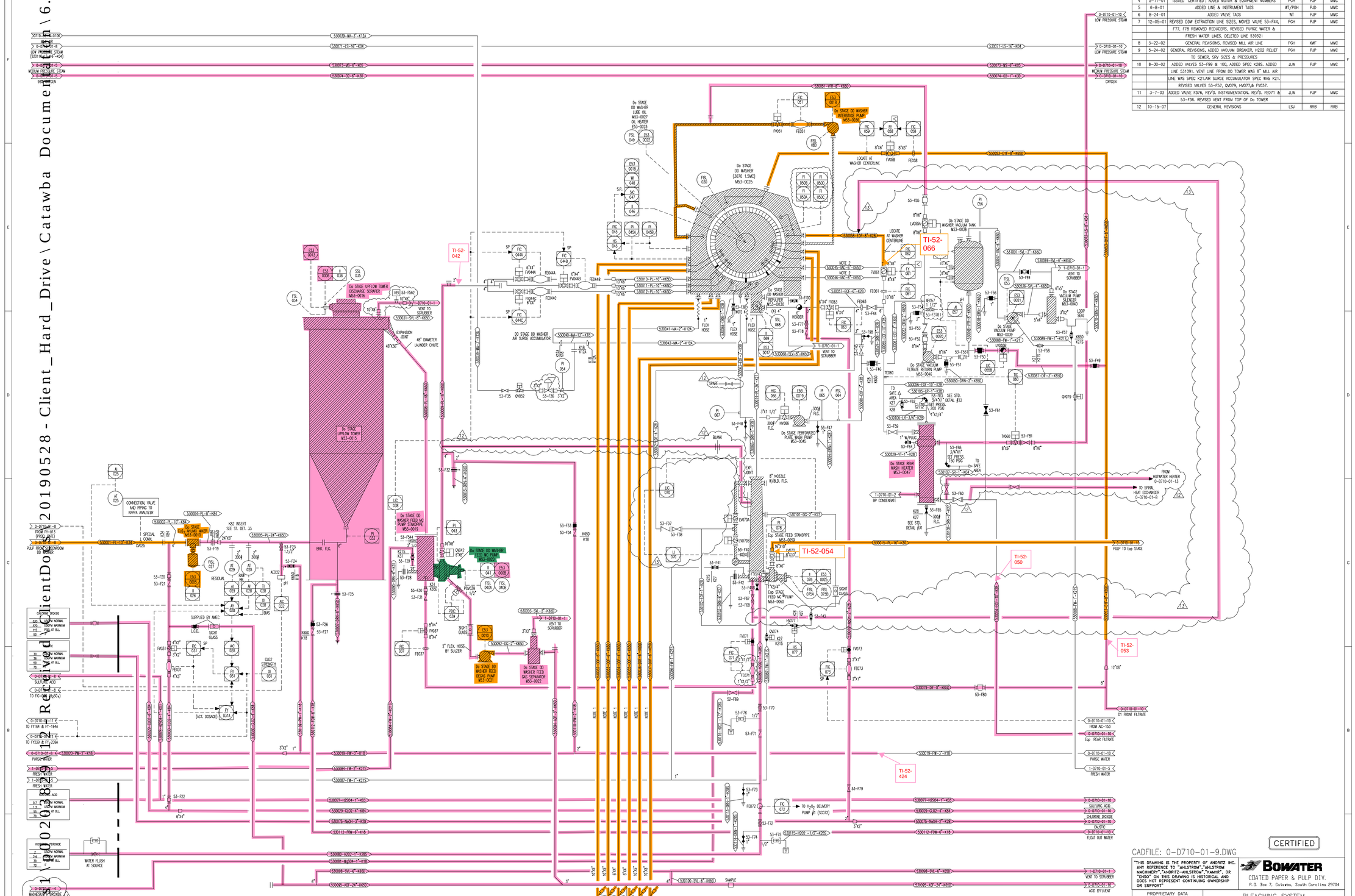
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-16-01	ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED"; ADDED MOTOR & EQUIPMENT NUMBERS	PGH	PJP	MMC
5	6-8-01	ADDED LINE & INSTRUMENT TAGS	WT/PGH	PJD	MMC
6	8-24-01	ADDED VALVE TAGS	WT	PJP	MMC
7	12-05-01	REVISED DDW EXTRACTION LINE SIZES, MOVED VALVE 53-F44, F77, F78 REMOVED REDUCERS, REVISED PURGE WATER & FRESH WATER LINES, DELETED LINE 530521	PGH	PJP	MMC
8	3-22-02	GENERAL REVISIONS, REVISED MILL AIR LINE	PGH	KWF	MMC
9	5-24-02	GENERAL REVISIONS, ADDED VACUUM BREAKER, H202 RELIEF TO SEWER, SRV SIZES & PRESSURES	PGH	PJP	MMC
10	8-30-02	ADDED VALVES 53-F99 & 100, ADDED SPEC K28S. ADDED LINE 531091. VENT LINE FROM DO TOWER WAS 8" MILL AIR LINE WAS SPEC K21.AIR SURGE ACCUMULATOR SPEC WAS K23. REVISED VALVES 53-F57, QV079, HV077,& FV037.	JLW	PJP	MMC
11	3-7-03	ADDED VALVE F376, REV'D. INSTRUMENTATION. REV'D. FE071 & 53-F36. REVISED VENT FROM TOP OF Do TOWER	JLW	PJP	MMC
12	10-15-07	GENERAL REVISIONS	LSJ	RRB	RRB



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BLEACHING SYSTEM
Do STAGE
BOWATER
CATAWBA,S.C.

ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Village Center
Glens Falls, New York 12801

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BAP	3-24-00			
CHECKED BY:	DATE:			
PJP	3-24-00			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	3-24-00	NONE	0-D710-01-9	13

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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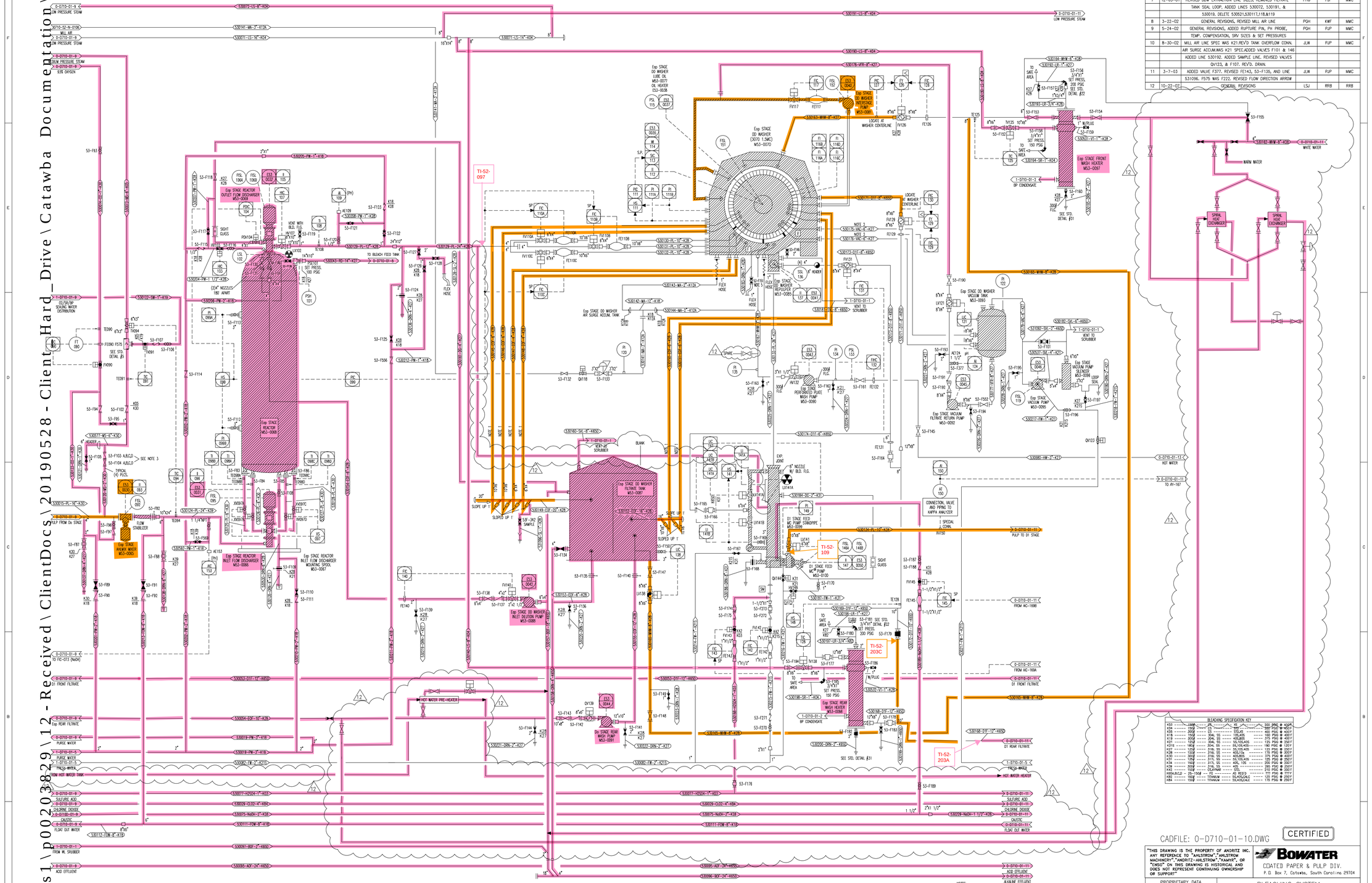
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-16-01	ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED"; ADDED MOTOR & EQUIPMENT NUMBERS	PGH	PJP	MMC
5	6-8-01	ADDED INSTRUMENT TAGS AND LINE TAGS	PGH/WT	JA	MMC
6	8-24-01	REMOVED EOP RUPTURE DISK, ADDED VALVE TAGS	PHG/WT	PJP	MMC
7	12-05-01	REVISED EOW EXTRACTION LINE SIZES, REMOVED FILTRATE TANK SEAL LOOP, ADDED LINES 530072, 530191, & 530019, DELETE 530521,530117,118,&119	PHG	PJP	MMC
8	3-22-02	GENERAL REVISIONS, REVISED MILL AIR LINE	PGH	KWF	MMC
9	5-24-02	GENERAL REVISIONS, ADDED RUPTURE PIN, PH PROBE, TEMP. COMPENSATION, SRV SIZES & SET PRESSURES	PGH	PJP	MMC
10	8-30-02	MILL AIR LINE SPEC WAS K21 REV'D TANK OVERFLOW CONN. AIR SURGE ACCUM.WAS K21 SPEC.ADDED VALVES F101 & 146 ADDED LINE 530192, ADDED SAMPLE LINE. REVISED VALVES QV123, & F107. REV'D. DRAIN.	JLW	PJP	MMC
11	3-7-03	ADDED VALVE F377. REVISED FE143, 53-F135, AND LINE 531096. F575 WAS F222. REVISED FLOW DIRECTION ARROW	JLW	PJP	MMC
12	10-22-07	GENERAL REVISIONS	LSJ	RRB	RRB



BLEACHING SPECIFICATION KEY						
K03	150#	CS	SS	300, 316L	300 PSIG @ 450F
K04	150#	CS	CS	300 LT	300 PSIG @ 400F
K15	300#	304L SS	304L SS	10S,40S	150 PSIG @ 400F
K16	150#	304L SS	304L SS	10S,40S	150 PSIG @ 400F
K19	300#	304L SS	304L SS	40S,80S	375 PSIG @ 450F
K21	125#	304L SS	304L SS	5S,10S,40S	125 PSIG @ 250F
K21S	180#	304L SS	304L SS	5S,10S,40S	180 PSIG @ 120F
K25	150#	316L SS	316L SS	40S,80S	175 PSIG @ 300F
K26	150#	316L SS	316L SS	40S,10s	175 PSIG @ 300F
K30	300#	316L SS	316L SS	40S,80S	375 PSIG @ 450F
K31	125#	316L SS	316L SS	5S,10S,40S	125 PSIG @ 250F
K34	150#	317L SS	317L SS	40S, 10S	200 PSIG @ 350F
K41	150#	317L SS	317L SS	10S	200 PSIG @ 350F
K42	150#	CD,AYN8	317L SS	10S	210 PSIG @ 250F
K80A,B,C,D	25-150#	FG	AS REQ'D.	----------	777 PSIG @ 777F
K82	150#	TITANIUM	SS,40S,CALC	----------	125 PSIG @ 250F
K84	150#	TITANIUM	SS,40S,CALC	----------	175 PSIG @ 250F

NOTES:
1. DO NOT INSTALL ELBOWS IN VERTICAL DROP FROM DO WASHER TO FILTRATE HEADER.
2. VACUUM FILTRATE LINES FROM DO WASHER TO VACUUM TANK MUST BE SLOPED DOWNWARD.
3. VALVES TO BE INSTALLED AT PULP LINE.
4. MILL AREA JESS.
5. VALVE F151 LOCATED ON FAR END OF PPW HEADER.

CADFILE: O-D710-01-10.DWG

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BLEACHING SYSTEM
Eop STAGE
BOWATER
CATAWBA,S.C.

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Andritz-Ahlstrom Inc.
Glens Falls, New York 12801

DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
BAP	3-24-00			
CHECKED BY:	DATE:			
PJP	3-24-00			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	3-24-00	NONE	O-D710-01-10	12

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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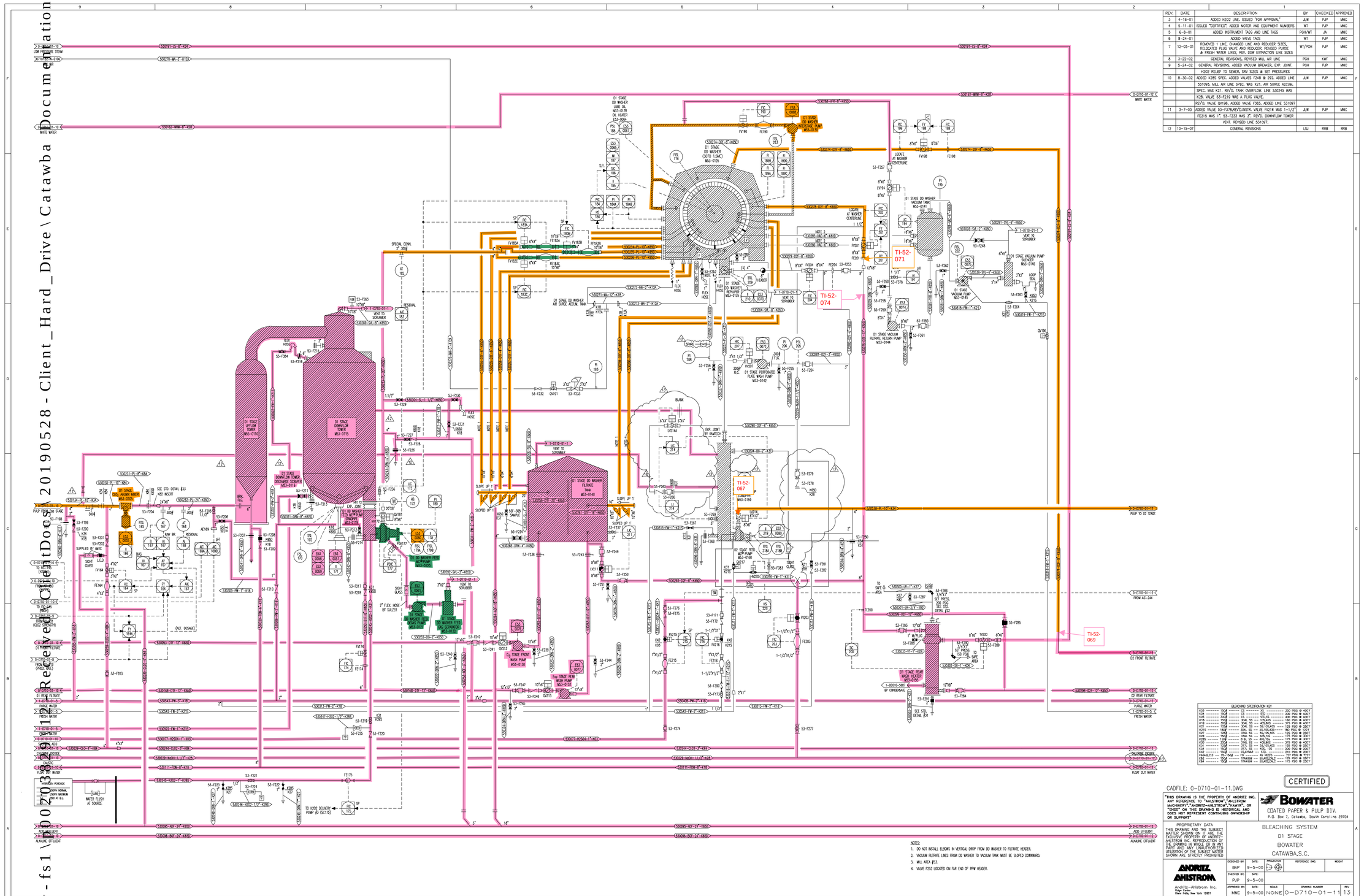
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-16-01	ADDED H2O2 LINE, ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED", ADDED MOTOR AND EQUIPMENT NUMBERS	WT	PJP	MMC
5	6-8-01	ADDED INSTRUMENT TAGS AND LINE TAGS	PGH/WT	JA	MMC
6	8-24-01	ADDED VALVE TAGS	WT	PJP	MMC
7	12-05-01	REMOVED 1 LINE, CHANGED LINE AND REDUCER SIZES, RELOCATED PLUG VALVE AND REDUCER, REVISED PURGE & FRESH WATER LINES, REV. DOW EXTRACTION LINE SIZES	WT/PGH	PJP	MMC
8	3-22-02	GENERAL REVISIONS, REVISED MILL AIR LINE	PGH	KWT	MMC
9	5-24-02	GENERAL REVISIONS, ADDED VACUUM BREAKER, EXP. JOINT.	PGH	PJP	MMC
		H2O2 RELIEF TO SEWER, SPV 5025 & SET PRESSURES			
10	8-30-02	ADDED K28S SPEC. ADDED VALVES F248 & 292, ADDED LINE	JLW	PJP	MMC
		531093, MILL AIR LINE SPEC. WAS K21. AIR SURGE ACCUM.			
		SPEC. WAS K21. REV'D. TANK OVERFLOW LINE 530245 WAS			
		K28. VALVE 53-F219 WAS A PLUG VALVE.			
		REV'D. VALVE DV196, ADDED VALVE F365. ADDED LINE 531097			
11	3-7-03	ADDED VALVE 53-F378,REV'D.INSTR. VALVE FV216 WAS 1-1/2"	JLW	PJP	MMC
		FE215 WAS 1". 53-F233 WAS 3". REV'D. DOWNFLOW TOWER			
		VENT. REVISED LINE 531097.			
12	10-15-07	GENERAL REVISIONS	LSJ	RRB	RRB



NOTES:

1. DO NOT INSTALL ELBOWS IN VERTICAL DROP FROM DO WASHER TO FILTRATE HEADER.
2. VACUUM FILTRATE LINES FROM DO WASHER TO VACUUM TANK MUST BE SLOPED DOWNWARD.
3. MILL AREA J53.
4. VALVE F252 LOCATED ON FAR END OF PPW HEADER.

BLEACHING SPECIFICATION KEY

K03	150#	CS	AS	200	PSIG @ 400F
K04	150#	CS	STD	200	PSIG @ 400F
K17	150#	304L SS	10S,AWS	140	PSIG @ 400F
K18	150#	304L SS	10S,AES	140	PSIG @ 400F
K19	300#	304L SS	40S,AES	375	PSIG @ 400F
K21	150#	304L SS	5S,10S,AES	125	PSIG @ 250F
K21S	150#	304L SS	10S,10S,AES	180	PSIG @ 100F
K27	150#	316L SS	10S,10S	125	PSIG @ 250F
K28	150#	316L SS	40S,10s	175	PSIG @ 300F
K28S	150#	316L SS	40S,10s	175	PSIG @ 300F
K29	150#	317L SS	10S,10S,AES	125	PSIG @ 250F
K31	150#	317L SS	10S,10S,AES	125	PSIG @ 250F
K34	150#	317L SS	40S, 10S	200	PSIG @ 300F
K42	150#	TITANIUM	STD	110	PSIG @ 300F
K42.B.C.S	150#	TITANIUM	40,40S,CS	175	PSIG @ 250F
K60	150#	TITANIUM	5S,40S,CS	125	PSIG @ 250F
K64	150#	TITANIUM	10S,40S,CS	175	PSIG @ 250F

CADFILE: 0-D710-01-11.DWG

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P.O. Box 7, Catawba, South Carolina 29704

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BLEACHING SYSTEM
D1 STAGE
BOWATER
CATAWBA, S.C.

ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Ridge Center
Dwin Falls, New York 12801

DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
BAP	9-5-00			
CHECKED BY:	DATE:			
PJP	9-5-00			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	9-5-00	NONE	0-D710-01-11	13

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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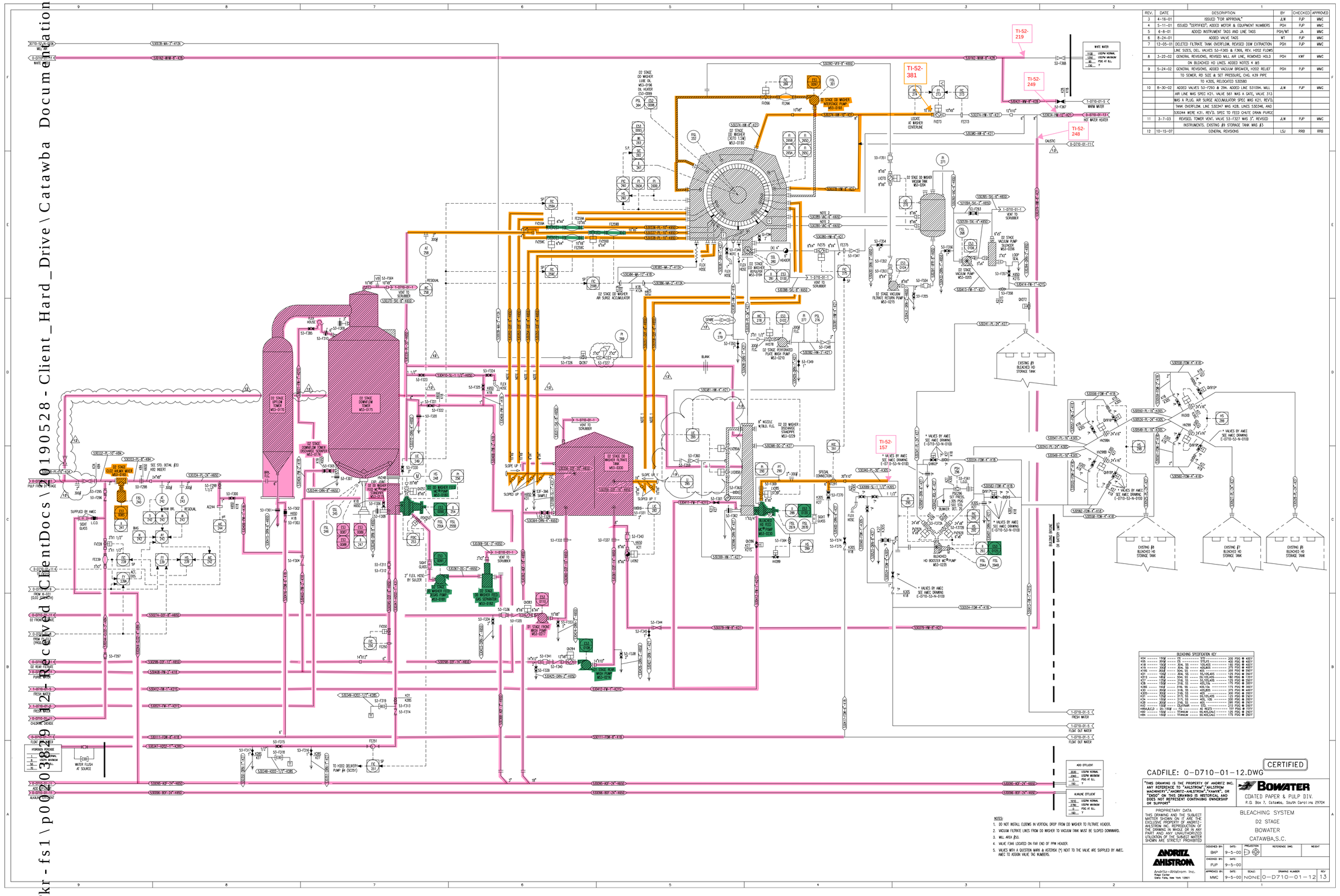

REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-16-01	ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED", ADDED MOTOR & EQUIPMENT NUMBERS	PGH	PJP	MMC
5	6-8-01	ADDED INSTRUMENT TAGS AND LINE TAGS	PGH/WT	JA	MMC
6	8-24-01	ADDED VALVE TAGS	WT	PJP	MMC
7	12-05-01	DELETED FILTRATE TANK OVERFLOW, REVISED DOW EXTRACTION	PGH	PJP	MMC
		LINE SIZES, DEL. VALVES 53-F365 & F366, REV. H202 FLOWS			
8	3-22-02	GENERAL REVISIONS, REVISED MILL AIR LINE, REMOVED HOLD	PGH	KWT	MMC
		ON BLEACHED HD LINES. ADDED NOTES 4 &5			
9	5-24-02	GENERAL REVISIONS, ADDED VACUUM BREAKER, H202 RELIEF	PGH	PJP	MMC
		TO SEWER, RD SIZE & SET PRESSURE, CHG. K39 PIPE			
		TO K305, RELOCATED 530580			
10	8-30-02	ADDED VALVES 53-F293 & 294. ADDED LINE 531094. MILL	JLW	PJP	MMC
		AIR LINE WAS SPEC K21. VALVE 561 WAS A GATE, VALVE 313			
		WAS A PLUG. AIR SURGE ACCUMULATOR SPEC WAS K21. REVD.			
		TANK OVERFLOW. LINE 530347 WAS K28. LINES 530346, AND			
		530344 WERE K31. REVD. SPEC TO FEED CHUTE DRAIN (PURGE)			
11	3-7-03	REVISED. TOWER VENT. VALVE 53-F327 WAS 3", REVISED	JLW	PJP	MMC
		INSTRUMENTS. EXISTING #9 STORAGE TANK WAS #3			
12	10-15-07	GENERAL REVISIONS	LSJ	RRB	RRB

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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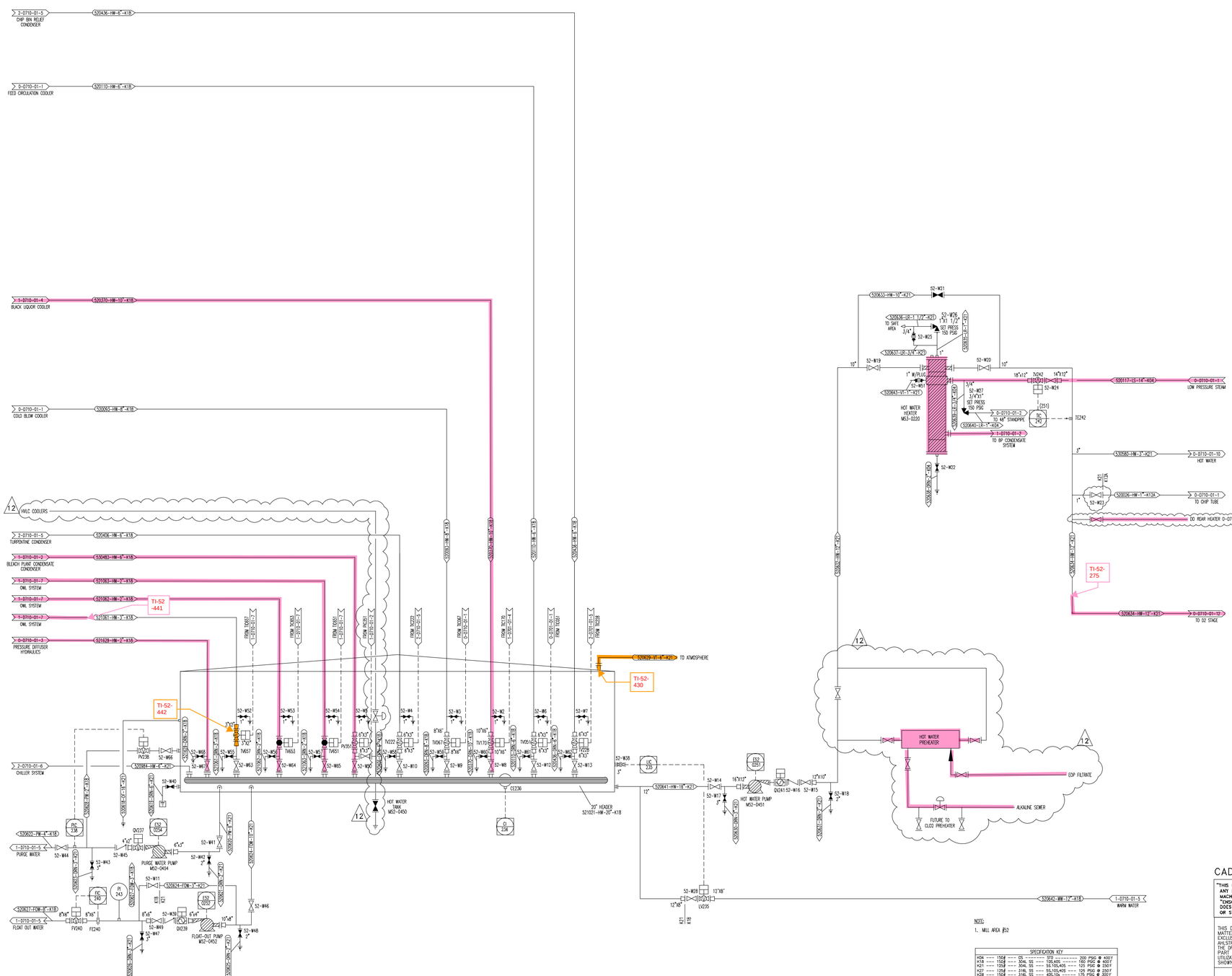
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-16-01	ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED", ADDED MOTOR AND EQUIPMENT NUMBERS	WT/PGH	PJP	MMC
5	6-8-01	ADDED LINE & INSTRUMENT TAGS, CHANGED LABEL	PGH/WT	PJD	MMC
6	8-24-01	REMOVED EVAPORATOR CONDENSATE TANK	WT/PGH	PJP	MMC
7	12-05-01	ADDED CHILLER LINE AND FLOAT PUMP, RECIRC. LINE WITH	WT/PGH	MMC	PJP
		LOCAL PL MOVED HEATER WATER INLET NOZZLE			
8	3-22-02	GENERAL REVISIONS	PGH	PJP	MMC
9	5-24-02	GENERAL REVISIONS, ADDED 52-W66, SRV SIZES & SET	PGH	PJP	MMC
		PRESSURES, RELOCATED 530580			
10	8-30-02	REVISED TANK OVERFLOW, DRAIN, VALVES 52-WX55, 56, & 57	JLW	PJP	MMC
		TV651, & TV653, ADDED LINE 521429 & VALVEW W67, & WR8			
11	3-7-03	VALVE 52-W23 WAS SHOWN CLOSED	JLW	PJP	MMC
12	10-18-07	GENERAL REVISIONS	LSJ	RRB	RRB



NOTE:
1. MILL AREA 052

SPECIFICATION KEY					
K04	150#	CS	ERW	200 PSIG @ 400F
K18	150#	304L SS	10S,40S	160 PSIG @ 400F
K21	125#	304L SS	5S,10S,40S	125 PSIG @ 250F
K22	125#	316L SS	5S,10S,40S	125 PSIG @ 250F
K28	150#	316L SS	40S,10s	175 PSIG @ 300F

CERTIFIED

CADFILE: 0-D710-01-13.DWG

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HOT WATER SYSTEM

BOWATER
CATAWBA,S.C.

ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Ridge Center
Glens Falls, New York 12801

	DATE:	PROJECTION:	REFERENCE DWG.	WEIGHT
DESIGNED BY: BAP	3-24-00			
CHECKED BY: PJP	3-24-00			
APPROVED BY: MMC	3-24-00	SCALE: NONE	DRAWING NUMBER 0-D710-01-13	REV 12

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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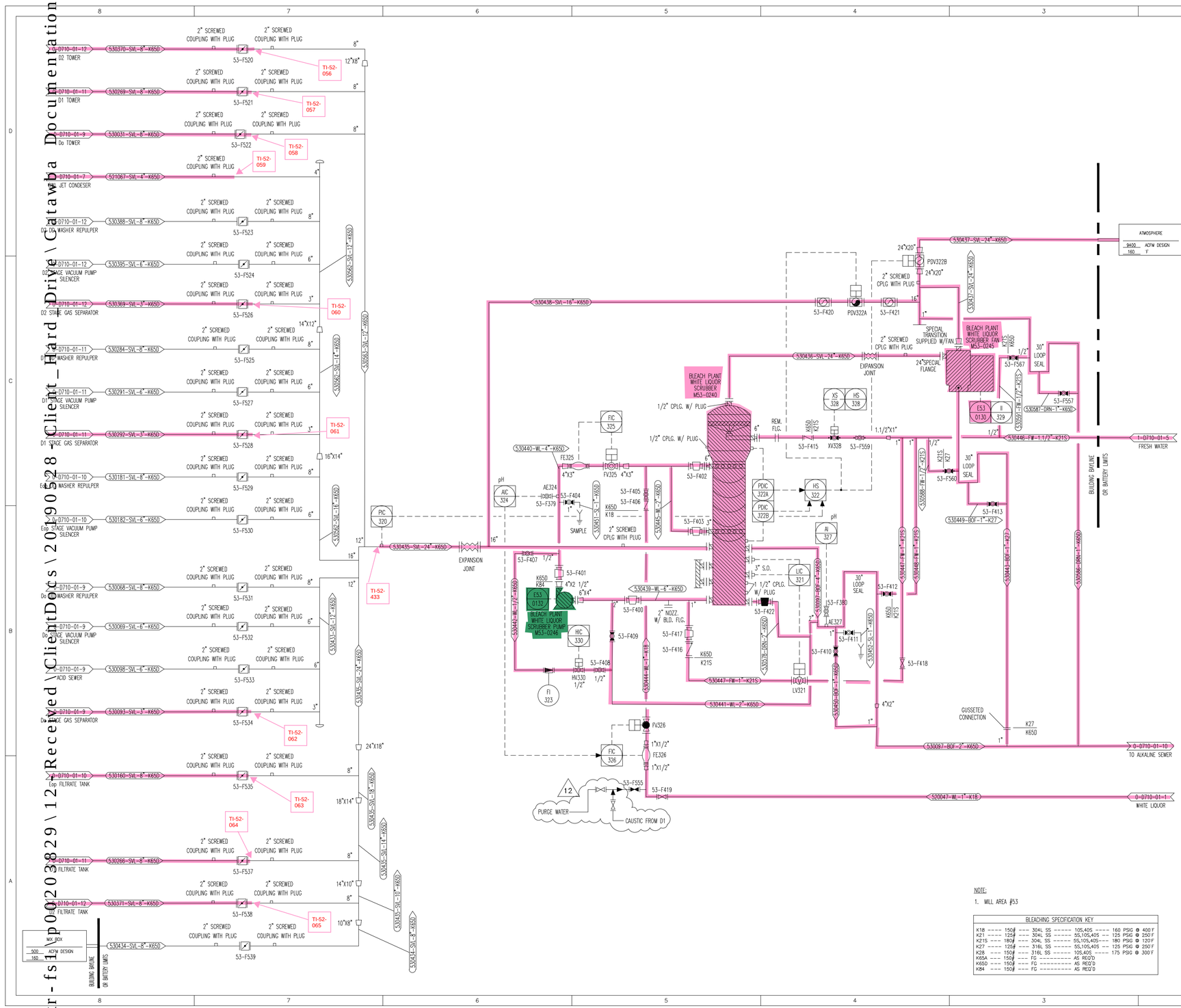
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-16-01	REVISED WL-9-3". ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED"; ADDED MOTOR AND EQUIPMENT NUMBERS	PGH	PJP	MMC
5	6-8-01	ADDED INSTRUMENT TAGS AND LINE TAGS	PGH/WT	JA	MMC
6	8-24-01	DELETED 530433-SVL-4",CHG. 530440 TO 4".REV'D. LINE TAG	PGH	PJP	MMC
7	12-5-01	ADDED 2" NOZZLE. REVD. LINE ARRANGEMENT AND TAGGING	PGH	PJP	MMC
8	3-22-02	DELETED LINE 530099, ADDED LINE 521067, 530578, CPLG'S.,	PGH	PJP	MMC
		REVISED LINE TAGS & MOVED VALVE 53-F415			
9	5-24-02	GENERAL REVISIONS; MODIFIED FAN DISCHARGE PIPING AND	PGH	PJP	MMC
		VENT PIPING; ADDED WHITE LIQUOR DRAIN.			
10	8-30-02	LINE 530031 WAS 6". ADDED HV330	JLW	PJP	MMC
		REV'D. FAN CONN.S, ADD EXP. JOINT. VALVE PDV322B WAS 24"			
11	3-7-03	ADDED VALVES F379 AND F370, REV'D HIC 330, VALVES F420,	JLW	PJP	MMC
		421, AND PDV322B WERE SHOWN AS NORMALLY CLOSED			
12	10-16-07	GENERAL REVISIONS	LSJ	RRB	RRB



NOTE:

1. MILL AREA #53

BLEACHING SPECIFICATION KEY					
K18	150#	304L SS	10S,40S	160 PSIG @ 400 F	
K21	125#	304L SS	5S,10S,40S	125 PSIG @ 250 F	
K21S	180#	304L SS	5S,10S,40S	180 PSIG @ 120 F	
K27	125#	316L SS	5S,10S,40S	125 PSIG @ 250 F	
K28	150#	316L SS	10S,40S	175 PSIG @ 300 F	
K65A	150#	FG	AS REQ'D		
K65D	150#	FG	AS REQ'D		
K84	150#	FG	AS REQ'D		

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BLEACH PLANT WHITE LIQUOR
SCRUBBER SYSTEM
BOWATER
CATAWBA, S.C.

ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Ridge Center
Glens Falls, New York 12801

DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
BAP	3-24-00			
CHECKED BY:	DATE:			
PJP	3-24-00			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	3-24-00	NONE	1-D710-01-1	12

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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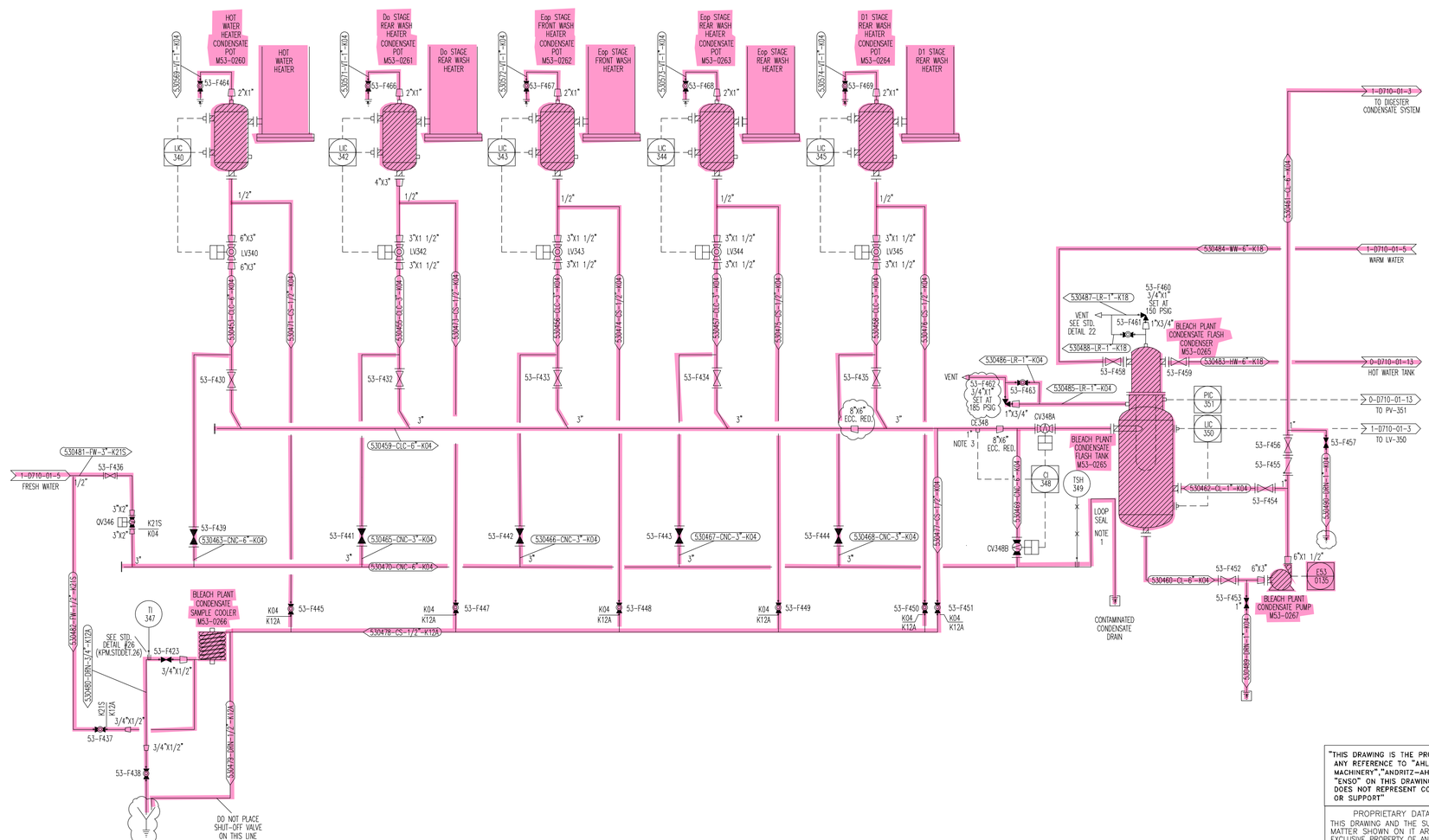
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-16-01	ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED"; ADDED MOTOR & EQUIPMENT NUMBERS	PGH	PJP	MMC
5	6-8-01	ADDED INSTRUMENT TAGS AND LINE TAGS	PGH/WT	JA	MMC
6	8-24-01	ADDED VALVE TAGS	WT	PJP	MMC
7	12-5-01	REVISED SAFETY VALVE NOTE, ADD. 1" VENTS TO COND. POTS	PGH	PJP	MMC
8	3-22-02	ADD. VALVE 53-F423, REV. VALVE 53-F437,F438 WERE GATES	PGH	KWF	MMC
		REVISED B.P. CONDENSER PER CUST. DWG., DELETED			
		SR DD WASHER WASH HEATER CONDENSATE POT			
9	5-24-02	GENERAL REVISIONS; REV. SPEC WAS K21; ADDED SRV SIZES	PGH	PJP	MMC
		AND SET PRESSURES; ADDED ECC. RED. ON 530459.			
10	8-30-02	REV'D SET PRESSURE OF SAFETY RELIEF VALVE. REV'D. DRAIN	JLW	PJP	MMC



ALL EQUIPMENT ABANDONED

CERTIFIED

NOTE:
1. SEE STD DETAIL 32 FOR PIPING REQUIREMENTS FOR CONDENSATE SYSTEMS
2. MILL AREA #53.
3. LOCATE CE348 AT THE 5 O'CLOCK POSITION

SPECIFICATION KEY
K04 --- 150# --- CS ------- STD ------ 200 PSIG @ 400°F
K12A -- 150# --- 304L ------ 10S ------ 160 PSIG @ 400°F
K18 --- 150# --- 304L SS --- 10S,40S ---- 160 PSIG @ 400°F
K21S -- 180# --- 304L SS --- 5S,10S,40S--- 180 PSIG @ 120°F

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BLEACH PLANT CONDENSATE SYSTEM

BOWATER
CATAWBA, S.C.

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Andritz-Ahlstrom Inc.
Ridge Center
Glens Falls, New York 12801

DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
BAP	3-24-00			
CHECKED BY: PJP	DATE: 3-24-00			
APPROVED BY: MMC	DATE: 3-24-00	SCALE: NONE	DRAWING NUMBER 1-D710-01-2	REV 10

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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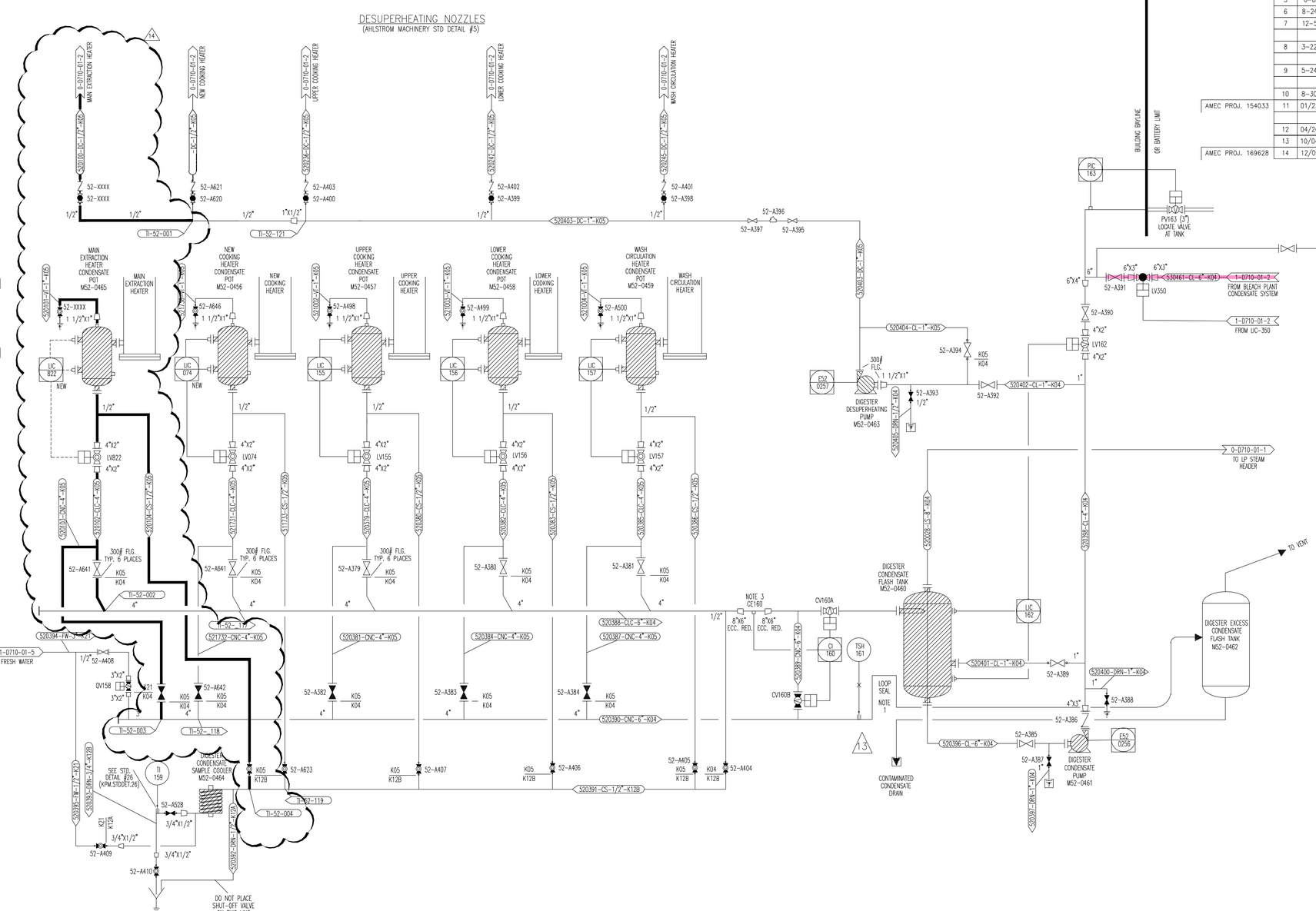
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-17-01	ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED"; ADDED MOTOR & EQUIPMENT NUMBERS	WT/PGH	PJP	MMC
5	6-8-01	ADDED LINE & INSTRUMENT TAGS	PGH	PJD	MMC
6	8-24-01	REV'D. REDUCER SIZES.	WT	PJP	MMC
7	12-5-01	LINE 520394 WAS 4", LINE 530461 WAS 520399, ADDED 1"	PGH	PJP	MMC
		VENT LINE TO CONDENSATE POTS			
8	3-22-02	REVISED 520387 WAS 3", VALVES 52-A409, A410, ADDED	PGH	PJD	MMC
		VALVE 52-A528			
9	5-24-02	GENERAL REVISIONS; ADDED SRV SIZES AND SET PRESSURES,	PGH	PJP	MMC
		ADDED ECC. RED. ON 520388; CHG'D CONDENSATE FLOWS			
10	8-30-02	VALVE LV350 WAS 6". REVISED DRAIN.	JLW	PJP	MMC
AMEC PROJ. 154033 11	01/22/07	ADDED CONDENSATE POT FOR NEW COOKING HEATER	DFC	AES	
		AND 1/2" DESUPERHEATING COND. TO NEW COOKING HEATER			
12	04/26/07	ADDED TIE-INS & LINE NOS.	DFC	AES	
13	10/04/07	GENERAL REVISIONS	LSJ	RRB	RRB
AMEC PROJ. 169628 14	12/05/11	ADDED CONDENSATE POT	JHK	AES	AES



NOTE:
1. SEE STD DETAL 32 FOR PIPING REQUIRMENTS FOR CONDENSATE SYSTEMS
2. MILL AREA #52
3. LOCATE CE160 AT 5 O'CLOCK POSITION

DIGESTER SPECIFICATION KEY				
K04 --- 150# ----- CS ------- STD ----------	200 PSIG @ 400F			
K05 --- 300# ----- CS ------- STD,XS ---------	400 PSIG @ 400F			
K12A -- 150# ----- 304L SS -- 10S ----------	160 PSIG @ 400F			
K12B -- 300# ----- 304L SS -- 10S, 40S -------	400 PSIG @ 400F			
K18 --- 150# ----- 304L SS -- 10S,40S --------	160 PSIG @ 400F			
K27 --- 125# ----- 316L SS --SS,10S,40S ------	125 PSIG @ 250F			
K28 --- 150# ----- 316L SS -- 40S,10s --------	175 PSIG @ 300F			
K30 --- 300# -----316L SS -- 40S,80S --------	375 PSIG @ 400F			

CERTIFIED

BOWATER
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P.O. Box 7, Catawba, South Carolina 29704

CADFILE: 1-D710-01-3-CLEAN.DWG

DIGESTER CONDENSATE SYSTEM
BOWATER
CATAWBA, S.C.

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CAD FILE: 1-D710-01-3-CLEAN.DWG | PROJECT: 169628
DR BY: JHK | DATE: 08NOV11 | DSN BY: AES | DATE: | CHK BY: AES | DATE: | APP BY: | DATE:

ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Ridge Center
Glens Falls, New York 12801

DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
DESIGNER	DDATE		REF.DWG.	WEIGHT
CHECKED BY:	DATE:		CUST	
CHECKER	CDATE		JOBNO	
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
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AREA 52 DEMO P&IDS
REV 0 05/21/2020

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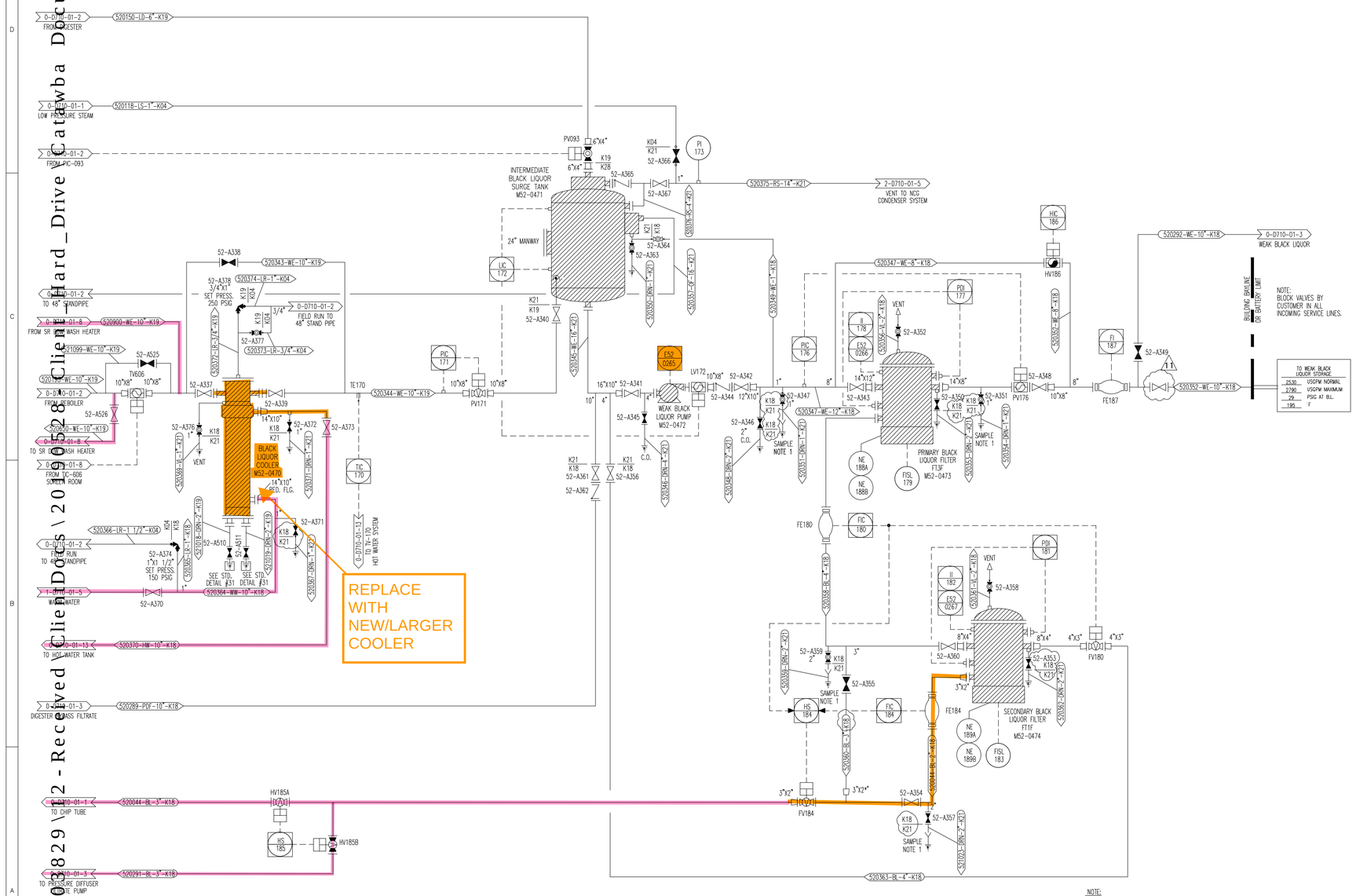
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-17-01	RS-1 LINE WAS 6". ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED"; ADDED MOTOR & EQUIPMENT NUMBERS	WT/PGH	PJP	MMC
5	6-8-01	ADDED LINE & INSTRUMENT TAGS	PGH	PJD	MMC
6	8-24-01	ADDED REDUCERS AT PUMP M52-0472. REV'D. LINE 520357	WT	PJP	MMC
7	12-5-01	REVISED LINES 520044 WAS 3", 520289 WAS 12"	PGH	PJP	MMC
8	3-22-02	REVISED VALVE & LINE TAGS, ADDED VALVE A341	PGH	PJP	MMC
9	5-24-02	GENERAL REVISIONS, ADDED SRV SIZES AND SET PRESSURES,	PGH	PJP	MMC
		MODIFIED PIPING AROUND BLC., CHANGED K04 DRAINS TO K21.			
10	8-30-02	REVISED DRAIN SPECS., OVERFLOW CONN. ON BLACK LIQUOR	JLW	PJP	MMC
		SURGE TANK. LINE 520360 WAS K21.			
11	10-16-07	GENERAL REVISIONS	LSJ	RRB	RRB



NOTE:
1. LOCATE SAMPLE ON SIDE OF PIPE (HORIZONTAL)
2. MILL AREA #52

PIPING SPECIFICATION KEY
K04 --- 150# --- CS --------- STD -------- 200 PSIG @ 400°F
K05 --- 300# --- CS --------- STD,XS ------ 400 PSIG @ 400°F
K18 --- 150# --- 304L SS ---- 10S,40S ----- 160 PSIG @ 400°F
K19 --- 300# --- 304L SS ---- 40S,80S ----- 375 PSIG @ 400°F
K21 --- 125# --- 304L SS ---- 5S,10S,40S --- 125 PSIG @ 250°F
K27 --- 125# --- 316L SS ---- 5S,10S,40S --- 125 PSIG @ 250°F
K28 --- 150# --- 316L SS ---- 40S,10s ----- 175 PSIG @ 300°F
K30 --- 300# --- 316L SS ---- 40S,80S ----- 375 PSIG @ 400°F

CADFILE: 1-D710-01-4.DWG

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BLACK LIQUOR FILTRATION SYSTEM

BOWATER
CATAWBA, S.C.

ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Ridge Center
Glens Falls, New York 12801

DESIGNED BY:	DATE:	PROJECTION:	REFERENCE DWG.	WEIGHT
BAP	3-24-00			
CHECKED BY:	DATE:			
PJP	3-24-00			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	3-24-00	NONE	1-D710-01-4	11

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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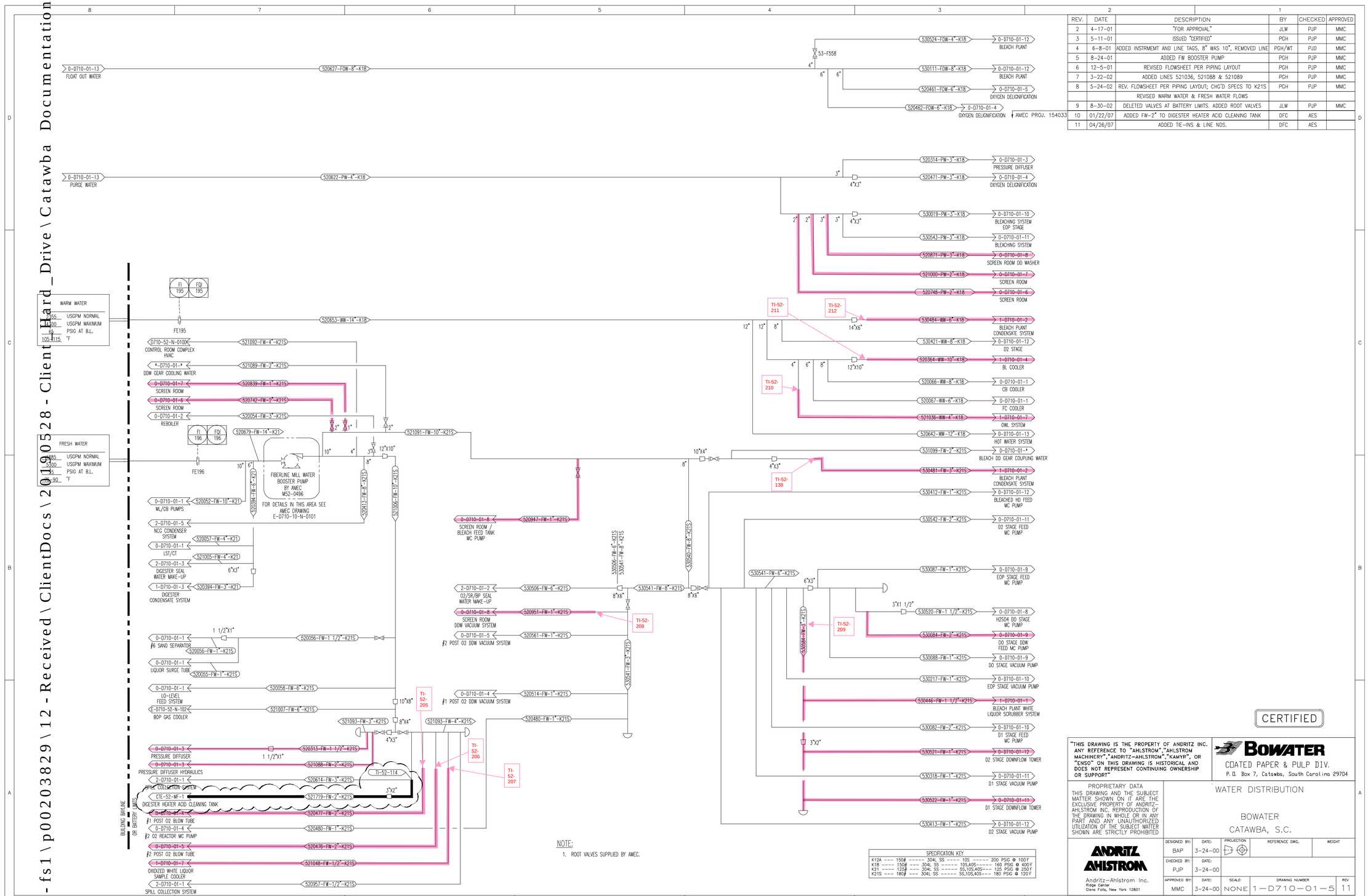
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
2	4-17-01	"FOR APPROVAL"	JLW	PJP	MMC
3	5-11-01	ISSUED "CERTIFIED"	PGH	PJP	MMC
4	6-8-01	ADDED INSTRMEMT AND LINE TAGS, 8" WAS 10", REMOVED LINE	PGH/WT	PJD	MMC
5	8-24-01	ADDED FW BOOSTER PUMP	PGH	PJP	MMC
6	12-5-01	REVISED FLOWSHEET PER PIPING LAYOUT	PGH	PJP	MMC
7	3-22-02	ADDED LINES 521036, 521088 & 521089	PGH	PJP	MMC
8	5-24-02	REV. FLOWSHEET PER PIPING LAYOUT; CHG'D SPECS TO K21S	PGH	PJP	MMC
		REVISED WARM WATER & FRESH WATER FLOWS			
9	8-30-02	DELETED VALVES AT BATTERY LIMITS. ADDED ROOT VALVES	JLW	PJP	MMC
10	01/22/07	ADDED FW-2" TO DIGESTER HEATER ACID CLEANING TANK	DFC	AES	
11	04/26/07	ADDED TIE-INS & LINE NOS.	DFC	AES	

AMEC PROJ. 154033



NOTE:

1. ROOT VALVES SUPPLIED BY AMEC.

SPECIFICATION KEY
K12A --- 150# ----- 304L SS ---- 10S ----- 200 PSIG @ 100°F
K18 --- 150# --- 304L SS ----- 10S,40S--- 160 PSIG @ 400°F
K21 --- 125# --- 304L SS ----- SS,10S,40S--- 125 PSIG @ 250°F
K21S --- 180# --- 304L SS ----- SS,10S,40S--- 180 PSIG @ 120°F

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	DATE			
DESIGNED BY: BAP	DATE: 3-24-00	PROJECTION	REFERENCE DWG.	WEIGHT
CHECKED BY: PJP	DATE: 3-24-00			
APPROVED BY: MMC	DATE: 3-24-00	SCALE: NONE	DRAWING NUMBER 1-D710-01-5	REV 11

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

EQUIPMENT TAG LIST

ACP – ACID CLEANING PUMP
AGT – AGITATOR
AHL – AHLMIX MIXER
AL – AIRLOCK
ASC – ALKALINITY SAMPLE COOLER
ASP – ACID SEWER PUMP
AT – AIR ACCUMULATOR TANK
BA – BIN ACTIVATOR
BCH * – BOTTOM CIRCULATION HEATER
BCP – BOTTOM CIRCULATION PUMP
BFC – BLEACHED HIGH DENSITY FEED CHUTE
BLC – BLACK LIQUOR COOLER
BLF – BLACK LIQUOR FILTER
BLHD – BLEACHED HIGH DENSITY STORAGE TANK
BLP – BLACK LIQUOR PUMP
BLT * – BLACK LIQUOR STORAGE TANK
BMCP – BLEACHED MEDIUM CONSISTENCY PUMP
BOP – BOOSTER PUMP
BP – BACKFLUSH PUMP
BRC – BIN RELIEF CONDENSER
BS – BASKET STRAINER
BSD – BROWNSTOCK DIFFUSER
BSDP – BROWNSTOCK DILUTION PUMP
BSDT – BROWNSTOCK DIFFUSER TANK
BSHD – BROWNSTOCK HIGH DENSITY
BSS – BROWN STOCK STORAGE
BST – BLOW STORAGE TANK
BSWP – BROWNSTOCK WASH PUMP
BT – BACKFLUSH TANK
CB * – CHIP BIN
CBB – CHIP BIN BLASTER
CBC – COLD BLOW COOLER
CBP – COLD BLOW PUMP
CC – CHIP CHUTE
CCP – CHIP CHUTE PUMP
CCT – CONDENSATE COLLECTION TANK
CFC – CONDENSATE FLASH CONDENSER
CFP – CONDENSATE FLASH PUMP
CFT – CONDENSATE FLASH TANK
CLCP – CLEAN CONDENSATE PUMP
CLCT* – CLEAN CONDENSATE TANK
CLT * – CONDENSATE LEVEL TANK
CM – CHIP METER
CNCP – CONTAMINATED CONDENSATE PUMP
CNCT* – CONTAMINATED CONDENSATE TANK
CNSC – CONDENSATE SAMPLE COOLER
CORP – CONDENSATE RETURN PUMP
CORT* – CONDENSATE RETURN TANK
COV – CONVEYOR
CP – CONDENSATE PUMP
CRP – CLEANER REJECTS PUMP
CRT – CLEANER REJECTS TANK
CST – COARSE SCREEN TROUGH
CWTP – COOLING WATER TEMPERING PUMP
D1BT – D1 STAGE BACKFLUSH TANK
D1DW – D1 STAGE DIFFUSION WASHER
D1FC – D1 STAGE FEED CHUTE
D1FP – D1 STAGE FILTRATE PUMP
D1FT – D1 STAGE FILTRATE TANK
D1H * – D1 STAGE HEATER
D1MCP – D1 STAGE TOWER SUPPLY MEDIUM CONSISTENCY PUMP
D2DW – D2 STAGE DIFFUSION WASHER
D2FC – D2 STAGE FEED CHUTE
D2FT – D2 STAGE FILTRATE TANK
D2H * – D2 STAGE HEATER
D2MCP – D2 STAGE TOWER SUPPLY MEDIUM CONSISTENCY PUMP
DBS – DUAL BASKET STRAINER
DBT – CHLORINE DIOXIDE BLEACH TOWER
DCFC – DC STAGE FEED CHUTE
DCH – DC STAGE HEATER
DCMCP – DC STAGE TOWER SUPPLY MEDIUM CONSISTENCY PUMP
DDD – DIFFUSER DISCHARGE DEVICE
DDS – DILUTION DISCHARGE SCRAPER
DDW – DD WASHER
DEFT – CHLORINE DIOXIDE & CAUSTIC FILTRATE TANK
DIG * – DIGESTER
DLP – DUMP LIQUOR PUMP
DLT – DUMP LIQUOR TANK
DM – D STAGE MEDIUM CONSISTENCY MIXER
DOP – D STAGE OVERFLOW PUMP
DPH – D STAGE PREHEATER
DSP – DESUPERHEATING PUMP
DSR – DESHIVE REFINER
DTPAP – DTPA PUMP
DTPAT – DTPA TANK
DWC – DEWATERING CONVEYOR
E1BT – E1 STAGE BACKFLUSH TANK
E1FP – E1 STAGE FILTRATE PUMP
E1H – E1 STAGE HEATER
E2BT – E2 STAGE BACKFLUSH TANK
E2FP – E2 STAGE FILTRATE PUMP
E2H – E2 STAGE HEATER
EFLT – EXTRACTION FILTRATE TANK
EJ – EJECTORS
EOFC – EO STAGE FEED CHUTE
EOFT – EO STAGE FILTRATE TANK
EOH – EO STAGE STAGE HEATER
EOMCP – EO STAGE TOWER SUPPLY MEDIUM CONSISTENCY PUMP
EOP – EO STAGE STAGE OVERFLOW PUMP
ES * – ENTRAINMENT SEPARATOR
FA * – FLAME ARRESTOR
FBRS – FIBER SCREEN
FLP – FLASH LIQUOR PUMP
FLT – FILTRATE TANK
FP – FILTRATE PUMP
FPP – FEEDER PURGE PUMP
FPST – FEED PUMP SURGE TANK
FRP – FIBER RECLAIM PUMP
FRS – FIBER RECLAIM SCREEN
FRT – FIBER RECLAIM TANK
FS – FIBER SUMP
FSA – FIBER SUMP AGITATOR
FSEP – FOAM SEPARATOR
FSP – FIBER SUMP PUMP
FST – FINE SCREEN TROUGH
FT * – FLASH TANK
GFP – GAS FIRE PUMP
GIN – GAS INJECTION NOZZLE
HAL – HORIZONTAL AIR LOCK
HBLP – HEAVY BLACK LIQUOR PUMP
HBLT* – HEAVY BLACK LIQUOR TANK
HC – HYDRAULIC CONSOLE
HCP * – HEATER CONDENSATE POT
HDFP – HIGH DENSITY FEED PUMP
HDT – HIGH DENSITY STORAGE TANK
HP – HYDRAULIC PUMP
HPF – HIGH PRESSURE FEEDER
HPP – HYDROGEN PEROXIDE PUMP
HPT – HYDROGEN PEROXIDE TOWER
HWH * – HOT WATER HEATER
HWT – HOT WATER TANK
IAC – INSTRUMENT AIR COMPRESSOR
ILD – IN-LINE DRAINER
IPP – INSTRUMENT PURGE PUMP
IST – INTERMEDIATE SCREEN TROUGH
ITS – INVERTED TOP SEPARATOR
IV * – IMPREGNATION VESSEL
JC – JIB CRANE
KD – KNOT DRAINER
KP – KNOT PUMP
KT – KNOT TANK
KTR – KNOTTER
LCH * – LOWER COOKING HEATER
LCP – LOWER COOKING PUMP
LPF – LOW PRESSURE FEEDER
LT – LEVEL TANK
LTP – LIQUOR TRANSFER PUMP
MAC – MILL AIR COMPRESSOR
MCBP – MEDIUM CONSISTENCY BOOSTER PUMP
MCFC – MEDIUM CONSISTENCY FEED CHUTE
MCH * – MODIFIED COOKING HEATER
MCM – MEDIUM CONSISTENCY MIXER
MCP – MEDIUM CONSISTENCY PUMP
MCP – MODIFIED COOKING PUMP
MCS – MEDIUM CONSISTENCY SCREEN
MCT – MEDIUM CONSISTENCY TWISTER
ME – MIST ELIMINATOR
MLP – MAKE-UP LIQUOR PUMP
MLPS – MAKE-UP LIQUOR PUMP SPARE
MWBP – MILL WATER BOOSTER PUMP
NCGS – NON-CONDENSIBLE GAS SCRUBBER
OD – OUTLET DEVICE
PCS – PRIMARY COARSE SCREEN
PD – PRESSURE DIFFUSER
PFC – PRIMARY FORWARD CLEANER
PFCP – PRIMARY FORWARD CLEANER PUMP
PFS – PRIMARY FINE SCREEN
PFSP – PRIMARY FINE SCREEN PUMP
PHDC – PRIMARY HIGH DENSITY CLEANER
PIS – PRIMARY INTERMEDIATE SCREEN
PISP – PRIMARY INTERMEDIATE SCREEN PUMP
PRS – PRIMARY SCREEN
PSFP – PRIMARY SCREEN FILTRATE PUMP
PT – PEROXIDE TOWER
PTC – PRIMARY TURPENTINE CONDENSER
QCP – QUENCH CIRCULATION PUMP
RP – RING PRESS
SAP – SULFURIC ACID PUMP
SAT – SULFURIC ACID TANK
SBHD – SCREENED BROWNSTOCK HIGH DENSITY STORAGE TANK
SBR – SCRUBBER
SC * – STEAM CYCLONE
SCH * – SPARE COOKING HEATER
SCS – SECONDARY COARSE SCREEN
SCSP – SECONDARY COARSE SCREEN PUMP
SD – SAMPLE DEVICE
SDT – SCREEN DILUTION TANK
SDW – SINGLE STAGE DIFFUSION WASHER
SE * – STEAM EJECTOR
SFC – SCREENED FEED CHUTE
SFC – SECONDARY FINE CLEANER
SFC – SECONDARY FORWARD CLEANER
SFCP – SECONDARY FORWARD CLEANER PUMP
SFS – SECONDARY FINE SCREEN
SFSP – SECONDARY FINE SCREEN PUMP
SHD – SCREENED HIGH DENSITY
SHDC – SECONDARY HIGH DENSITY CLEANER
SHDP – SECONDARY HIGH DENSITY PUMP
SHS – SIDE HILL SCREEN
SI – STEAM INJECTOR
SJ#1 – STEAM INJECTOR #1
SJ#2 – STEAM INJECTOR #2
SO2 – SECONDARY INTERMEDIATE SCREEN
SSP – SECONDARY INTERMEDIATE SCREEN PUMP
SM – STEAM MIXER
SMCP – SECONDARY MEDIUM CONSISTENCY PUMP
SMC – STEAM MIXER INLET CHUTE
SMOC – STEAM MIXER OUTLET CHUTE
SMP – SUMP PUMP
SP – SOAP PUMP
SPIPE – STANDPIPE BASE
SRT – SECONDARY REJECTS TANK
SS – SAND SEPARATOR
SS – SECONDARY SCREEN
SSEP – STEAM SEPARATOR
SSFP – SECONDARY SCREEN FILTRATE PUMP
SST – SCREENED SURGE TANK
STC – STOCK CHEST
STCA – STOCK CHEST AGITATOR
STK01 – STOCKER
STM – STATIC MIXER
SURFC – SURFACE CONDENSER
SV * – STEAMING VESSEL
SVFS* – STEAMING VESSEL FINES SEPARATOR
SWF – SEAL WATER FILTER
SWP – SEAL WATER PUMP
SWPS – SEAL WATER PUMP SPARE
SWRP – SEWER PUMP
SWRPS – SEWER PUMP SPARE
TCP – TOP CIRCULATION PUMP
TD – TURPENTINE DECANTER
TDW – TWO STAGE DIFFUSION WASHER
TGC – TURPENTINE GAS COOLER
TLH * – TRIM LIQUOR HEATER
TLP – TRIM LIQUOR PUMP
TMS – TRAMP MATERIAL SYSTEM
TRS – TERTIARY SCREEN
TS – TOP SEPARATOR
TSFP – TERTIARY SCREEN FILTRATE PUMP
TST – TURPENTINE STORAGE TANK
TTP – TURPENTINE TRANSFER PUMP
TTT – TURPENTINE TRANSFER TANK
TUP – TURPENTINE UNDERFLOW PUMP
UCH * – UPPER COOKING HEATER
UCP – UPPER COOKING PUMP
UST – UNSCREENED SURGE TANK
VACP – VACUUM PUMP
WCH * – WASH CIRCULATION HEATER
WCP – WASH CIRCULATION PUMP
WF – WATER FILTER
WLC – WHITE LIQUOR COOLER
WLP – WHITE LIQUOR PUMP
WMP – WARM WATER PUMP
WMBP – WARM WATER BOOSTER PUMP
WWP – WASH WATER PUMP
WWT – WARM WATER TANK
XFAN – EXHAUST FAN

* = PROCESS INSULATION REQ'D

PIPELINE TAG LIST

AA – AMBIENT AIR
ABO – AIR BLOW-OFF
AC – ACID CLEANING
ACDW – ACID DILUTION WATER
ACF – ACID FILTRATE
ACSW – ACID SHOWER WATER
ADW – ACID DILUTION WATER
AEW – ACID EXTRACTION WATER
ALDW – ALKALINE DILUTION WATER
ALF – ALKALINE FILTRATE
ALSW – ALKALINE SHOWER WATER
AOF – ACID OVERFLOW
AS * – ALKALINITY SYSTEM
AWW – ACID WASH WATER
BC * – BOTTOM CIRCULATION
BDL – BLEACHED DEINKING LIQUOR
BEW – BASIC EXTRACTION WATER
BF * – BACKFLUSH
BFW – BOOSTED FRESH WATER
BL – BLACK LIQUOR
BLE – BLACK LIQUOR EXTRACTION
BLW – BLACK LIQUOR WASH
BOF – BASIC OVERFLOW
BPL – BYPASS PULP
BR – BIN RELIEF
BWW – BASIC WASH WATER
CB – COLD BLOW
CC – CHIP CHUTE
CFW – CHIP FEED WASHING
CHEL – CHELATE
CL – CIRCULATION LIQUOR
CLC – CLEAN CONDENSATE
CLCV – CLEAN CONDENSATE VENT
CLOW – COOLING WATER
CLO2 – CHLORINE DIOXIDE
CLW – CLARIFIED WATER
CNC * – CONTAMINATED CONDENSATE
CNCV – CONTAMINATED CONDENSATE VENT
CO – CLEAN OUT
CR – CLEANER REJECTS
CS – CONDENSATE SAMPLE
CT – CHIP TRANSFER
CW – COUNTERWASH
DBF – DIFFUSER BACKFLUSH
DC * – DESUPERHEATING CONDENSATE
DD – DIGESTER DILUTION
DF – DEFOAMER
DG – DEGASSING
D1F – D1 FILTRATE
D2F – D2 FILTRATE
DL – DILUTION LINE
DLD – DUMP LIQUOR DRAIN
DLR – DUMP LIQUOR RETURN
DOF – Do FILTRATE
DR * – DIGESTER RELIEF
DRN – DRAIN
DTPA – SODIUM DIETHYLENE TRAMINE PENTA-ACETATE
DW – DILUTION WATER
EOW – EVAPORATOR CONDENSATE
EOF – Eo FILTRATE
EXH – EXHAUST
FC – FILL LINE COLD
FE – FEEDER EXHAUST
FH * – FILL LINE HOT
FL – FILL LINE
FLI * – FEED LIQUOR IN
FP – FEEDER PURGE
FR – FIBER RECLAIM
FW – FRESH WATER
H2O2 – HYDROGEN PEROXIDE
H2SO3 – SULFUROUS ACID
H2SO4 – SULFURIC ACID
HDCA – HIGH DENSITY CLEANER ACCEPTS
HDCF – HIGH DENSITY CLEANER FEED
HDRN * – HEATER DRAIN
HP – HYDRAULIC PIPING
HR – HEATER RELIEF
HS * – HIGH PRESSURE STEAM
HV * – HEATER VENT
HW * – HOT WATER
IA – INSTRUMENT AIR
ISW – INSTRUMENT SEAL WATER
JK – JUNK LINE
KD – KNOT DRAIN
KL – KNOT LINE
KR – KNOTTER REJECTS
LC * – LOWER COOKING
LD * – LIQUOR DRAIN
LL – LIQUOR LEVEL
LR * – LIQUOR RELIEF
LS * – LOW PRESSURE STEAM
MA – MILL AIR
MC * – MODIFIED COOKING
MFW – MILL FIRE WATER
MGSO4 – MAGNESIUM SULFATE
ML – MAKE-UP LIQUOR
MW – MILL WATER
MWW – MILL WARM WATER
NA2SO3 – SODIUM SULFITE
NAOH – SODIUM HYDROXIDE
NG – NONCONDENSIBLE GAS
OF – OVERFLOW
O2 – OXYGEN
O2E – OXYGEN STAGE EXTRACTION
O2W – OXYGEN STAGE WASH
PCA – PRIMARY CLEANER ACCEPTS
PCR – PRIMARY CLEANER REJECTS
PD – PRESSATE DRAIN
PDRP – PRESSURE DIFFUSER RELIEF
PE * – PRESSURE EQUALIZATION
PKA – PRIMARY KNOTTER ACCEPTS
PKR – PRIMARY KNOTTER REJECTS
PL – PULP LINE
PLIQ – PINK LIQUOR
PLR – PULP LINE RECYCLE
PLY – POLYMER
PSF – PRIMARY SCREEN FEED
PSA – PRIMARY SCREEN ACCEPTS
PSF – PRIMARY SCREEN FEED
PSR – PRIMARY SCREEN REJECTS
PW – PURGE WATER
QSA – QUATERNARY SCREEN ACCEPTS
QSF – QUATERNARY SCREEN FEED
QSR – QUATERNARY SCREEN REJECTS
RDL – RUPTURE DISC LINE
RL – REJECTS LINE
RPL – RECYCLED PULP
RR – REJECTS RECIRCULATION
RS * – RECOVERY STEAM
SCA – SECONDARY CLEANER ACCEPTS
SCR – SECONDARY CLEANER REJECTS
SG – SCRUBBER GAS
SH – SPARE HEATER
SL – SAMPLE LINE
SM – SAMPLE
SMP – SUMP LINE
SO2 – SULFUR DIOXIDE
SP * – SOAP
SR * – STEAM RELIEF
SRF – SCREEN ROOM FILTRATE
SRR – SECONDARY REJECTS RECYCLE
SSA – SECONDARY SCREEN ACCEPTS
SSF – SECONDARY SCREEN FEED
SSL – SECONDARY SCREEN LINE
SSR – SECONDARY SCREEN REJECTS
SSW – SCRUBBER SPRAY WATER
STA – SCREEN TERTIARY ACCEPTS
SVL – SCRUBBER VENT LINE
SW – SEAL WATER
TC – TOP CIRCULATION
TD – TURPENTINE DECANTER
TDA – TERTIARY DEINKING ACCEPTS
TF – THICKENER FILTRATE
TL * – TRIM LIQUOR
TP – TURPENTINE
TPC – TURPENTINE CONDENSATE
TSA – TERTIARY SCREEN ACCEPTS
TSF – TERTIARY SCREEN FEED
TSR – TERTIARY SCREEN REJECTS
UC * – UPPER COOKING
VAC – VACUUM
VFR – VACUUM FILTRATE RETURN
VL – VENT LINE
WBL – WEAK BLACK LIQUOR
WC * – WASH CIRCULATION
WE * – WASH EXTRACTION
WHW – WHITE WATER
WL – WHITE LIQUOR
WLOX – OXIDIZED WHITE LIQUOR
WMW – WARM WATER
WP – POTABLE WATER
WR – WATER RECIRCULATION
WW – WASH WATER

