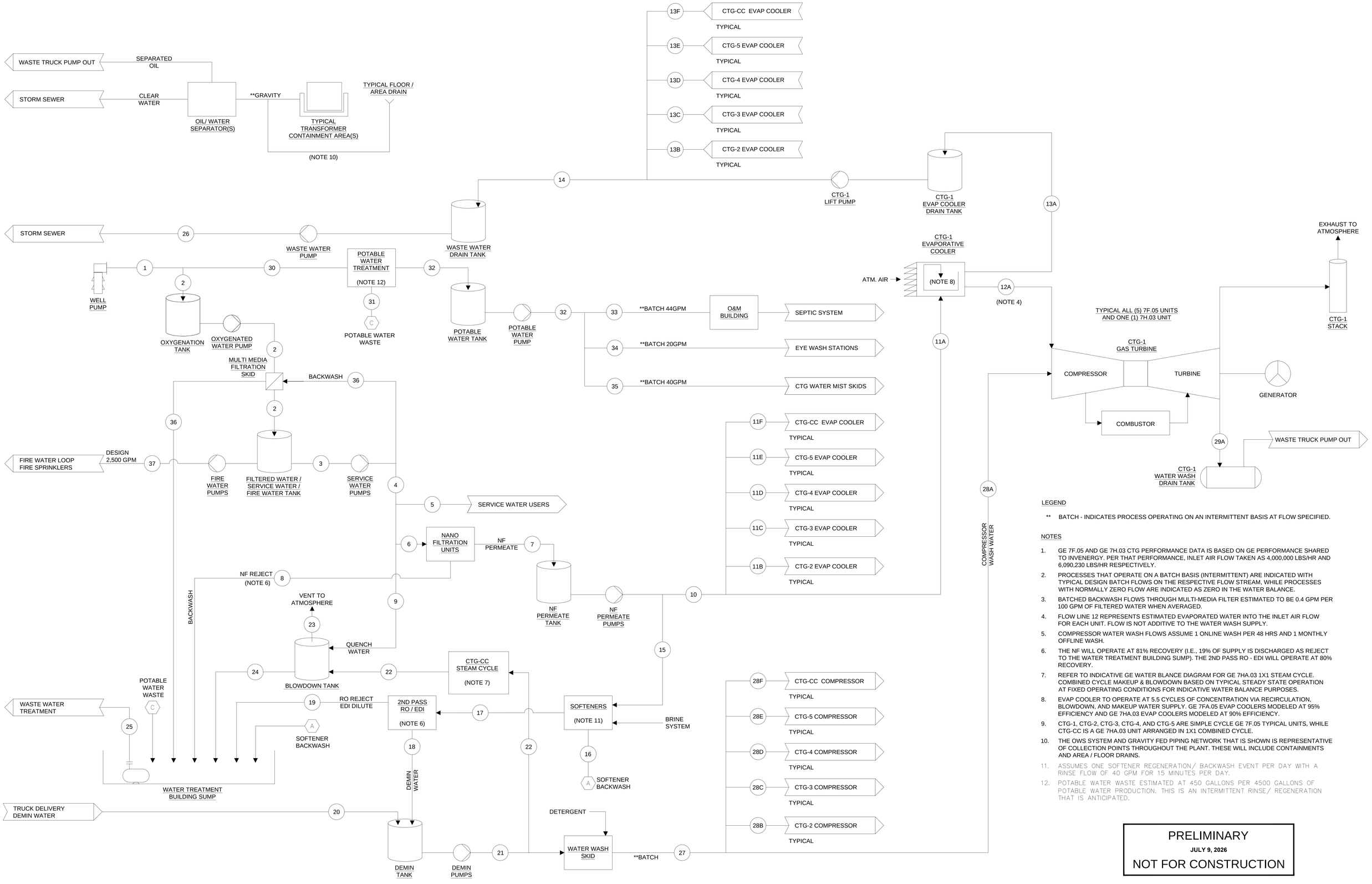

LEGEND

** BATCH - INDICATES PROCESS OPERATING ON AN INTERMITTENT BASIS AT FLOW SPECIFIED.

NOTES

1. GE 7F.05 AND GE 7H.03 CTG PERFORMANCE DATA IS BASED ON GE PERFORMANCE SHARED TO INVENERGY. PER THAT PERFORMANCE, INLET AIR FLOW TAKEN AS 4,000,000 LBS/HR AND 6,090,230 LBS/HR RESPECTIVELY.
2. PROCESSES THAT OPERATE ON A BATCH BASIS (INTERMITTENT) ARE INDICATED WITH TYPICAL DESIGN BATCH FLOWS ON THE RESPECTIVE FLOW STREAM, WHILE PROCESSES WITH NORMALLY ZERO FLOW ARE INDICATED AS ZERO IN THE WATER BALANCE.
3. BATCHED BACKWASH FLOWS THROUGH MULTI-MEDIA FILTER ESTIMATED TO BE 0.4 GPM PER 100 GPM OF FILTERED WATER WHEN AVERAGED.
4. FLOW LINE 12 REPRESENTS ESTIMATED EVAPORATED WATER INTO THE INLET AIR FLOW FOR EACH UNIT. FLOW IS NOT ADDITIVE TO THE WATER WASH SUPPLY.
5. COMPRESSOR WATER WASH FLOWS ASSUME 1 ONLINE WASH PER 48 HRS AND 1 MONTHLY OFFLINE WASH.
6. THE NF WILL OPERATE AT 81% RECOVERY (I.E., 19% OF SUPPLY IS DISCHARGED AS REJECT TO THE WATER TREATMENT BUILDING SUMP). THE 2ND PASS RO - EDI WILL OPERATE AT 80% RECOVERY.
7. REFER TO INDICATIVE GE WATER BLANCE DIAGRAM FOR GE 7HA.03 1X1 STEAM CYCLE. COMBINED CYCLE MAKEUP & BLOWDOWN BASED ON TYPICAL STEADY STATE OPERATION AT FIXED OPERATING CONDITIONS FOR INDICATIVE WATER BALANCE PURPOSES.
8. EVAP COOLER TO OPERATE AT 5.5 CYCLES OF CONCENTRATION VIA RECIRCULATION, BLOWDOWN, AND MAKEUP WATER SUPPLY. GE 7FA.05 EVAP COOLERS MODELED AT 95% EFFICIENCY AND GE 7HA.03 EVAP COOLERS MODELED AT 90% EFFICIENCY.
9. CTG-1, CTG-2, CTG-3, CTG-4, AND CTG-5 ARE SIMPLE CYCLE GE 7F.05 TYPICAL UNITS, WHILE CTG-CC IS A GE 7HA.03 UNIT ARRANGED IN 1X1 COMBINED CYCLE.