* = PROCESS INSULATION REQ'D

FLOWSHEET SYMBOLS

LINE DESIGNATIONS

STOCK LINE
PRIMARY PROCESS LINE
SECONDARY PROCESS LINE
LINE SUPPLIED BY OTHERS
INSTRUMENT SIGNAL
PNEUMATIC INSTRUMENT SIGNAL
FILLED INSTRUMENT SIGNAL

CONNECTION TYPES

FLANGED
LM/LF FLANGE
SCREWED
SOCKET WELD
BUTT WELD

INSTRUMENTS

MAGNETIC FLOWMETER
ORIFICE PLATE
ORIFICE PLATE WITH SPACERS
MASS FLOWMETER
TEMPERATURE ELEMENT
TEMPERATURE WELL
PROCESS TAP
FIELD MOUNTED INSTRUMENT
PANEL MOUNTED INSTRUMENT
INSTRUMENT MOUNTED BEHIND PANEL
COMPUTER CONTROL SYS
DISTRIBUTED CONTROL SYS
DIAPHRAGM SEAL
VORTEX METER
GAMMA SOURCE

VALVES SYMBOLS

GATE
CHECK
WAFER CHECK
BALL CHECK
GLOBE
3WAY GLOBE
BALL
REDUCED BORE BALL
WAFER BALL
3WAY BALL
BUTTERFLY
LUG TYPE BUTTERFLY
KNIFE GATE
PLUG
WAFER PLUG
DIAPHRAGM
SAFETY
VACUUM
PRESSURE REDUCING
DAMPER
STRAINER
STEAM TRAP
PISTON OPERATOR
DIAPHRAGH OPERATOR
SOLENOID OPERATOR
MOTORIZED OPERATOR
SECTOR BALL
REDUCING SECTOR BALL
WAFER SECTOR BALL

LINE COMPONENTS

REDUCER
EXPANSION JOINT
FLEXIBLE HOSE
EXPANSION SLEEVE (BANDED)
LINE SPACER
SHEAR PLATE
SPECTACLE FLANGE
DRAIN
CO — CLEAN OUT DRAIN
COVERED DRAIN
OBSERVATION OR SAMPLE FUNNEL
SCREEN
ATMOS — RUPTURE DISC (PRESSURE)
ATMOS — RUPTURE DISC (VACUUM)
RUPTURE DISC (PRESS & VAC)
DESUPERHEATING NOZZLE
BLIND FLANGE
CAP
UNION
FLAME ARRESTOR
VESSEL HEADER
SAMPLE POINT
S — STEAM OUT
SO
VB — VACUUM BREAKER
BC — SUPPLIED BY CUST OR OTHERS
K04 K18 — PIPE SPECIFICATION CHANGE
RUPTURE PIN VALVE
R.O. — RESTRICTION ORIFICE

SYSTEM DESIGNATIONS

A	DIGESTER
D	BROWNSTOCK WASHING
F	BLEACHING
SR	SCREEN ROOM
X	O2 DELIGNIFICATION

PIPING SPECIFICATION KEY

SPEC	MATERIAL	SCHEDULE	RATING	FLANGE
K01	CS	80,160	3000	SPECIAL
K01A	CS/TDF	40,80,160		SPECIAL
K03	CS	XS	150	SO,SW
K04	CS	STD,XS	150	SO,SW
K05	CS	STD,XS	300	SO,SW
K06	CS	XS	300	SO,SW
K07A	CS	STD,XS	150	SO
K07B	CS	STD,XS	300	SO
K08	CS/GALV	XS	250	SC
K09	CS	STD	125	SO,SW
K10	CS	80	600	SO,SW
K12A	304L SS	10S	150	SO,SW
K12B	304L SS	10S,40S	300	SO,SW
K13	316L SS	40S	150	SO,SW
K14	304L SS	10S	150	SO,SW
K15	304L SS	5S,10S,40S,250,312,375	150	SO,SW
K16	304L SS	10S,40S	150	LJ
K17	304 SS	40S	150	SO,SW
K18	304 SS	10S,40S	150	SO,SW
K19	304 SS	40S	300	SO,SW
K20	304 SS	40S,80S	300	SO,SW
K21	304L SS	5S,10S,40S	125/150	BU,SW
K21S	304L SS	5S,10S,40S	180/150	BU,SW
K22	304L SS	40S,140A,120A,110A,100A,188,250	125/150	BU,SW
K23	316L SS	10S	150	SC,SW
K25	316L SS	40S,140A,120A,110A,100A,188,250	125/150	BU,SW
K26	316L SS	5S,10S,40S,250,312,375	125/150	BU,SW
K27	316L SS	5S,10S,40S	125/150	BU,SW
K28	316L SS	10S,40S	150	SO,SW
K29	316L SS	10S,40S	150	LJ
K30	316L SS	40S,80S	300	SO,SW
K30S	316L SS	40S	300	SO,SW
K31	317L SS	5S,10S,40S	125/150	BU,SW
K32	317L SS	40S,140A,120A,110A,100A,188,250	125/150	BU,SW
K33	317L SS	10S,40S	150	LJ,SW
K34	317L SS	10S,40S	150	LJ
K35	317L SS	5S,10S,40S,250,312	125/150	BU,SW
K37	304L SS	10S,40S	150	LJ,SW
K38	316L SS	10S,40S	150	LJ,SW
K42	CS/KL	STD	150	SC
K43	FEP/FRP	150# FLG	150	FF
K62	HDPE	AS REQ'D	150	FF
K63	PVC	80	150	FF
K64	CPVC	80	150	FF
K65A,B,C,D	FRP	AS REQ'D	25/150	BM
K66A,B,C,D	FRP	AS REQ'D	25/150	BU
K73	304L SS	TUBING		FLARELESS
K75	304L SS	TUBING		FLARELESS
K81	HAST-C-22	5S,10S,40S	150	LJ,SW
K82	TITANIUM	CALC,5S,40S	150	SO,MN
K83	TITANIUM	CALC,5S,40S	150	SO,MN
K84	TITANIUM	CALC,5S,40S	150	SO,MN

INSTRUMENT TAGGING CODE

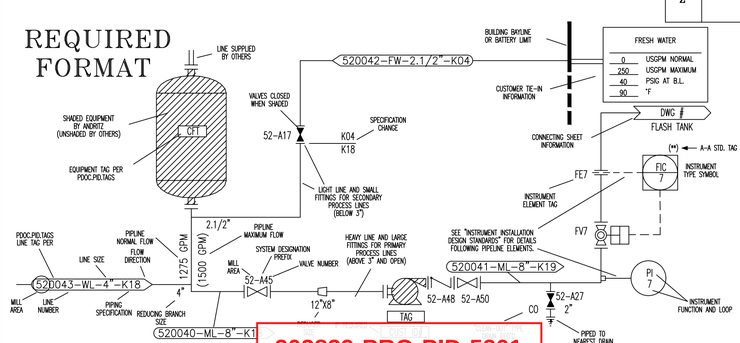
	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER FLAME		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	CONDUCTIVITY (ELECTRICAL)			CONTROL	CLOSE
D	DENSITY (MASS) OR SPECIFIC GRAVITY	DIFFERENTIAL			
E	VOLTAGE (EMF)		PRIMARY ELEM.		
F	FLOW RATE	RATIO (FRAC.)			
G	GAUGING (DIMENSIONAL)		GLASS		
H	HAND (MANUAL INIT'D)				HIGH
I	CURRENT ELECTRICAL		INDICATE		
J	POWER	SCAN			
K	CONSISTENCY				
L	LEVEL		LIGHT (PILOT)		LOW
M	MOISTURE OR HUMIDITY				MIDDLE OR INTERMED.
N	VIBRATION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE (REST.)		OPEN
P	PRESSURE OR VACUUM		POINT (TEST CONNECTION)		
Q	QUANTITY OR EVENT	INTEGRATE OR TOTALIZE			
R	RADIOACTIVITY		RECORD		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	STOP
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VISCOSITY			VALVE, DAMPER OR LOUVER	
W	WEIGHT OR FORCE		WELL		
X	UNCLASSIFIED OR TIME		UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	USER'S CHOICE			TRANSDUCER OR COMPUTE	
Z	POSITION			DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

INSTRUMENT TAG RANGE

DRAWING NO.	DRAWING TITLE	LOOP AREA NO.	LOOP NUMBERS USED
0–D710–01–1	SINGLE VESSEL HYDRAULIC DIGESTER	52	001–071
0–D710–01–2	SINGLE VESSEL HYDRAULIC DIGESTER	52	080–147
1–D710–01–3	DIGESTER CONDENSATE SYSTEM	52	155–164
1–D710–01–4	BLACK LIQUOR FILTRATION SYSTEM	52	170–189
1–D710–01–5	WATER DISTRIBUTION	52 / 53	195–196
1–D710–01–7	WHITE LIQUOR OXIDATION SYSTEM	52	641–663
1–D710–01–8	DIGESTER SEALING WATER DISTRIBUTION	52	671
1–D710–01–9	O2/SR/BP SEALING WATER DISTRIBUTION	53	676 ; 682
1–D710–01–10	DD WASHER SEAL WATER SYSTEM	52/53	685–740
2–D710–01–3	DIGESTER COOLING, SEALING, AND INSTRUMENT PURGE WATER	52	200–205
2–D710–01–4	HVLC COLLECTION SYSTEM	52	215
2–D710–01–5	NCG CONDENSER SYSTEM	52	220–231
2–D710–01–6	BAROMETRIC CHILLER SYSTEM	52	621–628
0–D710–01–13	HOT WATER SYSTEM	52	235–243
0–D710–01–3	BLOW LINE PRESSURE DIFFUSER FLOWSHEET	52	250–291
2–D710–01–1	BROWNSTOCK SPILL COLLECTION SYSTEM	52	300–307
0–D710–01–4	OXYGEN DELIGNIFICATION–FIRST STAGE	52	315–375
0–D710–01–5	OXYGEN DELIGNIFICATION–SECOND STAGE	52	385–450
0–D710–01–6	SCREEN ROOM	52	465–491
0–D710–01–7	SCREEN ROOM	52	500–549
0–D710–01–8	SCREEN ROOM DD™ WASHER	52	560–616
		53	001–014
0–D710–01–9	BLEACHING SYSTEM – Do STAGE	53	025–079
0–D710–01–10	BLEACHING SYSTEM – Eop STAGE	53	090–153
0–D710–01–11	BLEACHING SYSTEM – D1 STAGE	53	164–223
0–D710–01–12	BLEACHING SYSTEM – D2 STAGE	53	239–301
1–D710–01–1	BLEACH PLANT WHITE LIQUOR SCRUBBER SYSTEM	53	320–330
1–D710–01–2	BLEACH PLANT CONDENSATE SYSTEM	53	340–351
2–D710–01–2	O2/SR/BP COOLING, SEALING, AND INSTRUMENT PURGE WATER	53	360–367
	BOWATER TAGS	52/53	750–799 ; 850–899
	AMEC TAGS	BOP	800–849 ; 900–999

REV.	DATE	DESCRIPTION	BY
1	4–17–01	"FOR APPROVAL"	JLW
2	5–11–01	ISSUED "CERTIFIED"	WT
3	6–8–01	ADDED INSTRUMENT TAG NUMBERS, ADDED TO PIPLINE TAG LIST	PGH/WT
4	8–24–01	CHANGED INSTRUMENT TAGS	WT
5	12–5–01	UPDATED INSTRUMENT TAG RANGE TABLE	JA
6	3–22–02	ADDED WHITE LIQUOR OXIDATION SYSTEM	PGH
7	5–24–02	UPDATED INSTRUMENT TAG RANGE TABLE, ADD. K21S & K30S, UPDATED REQUIRED FORMAT	PGH
8	8–30–02	UPDATED INSTRUMENT TAG RANGE TABLE AND UPDATED FLOWSHEET SYMBOLS TABLE	JLW
9	3–7–03	UPDATED INST. TAG RANGE TABLE. ADDED WAFER SECTOR BALL	JLW

REQUIRED FORMAT



203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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ANDRITZ AHLSTROM
Andritz–Ahlstrom Inc.
Ridge Center
Glens Falls, New York 12801

BOWATER
COATED PAPER & F
P.O. Box 7, Catawba, So

FLOWSHEET LEGEN

BOWATER
CATAWBA, S.C.

DESIGNED BY:	DATE:	PROJECTION	REFERENCE DW
JLW	4–17–01		
CHECKED BY:	DATE:		
PJP	4–17–01		
APPROVED BY:	DATE:	SCALE:	DRAWING
MMC	4–17–01	NONE	1–D710

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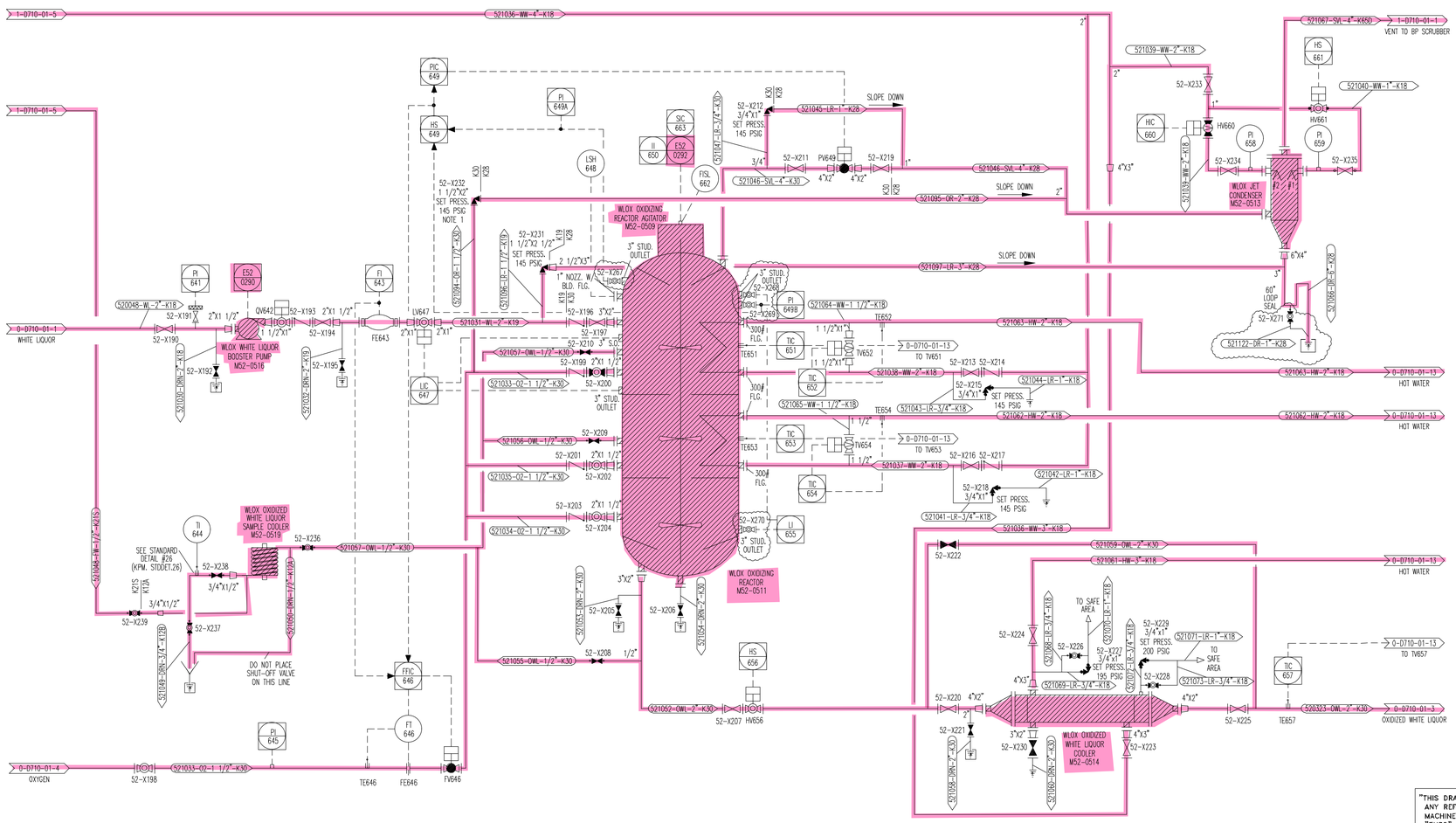
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
2	3-22-02	GENERAL REVISIONS, ISSUED FOR APPROVAL	PGH	PJP	MMC
3	5-24-02	ADDED LINES 521636-521639, LINE SIZES, REVSED SPEC'S.	PGH	PJP	MMC
		& EQUIPMENT NAMES, ISSUED CERTIFIED			
		ADDED SRV SIZES AND SET PRESSURES			
4	8-30-02	REV'D. VALVES HV661,PV649,TV652,AND LV647. REV'D. PI645	JLW	PJP	MMC
5	3-7-03	ADDED VALVES 52-X267 - 271. ADDED LINE 521122-DR-1"	JLW	PJP	MMC



ALL EQUIPMENT ABANDONED

CERTIFIED

NOTE:

1. LOCATE VALVE 52-X232 AT THE HIGHEST POINT POSSIBLE ON LINE 521033.

PIPING SPECIFICATION KEY					
K12A	150#	304L SS	10S	160 PSIG @ 400°F	
K12B	300#	304L SS	10S, 40S	400 PSIG @ 400°F	
K18	150#	304L SS	10S,40S	150 PSIG @ 400°F	
K19	300#	304L SS	40S,80S	375 PSIG @ 400°F	
K21	125#	304L SS	5S,10S,40S	125 PSIG @ 250°F	
K21S	180#	304L SS	5S,10S,40S	180 PSIG @ 120°F	
K28	150#	316L SS	40S,10s	175 PSIG @ 300°F	
K30	300#	316L SS	40S,80S	375 PSIG @ 400°F	

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COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

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WHITE LIQUOR OXIDATION SYSTEM

ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Ridge Center
Glens Falls, New York 12801

DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
PGH	11-14-01			
CHECKED BY:	DATE:			
PJP	11-14-01			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	11-14-01	NONE	1-D710-01-7	5

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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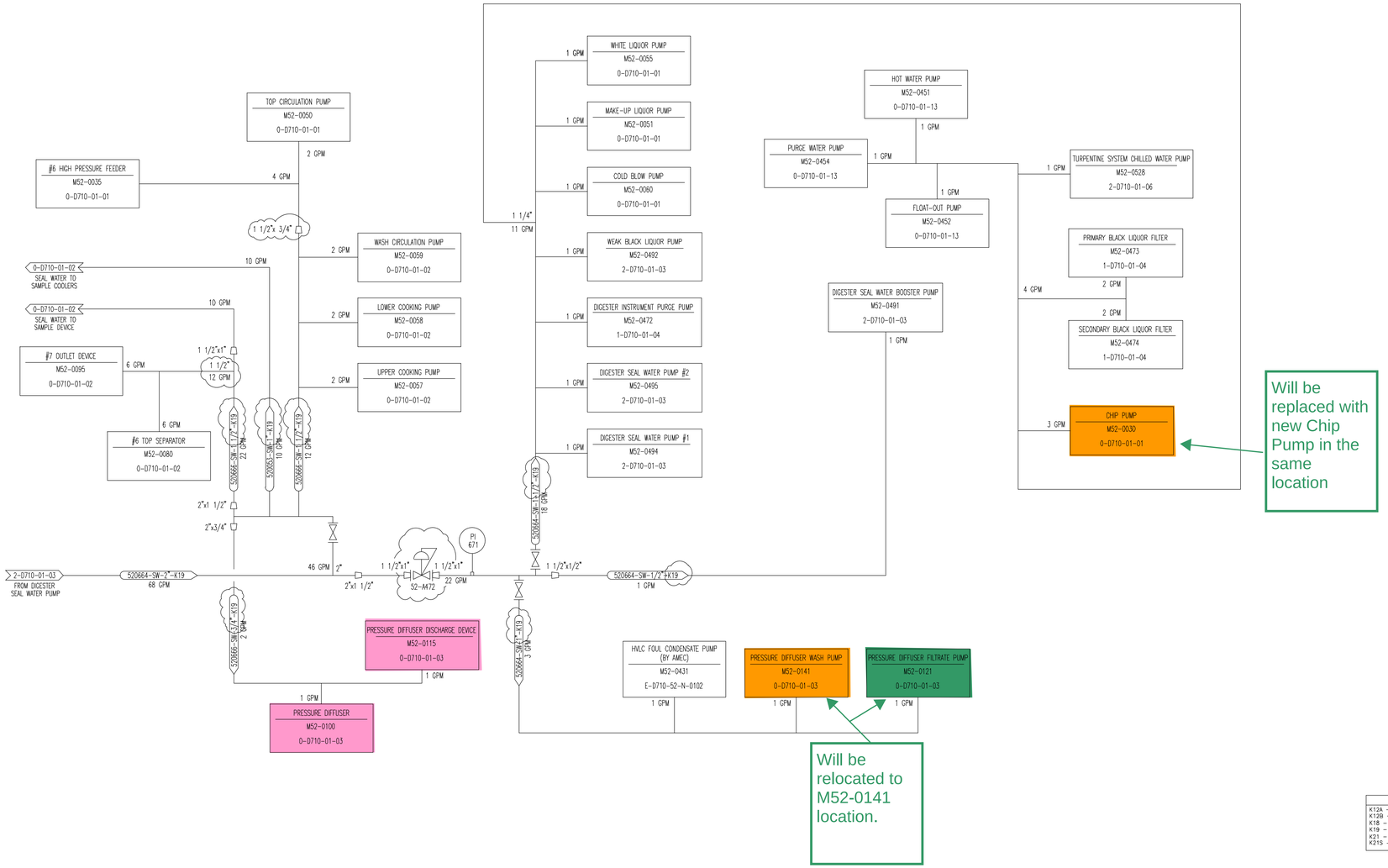
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
1	8-30-02	ISSUED CERTIFIED	KJC	PJP	MMC
2	3-7-03	VALVE TAG 52-A472 WAS 52-F562.REV'D PER AMEC MARK-UP	JLW	PJP	MMC



Will be replaced with new Chip Pump in the same location

Will be relocated to M52-0141 location.

SPECIFICATION KEY					
K12A	150#	304L SS	10S	160 PSIG @ 100°F
K12B	300#	304L SS	10S,40S	400 PSIG @ 400°F
K18	150#	304L SS	10S,40S	160 PSIG @ 400°F
K19	300#	304L SS	40S,80S	375 PSIG @ 400°F
K21	125#	304L SS	5S,10S,40S	125 PSIG @ 250°F
K21S	150#	304L SS	5S,10S,40S	180 PSIG @ 120°F

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P.O. Box 7, Catawba, South Carolina 29704

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DIGESTER SEALING
WATER DISTRUBUTION

CATAWBA, S.C.

ANDRITZ
Andritz Inc.
Kraft Mill Systems
Glens Falls, NY
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DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
KJC	8-22-02			
CHECKED BY:	DATE:	D710		
PJP	8-30-02			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	8-30-02	NONE	1-D710-01-8	2

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

REV.	DATE	DESCRIPTION	BY
1	8-30-02	ISSUED CERTIFIED	KJC
2	1-13-03	ADDED TABLE, REVISED PER AMEC MARK UP	JLW
3	3-7-03	ADDED QV VALVES, ADDED LINE TAGS	JLW

#2 O2 REACTOR MC® PUMP M52-0210 0-D710-01-04 — 5 GPM — QV371 1/2"
PRIMARY KNOTTER FEED PUMP M52-0280 0-D710-01-06 — 1 GPM
SCREEN ROOM FEED TANK AGITATOR M52-0276 0-D710-01-06 — 1 GPM
SECONDARY KNOTTER M52-0290 0-D710-01-06 — 1 GPM
SHIVE THICKENER M52-0293 0-D710-01-06 — 1 GPM
QUATERNARY SCREEN M52-0330 0-D710-01-07 — 2 GPM
PRIMARY KNOTTER M52-0285 0-D710-01-06 — 2 GPM
TERTIARY SCREEN M52-0320 0-D710-01-07 — 2 GPM
SECONDARY SCREEN M52-0310 0-D710-01-07 — 2 GPM
#2 PRIMARY SCREEN M52-0302 0-D710-01-07 — 2 GPM
#1 PRIMARY SCREEN M52-0301 0-D710-01-07 — 2 GPM
FIBERLINE MILL WATER BOOSTER PUMP (BY AMEC) M52-0496 1-D710-01-05 — 1 GPM
QUATERNARY SCREEN FEED PUMP M52-0325 0-D710-01-07 — 1 GPM
TERTIARY SCREEN FEED PUMP M52-0315 0-D710-01-07 — 1 GPM
D1 STAGE FRONT WASH PUMP M53-0217 0-D710-01-12 — 1 GPM
D2 STAGE PERFORATED PLATE WASH PUMP M53-0210 0-D710-01-12 — 1 GPM
Eop STAGE REAR WASH PUMP M53-0152 0-D710-01-11 — 1 GPM
Eop STAGE DD WASHER INLET DILUTION PUMP M53-0088 0-D710-01-10 — 1 GPM
Eop STAGE PERFORATED PLATE WASH PUMP M53-0090 0-D710-01-10 — 1 GPM
CLEANER FEED PUMP M52-0335 0-D710-01-07 — 1 GPM
PRIMARY SCREEN FEED PUMP M52-0300 0-D710-01-07 — 1 GPM
SECONDARY SCREEN FEED PUMP M52-0305 0-D710-01-07 — 1 GPM
D1 STAGE REAR WASH PUMP M53-0216 0-D710-01-12 — 1 GPM
Do STAGE FRONT WASH PUMP M53-0150 0-D710-01-11 — 1 GPM
D1 STAGE PERFORATED PLATE WASH PUMP M53-0142 0-D710-01-11 — 1 GPM
Do STAGE REAR WASH PUMP M53-0091 0-D710-01-10 — 1 GPM
Do STAGE PERFORATED PLATE WASH PUMP M53-0045 0-D710-01-09 — 1 GPM
16 GPM — 8 GPM — 4 GPM — 4 GPM
QV601 1/2" — 5 GPM
BLEACH FEED TANK MC® PUMP M52-0375 0-D710-01-08
O2/SR/BP SEAL WATER BOOSTER PUMP M53-0276 2-D710-01-02 — 1 GPM
#1 PRESSURE THICKENER M52-0341 0-D710-01-08
#2 PRESSURE THICKENER M52-0342 0-D710-01-08
QV287 1/2" — 5 GPM
BLEACHED HD FEED MC® PUMP M53-0230 0-D710-01-12
QV218 1/2" — 5 GPM
D2 STAGE FEED MC® PUMP M53-0160 0-D710-01-11
QV146 1/2" — 5 GPM
D1 STAGE FEED MC® PUMP M53-0100 0-D710-01-10
530496-SW-3"-K19 — 66 GPM
QV675 1/2" — 5 GPM
Eop STAGE FEED MC® PUMP M53-0060 0-D710-01-09
Do STAGE DD WASHER FLUSH M53-0025 0-D710-01-09 — 8 GPM
Eop STAGE DD WASHER FLUSH M53-0070 0-D710-01-10 — 8 GPM
D1 STAGE DD WASHER FLUSH M53-0125 0-D710-01-11 — 8 GPM
QV678 1/2" — 1 GPM
SCREEN ROOM PERFORATED PLATE WASH PUMP M52-0360 0-D710-01-08 — 8 GPM
2"x1"
531115-SW-2"-K19
PI 677
PI 676
53-F574
53-F570
4"x2"
3"x2"
WLOX WHITE LIQUOR BOOSTER PUMP M52-0516 1-D710-01-07 — 1 GPM
QV679
71 GPM — 60 GPM — 8 GPM — 9 GPM — 34 GPM
#1 POST O2 PERFORATED PLATE WASH PUMP M52-0195 0-D710-01-04 — 1 GPM
#2 POST O2 PERFORATED PLATE WASH PUMP M52-0251 0-D710-01-05 — 1 GPM
D2 STAGE VACUUM FILTRATE RETURN PUMP M53-0215 0-D710-01-12 — 1 GPM
O2/SR/BP SEAL WATER PUMP NO. 1 M53-0288 2-D710-01-02 — 1 GPM
530496-SW-3"-K19 — 6 GPM — 3"x1"
530496-SW-3"-K19 — 63 GPM
Do STAGE CLO2 AHLMIX MIXER M53-0010 0-D710-01-09 — 2 GPM
SPILL COLLECTION PUMP M52-0480 2-D710-01-01 — 1 GPM
SPILL COLLECTION TANK AGITATOR M52-0484 2-D710-01-01 — 1 GPM
#1 POST O2 VACUUM FILTRATE RETURN PUMP M52-0197 0-D710-01-04 — 1 GPM
#2 POST O2 VACUUM FILTRATE RETURN PUMP M52-0253 0-D710-01-05 — 1 GPM
SCREEN ROOM VACUUM FILTRATE RETURN PUMP M52-0362 0-D710-01-08 — 1 GPM
DD WASHER SEAL WATER PUMP M53-0282 2-D710-01-02 — 1 GPM
41 GPM — 10 GPM
D1 STAGE VACUUM FILTRATE RETURN PUMP M53-0144 0-D710-01-11 — 1 GPM
Eop STAGE VACUUM FILTRATE RETURN PUMP M53-0092 0-D710-01-10 — 1 GPM
Do STAGE VACUUM FILTRATE RETURN PUMP M53-0046 0-D710-01-09 — 1 GPM
O2/SR/BP SEAL WATER PUMP NO. 2 (SPARE) M53-0290 2-D710-01-02 — 1 GPM
0-D710-01-10 — 530122-SW-1"-K19 — 1 GPM — Eop STAGE DESUPERHEATER
530495-SW-4"-K19 — 25 GPM
Eop STAGE AHLMIX MIXER M53-0065 0-D710-01-10 — 2 GPM
D1 STAGE CLO2 AHLMIX MIXER M53-0105 0-D710-01-11 — 2 GPM
245 GPM — 530496-SW-4"-K19
530496-SW-1"-K19
D2 STAGE CLO2 AHLMIX MIXER M53-0165 0-D710-01-12 — 2 GPM
41 GPM — 530496-SW-2"-K19
530496-SW-2"-K19
#1 O2 REACTOR MC® PUMP M52-0150 0-D710-01-03 — 4 GPM
#1 O2 REACTOR DEGAS PUMP M52-0151 0-D710-01-03
BLOW TANK DISCHARGE SCRAPER M52-0131 0-D710-01-03 — 1 GPM
QV339 1/2" — 4 GPM
#1 POST-O2 DD WASHER MC® PUMP M52-0170 0-D710-01-04
#1 POST O2 DD WASHER DEGAS PUMP M52-0171 0-D710-01-04
#1 POST O2 DD WASHER FILTRATE PUMP M52-0187 0-D710-01-04 — 1 GPM
QV412 1/2" — 4 GPM
#2 POST-O2 DD WASHER MC® PUMP M52-0235 0-D710-01-05
#2 POST O2 DD WASHER DEGAS PUMP M52-0236 0-D710-01-05
#1 POST O2 DD WASHER FRONT WASH PUMP M52-0200 0-D710-01-05 — 1 GPM
#1 POST O2 DD WASHER REAR WASH PUMP M52-0201 0-D710-01-05 — 1 GPM
#2 POST O2 DD WASHER WASH PUMP M52-0258 0-D710-01-08 — 1 GPM
SCREEN ROOM DILUTION PUMP M52-0298 0-D710-01-08 — 1 GPM
TANK DILUTION PUMP M52-0371 0-D710-01-08 — 1 GPM
9 GPM — 530496-SW-1 1/2"-K19
531115-SW-2"-K19
20 GPM
OXYGEN PLANT (BY BOWATER) ---
QV680
530496-SW-1"-K19
Eop STAGE REACTOR INLET FLOW DISCHARGER M53-0066 0-D710-01-10 — 2 GPM
Eop STAGE REACTOR OUTLET FLOW DISCHARGER M53-0069 0-D710-01-10 — 4 GPM
#2 O2 REACTOR OUTLET FLOW DISCHARGER M52-0230 0-D710-01-05
WLOX OXIDIZING REACTOR AGITATOR M52-0509 1-D710-01-07 — 2 GPM
QV294 1/2" — 1 GPM
BLEACHED HD BOOSTER MC® PUMP M53-0235 (BY AMEC) 0-D710-01-12
#1 POST-O2 VACUUM PUMP M52-0198 0-D710-01-04 — 1 GPM
#2 POST-O2 VACUUM PUMP M52-0254 0-D710-01-05 — 1 GPM
SCREEN ROOM VACUUM PUMP M52-0365 0-D710-01-08 — 1 GPM
D2 STAGE VACUUM PUMP M53-0205 0-D710-01-12 — 1 GPM
D1 STAGE VACUUM PUMP M53-0145 0-D710-01-11 — 1 GPM
Eop STAGE VACUUM PUMP M53-0095 0-D710-01-10 — 1 GPM
BLEACH PLANT WHITE LIQUOR SCRUBBER PUMP M53-0246 1-D710-01-01 — 1 GPM
Do STAGE VACUUM PUMP M53-0039 0-D710-01-09 — 1 GPM
8 GPM — 530496-SW-1 1/2"-K19
9 GPM — 530496-SW-1 1/2"-K19
QV681 1/2" — 4 GPM
530496-SW-1"-K19
D2 STAGE DOWNFLOW TOWER DISCHARGE SCRAPER M53-0176 0-D710-01-12 — 1 GPM
QV255 1/2" — 4 GPM
D2 DD WASHER FEED MC® PUMP M53-0180 0-D710-01-12
D2 STAGE DD WASHER FEED DEGAS PUMP M53-0181 0-D710-01-12
D1 STAGE DOWNFLOW TOWER DISCHARGE SCRAPER M53-0116 0-D710-01-11 — 1 GPM
QV179 1/2" — 10 GPM — 4 GPM
D1 DD WASHER FEED MC® PUMP M53-0120 0-D710-01-11
D1 STAGE DD WASHER FEED DEGAS PUMP M53-0121 0-D710-01-11
BLEACH FEED TANK DISCHARGE SCRAPER M53-0002 0-D710-01-08 — 1 GPM
QV010 1/2" — 4 GPM
Do STAGE MC® PUMP M53-0005 0-D710-01-08
Do STAGE DEGAS PUMP M53-0006 0-D710-01-08
QV040 1/2" — 4 GPM
Do STAGE DD WASHER FEED MC® PUMP M53-0020 0-D710-01-09
Do STAGE DD WASHER FEED DEGAS PUMP M53-0021 0-D710-01-09
0-D710-01-5 — 1 GPM — 520559-SW-1"-K19 — #2 O2 STAGE DESUPERHEATER
0-D710-01-4 — 1 GPM — 530460-SW-1"-K19 — #1 O2 STAGE DESUPERHEATER
#1 O2 AHLMIX MIXER M52-0160 0-D710-01-04 — 2 GPM
QV682
530495-SW-1"-K19
#1 O2 REACTOR OUTLET FLOW DISCHARGER M52-0163 0-D710-01-04 — 4 GPM
#2 O2 REACTOR INLET FLOW DISCHARGER M52-0222 0-D710-01-05 — 2 GPM
#2 O2 AHLMIX MIXER M52-0220 0-D710-01-05 — 2 GPM

SPECIFICATION KEY

K12A	150#	304L SS	10S	160 PSIG @ 100°F
K12B	300#	304L SS	10S,40S	400 PSIG @ 400°F
K18	150#	304L SS	10S,40S	160 PSIG @ 400°F
K19	300#	304L SS	40S,80S	375 PSIG @ 400°F
K21	125#	304L SS	5S,10S,40S	125 PSIG @ 250°F
K21S	180#	304L SS	5S,10S,40S	180 PSIG @ 120°F

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Kraft Mill Systems
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O2/SR/BP SEALING
WATER DISTRUBUTIO
CATAWBA, S.C.

DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.
KJC	8-22-02		
CHECKED BY:	DATE:		
PJP	8-30-02		D710
APPROVED BY:	DATE:	SCALE:	DRAWING NU
MMC	8-30-02	NONE	1-D710-

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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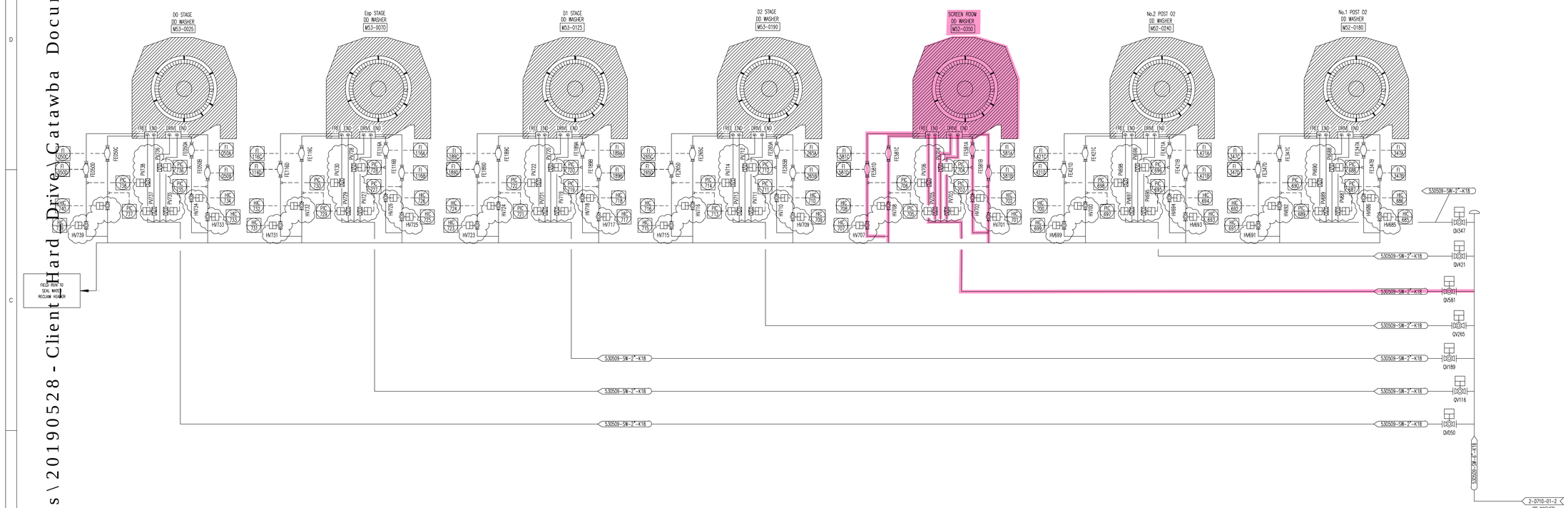
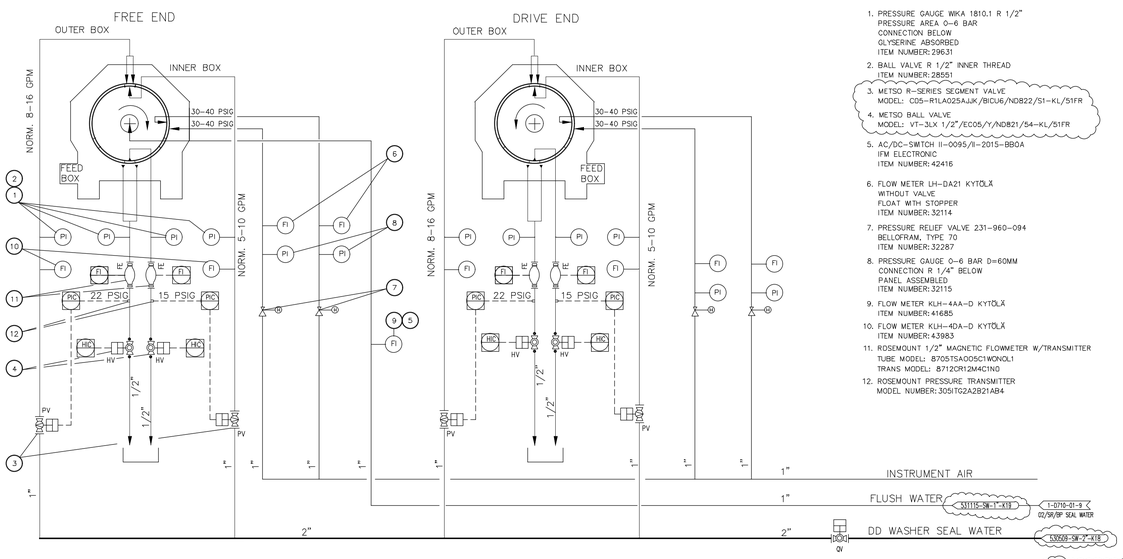
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
1	01-03-03	ISSUED CERTIFIED	JLW	PJP	MMC
2	3-7-03	REVISED VALVES. REVISED NOTES 3 AND 4	JLW	PJP	MMC





1. PRESSURE GAUGE WIKA 1810.1 R 1/2"
   PRESSURE AREA 0-6 BAR
   CONNECTION BELOW
   GLYSERINE ABSORBED
   ITEM NUMBER: 29631
2. BALL VALVE R 1/2" INNER THREAD
   ITEM NUMBER: 28551
3. METSO R-SERIES SEGMENT VALVE
   MODEL: C05-R1LA025AJJK/BICU6/ND822/S1-KL/51FR
4. METSO BALL VALVE
   MODEL: VT-3LX 1/2"/EC05/Y/ND821/54-KL/51FR
5. AC/DC-SWITCH II-0095/II-2015-BB0A
   IFM ELECTRONIC
   ITEM NUMBER: 42416
6. FLOW METER LH-DA21 KYTÖLÄ
   WITHOUT VALVE
   FLOAT WITH STOPPER
   ITEM NUMBER: 32114
7. PRESSURE RELIEF VALVE 231-960-094
   BELLOFRAM, TYPE 70
   ITEM NUMBER: 32287
8. PRESSURE GAUGE 0-6 BAR D=60MM
   CONNECTION R 1/4" BELOW
   PANEL ASSEMBLED
   ITEM NUMBER: 32115
9. FLOW METER KLH-4AA-D KYTÖLÄ
   ITEM NUMBER: 41685
10. FLOW METER KLH-4DA-D KYTÖLÄ
    ITEM NUMBER: 43983
11. ROSEMOUNT 1/2" MAGNETIC FLOWMETER W/TRANSMITTER
    TUBE MODEL: 8705TSA005C1WONQL1
    TRANS MODEL: 8712CR12M4C1N0
12. ROSEMOUNT PRESSURE TRANSMITTER
    MODEL NUMBER: 3051T02A2B21AB4

CERTIFIED

PIPING SPECIFICATION KEY				
K18	150#	304L SS	105.40S	160 PSIG @ 400°F
K19	300#	304L SS	405.80S	375 PSIG @ 400°F

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BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

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DD WASHER SEAL WATER SYSTEM

ANDRITZ
Andritz Inc.
Kraft Mill Systems
Glens Falls, NY

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DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
JLW	10-29-02			
CHECKED BY:	DATE:			
PJP	01-03-03			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	01-03-03	NONE	1-D710-01-10	2

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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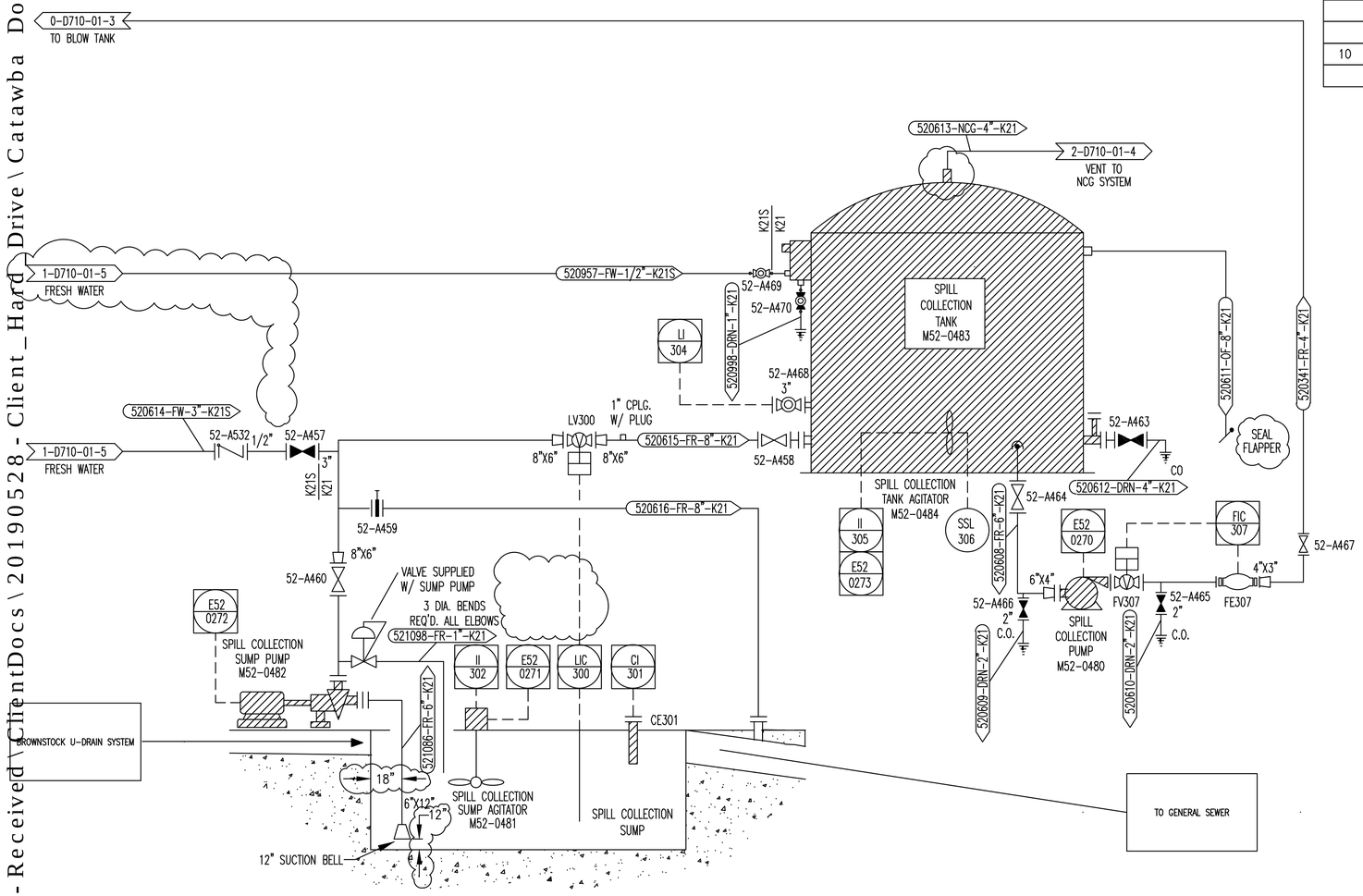
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-17-01	ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED"; ADDED MOTOR & EQUIPMENT NUMBERS	PGH	PJP	MMC
5	6-8-01	ADDED LINE & INSTRUMENT TAGS	PGH	PJD	MMC
6	8-24-01	ADDED SEAL LOOP & OVERFLOW FLAPPER	WT	PJP	MMC
7	12-5-01	REV. LINE 520611 WAS 6", ADD. SIZES FOR FV307, LV300	WT/PGH	PJP	MMC
		REMOVED FLAPPER, RELOCATED LINE 520957			
8	3-22-02	REVISED VALVES 52-A468, A469, A470, REMOVED FLG.'S	PGH	PJD	MMC
		ADDED PURGE LINE			
9	5-24-02	DELETED LINE 520617, ADDED VALVE 52-A532, LINE 521098	PGH	PJP	MMC
		& 1" CPLG, REVISED SUCTION BELL & MOVED REDUCER			
		DELETED 52-A462, REMOVED SPEC. FLANGE, ADDED SIC-303			
10	8-30-02	REV'D. SEAL CALLOUT. REV'D. DIMENSIONS FOR SUCTION BELL	JLW	PJP	MMC
		REVISED TANK VENT CONN. DELETED SIC-303			



CERTIFIED

NOTE:

1. MILL AREA #52

DESIGN INFORMATION

1. SLOPE OF U-DRAINS = 0.0625"/FT.
2. SLOPE OF OVER FLOW TO MAIN SEWER = 0.0625"/FT.
3. SLOPE OF SLAB TO FLOOR DRAINS = 0.125"/FT.
4. CRC STARTS PUMP
5. LOW LEVEL STOPS PUMP
6. TOTAL SUMP AREA 8'-0" X 12'-0" X 8' DEEP
7. SEWER PIPE TO MAIN U-DRAIN
8. PUMP DISCHARGE VALVE INTERLOCKED WITH PUMP MOTOR

DIGESTER SPECIFICATION KEY
K04 --- 150# --- CS ---------- STD------- 200PSIG @ 400°F
K21 --- 125# --- 304L SS ------ 5S,10S,40S----125PSIG @ 250°F
K21S -- 180# --- 304L SS ------ 5S,10S,40S----180 PSIG @ 120°F

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BROWNSTOCK SPILL COLLECTION SYSTEM

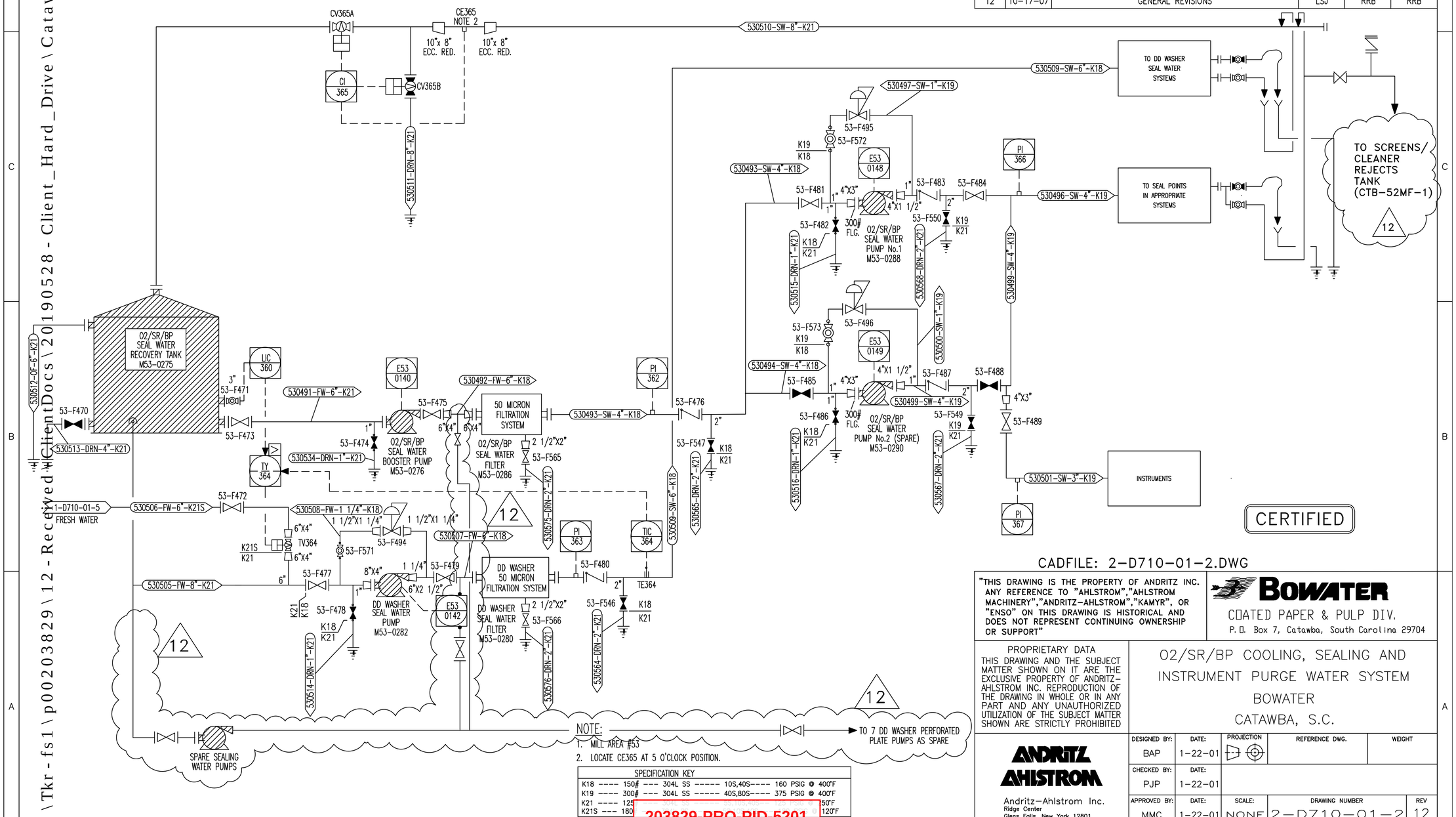
BOWATER
CATAWBA, S.C.

ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Ridge Center
Glens Falls, New York 12801

DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
BAP	1-22-01			
CHECKED BY:	DATE:			
PJP	1-22-01			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	1-22-01	NONE	2-D710-01-1	10

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-17-01	ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED"; ADDED MOTOR AND EQUIPMENT NUMBERS	PGH	PJP	MMC
5	6-8-01	ADDED INSTRUMENT AND LINE TAGS	PGH/WT	JA	MMC
6	8-24-01	ADDED DD WASHER SEAL WATER TEMP. CONTROL	WT	PJP	MMC
7	12-5-01	ADD. 2" DRAINS, REV. DDW TO K18, RECOVERY LINES WERE 6"	WT/PGH	PJP	MMC
8	3-22-02	REV. DRAIN VALVES, LINE TAGS, ADD. (2) DRAINS, LINE SIZES,	PGH	KWF	MMC
		DELETED O2/SR/BP INST. PURGE PUMP & LINE 530504			
9	5-24-02	ADDED NOTES & VALVE 53-F489 WAS CLOSED, REVISED	PGH	PJP	MMC
		SPEC WAS K21, ADDED FILTER DRAIN VALVES			
10	8-30-02	ADDED ECCENTRIC REDUCERS. DELETED LINE TAG 530518	JLW	PJP	MMC
		ADDED REDUCER AT SEAL WATER FILTER INLET. TV364 WAS 6"			
11	3-7-03	DELETED LINE 520460 & 530122. ADDED VALVES F571,F572,	JLW	PJP	MMC
		AND F573. REVISED PIPING AROUND PUMPS			
12	10-17-07	GENERAL REVISIONS	LSJ	RRB	RRB



NOTE:
1. MILL AREA #53
2. LOCATE CE365 AT 5 O'CLOCK POSITION.

SPECIFICATION KEY					
K18	150#	304L SS	10S,40S	160 PSIG @	400°F
K19	300#	304L SS	40S,80S	375 PSIG @	400°F
K21	125	304L SS	05/10S,40S	125 PSIG @	50°F
K21S	180	304L SS	05/10S,40S	180 PSIG @	120°F

CADFILE: 2-D710-01-2.DWG

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O2/SR/BP COOLING, SEALING AND INSTRUMENT PURGE WATER SYSTEM
BOWATER
CATAWBA, S.C.

ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Ridge Center
Glens Falls, New York 12801

DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
BAP	1-22-01			
CHECKED BY:	DATE:			
PJP	1-22-01			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	1-22-01	NONE	2-D710-01-2	12

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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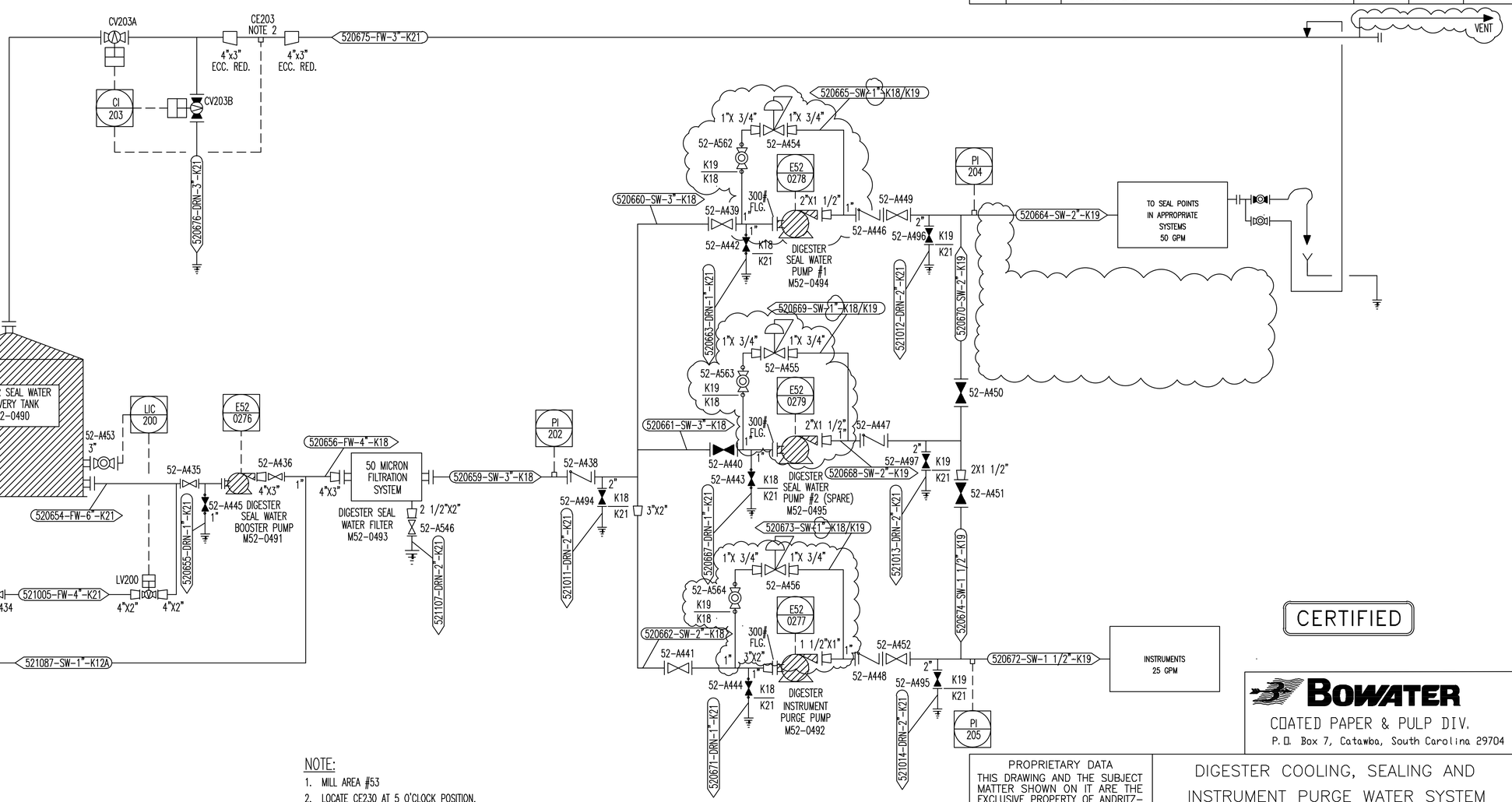
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-17-01	ISSUED "FOR APPROVAL"	JLW	PJP	MMC
4	5-11-01	ISSUED "CERTIFIED" ; ADDED MOTOR & EQUIPMENT NUMBERS	WT/PGH	PJP	MMC
5	6-8-01	ADDED LINE & INSTRUMENT TAGS	PGH	PJD	MMC
6	8-24-01	VALVE 52-A443 WAS 52-A441, ADDED FLOW,REV'D. LINE TAG	WT	PJP	MMC
7	12-5-01	ADDED 2" DRAINS, ADDED SAMPLE COOLER LINE	WT	MMC	PJP
		ADDED VALVE TAGGING. REV'D. LINE SPEC			
8	3-22-02	REVISED DRAIN VALVES, 52-A453 WAS A KNIFEGATE & SPEC	PGH	PJD	MMC
		WAS K12B, DELETED LINE 520657, ADDED 521087			
9	5-24-02	ADDED NOTES, REVISED SPEC. LINE 521087	PGH	PJP	MMC
		ADDED FILTER DRAIN VALVE			
10	8-30-02	ADDED ECCENTRIC REDUCERS. VALVE 52-A546 WAS SHOWN	JLW	PJP	MMC
		NORMALLY CLOSED. DEL. 3"x 2"RED. 4"x 3" RED. WAS 4"x 2"			
11	2-7-03	DELETED LINES 520053 & 520666. DELETED TAG 521628. ADDED	JLW	PJP	MMC
		VALVES A562, A563, & A564. REV'D PIPING AROUND PUMPS			



CERTIFIED

NOTE:

1. MILL AREA #53
2. LOCATE CE230 AT 5 O'CLOCK POSITION.

SPECIFICATION KEY						
K12B	300#	304L SS	10S, 40S	400 PSIG @ 400°F
K12A	150#	304L	10S	160 PSIG @ 400°F
K18	150#	304L SS	10S,40S	160 PSIG @ 400°F
K19	300#	304L SS	40S,80S	375 PSIG @ 400°F
K21	125#	304L SS	5S,10S,40S	125 PSIG @ 250 °F

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DIGESTER COOLING, SEALING AND INSTRUMENT PURGE WATER SYSTEM
BOWATER
CATAWBA, S.C.

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ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Ridge Center
Glens Falls, New York 12801

DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
BAP	1-22-01			
CHECKED BY:	DATE:			
PJP	1-22-01			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	1-22-01	NONE	2-D710-01-3	11

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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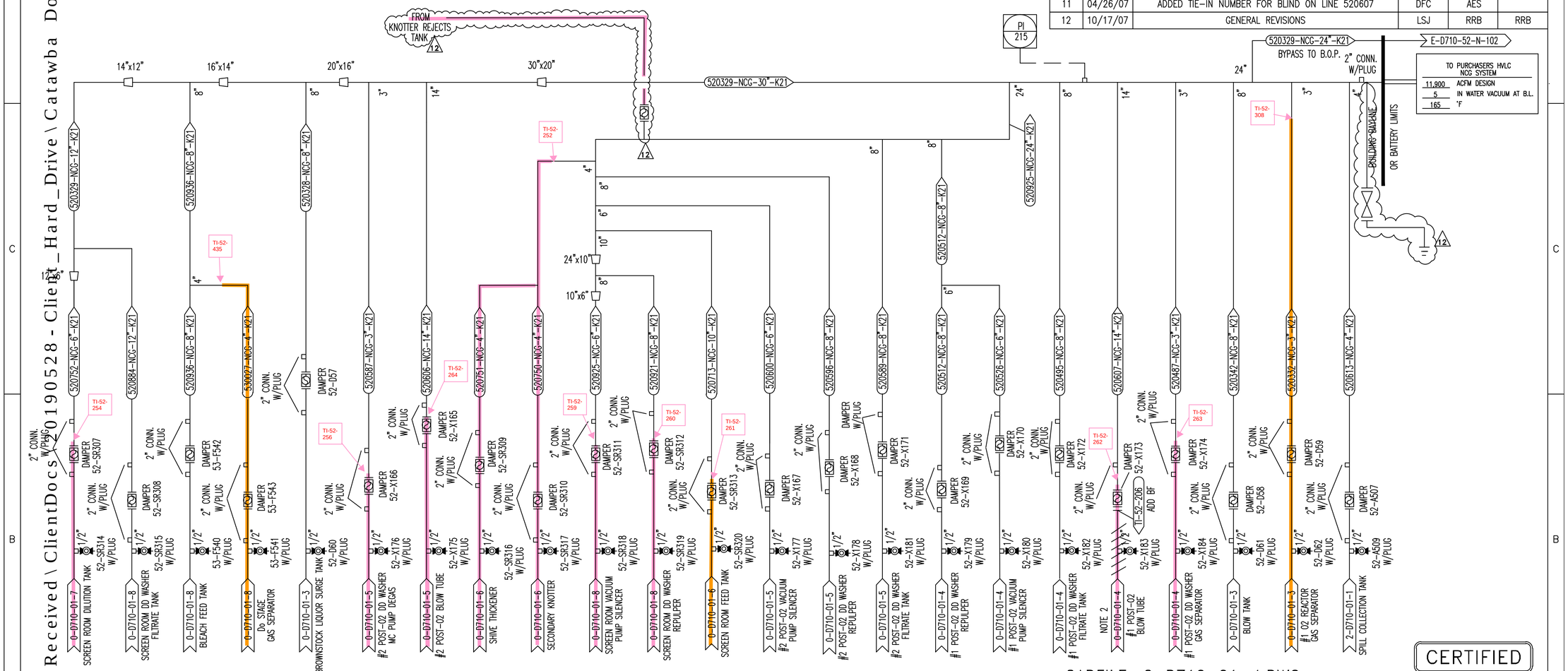
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
2	4-17-01	REVISED LINE SIZES. ISSUED "FOR APPROVAL"	JLW	PJP	MMC
3	5-11-01	ISSUED "CERTIFIED"	PGH	PJP	MMC
4	6-8-01	ADDED LINE & INSTRUMENT TAGS & NEW LINE	PGH/WT	PJD	MMC
5	12-5-01	REVISED FLOWSHEET PER PIPING LAYOUT, ADD. DAMPER TAGS	WT/PGH	PJP	MMC
6	3-22-02	REVISED DAMPER VALVE, ADDED SPEC. FLANGES	PGH	KWF	MMC
7	5-24-02	REVISED VALVES WERE OPEN, NOTES	PGH	KWF	MMC
8	8-30-02	CHANGED LINE TAGS, MOVED BRANCH 520512	JLW	PJP	MMC
9	3-7-03	24" BYPASS TO B.O.P. WAS 20"	JLW	PJP	MMC
10	01/29/07	REMOVE LINE 520607 TO DAMPER	DFC	AES	
11	04/26/07	ADDED TIE-IN NUMBER FOR BLIND ON LINE 520607	DFC	AES	
12	10/17/07	GENERAL REVISIONS	LSJ	RRB	RRB



CERTIFIED

CADFILE: 2-D710-01-4.DWG

NOTE:

1. MILL AREA #52
2. REMOVE LINE 520607-NCG-14-K21 BETWEEN BLOW TUBE AND DAMPER. LEAVE DAMPER IN PLACE. INSTALL BLIND FLANGE ON DAMPER.

SPECIFICATION KEY
K21 ---- 125# --- 304L SS ----- 5S,10S,40S-- 125 PSIG @ 250°F

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HVLC COLLECTION SYSTEM

BOWATER
CATAWBA, S.C.

ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Ridge Center
Glens Falls, New York 12801

DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
BAP	1-22-01			
CHECKED BY:	DATE:			
PJP	1-22-01			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	1-22-01	NONE	2-D710-01-4	12

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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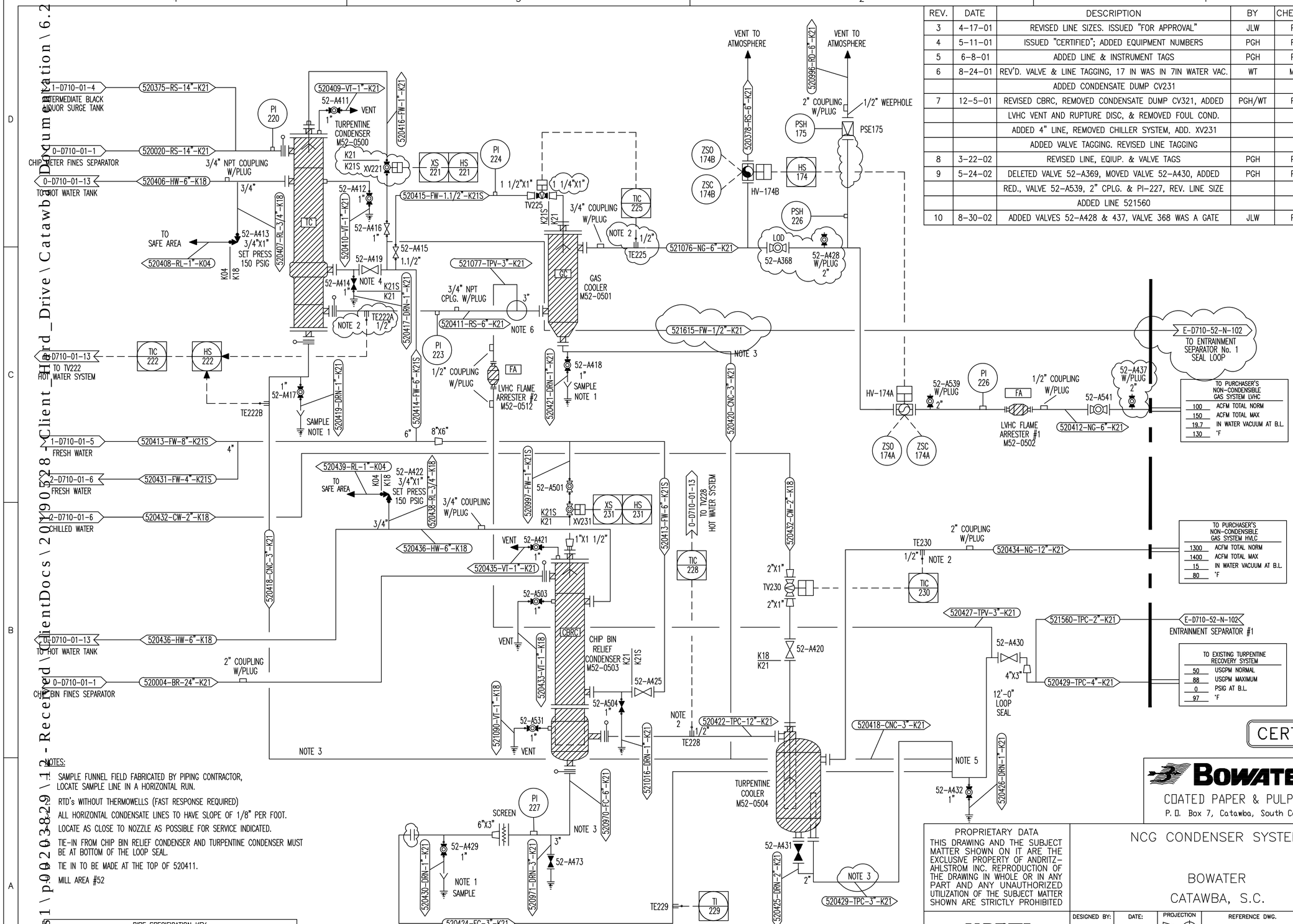
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
3	4-17-01	REVISED LINE SIZES. ISSUED "FOR APPROVAL"	JLW	PJP	PJP
4	5-11-01	ISSUED "CERTIFIED"; ADDED EQUIPMENT NUMBERS	PGH	PJP	PJP
5	6-8-01	ADDED LINE & INSTRUMENT TAGS	PGH	PJD	PJD
6	8-24-01	REV'D. VALVE & LINE TAGGING, 17 IN WAS IN 7IN WATER VAC.	WT	MMC	PJP
		ADDED CONDENSATE DUMP CV231			
7	12-5-01	REVISED CBRC, REMOVED CONDENSATE DUMP CV321, ADDED	PGH/WT	PJP	MMC
		LVHC VENT AND RUPTURE DISC, & REMOVED FOUL COND.			
		ADDED 4" LINE, REMOVED CHILLER SYSTEM, ADD. XV231			
		ADDED VALVE TAGGING. REVISED LINE TAGGING			
8	3-22-02	REVISED LINE, EQIUP. & VALVE TAGS	PGH	PJD	MMC
9	5-24-02	DELETED VALVE 52-A369, MOVED VALVE 52-A430, ADDED	PGH	PJD	MMC
		RED., VALVE 52-A539, 2" CPLG. & PI-227, REV. LINE SIZE			
		ADDED LINE 521560			
10	8-30-02	ADDED VALVES 52-A428 & 437, VALVE 368 WAS A GATE	JLW	PJP	MMC



NOTES:

1. SAMPLE FUNNEL FIELD FABRICATED BY PIPING CONTRACTOR, LOCATE SAMPLE LINE IN A HORIZONTAL RUN.
2. RTD's WITHOUT THERMOWELLS (FAST RESPONSE REQUIRED)
3. ALL HORIZONTAL CONDENSATE LINES TO HAVE SLOPE OF 1/8" PER FOOT.
4. LOCATE AS CLOSE TO NOZZLE AS POSSIBLE FOR SERVICE INDICATED.
5. TIE-IN FROM CHIP BIN RELIEF CONDENSER AND TURPENTINE CONDENSER MUST BE AT BOTTOM OF THE LOOP SEAL.
6. TIE IN TO BE MADE AT THE TOP OF 520411.
7. MILL AREA #52

PIPE SPECIFICATION KEY						
K04	--- 150#	------ CS	------ STD	-------- 200 PSIG	@ 400°F
K18	--- 150#	------ 304L SS	--- 5S,10S,40S	-- 160 PSIG	@ 400°F
K21	--- 125#	------ 304L SS	---10S,40S	---- 125 PSIG	@ 250°F
K21S	-- 180#	------ 304L SS	-- 5S,10S,40S	---- 180 PSIG	@ 120°F

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NCG CONDENSER SYSTEM

BOWATER
CATAWBA, S.C.

ANDRITZ AHLSTROM
Andritz-Ahlstrom Inc.
Ridge Center
Glens Falls, New York 12801

DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
BAP	3-29-00			
CHECKED BY:	DATE:			
PJP	3-29-00			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	3-29-00	NONE	2-D710-01-5	10

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

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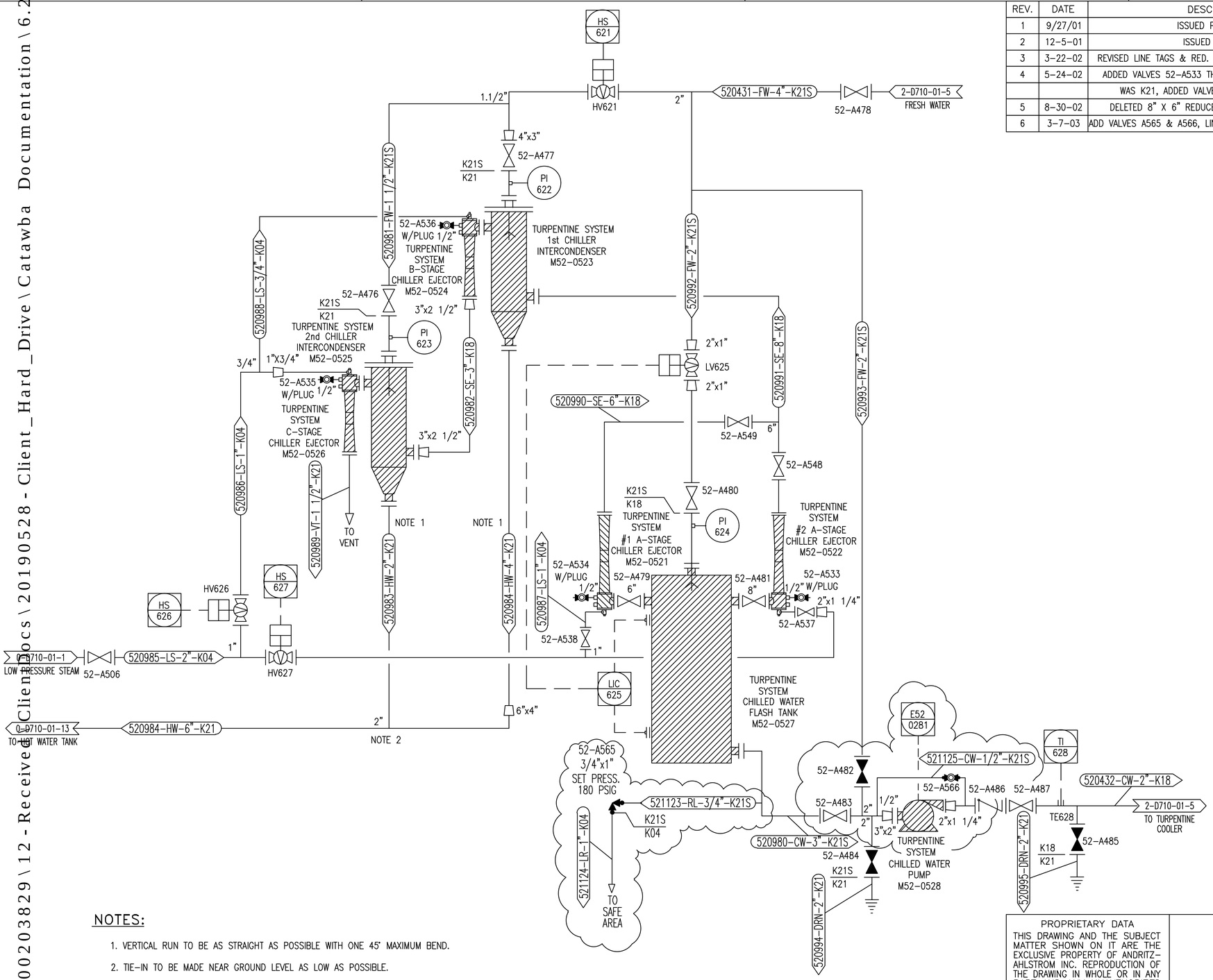
REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
1	9/27/01	ISSUED PRELIMINARY	JLW/WT	PJP	MMC
2	12-5-01	ISSUED CERTIFIED	PGH	PJP	MMC
3	3-22-02	REVISED LINE TAGS & RED. SIZES, VALVES 52-A484, A485	PGH	PJD	MMC
4	5-24-02	ADDED VALVES 52-A533 THRU 52-A538, REVISED SPEC.	PGH	PJP	MMC
		WAS K21, ADDED VALVES 52-A548, & 52-A549			
5	8-30-02	DELETED 8" X 6" REDUCER. VALVE 52-A548 WAS 6"	JLW	PJP	MMC
6	3-7-03	ADD VALVES A565 & A566, LINES 521123, 521124, & 521125	JLW	PJP	MMC



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NOTES:

1. VERTICAL RUN TO BE AS STRAIGHT AS POSSIBLE WITH ONE 45° MAXIMUM BEND.
2. TIE-IN TO BE MADE NEAR GROUND LEVEL AS LOW AS POSSIBLE.
3. MILL AREA #52.

PIPE SPECIFICATION KEY
K04 --- 150# ------ CS ------ STD -------- 200 PSIG @ 400°F
K18 --- 150# ------ 304L SS--- 5S,10S,40S -- 160 PSIG @ 400°F
K21 --- 125# ------ 304L SS ---10S,40S ---- 125 PSIG @ 250°F
K21S --- 180# --- 304L SS ----- 5S,10S,40S--- 180 PSIG @ 120°F

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BAROMETRIC CHILLER SYSTEM

ANDRITZ AHLSTROM
KRAFT MILL BUSINESS
GLENS FALLS, NY

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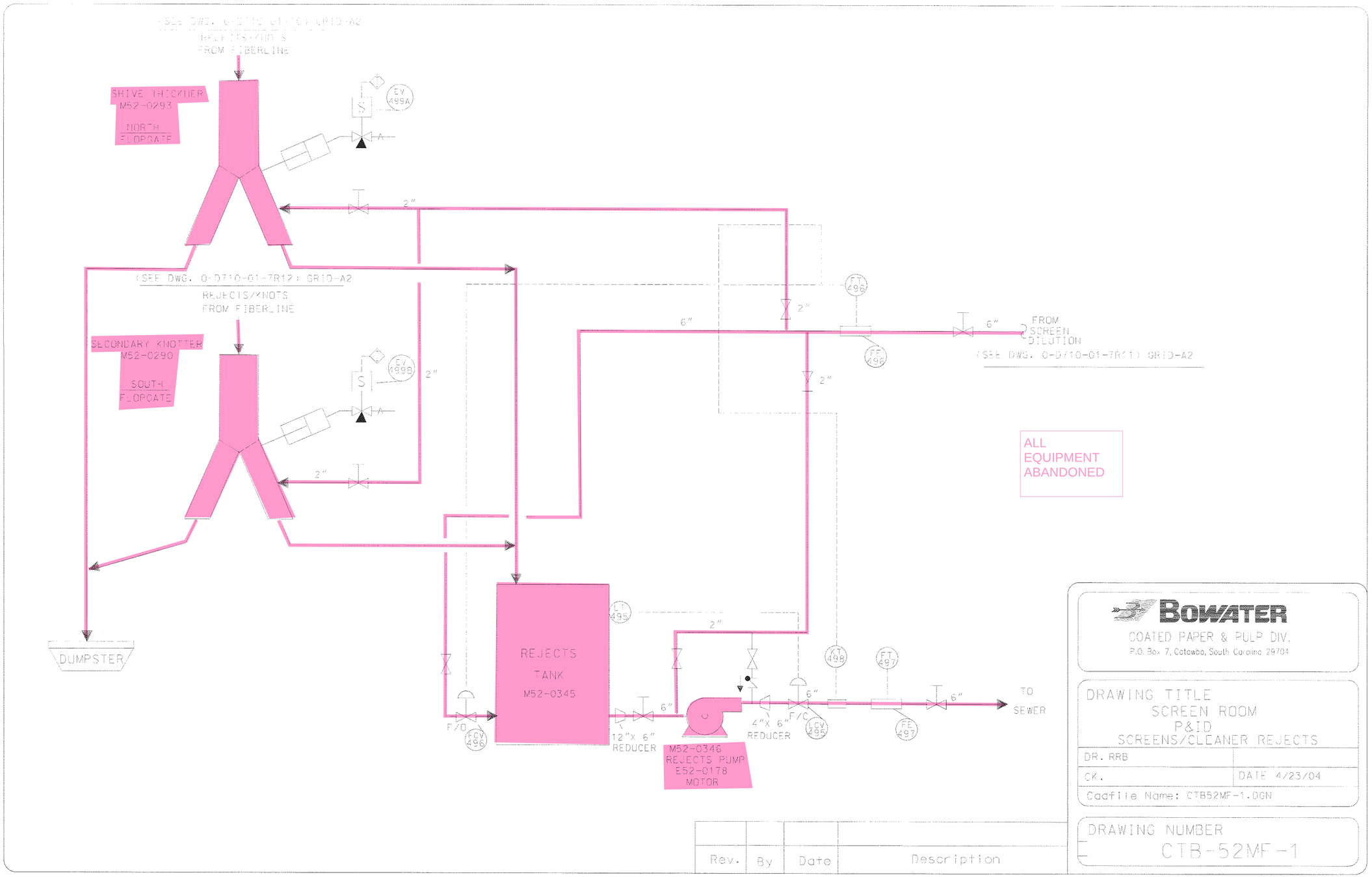
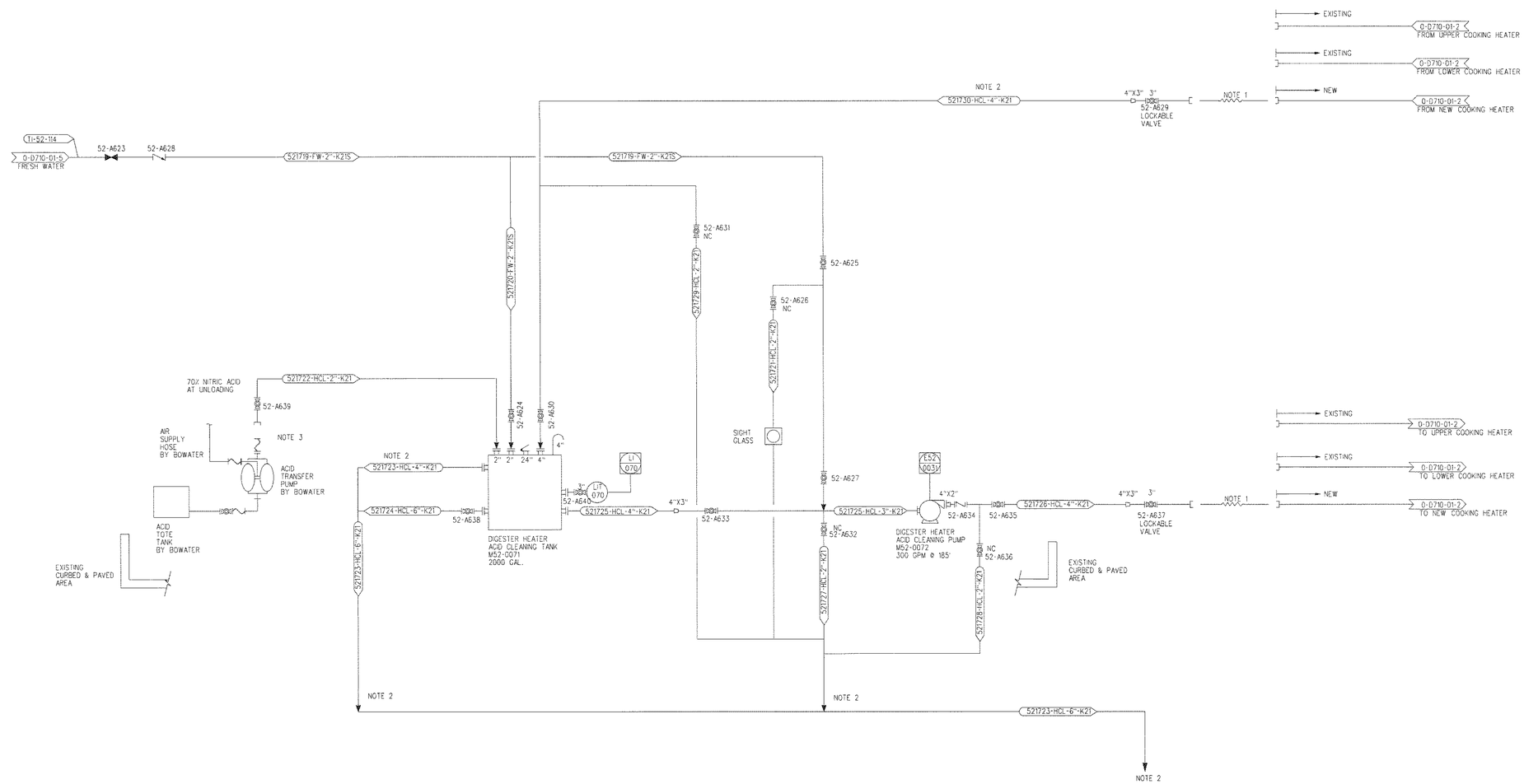
DESIGNED BY:	DATE:	PROJECTION	REFERENCE DWG.	WEIGHT
JLW	9/27/01			
CHECKED BY:	DATE:			
PJP	9/27/01			
APPROVED BY:	DATE:	SCALE:	DRAWING NUMBER	REV
MMC	9/27/01	NONE	2-D710-01-6	6

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020


(SEE DWG. 0-D710-01-7R12) GRID-A2
REJECTS/KNOTS
FROM FIBERLINE
SHIVE THICKNER
M52-0293
NORTH
FLOPGATE
EV 499A
2"
(SEE DWG. 0-D710-01-7R12) GRID-A2
REJECTS/KNOTS
FROM FIBERLINE
SECONDARY KNOTTER
M52-0290
SOUTH
FLOPGATE
EV 499B
2"
2"
DUMPSTER
REJECTS
TANK
M52-0345
LT 495
2"
6"
2"
FT 496
FE 496
6"
FROM
SCREEN
DILUTION
(SEE DWG. 0-D710-01-7R11) GRID-A2
2"
ALL
EQUIPMENT
ABANDONED
F/D
FCV 496
12"X 6"
REDUCER
6"
M52-0346
REJECTS PUMP
E52-0178
MOTOR
4"X 6"
REDUCER
F/C
LCV 495
6"
KT 498
FT 497
FE 497
6"
TO
SEWER
BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704
DRAWING TITLE
SCREEN ROOM
P&ID
SCREENS/CLEANER REJECTS
DR. RRB
CK.
DATE 4/23/04
Cadfile Name: CTB52MF-1.DGN
DRAWING NUMBER
CTB-52MF-1
Rev.
By
Date
Description
J:\N52MF-1.DGN 2/18/2014 7:11:24 AM

NOTES:

1. 3" QUICK DISCONNECTS AND HOSES TO CONNECT TO HEATERS BY BOWATER.
2. PIPE OVERFLOW AND ALL DRAINS TO AGITATED SECTION OF SPILL COLLECTION SUMP.
3. 2" QUICK DISCONNECTS AND HOSE BY BOWATER.



AMEC E&C Services Inc.
AMEC SMOKE FOREST INDUSTRY
(Formerly ASRI, Simons, Inc.)
AMEC PROJECT NO. 1546593

amec

APPROVED FOR CONSTRUCTION

ENGINEERING MGR. TECH DIR / DEPT MGR AREA LEADER

PROJECT NUMBER	DRAWING No.	REV.
	- - - - - -	1

BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

FIBERLINE P&ID
ACID CLEANING SYSTEM
DIGESTER AREA

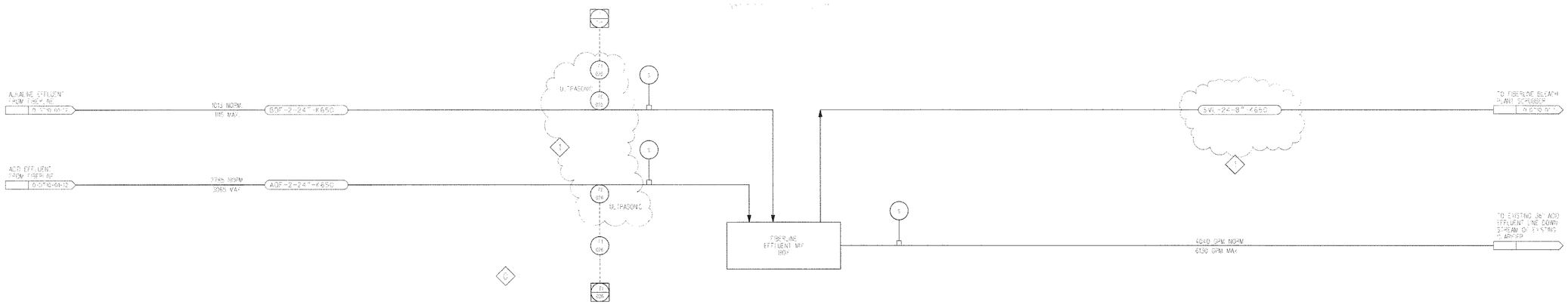
DR.	SCALE NTS	BOWATER DRAWING No.
CKD.	DATE 12/21/06	CTE-52MF-1

Rev	Date	By	Description
1	04/04/07	DFC	ADDED LINE NUMBERS
0	01/03/07	DFC	AMEC PROJ. 1546033 NEW SYSTEM

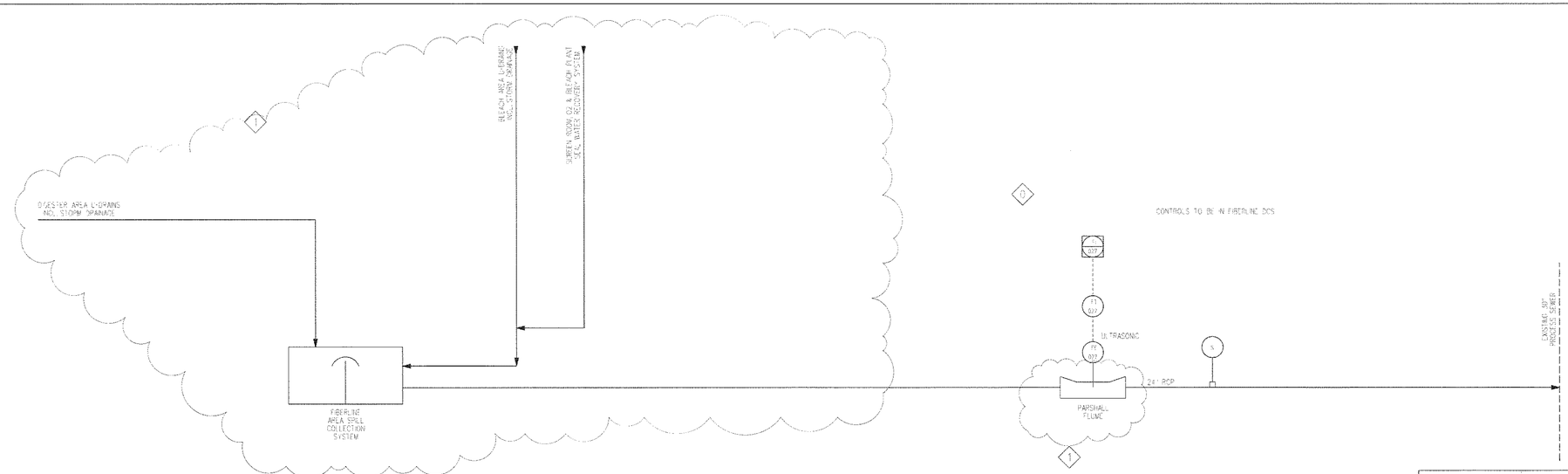
ISSUE	D/M/Y	APP.	ISSUED FOR	REV.
A	01/ 22/ 07		DESIGN	0

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

File: P:/CAD/Prc/52MF-1.dgn P:/CAD/PRC/52MF-1.DGN
Date: 28-APRL-07-11:18



ACID / ALKALINE EFFLUENT



SEWERS

ISSUE	DRAWN	APP.	ISSUED FOR	REV.
	/ /			
	/ /			
	/ /			
	/ /			
D	27/02	BAR	DESIGN - INFORMATION	
C	21/08/01	BAR RBC	DESIGN	0
A	04/05/01	BAR RBC	APPROVAL	A

REV.	DATE	BY	DESCRIPTION
1	08.06.01	AES	CHANGED INC SIZE
			DELETED STORM DRAINS
0	04.05.01	AES	ISSUED FOR DESIGN

AMEC E&C Services Inc.
AMEC BIRONS FOREST INDUSTRY
(Formerly ADAM Simons Inc.)
AMEC PROJECT NO E597

amec

APPROVED FOR CONSTRUCTION

BAR ENGINEERING MGR. | MIT JR. TECH SUP. / DEPT MGR | AES AREA LEADER

PROJECT NUMBER	DRAWING No.	REV.
D710	E-D710-10-N-0100	1

BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

PROCESS & INSTRUMENT DIAGRAM
SEWERS
FIBERLINE

DR. SAF | SCALE NONE | BOWATER TRACING No.
CHK. AES | DATE 05.04.01

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

File: p:/CAD/Fld/web/10n0100.dgn
Date: 27-Feb-02-15:56

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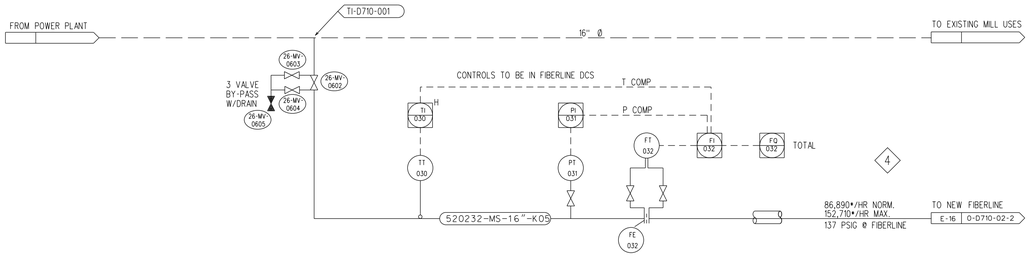
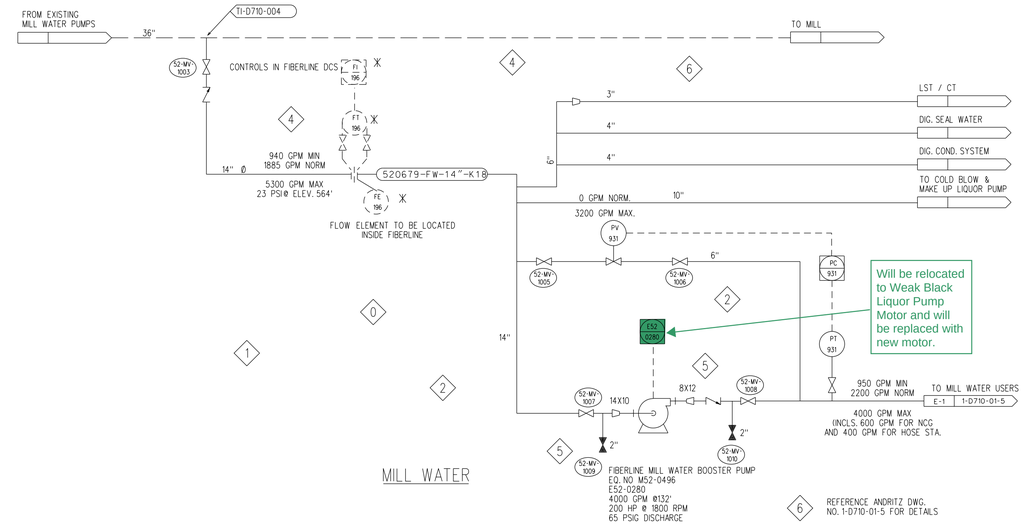
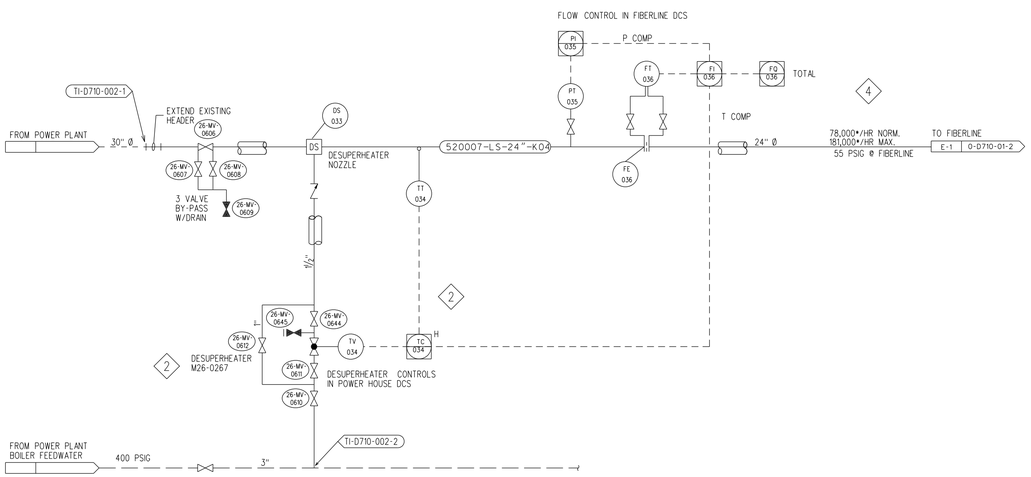


MEDIUM PRESSURE STEAM (160 PSIG)

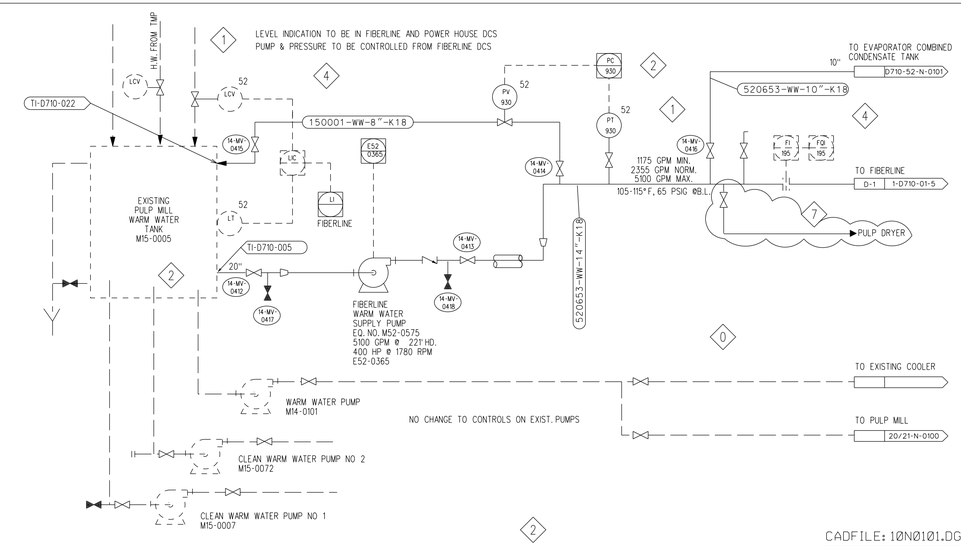
X FURNISHED BY ANDRITZ-AHLSTROM



MILL WATER



LOW PRESSURE STEAM (60 PSIG)



WARM WATER

CADFILE: 10N0101.DGN

AMEC E&C Services Inc.
AMEC SIMONS FOREST INDUSTRY
(Formerly AGRA Simons, Inc.)
AMEC PROJECT NO. E597

APPROVED FOR CONSTRUCTION

BAR	WIT JR.	AES
ENGINEERING MGR.	TECH DIR / DEPT. MGR	AREA LEADER

PROJECT NUMBER	DRAWING No.	REV.
D710	E-D710-10-N-0101	7

BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

PROCESS & INSTRUMENT DIAGRAM
STEAM / WATER
FIBERLINE

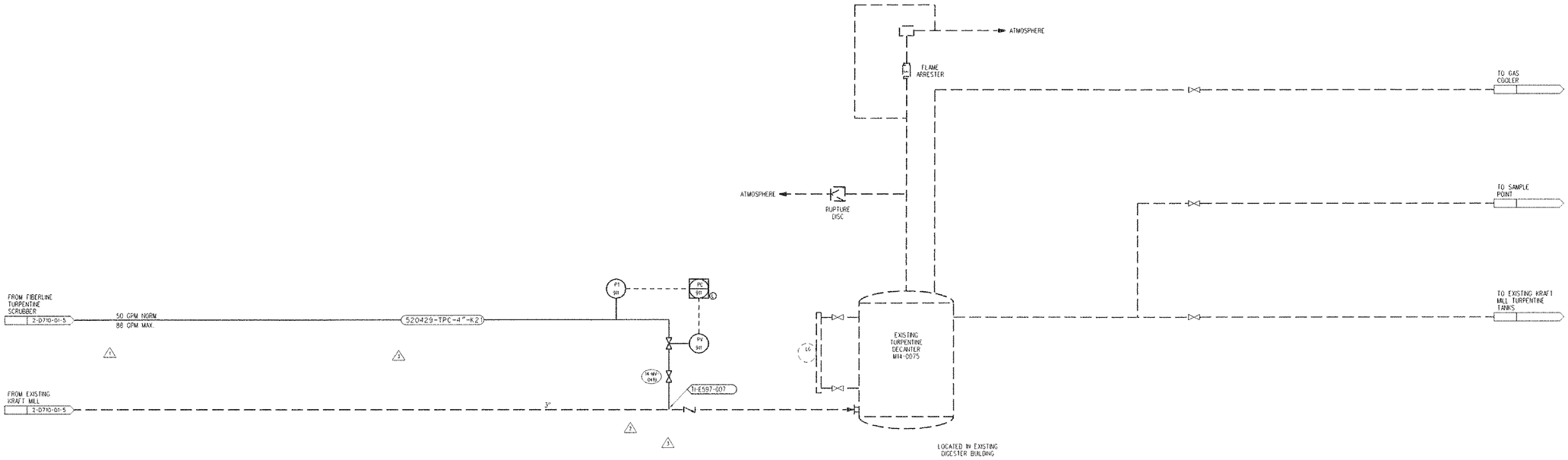
DR. SMF | SCALE NONE | BOWATER DRAWING No.
CKD. AES | DATE 05-04-01

Rev	Date	By	Description
7	09-26-01	LSJ	GENERAL REVISION
6	08-20-02	AES	GENERAL REVISION
5	07-24-02	AES	ADDED VALVE NUMBERS
4	07-10-02	AES	GENERAL REVISION
3	04-18-02	AES	REV LINE SIZE ADD LINE NO.
2	2-25-02	AES	REVISED EQ. TAGS
1	4-27-01	AES	ISSUED FOR DESIGN & INFO

ISSUE	D/M/Y	APP.	ISSUED FOR	REV.
G	24/07/02	BAR	DESIGN	5
F	01/07/02	BAR	DESIGN - INFORMATION	4
H	20/08/02	BAR	DESIGN	6
E	18/04/02	BAR	DESIGN - INFORMATION	3
D	27/02/02	BAR	DESIGN - INFORMATION	2
C	28/08/01	BAR RBC	DESIGN	0
A	04/05/01	BAR RBC	APPROVAL	A

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

REFERENCE DRAWING: E-14-114



NO CHANGE TO CONTROLS ON DECANTER

ISSUE	DWN/Y	APP.	ISSUED FOR	REV.
C	24/07/02	BAR	DESIGN	4
F	01/07/02	BAR	DESIGN - INFORMATION	3
E	16/04/02	BAR	INFORMATION	2
D	27/02/02	BAR	DESIGN	2
C	27/01/02			2
				1
				1
				0
A	04/05/01	BAR RBC	APPROVAL	A
		BAR RBC	DESIGN	0

Rev	Date	By	Description
4	19-06-02	AES	ADDED VALVE NUMBERS
3	07-04-02	AES	GENERAL REVISION
2	04-04-02	AES	ADDED TIE IN NUMBER
1	4-11-01	AES	ISSUED FOR DESIGN & INFO.

AMEC E&C Services Inc.
AMEC SPROUL FOREST INDUSTRY
formerly KGM Services Inc.
AMEC PROJECT NO 7367

amec

APPROVED FOR CONSTRUCTION

BAR	NTT JR.	AES
ENGINEERING MGR.	TECH DIV / DEPT MGR	AREA LEADER

PROJECT NUMBER	DRAWING No.	REV.
D710	E-D710-14-N-0100	4

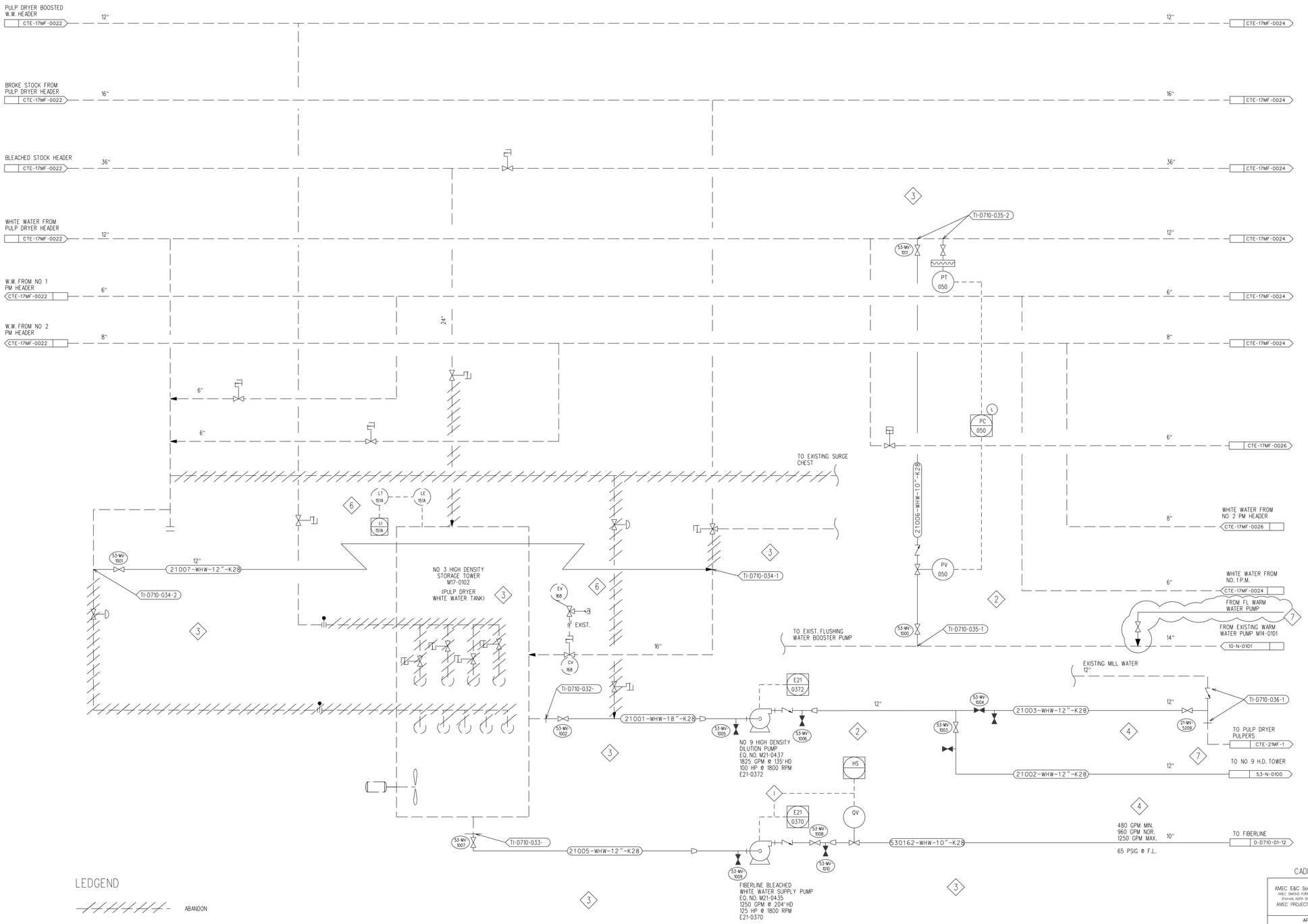
BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Columbia, South Carolina 29204

PROCESS & INSTRUMENT DIAGRAM
TURPENTINE
FIBERLINE

DR. SMF	SCALE NONE	BOWATER DRAWING No.
CKD. AES	DATE 05-04-01	

File: p:/CAD/Pid/web/14n0100.dgn
Date: 06-Feb-03 10:35

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020



LEDGEND

ABANDON

EXISTING

NEW

CADFILE: 20N0100.DGN

AMEC E&C Services Inc.
AMEC SIMONS FOREST INDUSTRY (Formerly ASPA Simons Inc.)
AMEC PROJECT NO. E697

APPROVED FOR CONSTRUCTION

ENGINEERING MGR. | TECH DIR / DEPT MGR | AREA LEADER

PROJECT NUMBER	DRAWING No.	REV.
D710	E-D710-20/21-N-0100	8

BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

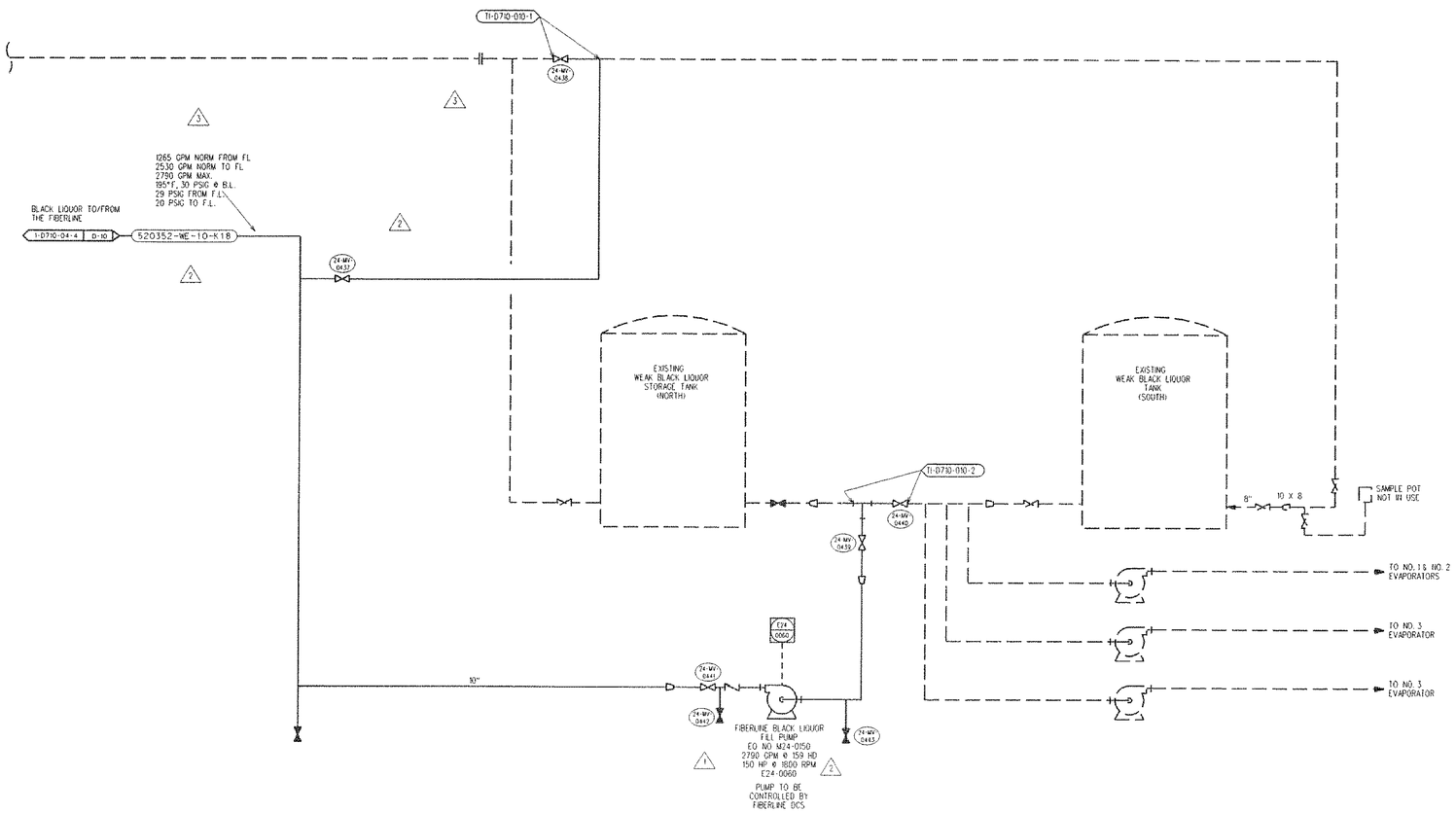
PROCESS & INSTRUMENT DIAGRAM
WHITE WATER
FIBERLINE

DR. SMF | SCALE NONE | BOWATER DRAWING No.
CKD. AES | DATE 05-04-01

Rev	Date	By	Description
8	09-26-07	LSJ	GENERAL REVISIONS
7	10-30-02	AES	ADDED VALVE NO & REFER.
6	08-29-02	AES	ADDED CONTROLS.
5	07-24-02	AES	ADDED VALVE NUMBERS
04	07-01-02	AES	GENERAL REVISION
3	04-18-02	AES	ADD TE-IN & LINE NOS.
2	02-25-02	AES	ADDED MOTOR NUMBERS
-	-	-	CHANGED LINE SIZE
1	9-28-92	AES	REDRAWN

ISSUE	D/M/Y	APP.	ISSUED FOR	REV.
G	24/07/02	BAR	DESIGN	5
F	01/07/02	BAR	DESIGN - INFORMATION	4
H	20/08/02	BAR	DESIGN	6
E	18/04/02	BAR	DESIGN - INFORMATION	3
I	30/10/02	BAR	DESIGN	7
D	27/02/02	BAR	DESIGN	2
C	/ /			
	28/08/01	BAR RBC	DESIGN	0
A	04/05/01	BAR RBC	APPROVAL	P0

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020



ISSUE	DRAWN	APP.	ISSUED FOR	REV.
G	24/07/02	BAR	DESIGN	4
F	01/07/02	BAR	INFORMATION	3
E	18/04/02	BAR	INFORMATION	2
D	27/02/02	BAR	DESIGN - INFORMATION	2
C	27/11/01		DESIGN	1
B	28/11/01	BAR RBC	DESIGN	0
A	04/05/01	BAR RBC	APPROVAL	A

Rev	Date	By	Description
4	24-07-02	AES	ADDED VALVE NUMBERS
3	01-07-02	AES	GENERAL REVISION
2	27-02-02	AES	DELETED ONE VALVE, MOVED ONE
1	27-11-01	AES	ISSUED FOR DESIGN & INFO

AMEC E&C Services Inc.
AMEC SNC(NB FOREST NOLITER
Formerly AMEC Simons Inc.)
AMEC PROJECT NO. E661

amec

APPROVED FOR CONSTRUCTION

BAR — ENGINEERING MGR. | NTT JR. — TECH DIR / DEPT MGR | AES — AREA LEADER

PROJECT NUMBER	DRAWING No.	REV.
D710	E-D710-24-N-0100	4

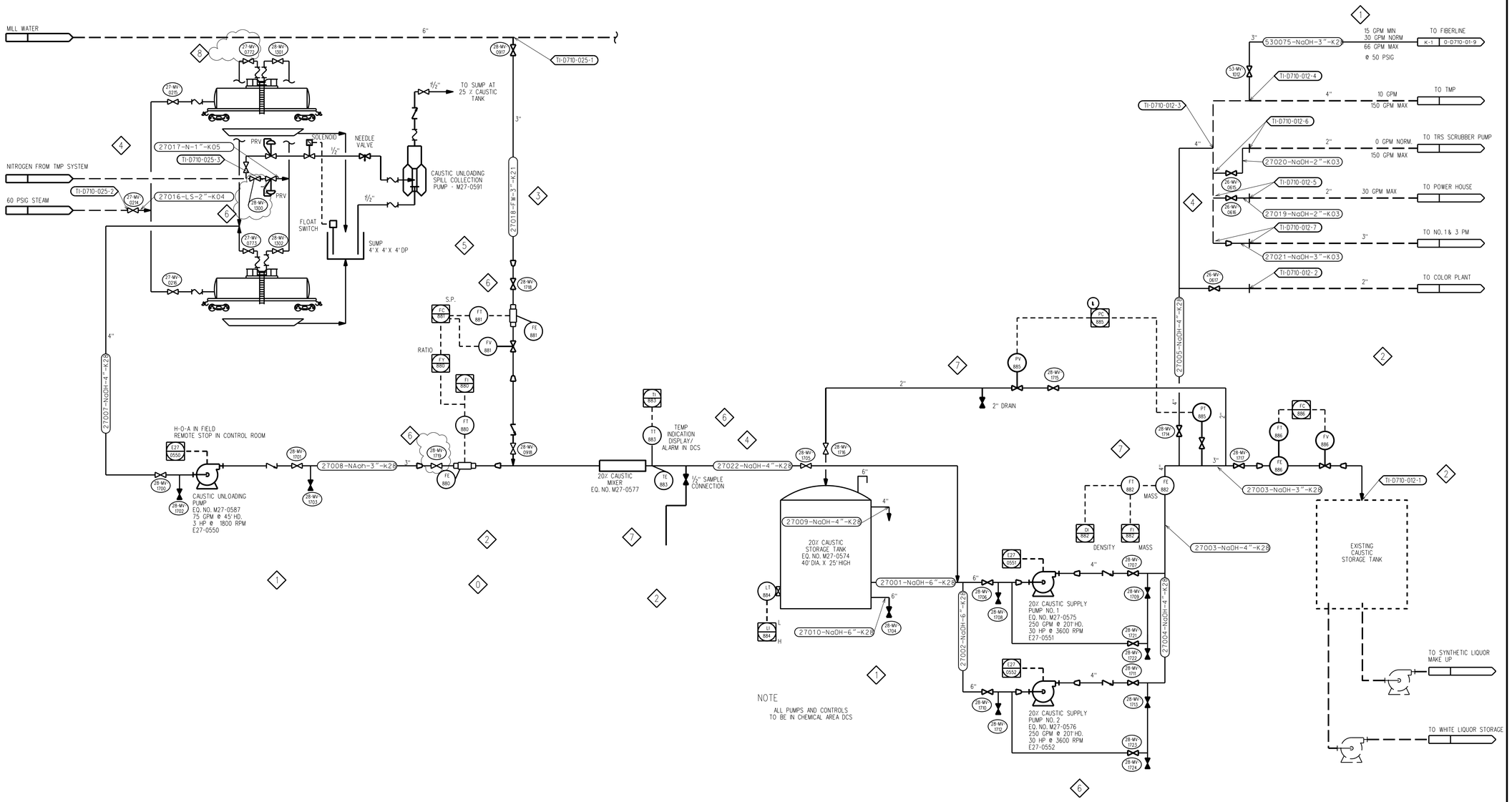
BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

PROCESS & INSTRUMENT DIAGRAM
BLACK LIQUOR
FIBERLINE

DR. SMF | SCALE NONE | BOWATER DRAWING No.
CKD. AES | DATE 07-26-01

File: p:/CAD/Pid/web/24n0100.dgn
Date: 06-Feb-03-10:35

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020



NOTE

ALL PUMPS AND CONTROLS TO BE IN CHEMICAL AREA DCS

ISSUE	D/M/Y	APP.	ISSUED FOR	REV.
G	24/07/02	BAR	DESIGN	5
F	01/07/02	BAR	INFORMATION	4
H	20/08/02	BAR	DESIGN	6
E	18/04/02	BAR	DESIGN	3
I	11/10/02	BAR	DESIGN	7
D	27/02/02	BAR	DESIGN - INFORMATION	2
J	/ /			
C				
	/ /			
	28/08/01	BAR RBC	DESIGN	0
	/ /			
A	04/05/01	BAR RBC	APPROVAL	Δ

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

Rev	Date	By	Description
8	05-21-03	AES	REVISED NUMBER
7	10-11-02	AES	REVISED PIPING
6	08-20-02	AES	GENERAL REVISION
5	07-24-02	AES	ADD PUMP & VLV NUMBERS
4	07-01-02	AES	GENERAL REVISION
3	04-18-02	AES	ADDED LINE NO.
2	02-25-02	AES	DELETED CONDUCT, WTR., CHNG.
1	-	-	LINE SIZE, GENERAL REVISIONS
0	4-27-01	AES	ISSUED FOR DESIGN & INFO

AMEC E&C Services Inc.
AMEC SMONG FOREST INDUSTRY
(Formerly AGRA Simons Inc.)
AMEC PROJECT NO. E597

amec

APPROVED FOR CONSTRUCTION

BAR ENGINEERING MGR. | WWT JR. TECH DIR / DEPT MGR | AES AREA LEADER

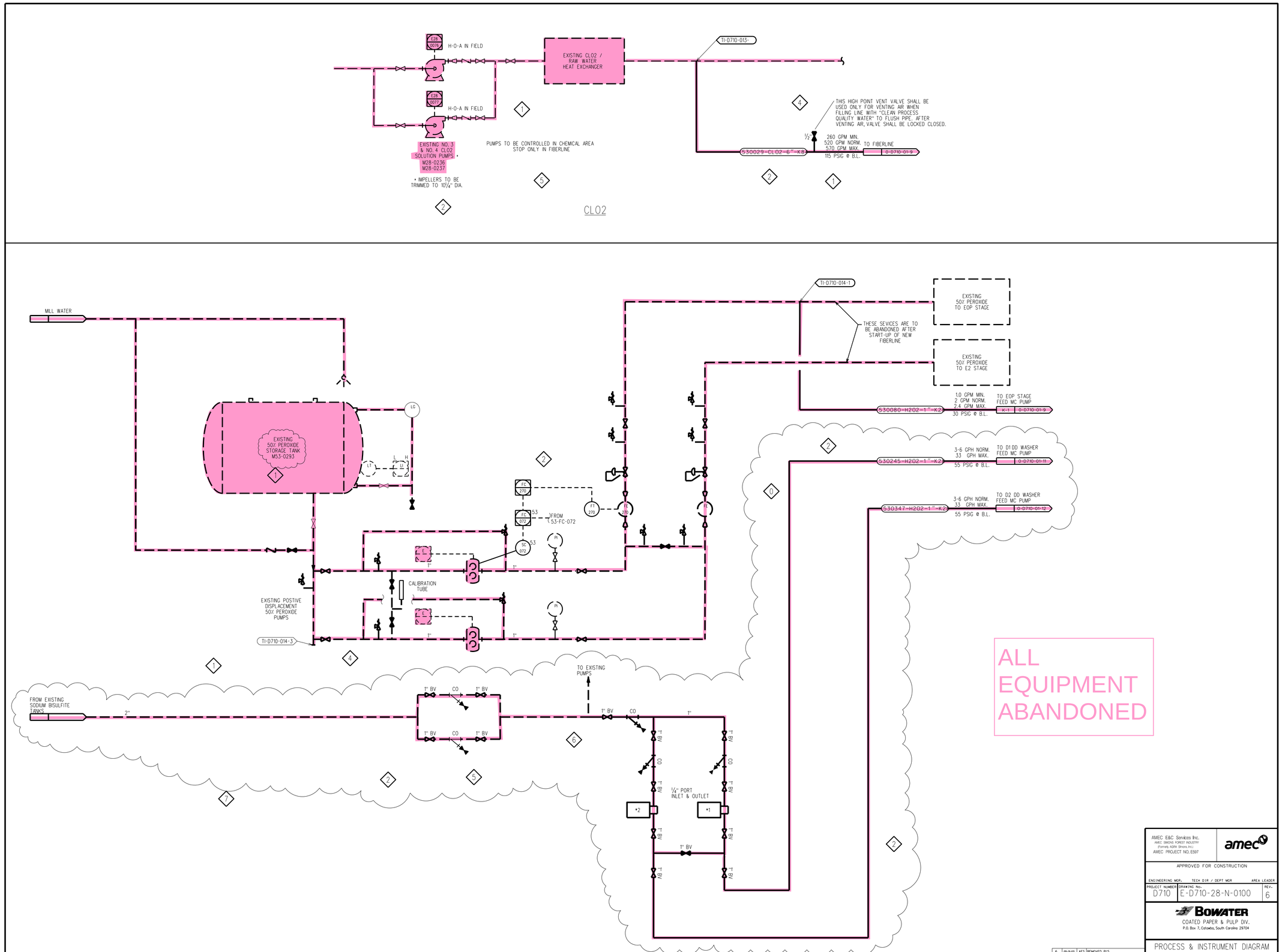
PROJECT NUMBER	DRAWING No.	REV.
D710	E-D710-27-N-0100	8

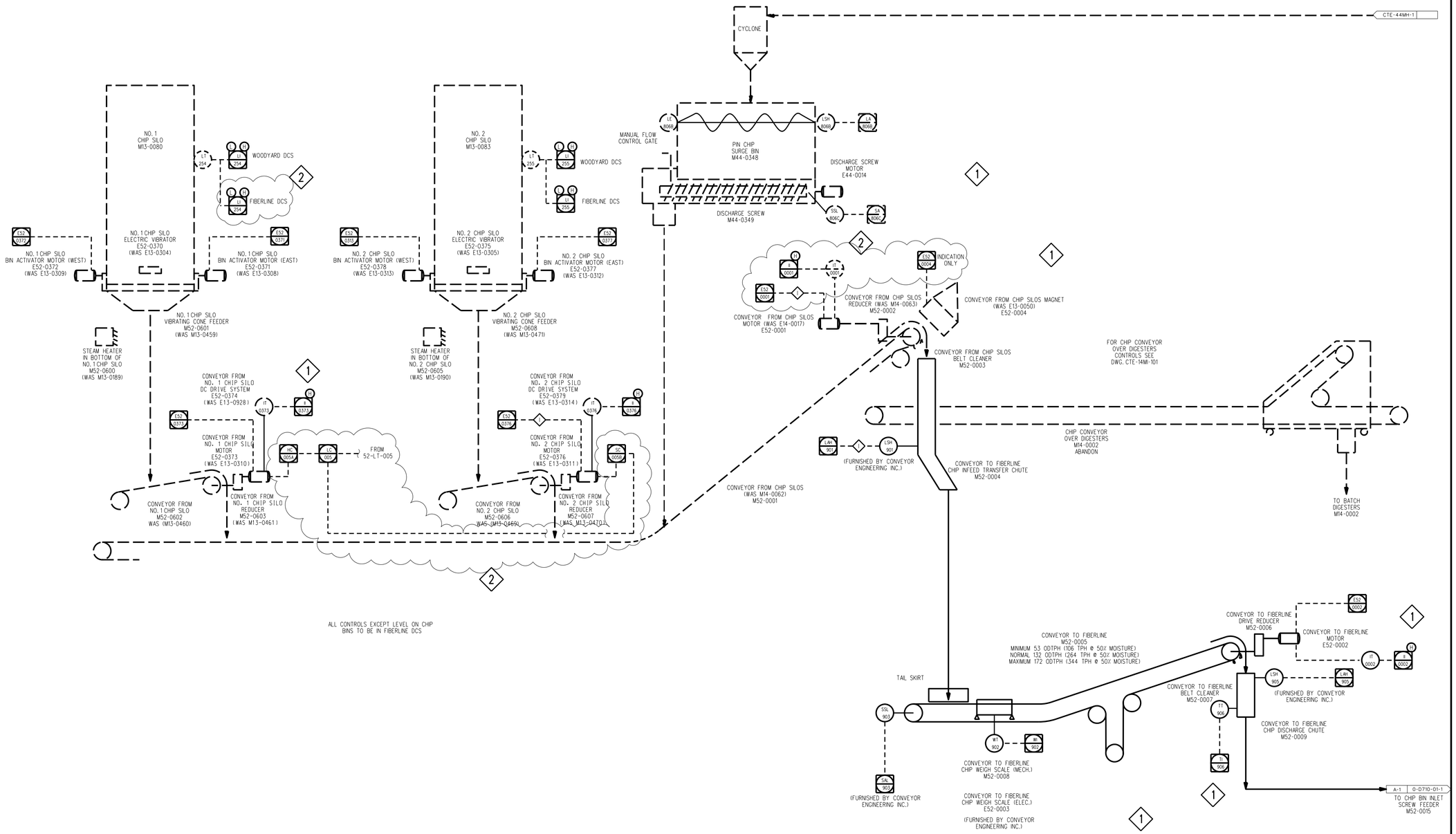
BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

PROCESS & INSTRUMENT DIAGRAM
CAUSTIC
FIBERLINE

DR. SMF	SCALE NONE	BOWATER DRAWING No.
CKD. AES	DATE 05-04-01	

File: P:/Cad/Pid/web/27n0100.dgn
Date: 19-Jan-04-08:50


H-O-A IN FIELD
EXISTING CLO2 / RAW WATER HEAT EXCHANGER
TI-D710-013-
THIS HIGH POINT VENT VALVE SHALL BE USED ONLY FOR VENTING AIR WHEN FILLING LINE WITH "CLEAN PROCESS QUALITY WATER" TO FLUSH PIPE. AFTER VENTING AIR, VALVE SHALL BE LOCKED CLOSED.
260 GPM MIN.
520 GPM NORM. TO FIBERLINE
570 GPM MAX.
115 PSIG @ B.L.
530029-CLO2-6"-K8
D-D710-01-9
EXISTING NO. 3 & NO. 4 CLO2 SOLUTION PUMPS *
M28-0236
M28-0237
* IMPELLERS TO BE TRIMMED TO 10 1/4" DIA.
PUMPS TO BE CONTROLLED IN CHEMICAL AREA STOP ONLY IN FIBERLINE
CLO2
MILL WATER
EXISTING 50% PEROXIDE STORAGE TANK M53-0293
EXISTING POSTIVE DISPLACEMENT 50% PEROXIDE PUMPS
CALIBRATION TUBE
FROM 53-FC-072
TI-D710-014-3
TI-D710-014-1
THESE SEVICES ARE TO BE ABANDONED AFTER START-UP OF NEW FIBERLINE
EXISTING 50% PEROXIDE TO EOP STAGE
EXISTING 50% PEROXIDE TO E2 STAGE
1.0 GPM MIN.
2 GPM NORM.
2.4 GPM MAX.
30 PSIG @ B.L.
530080-H202-1"-K2
TO EOP STAGE FEED MC PUMP
D-D710-01-9
3-6 GPH NORM.
3.3 GPH MAX.
55 PSIG @ B.L.
530245-H202-1"-K2
TO D1 DD WASHER FEED MC PUMP
D-D710-01-11
530347-H202-1"-K2
TO D2 DD WASHER FEED MC PUMP
D-D710-01-12
ALL EQUIPMENT ABANDONED
FROM EXISTING SODIUM BISULFITE TANKS
TO EXISTING PUMPS
1/4" PORT INLET & OUTLET
AMEC E&C Services Inc.
AMEC SNOWS FOREST INDUSTRY
(Formerly AGRA Simons, Inc.)
AMEC PROJECT NO. E597
APPROVED FOR CONSTRUCTION
ENGINEERING MGR. TECH DIR / DEPT MGR AREA LEADER
PROJECT NUMBER D710
DRAWING No. E-D710-28-N-0100
REV. 6
BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704
PROCESS & INSTRUMENT DIAGRAM
CLO2 / H202
FIBERLINE
DR. SMF
SCALE NONE
CKD. AES
DATE 05-04-01
BOWATER DRAWING No.
ISSUE G D/M/Y 27/01/03 APP. BAR ISSUED FOR DESIGN REV. 5
ISSUE F D/M/Y 20/08/02 APP. BAR ISSUED FOR DESIGN REV. 4
ISSUE H D/M/Y 21/05/03 APP. BAR ISSUED FOR DESIGN REV. 6
ISSUE E D/M/Y 24/07/02 APP. BAR ISSUED FOR DESIGN REV. 3
ISSUE D D/M/Y 01/07/02 APP. BAR ISSUED FOR DESIGN - INFORMATION REV. 2
ISSUE C
ISSUE D/M/Y / / APP. ISSUED FOR REV.
D/M/Y 28/08/01 APP. BAR RBC ISSUED FOR DESIGN REV. 0
ISSUE A D/M/Y 04/05/01 APP. BAR RBC ISSUED FOR APPROVAL REV. A
6 09-21-03 AES REMOVED PI'S
5 9-27-03 AES REV NOTE & SC NOS.
4 08-20-02 AES ADDED VENT & VALVE
3 07-24-02 AES ADDED VALVE NUMBERS
2 07-0-02 AES GENERAL REVISION
1 04-18-02 AES CHANGED FLOWS AND EQ NO'S
0 08-28-01 AES ISSUED FOR DESIGN
A 05-04-01 AES ISSUED FOR APPROVAL
Rev Date By Description
203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020
File: P:/CAD/Pid/web/28N0100.dgn
Date: 19-Jan-04-10:27



ISSUE	D/M/Y	APP.	ISSUED FOR	REV.
	/ /			
	/ /			

ISSUE	D/M/Y	APP.	ISSUED FOR	REV.
E	01/ 07/ 02	BAR	DESIGN - INFORMATION	2

ISSUE	D/M/Y	APP.	ISSUED FOR	REV.
D	18/ 04/ 02	BAR	INFORMATION	1

ISSUE	D/M/Y	APP.	ISSUED FOR	REV.
C	28/ 08/ 01	BAR RBC	DESIGN	0

ISSUE	D/M/Y	APP.	ISSUED FOR	REV.
A	04/ 05/ 01	BAR RBC	APPROVAL	A

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

Rev	Date	By	Description
2	07-01-02	AES	GENERAL REVISION
1	02-25-02	AES	ADDED PIN CHIP SYSTEM

AMEC E&C Services Inc.
AMEC SMOKE FOREST INDUSTRY
(Formerly AGRA Simons Inc.)
AMEC PROJECT NO. E987

amec

APPROVED FOR CONSTRUCTION

ENGINEERING MGR. TECH DIR / DEPT MGR AREA LEADER

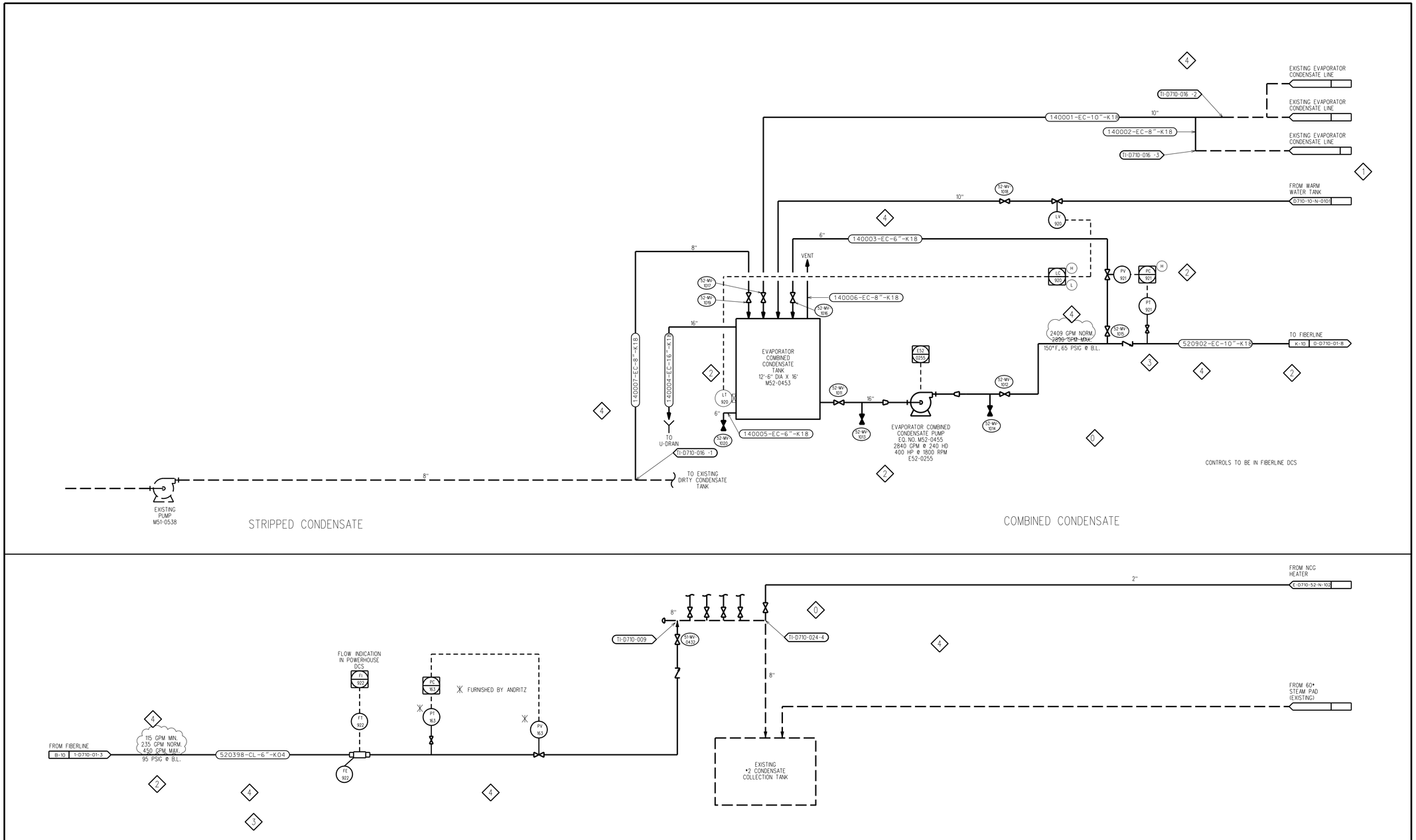
PROJECT NUMBER	DRAWING No.	REV.
D710	E-D710-52-N-0100	2

BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

PROCESS & INSTRUMENT DIAGRAM
CHIP CONVEYOR
FIBERLINE

DR. SMF	SCALE NONE	BOWATER DRAWING No.
CKD. AES	DATE 05-04-01	

File: P:/Cad/Pid/web/52n0100.dgn
Date: 19-Jan-04-08:50



ISSUE	D/M/Y	APP.	ISSUED FOR	REV.
C	24/07/02	BAR	DESIGN	5
F	01/07/02	BAR	DESIGN - INFORMATION	4
E	18/04/02	BAR	DESIGN - INFORMATION	3
D	27/02/02	BAR	DESIGN - INFORMATION	2
C	/ /			
	/ /			
	/ /			
	28/08/01	BAR RBC	DESIGN	0
A	04/05/01	BAR RBC	DESIGN	A

Rev	Date	By	Description
5	07-24-02	AES	ADDED VALVE NUMBERS
4	07-01-02	AES	GENERAL REVISION
3	04-18-02	AES	ADD VALVE & LINE NO.
2	02-25-02	AES	REVISED NOTATIONS, RELOC. FE
1	4-27-01	AES	ISSUED FOR DESIGN & INFO

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

AMEC E&C Services Inc.
AMEC FOREST INDUSTRY
(Formerly AGRA Simons Inc.)
AMEC PROJECT NO. E597

APPROVED FOR CONSTRUCTION

BAR ENGINEERING MGR. WTT JR. TECH DIR / DEPT MGR AES AREA LEADER

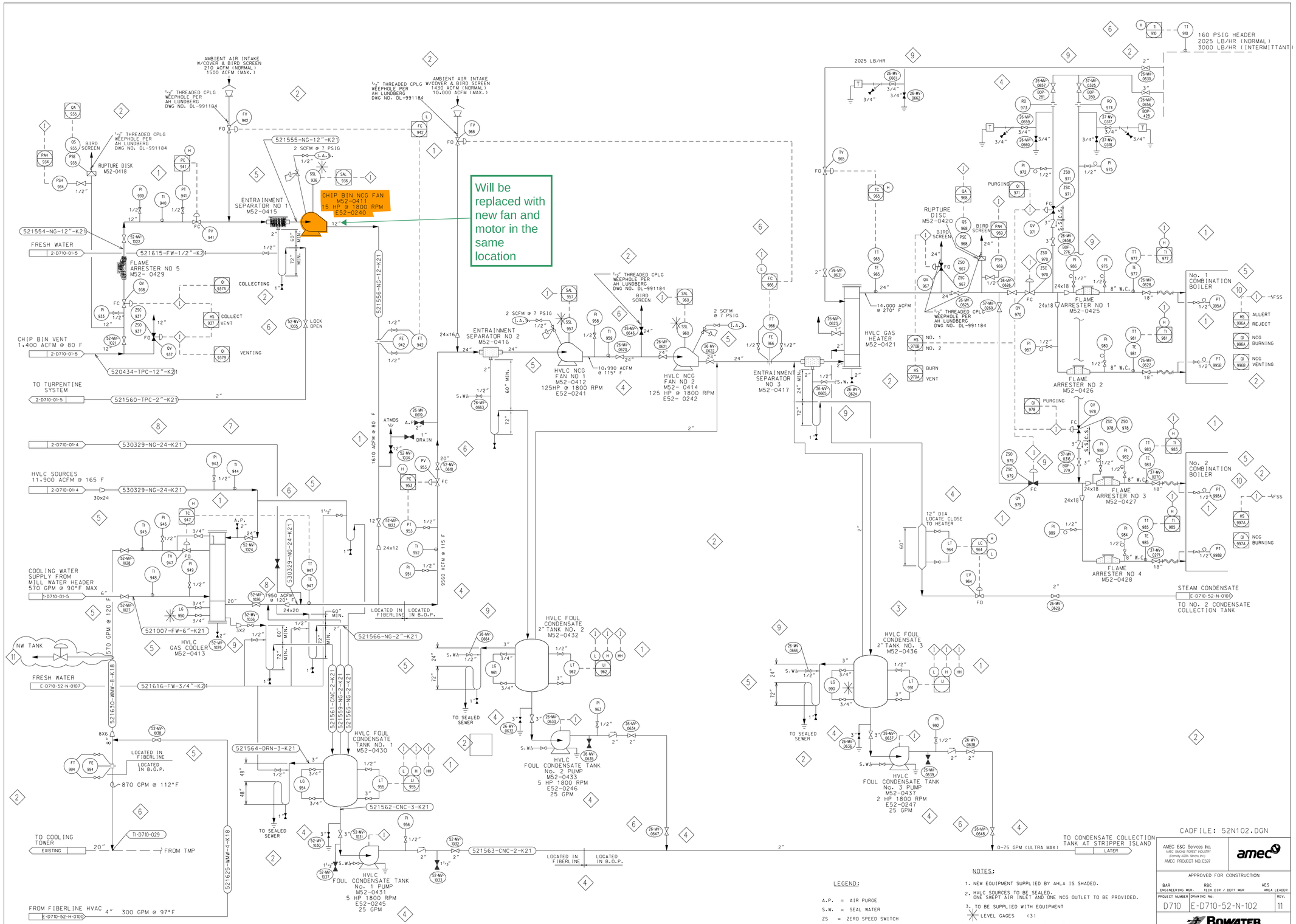
PROJECT NUMBER	DRAWING No.	REV.
D710	E-D710-52-N-0101	5

BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

PROCESS & INSTRUMENT DIAGRAM
CONDENSATE
FIBERLINE

DR. SMF SCALE NONE BOWATER DRAWING No.
CKD. AES DATE 05-04-01

File: P:/Cad/Pid/web/52n0101.dgn
Date: 19-Jan-04-08:50



LEGEND:

A.P. = AIR PURGE
S.W. = SEAL WATER
ZS = ZERO SPEED SWITCH
PSH = PRESSURE SWITCH HIGH
PSE = RUPTURE DISC
QS = BURST INDICATION
I.A.S. = INSTRUMENT AIR SUPPLY

NOTES:

1. NEW EQUIPMENT SUPPLIED BY AHLA IS SHADED.
2. HVLC SOURCES TO BE SEALED. ONE SWEPT AIR INLET AND ONE NCG OUTLET TO BE PROVIDED.
3. TO BE SUPPLIED WITH EQUIPMENT
   ✳ LEVEL GAGES (3)
4. ALL LOW POINTS MUST HAVE CONDENSATE DRAIN & BE PUMPED AWAY.

Rev.	Date	By	Description
A	09-24-01	LJ	GENERAL REVISIONS
10	06-20-01	AES	ADDED NUMBERS
9	01-30-01	AES	ADDED VALVE TAGS
8	10-03-02	AES	REV. LINE SIZE
7	08-07-02	AES	GENERAL REVISIONS
6	08-20-02	AES	ADDED VALVES & NCG.
5	07-24-02	AES	REV. SEAL LOOPS & ADD. VLV NO.
4	07-30-02	AES	GENERAL REVISION
3	04-23-02	AES	REVISED TANK NUMBER
2	04-18-02	AES	GENERAL REVISIONS
1	03-14-02	AES	GENERAL REVISIONS

ISSUE	D/M/Y	APP.	ISSUED FOR	REV.
G	24/07/02	BAR	DESIGN	5
F	01/07/00	BAR	DESIGN - INFORMATION	4
H	20/08/02	BAR	DESIGN	6
E	23/04/02	BAR	DESIGN	3
I	17/09/02	BAR	REVISED BY-PASS, ISSUED FOR DESIGN	7
D	18/04/02	BAR	DESIGN - INFORMATION	2
J	30/01/03	BAR	DESIGN	9
C	19/02/02	BAR	DESIGN	0
L	21/05/03	BAR	DESIGN	10
A	08/01/02	BAR	APPROVAL	PA

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

CADFILE: 52N102.DGN

AMEC E&C Services Inc.
AMEC SNOWS FOREST INDUSTRY
(Formally AGRA Simons Inc.)
AMEC PROJECT NO.E597

APPROVED FOR CONSTRUCTION

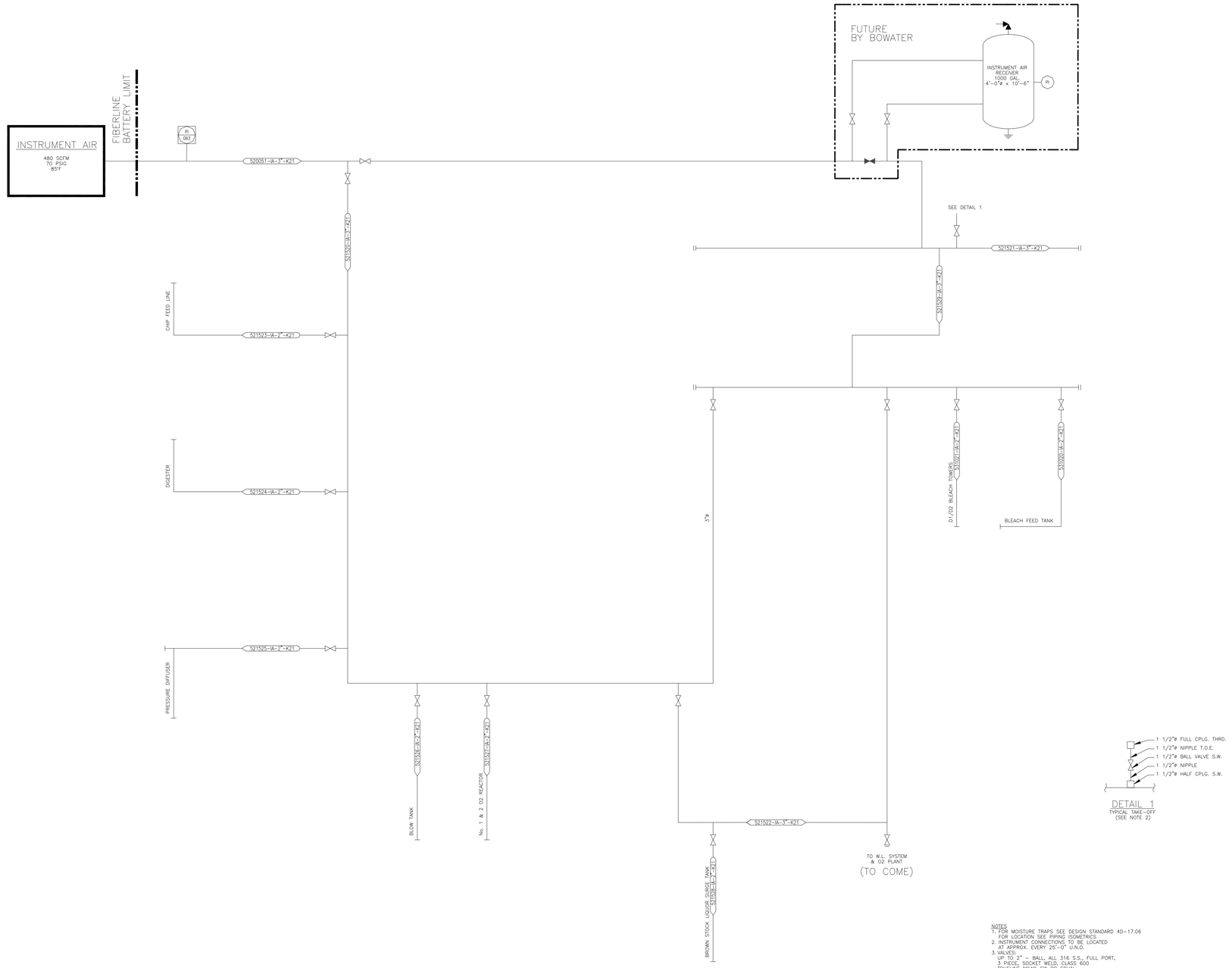
BAR	RBC	AES
ENGINEERING MGR.	TECH DIR / DEPT MGR	AREA LEADER

PROJECT NUMBER	DRAWING No.	REV.
D710	E-D710-52-N-102	11

BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

PROCESS & INSTRUMENT DIAGRAM
NCG SYSTEM FLOW SHEET
FIBERLINE

DR. ETC | SCALE NONE | BOWATER DRAWING No.
CKD. AES | DATE 01-02-02



NOTES
1. FOR MOISTURE TRAPS SEE DESIGN STANDARD 40-17.06 FOR LOCATION SEE PIPING ISOMETRICS.
2. INSTRUMENT CONNECTIONS TO BE LOCATED AT APPROX. EVERY 25'-0" U.N.O.
3. VALVES:
   UP TO 2" – BALL, ALL 316 S.S., FULL PORT, 3 PIECE, SOCKET WELD, CLASS 600 TRUELINE M640-SW OR EQUAL.
   2 1/2" & UP – GATE, CAST IRON, BRONZE TRIM, SOLID WEDGE, FLANGED, RISING O.S. & Y, CRANE 465 – 1/2 OR EQUAL, CLASS 125
4. DRAWING RENUMBERED, WAS E-D710-52-0101

amec

APPROVED FOR CONSTRUCTION

CATHAL FOX	STEVE FLECK	ALISTAIR McNEUR
ENGINEERING MGR.	TECH DIR / DEPT MGR	AREA LEADER

PROJECT NUMBER	DRAWING No.	REV.
D710	E-D710-52-N-0105	0

BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

INSTRUMENT AIR DISTRIBUTION

ISSUE	M/D/Y	APP.	ISSUED FOR	REV.
B	04/01/02	C.FOX	DESIGN	
A	01/31/02	LMK	REVIEW	

Rev	Date	By	Description

DR. CDW | SCALE | BOWATER DRAWING No.
CKD. LMK | DATE 28/03/02

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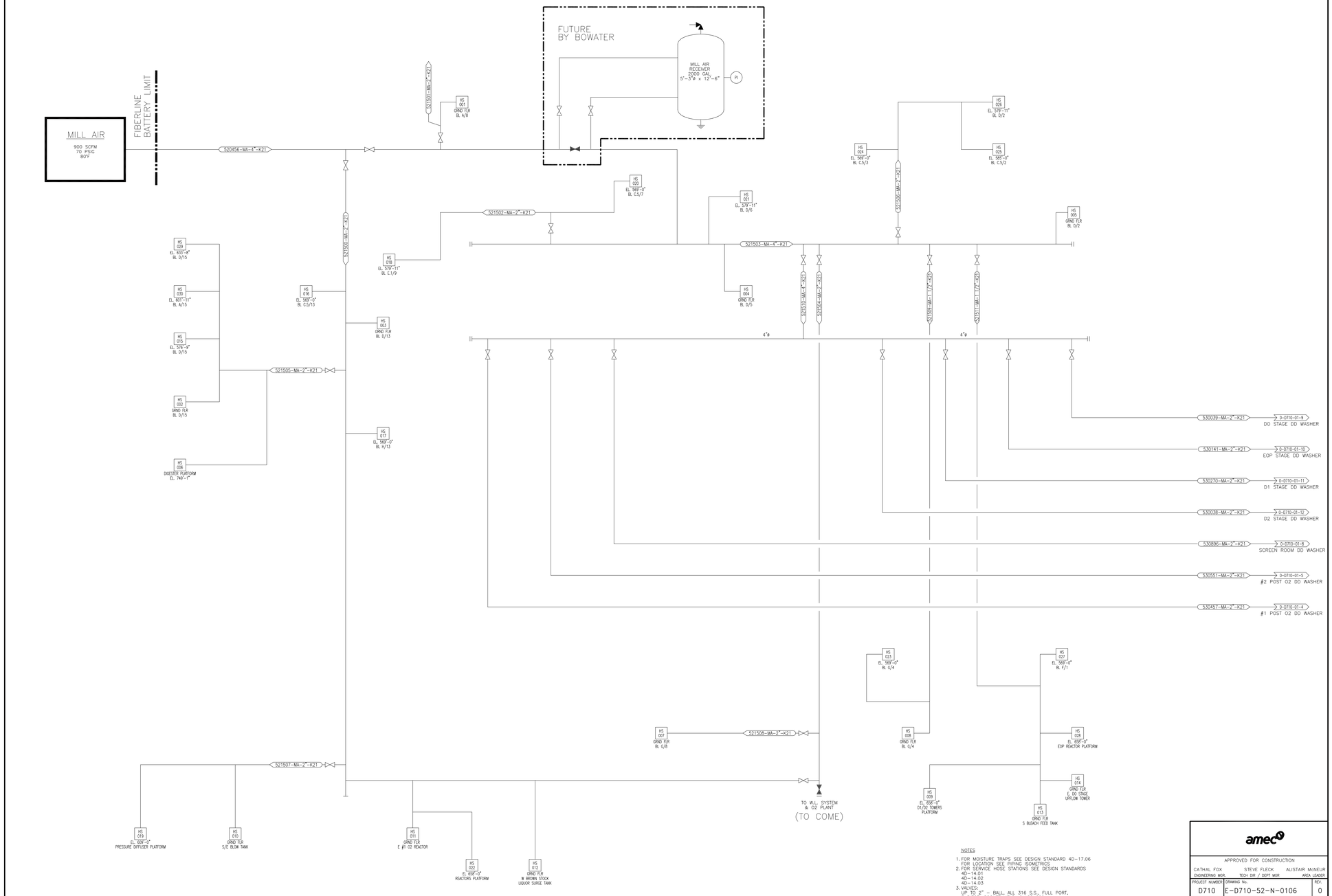
02/03/18 4:20pm

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020



NOTES

1. FOR MOISTURE TRAPS SEE DESIGN STANDARD 4D-17.06 FOR LOCATION SEE PIPING ISOMETRICS.
2. FOR SERVICE HOSE STATIONS SEE DESIGN STANDARDS 4D-14.01 4D-14.02 4D-14.03
3. VALVES:
   UP TO 2" – BALL, ALL 316 S.S., FULL PORT, 3 PIECE, SOCKET WELD, CLASS 600 TRUELINE M640-SW OR EQUAL.
   2 1/2" AND ABOVE – GATE, CAST IRON, BRONZE TRIM SOLID WEDGE, FLANGED, RISING O.S. & Y., CRANE 465 - 1/2 OR EQUAL, CLASS 125.
4. DRAWING RENUMBERED, WAS E-0710-52-0100

amec

APPROVED FOR CONSTRUCTION

CATHAL FOX	STEVE FLECK	ALISTAIR McNEUR
ENGINEERING MGR.	TECH SVE / DEPT MGR	AREA LEADER

PROJECT NUMBER	DRAWING No.	REV.
D710	E-D710-52-N-0106	0

BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

MILL AIR DISTRIBUTION

DR. C.C-WEIGEL	SCALE	BOWATER DRAWING No.
CKD. LMK	DATE 28/03/02	

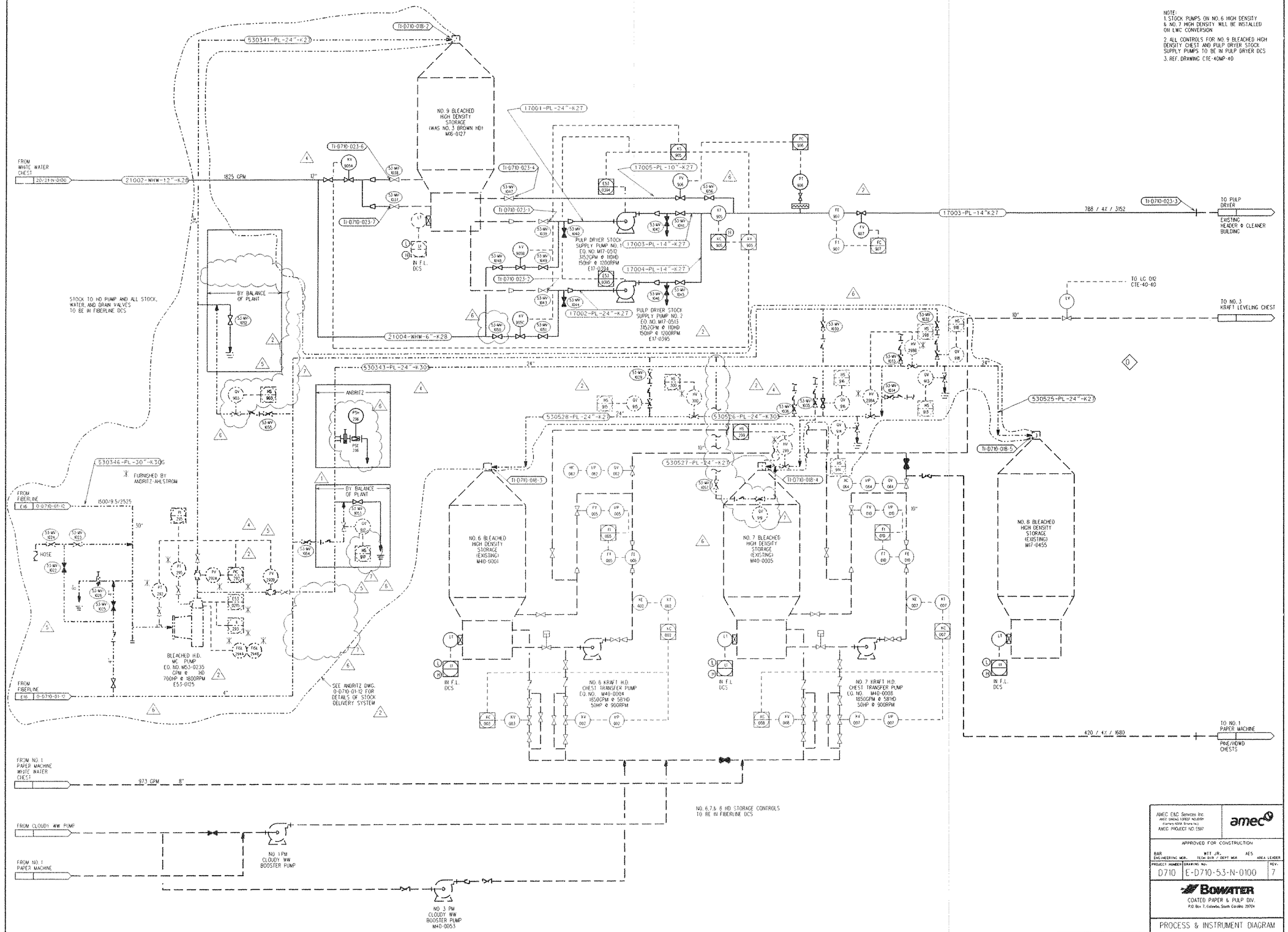
ISSUE	M/D/Y	APP.	ISSUED FOR	REV.
B	04/01 02	C.FOX	DESIGN	
A	01/31 02	LMK	REVIEW	

Rev.	Date	By	Description

CADD FILE: P:\CAD\PRC\Miscellaneous\52-N-0106.dwg
02/03/18 3:55pm

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

NOTE:
1. STOCK PUMPS ON NO. 6 HIGH DENSITY & NO. 7 HIGH DENSITY WILL BE INSTALLED ON LWC CONVERSION
2. ALL CONTROLS FOR NO. 9 BLEACHED HIGH DENSITY CHEST AND PULP DRYER STOCK SUPPLY PUMPS TO BE IN PULP DRYER DCS
3. REF. DRAWING CTE-40MP-40



ISSUE	DATE	APP.	ISSUED FOR	REV.
G	24/07/02	BAR	DESIGN	5
F	01/07/02	BAR	DESIGN - INFORMATION	4
H	20/08/02	BAR	DESIGN	6
E	18/04/02	BAR	DESIGN - INFORMATION	3
I	07/11/02	BAR	DESIGN	7
D	27/02/02	BAR	DESIGN - INFORMATION	2
C	27/ /		DESIGN	1
B	28/08/01	BAR RBC	DESIGN	0
A	04/05/01	BAR RBC	APPROVAL	Δ

Rev.	Date	By	Description
7	14-01-02	AES	GENERAL REVISION
6	16-08-02	AES	GENERAL REVISION
5	07-01-02	AES	ADDED VALVE MOS & FLUSH OUT
4	07-01-02	AES	GENERAL REVISION
3	01-01-02	AES	GENERAL REVISIONS
2	16-05-02	AES	REVISED PUMP TEXT
1	14-01-01	AES	ISSUED FOR DESIGN & INFO

AMEC E&C Services Inc.
AMEC SNC(NG FORMERLY NOURRY)
Formerly ABB Simcoe Inc.
AMEC PROJECT NO. 5597

APPROVED FOR CONSTRUCTION

BAR	WITT JR.	AES
ENGINEERING MGR.	TECH DIR / DEPT MGR	AREA LEADER

PROJECT NUMBER	DRAWING No.	REV.
D710	E-D710-53-N-0100	7

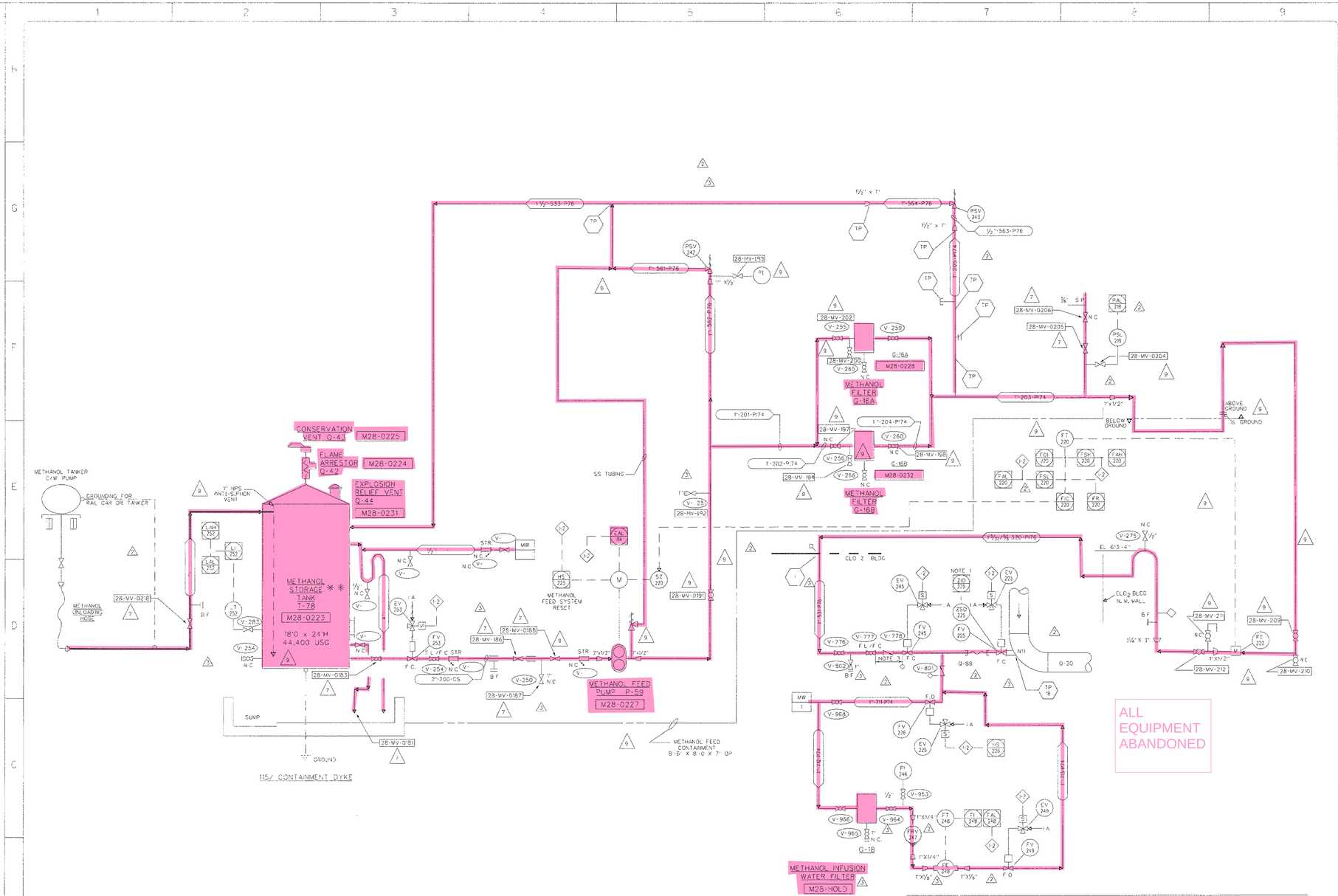
BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Columbia, South Carolina 29204

PROCESS & INSTRUMENT DIAGRAM
BLEACHED STOCK
FIBERLINE

DR. SMF	SCALE NONE	BOWATER DRAWING No.
CHK. AES	DATE 05-04-01	

File: p:/CAD/Pid/web/53N0100.dgn
Date: 06-Feb-03-10:36

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020



NOTES

1. ALARM TO STATE "VALVE HAS FAILED TO CLOSE"
2. FLOWMETER WITH INTERLOCK REQUIRED WITH METHANOL FEED AT Q-20 BOTTOM
3. LOCATE V-778 IN VICINITY OF FV-245

LEGEND

NEW OR MODIFIED

REV. NO.	CIRCLES	DATE	DESCRIPTION	APPROVED
9	LSJ	02 21 08	DG PHA - AS-BUILT	
8	LSJ	11 30 04	REROUTE METHANOL FEED PUMP RELIEF LINE	
7	LSJ	06 06 01	ADDED VALVE NUMBERS	
6	J.H.	97 01 14	AS BUILT	
5	MMC	96 09 18	WEAK WASH SCRUBBER ADDITION	
4	K.M.	96 09 05	UPDATED TO AS BUILT	
3	MMC	96 07 25	REVISED AS INDICATED	
2	MMC	96 06 17	REVISED AS INDICATED	
1	MMC	95 03 29	ISSUED FOR DETAILED DESIGN	
OC	N.B	96 02 08	UPDATED	
OB	HB	96 01 25	ISSUED FOR HAZOP & REVIEW	
OA	N.B	95 10 02	PRELIMINARY ISSUE	

NOTE: CLOUD ALL REVISIONS, IDENTIFY WITH DIAMOND NUMBER AND ARROW. REMOVE ONLY CLOUDS AND ARROW BEFORE NEXT REVISION.

SEAL

SIGNATURE

DATE

DR.	DATE
DSGN.	
CK.	FILE NUMBER
DPE	JOB NO.
Cadfile Name:	

DRAWING TITLE

abitibi bowater

CATAMBA OPERATIONS

DRAWING NUMBER

CTE-28MF-4

CLIENT DRAWING NUMBER

PROCESS SAFETY MANAGEMENT (PSM)

REFERENCE DWG NUMBER	REFERENCE OR TITLE
E-EE94026-115	ENGINEERING FLOWSHEET - WEAK WASH VENT SCRUBBER
E-EE94026-114	ENGINEERING FLOWSHEET - ClO_2 SOLUTION STORAGE TANK-EAST
E-EE94026-113	ENGINEERING FLOWSHEET - HYPO SYSTEM
E-EE94026-112	ENGINEERING FLOWSHEET - CHLORATE UNLOADING & STORAGE
E-EE94026-111	ENGINEERING FLOWSHEET - SEWERS
E-EE94026-110 SHT 1 & 2	ENGINEERING FLOWSHEET - SERVICES
E-EE94026-109	ENGINEERING FLOWSHEET - VENT
E-EE94026-108	ENGINEERING FLOWSHEET - OFF GAS
E-EE94026-107 SHT 2	ENGINEERING FLOWSHEET - SALTCAKE FILTER
E-EE94026-107 SHT 1	ENGINEERING FLOWSHEET - MATATHESIS
E-EE94026-106	ENGINEERING FLOWSHEET - CONDENSATE
E-EE94026-105	ENGINEERING FLOWSHEET - GENERATOR
E-EE94026-104	ENGINEERING FLOWSHEET - CHEMICAL FILTERS
E-EE94026-102	FLOWSHEET LEGEND

Bowater Cadfile No. 28mf-4.dgn

STERLING PULP CHEMICALS

DRAWN	CHECKED	PROCESS	MAINT.	MECH.	PROJECT	APPROVED
DATE	DATE	DATE	DATE	DATE	DATE	DATE

SCALE | DWG E-EE | REV

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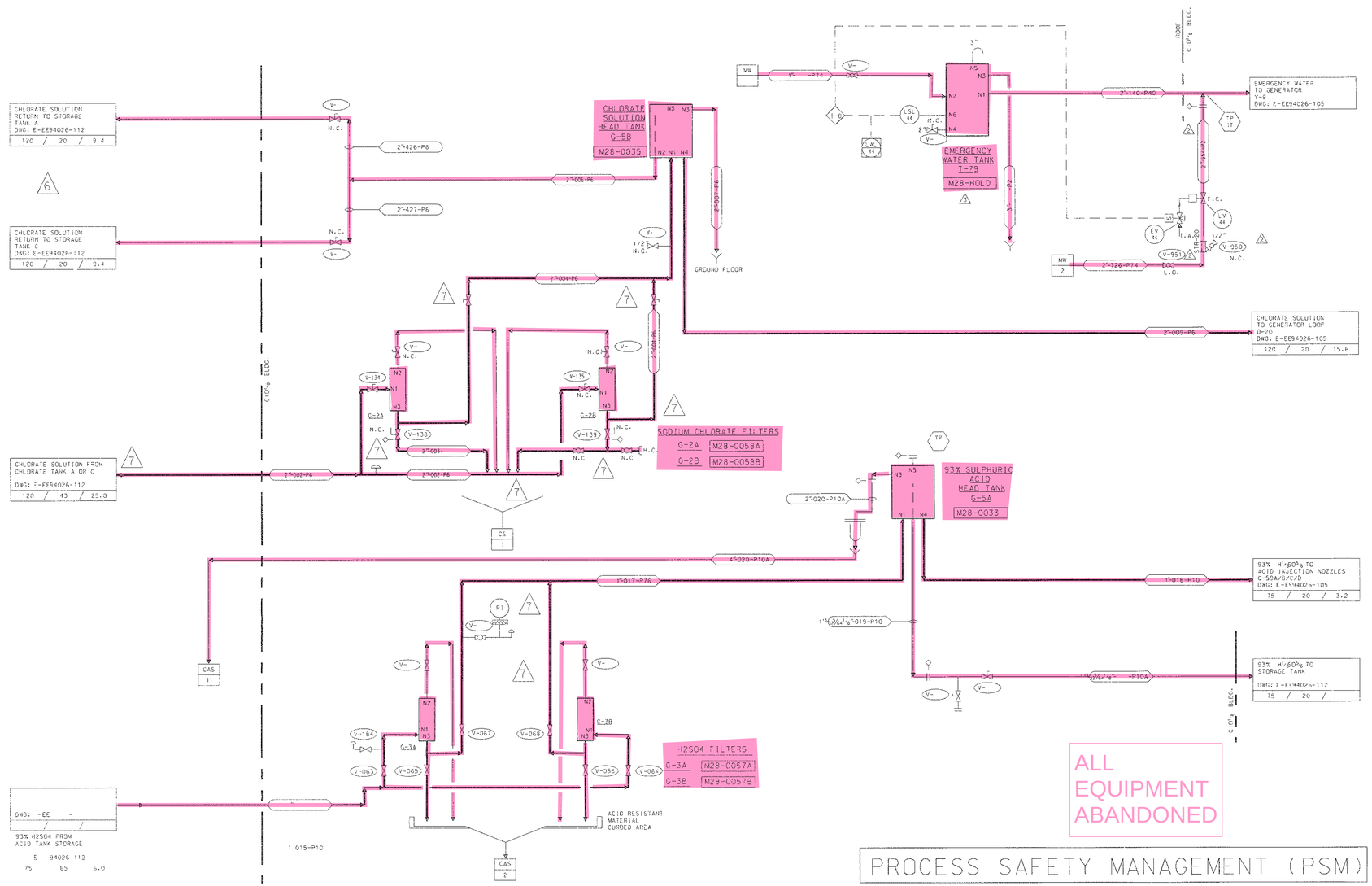
203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

Plot date = 97/01/14 12:58



ALL EQUIPMENT ABANDONED

PROCESS SAFETY MANAGEMENT (PSM)

E-EE 94026 -115	ENGINEERING FLOWSHEET - WEAK WASH SCRUBBER
E-EE 94026 -114	ENGINEERING FLOWSHEET - C10% SOLUTION STORAGE TANK-EAST
E-EE 94026 -113	ENGINEERING FLOWSHEET - HYPO SYSTEM
E-EE 94026 -112	ENGINEERING FLOWSHEET - CHLORATE UNLOADING & STORAGE
E-EE 94026 -111	ENGINEERING FLOWSHEET - SEWERS
E-EE 94026 -110 SHT. 2	ENGINEERING FLOWSHEET - SERVICES
E-EE 94026 -110 SHT. 1	ENGINEERING FLOWSHEET - SERVICES
E-EE 94026 -109	ENGINEERING FLOWSHEET - VENT.
E-EE 94026 -108	ENGINEERING FLOWSHEET - OFF GAS
E-EE 94026 -107 SHT. 2	ENGINEERING FLOWSHEET - SALTCAKE FILTER
E-EE 94026 -107 SHT. 1	ENGINEERING FLOWSHEET - METATHESIS
E-EE 94026 -106	ENGINEERING FLOWSHEET - CONDENSATE
E-EE 94026 -105	ENGINEERING FLOWSHEET - GENERATOR
E-EE 94026 -103	ENGINEERING FLOWSHEET - METHANOL
E-EE 94026 -102	ENGINEERING FLOWSHEET - LEGEND
REFERENCE DWG. NUMBER	REFERENCE OR TITLE

REV. NO.	CIRCLES	DATE	REV. BY	DESCRIPTION	APPROVED
7	LSJ	02 25 08		06 PHA - #23 & 22 AS BUILT UPDATE	
6	LSJ	01 07 19		GENERAL REVISIONS	
5	I.H.	97 01 14		AS BUILT	
4	MMC	96 09 18		WEAK WASH SCRUBBER ADDITION	
3	MMC	96 07 25		UPDATED TO AS BUILT	
2	MMC	96 06 17		REVISED AS INDICATED	
1	I.H.	96 04 02		ISSUED FOR DETAILED DESIGN	J E
OC	N.B.	96 02 08		UPDATED	
OB	M.S.	96 01 25		ISSUED FOR HAZOP & REVIEW	
OA	N.B.	95 10 03		PRELIMINARY ISSUE	

NOTE: CIRCLE ALL REVISIONS. IDENTIFY WITH DIAMOND, NUMBER AND ARROW. REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION.

SEAL

SIGNATURE

DATE

DR. | DATE
DSGN. | FILE NUMBER
CK. | JOB NO.
DPE
Cad File Name:

DRAWING TITLE

BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

STERLING PULP CHEMICALS

DRAWN	CHECKED	PROCESS	INSTR.	MECH.	PROJECT	APPROVED
DATE	DATE	DATE	DATE	DATE	DATE	DATE

SCALE | DWG. E-EE - | REV.

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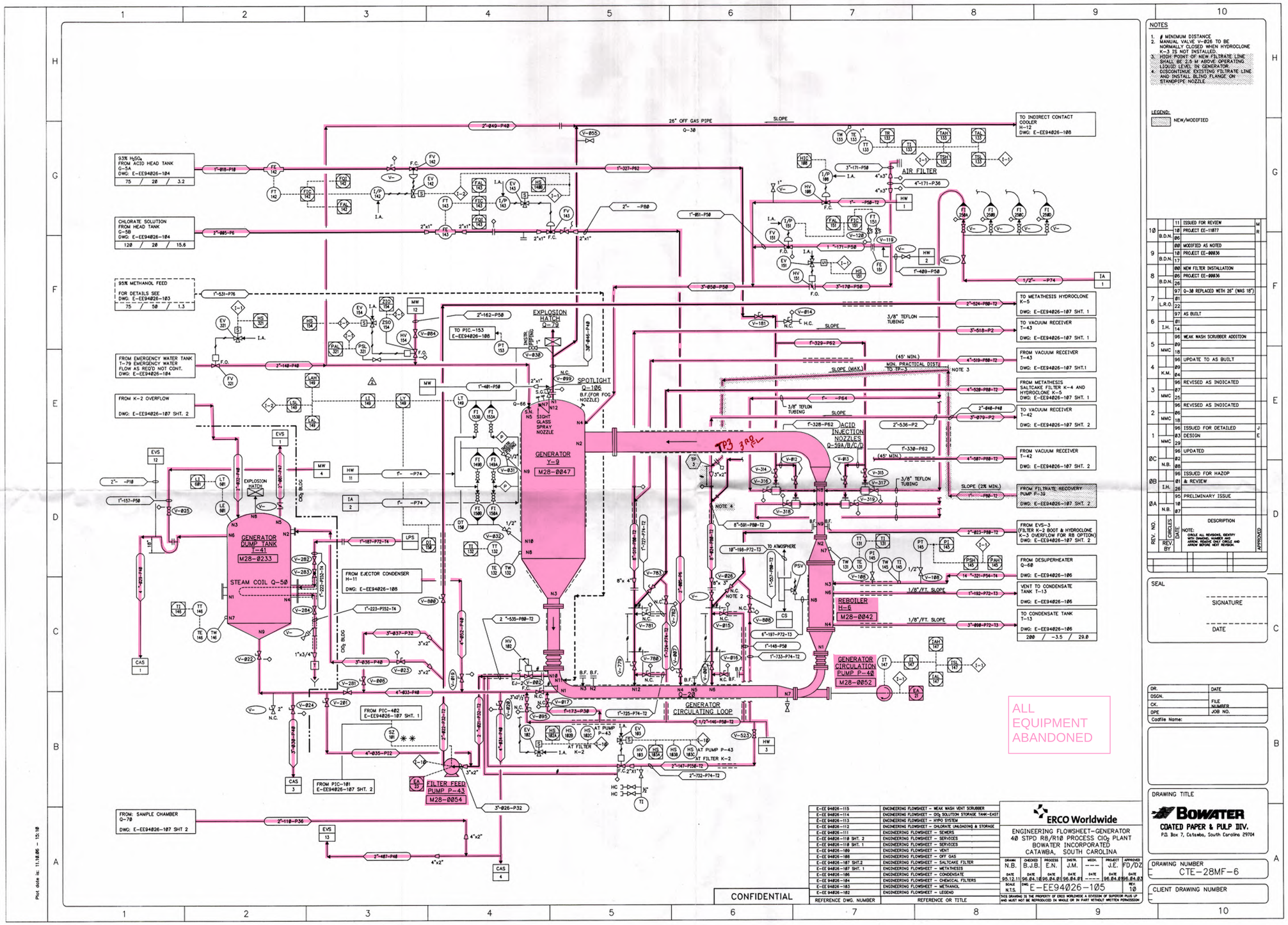
DRAWING NUMBER
CTE-28MF-5

CLIENT DRAWING NUMBER

NTIAL

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020



NOTES

1. # MINIMUM DISTANCE
2. MANUAL VALVE V-826 TO BE NORMALLY CLOSED WHEN HYDROCLONE K-3 IS NOT INSTALLED.
3. HIGH POINT OF NEW FILTRATE LINE SHALL BE 2.5 M ABOVE OPERATING LIQUID LEVEL IN GENERATOR.
4. DISCONTINUE EXISTING FILTRATE LINE AND INSTALL BLIND FLANGE ON STANDPIPE NOZZLE.

LEGEND:

NEW/MODIFIED

REV. NO.	CIRCLES	DATE	REV. BY	DESCRIPTION	APPROVED
10	11	B.D.N.	M	ISSUED FOR REVIEW	
	10		R	PROJECT EE-11077	
	06				
9	00	B.D.N.		MODIFIED AS NOTED	
	10			PROJECT EE-00036	
	17				
8	00	B.D.N.		NEW FILTER INSTALLATION	
	06			PROJECT EE-00036	
	26				
7	97	L.R.O.		Q-3B REPLACED WITH 26" (WAS 18")	
	01				
	22				
6	97	I.H.		AS BUILT	
	01				
	14				
5	96	MMC		WEAK WASH SCRUBBER ADDITION	
	09				
	18				
4	96	K.M.		UPDATE TO AS BUILT	
	09				
	04				
3	96	MMC		REVISED AS INDICATED	
	07				
	25				
2	96	MMC		REVISED AS INDICATED	
	06				
	18				
1	96	MMC		ISSUED FOR DETAILED DESIGN	J E
	03				
	29				
0C	96	N.B.		UPDATED	
	02				
	08				
0B	96	I.H.		ISSUED FOR HAZOP & REVIEW	
	01				
	26				
0A	95	N.B.		PRELIMINARY ISSUE	
	10				
	07				

NOTE: CIRCLE ALL REVISIONS, IDENTIFY WITH CIRCLED NUMBER, MARK REVISED AREA ON DRAWING AND ARROW BEFORE NEXT REVISION.

SEAL

SIGNATURE

DATE

DR.	DATE
DSGN.	
CK.	FILE NUMBER
DPE	JOB NO.
Codile Name:	

DRAWING TITLE

BOWATER COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

DRAWING NUMBER
CTE-28MF-6

CLIENT DRAWING NUMBER

REFERENCE DWG. NUMBER	REFERENCE OR TITLE
E-EE94026-115	ENGINEERING FLOWSHEET - WEAK WASH VENT SCRUBBER
E-EE94026-114	ENGINEERING FLOWSHEET - ClO_2 SOLUTION STORAGE TANK-EAST
E-EE94026-113	ENGINEERING FLOWSHEET - HYPO SYSTEM
E-EE94026-112	ENGINEERING FLOWSHEET - CHLORATE UNLOADING & STORAGE
E-EE94026-111	ENGINEERING FLOWSHEET - SEWERS
E-EE94026-110 SHT. 2	ENGINEERING FLOWSHEET - SERVICES
E-EE94026-110 SHT. 1	ENGINEERING FLOWSHEET - SERVICES
E-EE94026-109	ENGINEERING FLOWSHEET - VENT
E-EE94026-108	ENGINEERING FLOWSHEET - OFF GAS
E-EE94026-107 SHT.2	ENGINEERING FLOWSHEET - SALTCAKE FILTER
E-EE94026-107 SHT. 1	ENGINEERING FLOWSHEET - METATHESIS
E-EE94026-106	ENGINEERING FLOWSHEET - CONDENSATE
E-EE94026-104	ENGINEERING FLOWSHEET - CHEMICAL FILTERS
E-EE94026-103	ENGINEERING FLOWSHEET - METHANOL
E-EE94026-102	ENGINEERING FLOWSHEET - LEGEND

ERCO Worldwide

ENGINEERING FLOWSHEET-GENERATOR
40 STPD R8/R10 PROCESS ClO_2 PLANT
BOWATER INCORPORATED
CATAWBA, SOUTH CAROLINA

DRAWN	CHECKED	PROCESS	DSTN.	MECH.	PROJECT	APPROVED
N.B.	B.J.B.	E.N.	J.M.	---	J.E.	FD/DZ
DATE 95.12.11	DATE 96.04.18	DATE 96.04.01	DATE 96.04.01	DATE ----	DATE 96.04.09	DATE 96.04.03

SCALE N.T.S. | DWG. E-EE94026-105 | REV. 10

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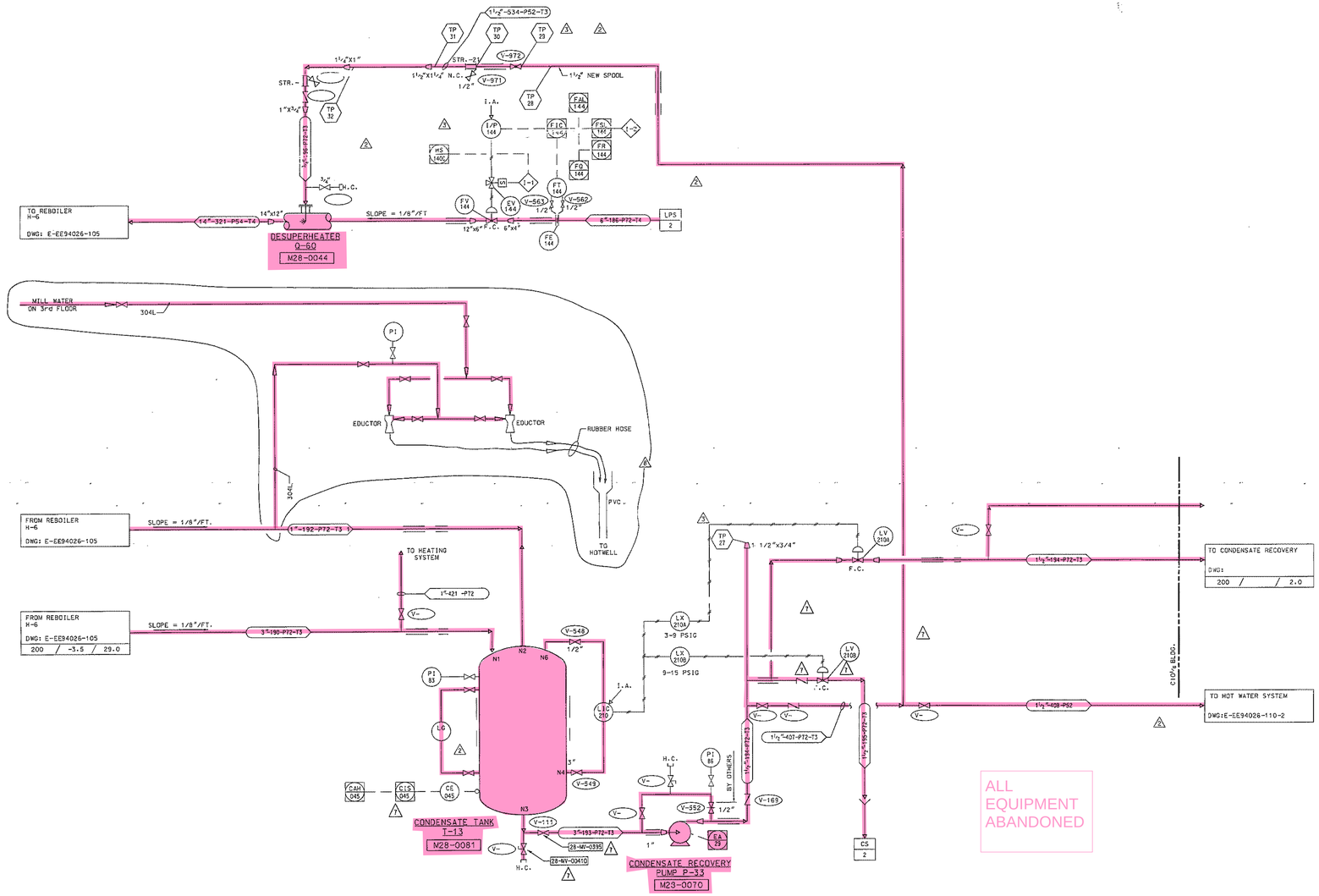
Plot date is: 11.18.06 - 13:18

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020



NOTES

LEGEND

NEW OR MODIFIED

REV. NO.	CIRCLE	REV. BY	DATE	DESCRIPTION	APPROVED
8		JKHM	11 06 02	GENERAL REVISION	
7		LSJ	00 05 01	ADDED VALVE NUMBERS, & GENERAL	
6		I.N.	97 01 14	AS BUILT	
5		MMC	96 09 18	WEAK WASH SCRUBBER ADDITION	
4		K.M.	96 05 04	UPDATED TO AS BUILT	
3		MMC	96 07 25	REVISED AS INDICATED	
2		MMC	96 06 17	REVISED AS INDICATED	
1		K.M.	96 04 02	ISSUED FOR DETAILED DESIGN	J.E.
OC		N.B.	96 02 08	UPDATED	
OB		G.C.	96 01 26	ISSUED FOR HAZOP & REVIEW	
OA		N.B.	95 10 02	PRELIMINARY ISSUE	

NOTE: CIRCLE ALL REVISIONS. IDENTIFY WITH DIAMOND; NUMBER AND AREAS. REDACTE ONLY CIRCLE AND AREAS BEFORE NEXT REVISION.

SEAL

SIGNATURE

DATE

DR.	DATE
DSGN.	FILE NUMBER
CK.	
DPE	JOB NO.
Codfile Name:	

DRAWING TITLE

BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

DRAWING NUMBER
CTE-28MF-7

CLIENT DRAWING NUMBER

REFERENCE DWG. NUMBER	REFERENCE OR TITLE
E-EE94026 -114	ENGINEERING FLOWSHEET - WEAK WASH VENT SCRUBBER
E-EE94026 -114	ENGINEERING FLOWSHEET - ClO_2 SOLUTION STORAGE TANK-EAST
E-EE94026 -113	ENGINEERING FLOWSHEET - HYPO SYSTEM
E-EE94026 -112	ENGINEERING FLOWSHEET - CHORATE UNLOADING & STORAGES
E-EE94026 -111	ENGINEERING FLOWSHEET - SEWERS
E-EE94026 -110 SHT. 2	ENGINEERING FLOWSHEET - SERVICES
E-EE94026 -110 SHT. 1	ENGINEERING FLOWSHEET - SERVICES
E-EE94026 -109	ENGINEERING FLOWSHEET - VENT.
E-EE94026 -108	ENGINEERING FLOWSHEET - OFF GAS (SURFACE COND.)
E-EE94026 -107 SHT. 2	ENGINEERING FLOWSHEET - SALTCAKE FILTER
E-EE94026 -107 SHT. 1	ENGINEERING FLOWSHEET - METATHESIS
E-EE94026 -105	ENGINEERING FLOWSHEET - GENERATOR
E-EE94026 -104	ENGINEERING FLOWSHEET - CHEMICAL FILTERS
E-EE94026 -103	ENGINEERING FLOWSHEET - METHANOL
E-EE94026 -102	ENGINEERING FLOWSHEET - LEGEND

STERLING PULP CHEMICALS

ENGINEERING FLOWSHEET-CONDENSATE
40 STPD R8/R10 PROCESS ClO_2 PLANT
BOWATER INCORPORATED
CATAWBA, SOUTH CAROLINA

DRAWN	CHECKED	PROCESS	DSTRL.	MECH.	PROJECT	APPROVED
N.B.B.	J.J.B.	E.N.	J.M.	----	J.E.	FD/DZ
DATE 85.12.19	DATE 86.04.19	DATE 86.04.09	DATE 86.04.01	DATE ----	DATE 86.04.09	DATE 86.04.03

SCALE N.T.S. DWG.-- E-EE94026-106 REV. 6

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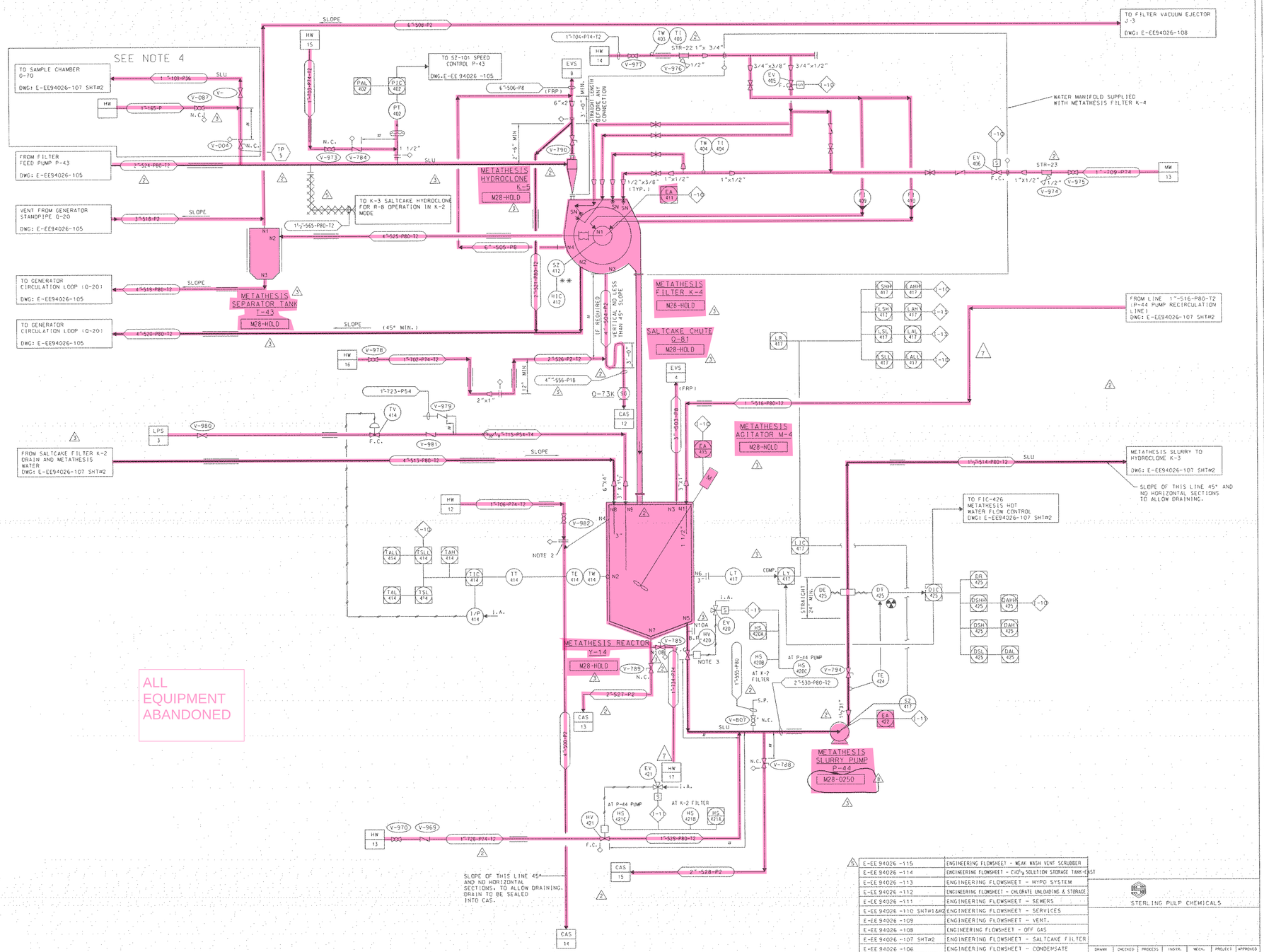
Plot date 1987.08.25 - 15:09

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020



NOTES

1. # MINUMUM DISTANCE FOR PIPING.
2. PIPING EXTENSION SEE PIPING DETAIL DWG. E-EE94026-506-1, DETAIL NO. 12
3. Y-14 NOZZLE N5 & SLURRY BLOCK VALVE HV-220 TO BE HEAT TRACED & INSULATED.
4. ALL PIPING & EQUIPMENT WITHIN AREA MARKED THUS———— IS EXISTING. ALL REMAINING PIPING & EQUIPMENT ON THIS DWG. IS NEW.
5. ALL PIPING, INSTRUMENTS AND EQUIP. ARE NEW OR MODIFIED

REV. NO.	REV. BY	DATE	DESCRIPTION	APPROVED
8	RRB	09	REVISED METATHESIS SLURRY	
		03	PUMP EQUIP. NO.	
		04		
7	L.S.	06	GENERAL REVISIONS	
		06	& REMOVE RO-416	
		01		
6	I.H.	97	AS BUILT	
		01		
		14		
5	MMC	96	WEAK WASH SCRUBBER ADDITION	
		09		
		18		
4	K.M.	96	UPDATED TO AS BUILT	
		09		
		04		
3	MMC	96	REVISED AS INDICATED	
		07		
		25		
2	MMC	96	REVISED AS INDICATED	
		06		
		18		
1	I.H.	96	ISSUED FOR DETAILED	J
		04	DESIGN	E
		02		
OC	N.B.	96	UPDATED	
		02		
		08		
OB	I.H.	96	ISSUED FOR HAZOP	
		01	& REVIEW	
		26		
OA	N.B.	95	PRELIMINARY ISSUE	
		11		
		07		

NOTE: CIRCLE ALL REVISIONS. IDENTIFY WITH DIAMOND, NUMBER AND ARROW. REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION.

SEAL

SIGNATURE

DATE

DR.	DATE
DSGN.	FILE NUMBER
CK.	
DPE	JOB NO.

Codefile Name:

DRAWING TITLE

BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Calawba, South Carolina 29704

DRAWING NUMBER
CTE-28MF-8

CLIENT DRAWING NUMBER

E-EE 94026 -115	ENGINEERING FLOWSHEET - WEAK WASH VENT SCRUBBER
E-EE 94026 -114	ENGINEERING FLOWSHEET - ClO_2 SOLUTION STORAGE TANK-EAST
E-EE 94026 -113	ENGINEERING FLOWSHEET - HYPO SYSTEM
E-EE 94026 -112	ENGINEERING FLOWSHEET - CHLORATE UNLOADING & STORAGE
E-EE 94026 -111	ENGINEERING FLOWSHEET - SEWERS
E-EE 94026 -110 SHT#1 &#2	ENGINEERING FLOWSHEET - SERVICES
E-EE 94026 -109	ENGINEERING FLOWSHEET - VENT.
E-EE 94026 -108	ENGINEERING FLOWSHEET - OFF GAS
E-EE 94026 -107 SHT#2	ENGINEERING FLOWSHEET - SALTCAKE FILTER
E-EE 94026 -106	ENGINEERING FLOWSHEET - CONDENSATE
E-EE 94026 -105	ENGINEERING FLOWSHEET - GENERATOR
E-EE 94026 -104	ENGINEERING FLOWSHEET - CHEMICAL FILTERS
E-EE 94026 -103	ENGINEERING FLOWSHEET - METHANOL
E-EE 94026 -102	ENGINEERING FLOWSHEET - LEGEND
REFERENCE DWG. NUMBER	REFERENCE OR TITLE

STERLING PULP CHEMICALS

DRAWN	CHECKED	PROCESS	INSTR.	MECH.	PROJECT	APPROVED
DATE	DATE	DATE	DATE	DATE	DATE	DATE

SCALE — DWG. E-EE — REV.

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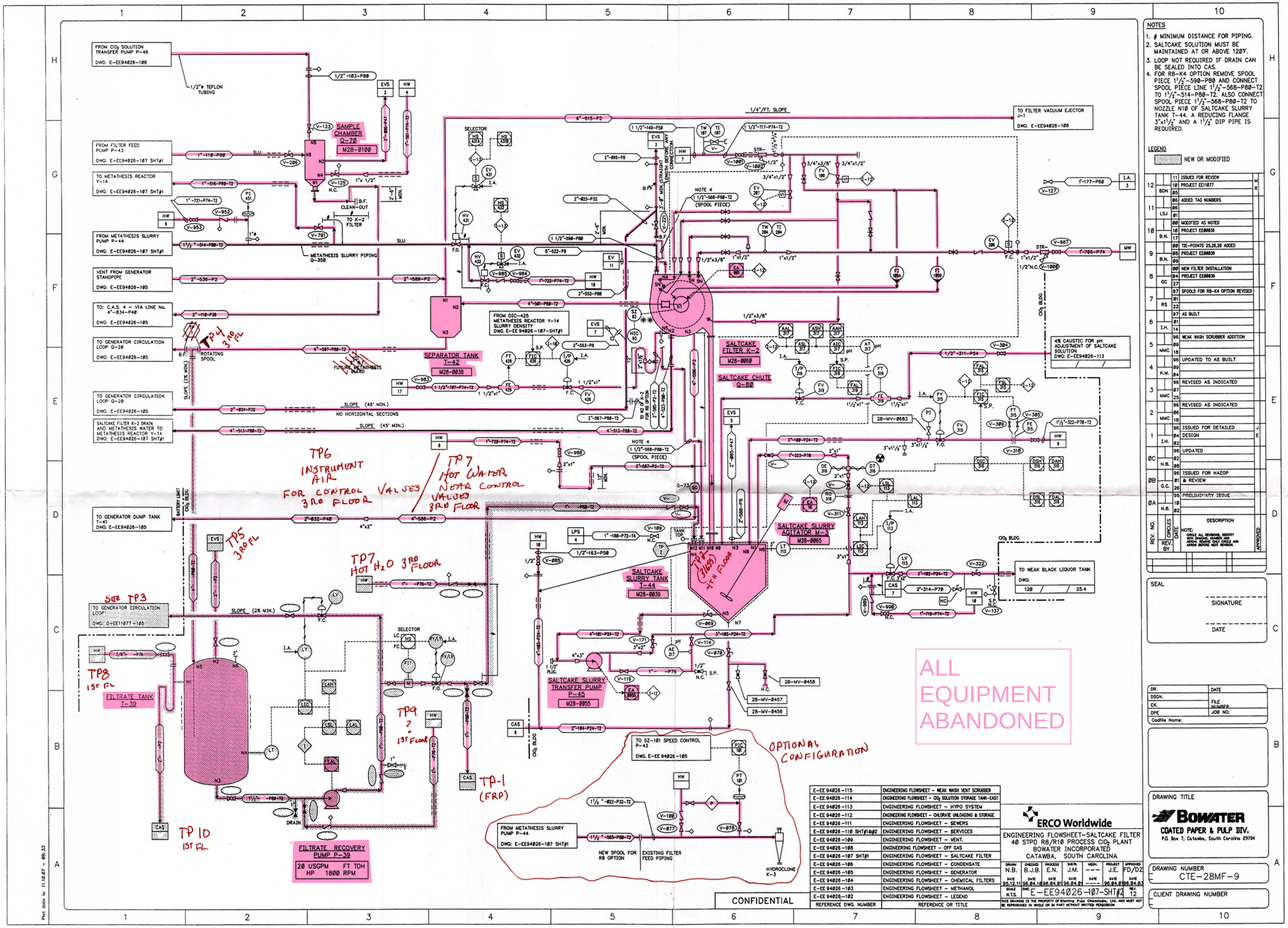
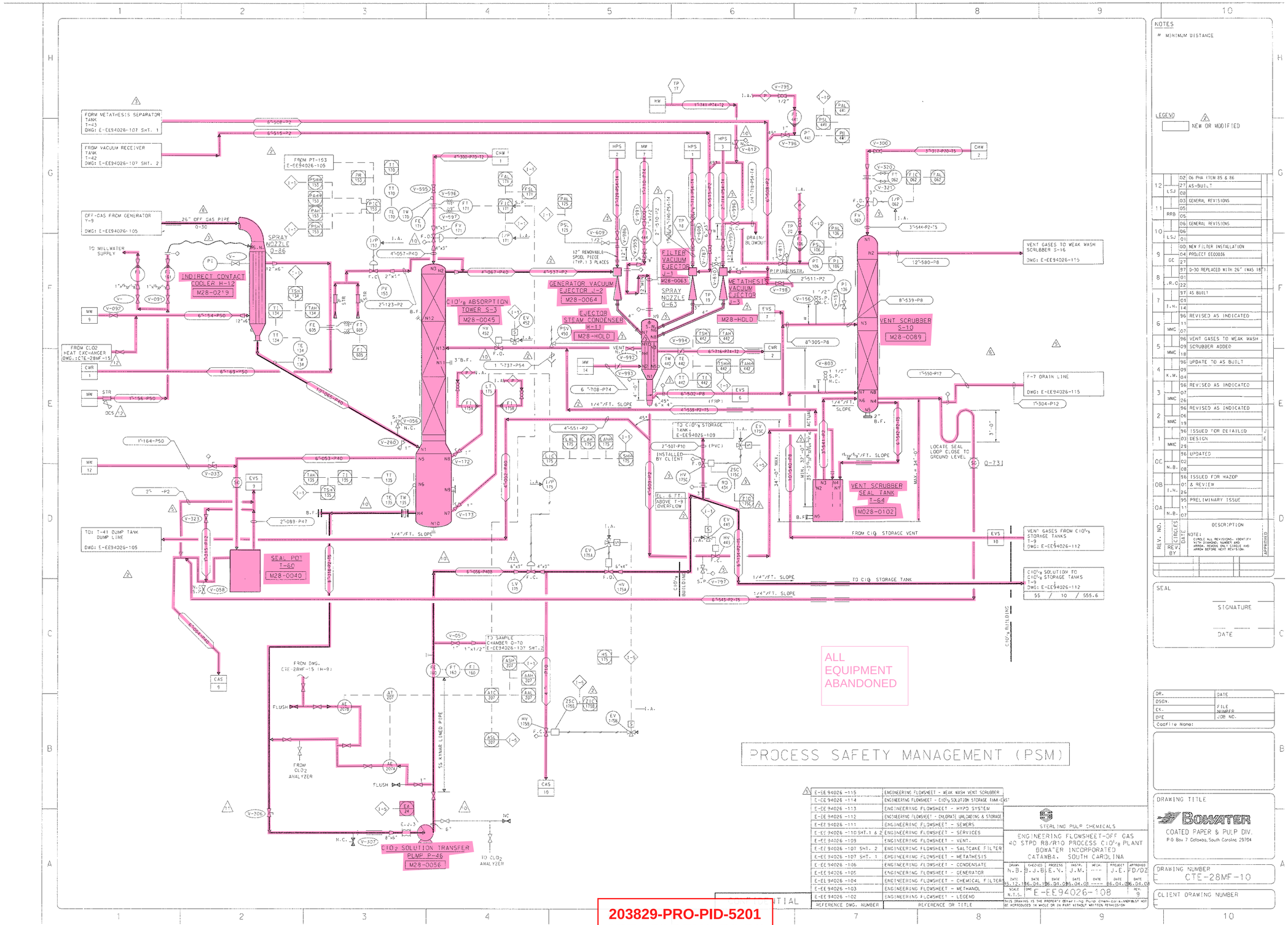
CONFIDENTIAL

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020



203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020



E-EE94026-115	ENGINEERING FLOWSHEET - WEAK WASH VENT SCRUBBER
E-EE94026-114	ENGINEERING FLOWSHEET - ClO2's SOLUTION STORAGE TANK-GAS
E-EE94026-113	ENGINEERING FLOWSHEET - HYPO SYSTEM
E-EE94026-112	ENGINEERING FLOWSHEET - CHLORATE UNLOADING & STORAGE
E-EE94026-111	ENGINEERING FLOWSHEET - SEWERS
E-EE94026-110 SHT.1 & 2	ENGINEERING FLOWSHEET - SERVICES
E-EE94026-109	ENGINEERING FLOWSHEET - VENT.
E-EE94026-107 SHT. 2	ENGINEERING FLOWSHEET - SALTCAKE FILTER
E-EE94026-107 SHT. 1	ENGINEERING FLOWSHEET - METATHESIS
E-EE94026-106	ENGINEERING FLOWSHEET - CONDENSATE
E-EE94026-105	ENGINEERING FLOWSHEET - GENERATOR
E-EE94026-104	ENGINEERING FLOWSHEET - CHEMICAL FILTERS
E-EE94026-103	ENGINEERING FLOWSHEET - METHANOL
E-EE94026-102	ENGINEERING FLOWSHEET - LEGEND
REFERENCE DWG. NUMBER	REFERENCE OR TITLE

STERLING PULP CHEMICALS

ENGINEERING FLOWSHEET-OFF GAS
40 STPD R8/R10 PROCESS ClO2's PLANT
BOWATER INCORPORATED
CATAWBA, SOUTH CAROLINA

DRAWN	CHECKED	PROCESS	INSTR.	MECH.	PROJECT	APPROVED
N.B.	S.J.B.	E.N.	J.M.	---	J.E.	FD/DZ
DATE 95.12.18	DATE 96.04.18	DATE 96.04.08	DATE 96.04.01	DATE ----	DATE 96.04.08	DATE 96.04.08

SCALE N.T.S. DWG E-EE94026-108 REV 9

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NOTES

MINIMUM DISTANCE

LEGEND

NEW OR MODIFIED

REV. NO.	REV. BY	DATE	DESCRIPTION
12	LSJ	02	06 PHA ITEM 85 & 86
		27	AS-BUILT
		08	
11	RRB	03	GENERAL REVISIONS
		05	
		05	
10	LSJ	06	GENERAL REVISIONS
		06	
		01	
9	GC	00	NEW FILTER INSTALLATION
		04	PROJECT EE00036
		27	
8	L.R.C.	97	9-30 REPLACED WITH 26" (WAS 18")
		01	
		22	
7	T.N.	97	AS BUILT
		01	
		14	
6	MMC	96	REVISED AS INDICATED
		11	
		07	
5	MMC	96	VENT GASES TO WEAK WASH
		09	SCRUBBER ADDED
		18	
4	K.M.	96	UPDATE TO AS BUILT
		09	
		04	
3	MMC	96	REVISED AS INDICATED
		07	
		26	
2	MMC	96	REVISED AS INDICATED
		06	
		19	
1	MMC	96	ISSUED FOR DETAILED DESIGN
		03	
		29	
CC	N.B.	96	UPDATED
		02	
		08	
0B	T.N.	96	ISSUED FOR HAZOP & REVIEW
		01	
		26	
0A	N.B.	95	PRELIMINARY ISSUE
		11	
		07	

NOTE: CIRCLE ALL REVISIONS, IDENTIFY WITH DIAMOND, NUMBER AND ARROW, REVISE ON FINISHED AND ARROW BEFORE NEXT REVISION.

APPROVED

SEAL

SIGNATURE

DATE

DR.	DATE
DSGN.	
CK.	FILE NUMBER
DPE	JOB NO.

Cadfile Name:

DRAWING TITLE

BOWATER

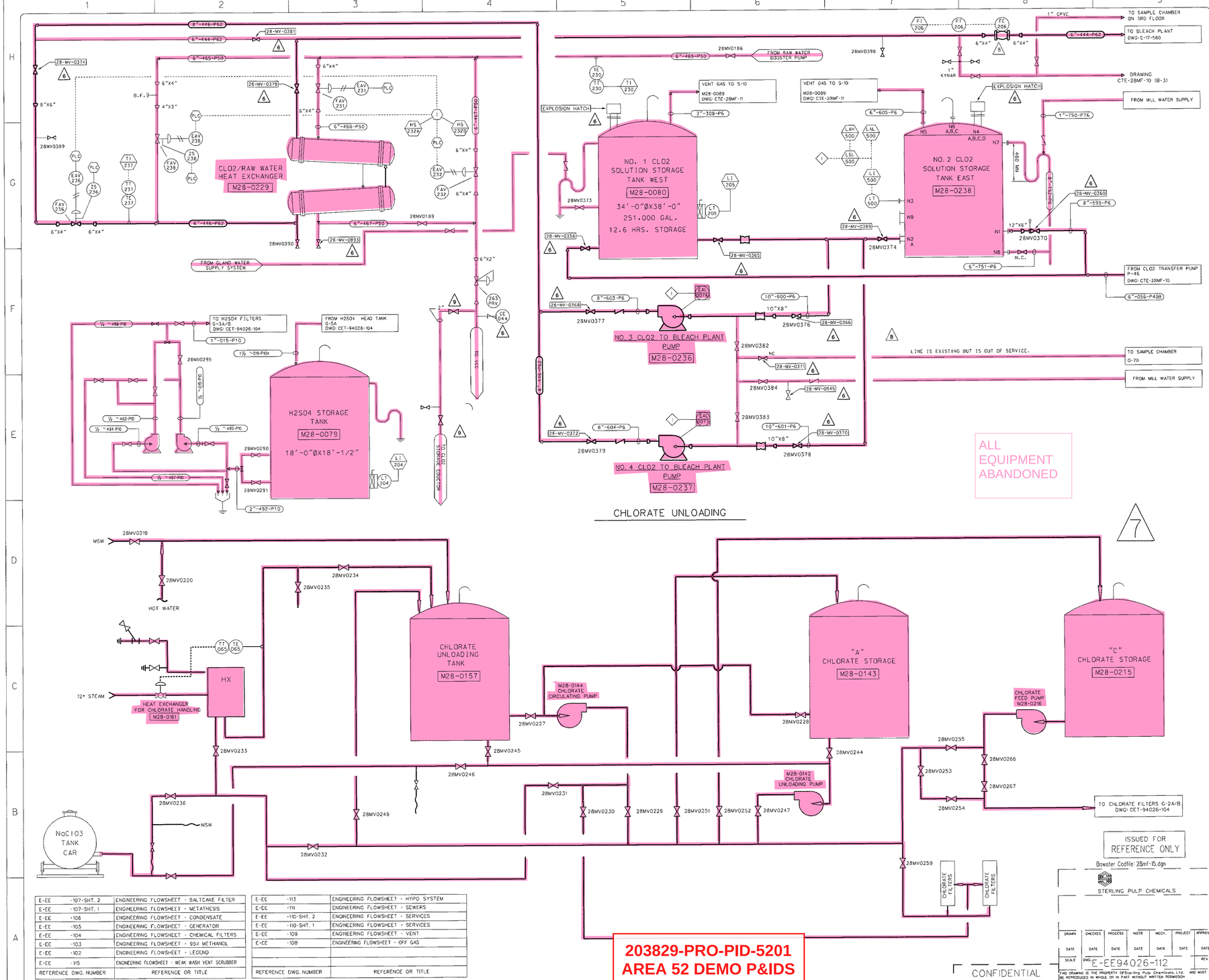
COATED PAPER & PULP DIV.
P.O Box 7 Catawba, South Carolina 29704

DRAWING NUMBER

CTE-28MF-10

CLIENT DRAWING NUMBER

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020



E-EE -107-SHT. 2	ENGINEERING FLOWSHEET - SALTCAKE FILTER
E-EE -107-SHT. 1	ENGINEERING FLOWSHEET - METATHESIS
E-EE -106	ENGINEERING FLOWSHEET - CONDENSATE
E-EE -105	ENGINEERING FLOWSHEET - GENERATOR
E-EE -104	ENGINEERING FLOWSHEET - CHEMICAL FILTERS
E-EE -103	ENGINEERING FLOWSHEET - 95% METHANOL
E-EE -102	ENGINEERING FLOWSHEET - LEGEND
E-EE -115	ENGINEERING FLOWSHEET - WEAK WASH VENT SCRUBBER
REFERENCE DWG. NUMBER	REFERENCE OR TITLE

E-EE -113	ENGINEERING FLOWSHEET - HYPO SYSTEM
E-EE -111	ENGINEERING FLOWSHEET - SEWERS
E-EE -110-SHT. 2	ENGINEERING FLOWSHEET - SERVICES
E-EE -110-SHT. 1	ENGINEERING FLOWSHEET - SERVICES
E-EE -109	ENGINEERING FLOWSHEET - VENT
E-EE -108	ENGINEERING FLOWSHEET - OFF GAS
REFERENCE DWG. NUMBER	REFERENCE OR TITLE

NOTES

1. FOR INSULATION CODING REFER TO INSULATION SPEC. EE94026-INS.
2. INSTRUMENT PRESENTATION FOLLOWS ISA STANDARD.
3. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY AREA/DEPT. No. 28 UNLESS OTHERWISE NOTED.

REV. NO.	REV. BY	DATE	DESCRIPTION
9	LSJ	11 05 04	WATER LINE TO CLO2 STORAGE EDUCTOR
8	RRB	03 05 05	GENERAL REVISIONS
7	LSJ	01 02 16	ADDED CHLORATE UNLOADING SYSTEM
6	LSJ	01 08 06	ADDED VALVE NUMBERS AND GENERAL
5	TH	99 12 05	GENERAL REVISION
4	TH	98 01 19	SODIUM CHLORATE STORAGE TANK B & PUMP DEMOLISHED
3	K.M.	96 06 05	UPDATED AND REVISED FOR REFERENCE
2	MMC	96 05 14	REVISED AS NOTED
1	MMC	96 03 29	ISSUED FOR DETAILED DESIGN
OC	N.B.	96 03 09	PRELIMINARY ISSUE
OB	M.S.	96 01 25	ISSUED FOR HAZOP & REVIEW
OA	N.B.	95 10 02	PRELIMINARY ISSUE

NOTE: CIRCLE ALL REVISIONS, IDENTIFY WITH DIAMOND, NUMBER AND ARROW. REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION.

APPROVED

SEAL

SIGNATURE

DATE

DR.	DATE
DSGN.	
CK.	FILE NUMBER
DPE	JOB NO.
Codfile Name:	

RECEIVED DEC 1 2004 BOWATER CAROLINA ENGINEERING

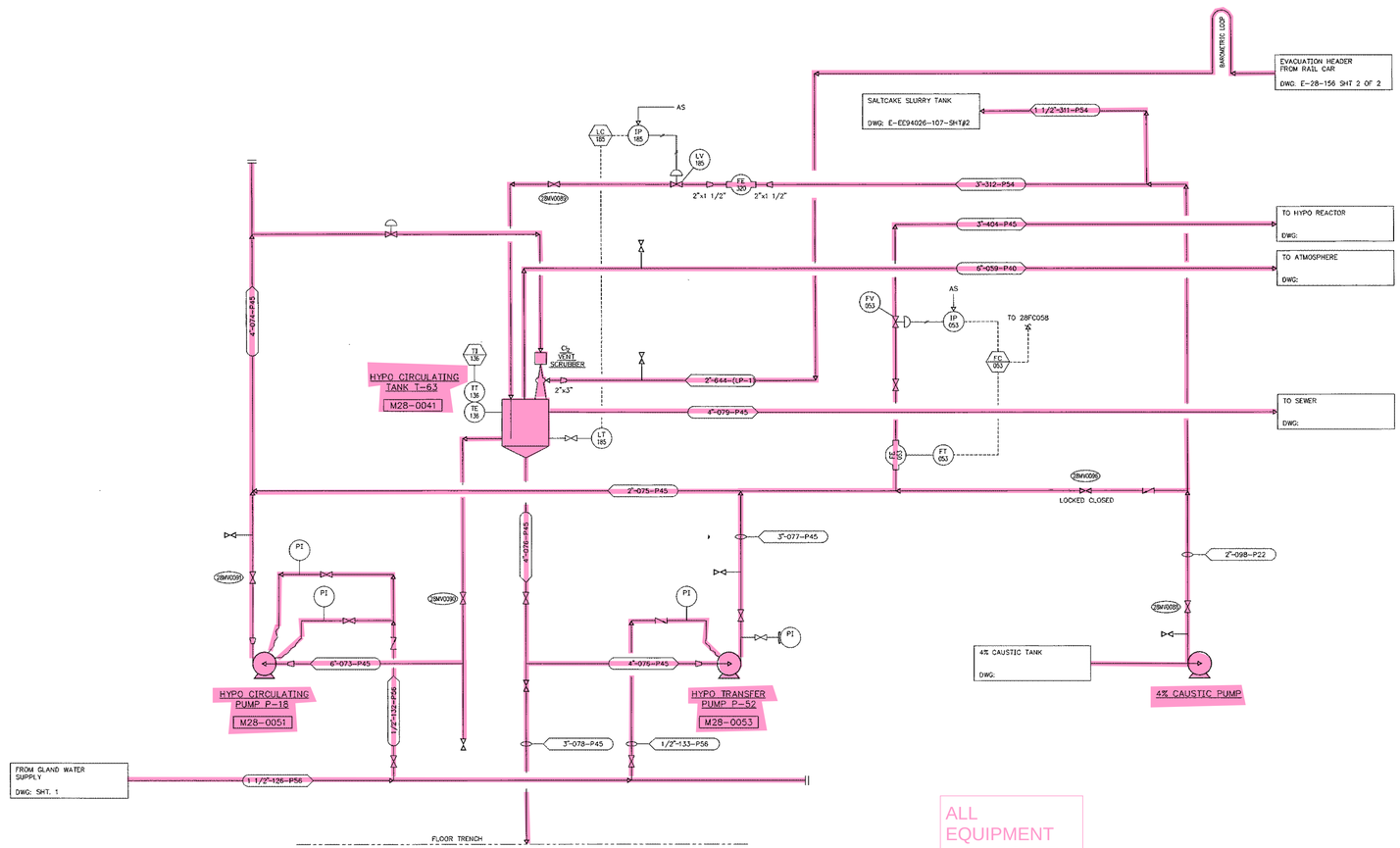
DRAWING TITLE

BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

DRAWING NUMBER
CTE-28MF-15

CLIENT DRAWING NUMBER

Plot date is:



ALL EQUIPMENT ABANDONED

NOTES

REV NO.	CIRCLES	DATE	DESCRIPTION	APPROVED
1	MMC	96 03 29	ISSUED FOR DETAILED DESIGN	
OB	G.C.	96 01 26	ISSUED FOR HAZOP & REVIEW	
OA	N.B.	95 10 02	PRELIMINARY ISSUE	

NOTE: CIRCLE ALL REVISIONS, IDENTIFY WITH SHADING, NUMBER AND ARROW. REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION

SEAL

SIGNATURE

DATE

DR.	DATE
DSGN.	
CK.	FILE NUMBER
DPE	JOB NO.

Codfile Name:

DRAWING TITLE

BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

DRAWING NUMBER
CTE-28MF-16

CLIENT DRAWING NUMBER

DWG. NUMBER	REFERENCE OR TITLE
E-EE 94026-115	ENGINEERING FLOWSHEET - WEAK WASH VENT SCRUBBER
E-EE 94026-114	ENGINEERING FLOWSHEET - ClO_2 SOLUTION STORAGE TANK-EAST
E-EE 94026-112	ENGINEERING FLOWSHEET - CHLORATE UNLOADING & STORAGE
E-EE 94026-111	ENGINEERING FLOWSHEET - SEWERS
E-EE 94026-110-2	ENGINEERING FLOWSHEET - SERVICES
E-EE 94026-110-1	ENGINEERING FLOWSHEET - SERVICES
E-EE 94026-109	ENGINEERING FLOWSHEET - VENT.
E-EE 94026-108	ENGINEERING FLOWSHEET - OFF GAS
E-EE 94026-107-2	ENGINEERING FLOWSHEET - SALTCAKE FILTER
E-EE 94026-107-1	ENGINEERING FLOWSHEET - METATHESIS
6	ENGINEERING FLOWSHEET - CONDENSATE
5	ENGINEERING FLOWSHEET - GENERATOR
4	ENGINEERING FLOWSHEET - CHEMICAL FILTERS
3	ENGINEERING FLOWSHEET - METHANOL
2	ENGINEERING FLOWSHEET - LEGEND

ISSUED FOR REFERENCE ONLY

STERLING PULP CHEMICALS

ENGINEERING FLOWSHEET-ClO_2 SYS.
40 STPD R8/R10 ClO_2 PLANT
BOWATER INCORPORATED
CATAWBA, SOUTH CAROLINA

DRAWN	CHECKED	PROCESS	INSTR	MECH	PROJECT	APPROVED
N.B.		E.N.				
DATE 95.12.11	DATE	DATE 96.04.01	DATE	DATE	DATE	DATE
SCALE N.T.S.	ENG.	E-EE94026-113				REV 1

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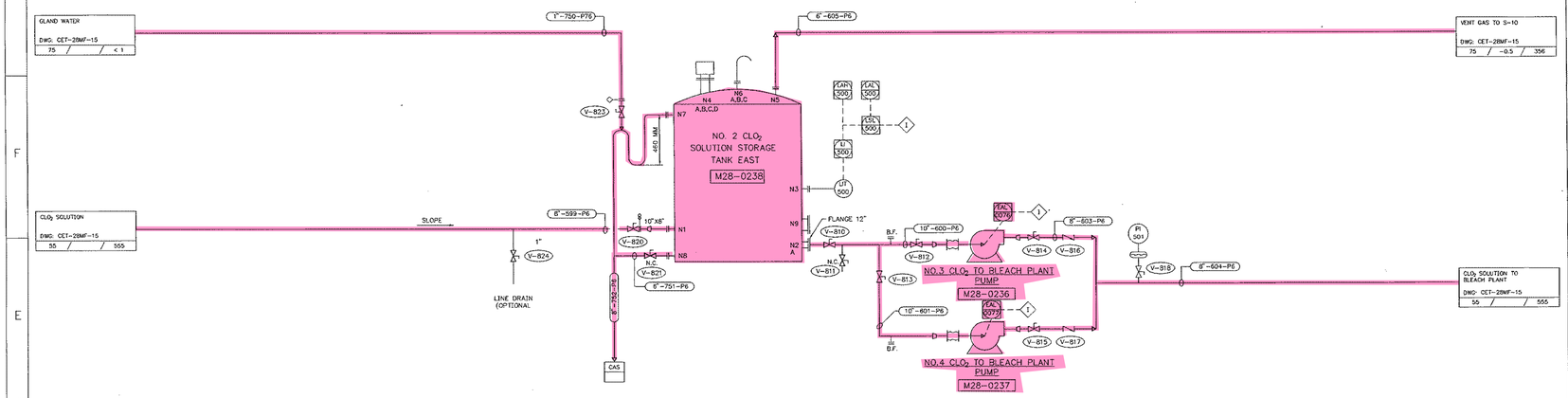
203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

Plot date is: 98.01.16 - 10:52



ALL EQUIPMENT ABANDONED

NOTES

1. ALL INSTRUMENT TAG NO. PREFIXED BY "WITH MILL DEP: NO.28" UNLESS NOTED OTHERWISE

REV. NO.	CHECKED:	DATE	DESCRIPTION	APPROVED
OB	K.M.	96	UPDATED AND REVISED	
		06	FOR REFERENCE	
		05		
OA	MMC	96	ISSUED FOR REFERENCE	
		05		
		14		

NOTE: CIRCLE ALL REVISIONS, IDENTIFY WITH DIAMOND, NUMBER AND ARROW. REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION

SEAL

SIGNATURE

DATE

DR.	DATE
DSGN.	
CK.	FILE NUMBER
DPE	JOB NO.
Codfile Name:	

DRAWING TITLE

BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

DRAWING NUMBER
CTE-28MF-17

CLIENT DRAWING NUMBER

ISSUED FOR REFERENCE ONLY

STERLING PULP CHEMICALS

ENGINEERING FLOWSHEET-ClO_2 SOLUTION STORAGE TANK-EAST
40 STPD RB/R10 PROCESS ClO_2 PLANT
BOWATER INCORPORATED
CATAWBA, SOUTH CAROLINA

DRAWN:	CHECKED	PROCESS	INSTR.	MECH.	PROJECT	APPROVED:
MMC						
DATE 96.05.14	DATE	DATE	DATE	DATE	DATE	DATE

SCALE N.T.S. DWG E-EE94026-114 REV 0B

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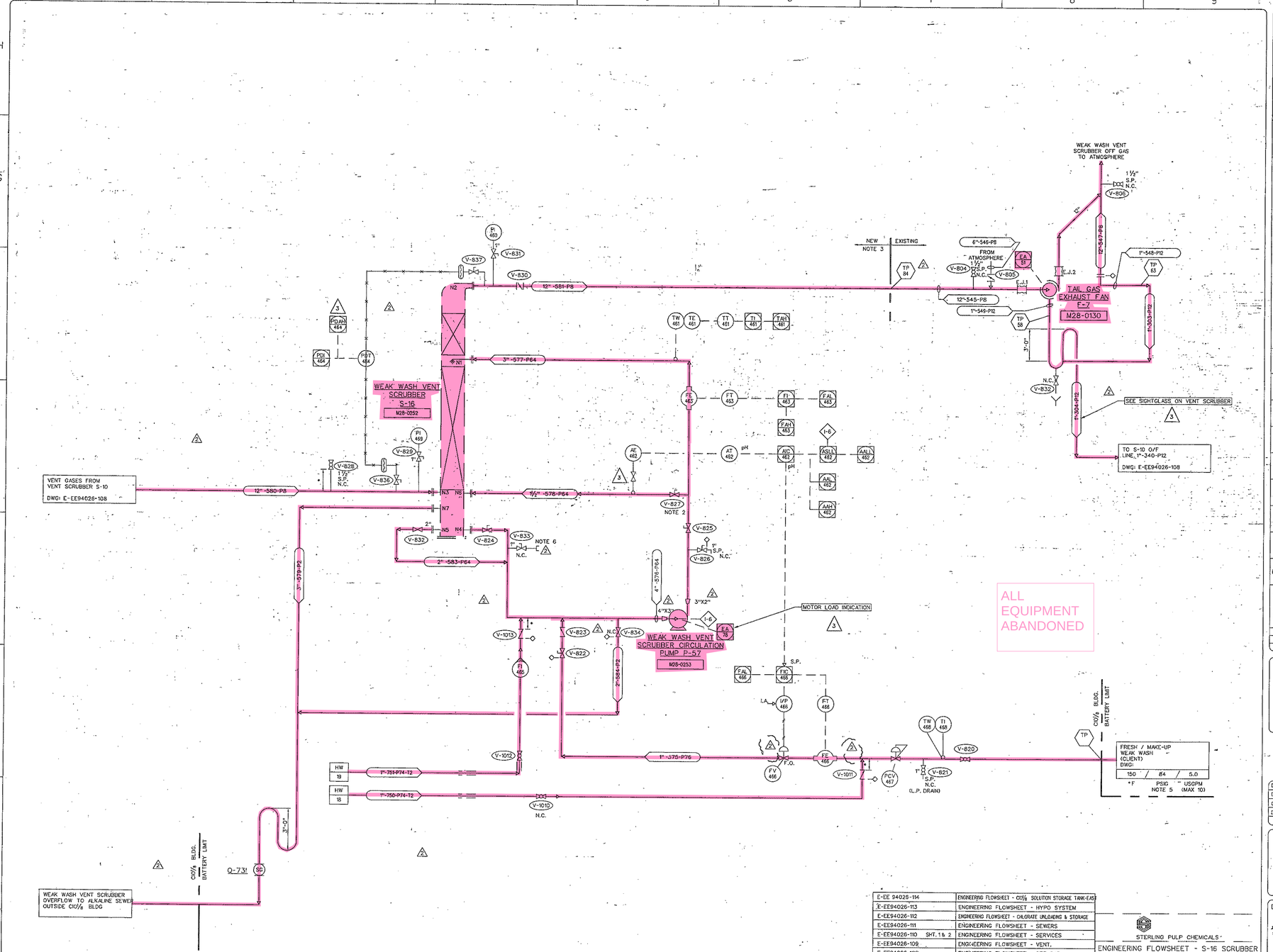
DWG. NUMBER	REFERENCE OR TITLE
E-EE 94026-115	ENGINEERING FLOWSHEET - WEAK WASH VENT SCRUBBER
E-EE 94026-113	ENGINEERING FLOWSHEET - HYPO SYSTEM
E-EE 94026-111	ENGINEERING FLOWSHEET - SEWERS
E-EE 94026-110-SHT. 2	ENGINEERING FLOWSHEET - SERVICES
E-EE 94026-110-SHT. 1	ENGINEERING FLOWSHEET - SERVICES
E-EE 94026-109	ENGINEERING FLOWSHEET - VENT
E-EE 94026-108	ENGINEERING FLOWSHEET - OFF GAS
E-EE 94026-107-SHT. 2	ENGINEERING FLOWSHEET - SALTCAKE FILTER
E-EE 94026-107-SHT. 1	ENGINEERING FLOWSHEET - METATHESIS
[illegible]	ENGINEERING FLOWSHEET - CONDENSATE
[illegible]	ENGINEERING FLOWSHEET - GENERATOR
[illegible]	ENGINEERING FLOWSHEET - CHEMICAL FILTERS
[illegible]	ENGINEERING FLOWSHEET - 95% METHANOL
[illegible]	ENGINEERING FLOWSHEET - LEGEND

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020

Plot date is 98.01.16 - 10.53



NOTES

1. * MINIMUM DISTANCE FOR PIPING ONLY.
2. VALVE TO BE LOCKED IN PLACE AFTER ADJUSTMENT, ON START UP.
3. ADDITION OF WEAK WASH VENT SCRUBBER
4. SHADED LINES & EQUIPMENT ARE EXISTING (PART OF PROJECT EE-94026).
5. PRESSURE IS AT GROUND LEVEL.
6. CONNECTION FOR WASHING.

REV. NO.	CIRCLES	REV BY	DATE	DESCRIPTION	APPROVED
3		LSJ	06 06 01	GENERAL REVISIONS	
2		MMC	96 11 07	REVISED AS INDICATED	
1		K.M.	96 09 30	ISSUED FOR DETAILED DESIGN	
DA		K.M.	96 09 18	PRELIMINARY ISSUE	

NOTE: CIRCLE ALL REVISIONS. IDENTIFY WITH DIAMOND, NUMBER AND ARROW. REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION.

SEAL

SIGNATURE

DATE

DR.	DATE
DSGN.	FILE NUMBER
CK.	
DPE	JOB NO.

DRAWING TITLE

BOWATER
COATED PAPER & PULP DIV.
P.O. Box 7, Catawba, South Carolina 29704

DRAWING NUMBER
CTE-28MF-18

CLIENT DRAWING NUMBER

REFERENCE DWG. NUMBER	REFERENCE OR TITLE
E-EE 94026-114	ENGINEERING FLOWSHEET - ClO2/g SOLUTION STORAGE TANK-EAST
E-EE94026-113	ENGINEERING FLOWSHEET - HYPO SYSTEM
E-EE94026-112	ENGINEERING FLOWSHEET - CHLORATE UNLOADING & STORAGE
E-EE94026-111	ENGINEERING FLOWSHEET - SEWERS
E-EE94026-110 SHT. 1 & 2	ENGINEERING FLOWSHEET - SERVICES
E-EE94026-109	ENGINEERING FLOWSHEET - VENT.
E-EE94026-108	ENGINEERING FLOWSHEET - OFF GAS.
E-EE94026-107 SHT. 2	ENGINEERING FLOWSHEET - SALTCAKE FILTER
E-EE94026-107 SHT. 1	ENGINEERING FLOWSHEET - METATHESIS
E-EE94026-106	ENGINEERING FLOWSHEET - CONDENSATE
E-EE94026-105	ENGINEERING FLOWSHEET - GENERATOR
E-EE94026-104	ENGINEERING FLOWSHEET - CHEMICAL FILTERS
E-EE94026-103	ENGINEERING FLOWSHEET - METHANOL
E-EE94026-102	ENGINEERING FLOWSHEET - LEGEND

STERLING PULP CHEMICALS

ENGINEERING FLOWSHEET - S-16 SCRUBBER
40 STPD R8/R10 PROCESS ClO2/g PLANT
BOWATER INCORPORATED
CATAWBA, SOUTH CAROLINA

DRAWN	CHECKED	PROCESS	INSTR.	MECH.	PROJECT	APPROVED
K.M.		E.B.	J.M.		F.D.	G.G.
DATE 96.09.17	DATE	DATE 96.09.24	DATE 96.10.11	DATE	DATE 96.09.27	DATE 96.10.03

SCALE N.T.S. DWG. E-EE 94026- 115 REV. 2

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CONFIDENTIAL

Plot date is: 96.11.15 - 14:31

203829-PRO-PID-5201
AREA 52 DEMO P&IDS
REV 0 05/21/2020