10. THE OWS SYSTEM AND GRAVITY FED PIPING NETWORK THAT IS SHOWN IS REPRESENTATIVE OF COLLECTION POINTS THROUGHOUT THE PLANT. THESE WILL INCLUDE CONTAINMENTS AND AREA / FLOOR DRAINS.
11. ASSUMES ONE SOFTENER REGENERATION/ BACKWASH EVENT PER DAY WITH A RINSE FLOW OF 40 GPM FOR 15 MINUTES PER DAY.
12. POTABLE WATER WASTE ESTIMATED AT 450 GALLONS PER 4500 GALLONS OF POTABLE WATER PRODUCTION. THIS IS AN INTERMITTENT RINSE/ REGENERATION THAT IS ANTICIPATED.

PRELIMINARY
JULY 9, 2026
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	DWN	DGN	CHK	APP	
RH	07-09-26	REVISED PER OWNER COMMENTS	MC	JAS	JJF	ALC	DWG SCALE
RG	06-24-26	REVISED PER OWNER COMMENTS	MC	JAS	JJF	ALC	NONE
RF	06-10-26	REVISED PER CC PERFORMANCE UPDATE; NOTES UPDATE	MC	JAS	JJF	ALC	
RE	05-29-26	REVISED TO INCLUDE COMBINED CYCLE	MC	JAS	JJF	ALC	DWG SIZE
RD	05-21-26	REVISED PER WELL WATER ANALYSIS	MC	JAS	JJF	ALC	E SIZE - 42"x30"

PEC
A Zero6 Energy Company
Power Engineers Collaborative, L.L.C.
150 North Sunny Slope Road, Suite 375
Brookfield, Wisconsin 53005

Invenergy

OWNER DWG# FJ-PEC-MQ-DW-050-01-RH

FOREST JUNCTION ENERGY CENTER
WATER BALANCE DIAGRAM

DWG# 866-M-050-01

REV. RH

CYCLES OF CONCENTRATION: 5.5

CASE			1	2	3	4	5	6	7	8	9	10	11 (A THRU E)	11F	12 (A THRU E)	12F	13 (A THRU E)
	CONDITION (AMBIENT / RH %)	UNITS	TOTAL WELL WATER	OXYGENATED / FILTERED WATER	TOTAL SERVICE WATER	SERVICE WATER LESS BACKWASH	OTHER SERVICE WATER USERS	NANO FILTRATION UNITS SUPPLY	NANO FILTRATION PERMEATE	NANO FILTRATION REJECT	BLOWDOWN QUENCH WATER	TOTAL CTG EVAP. MAKEUP WATER	EVAP. MAKEUP WATER (EA. CTG-SC)	EVAP. MAKEUP WATER (CTG-CC)	EVAP'D WATER (EA. CTG-SC)	EVAP'D WATER (CTG-CC)	EVAP. COOL'R BLOWDOWN (EA. CTG-SC)
AVERAGE DESIGN	60 degF / 60 %	(GPM)	239.87	237.67	237.67	236.72	3.00	183.91	148.96	34.94	49.82	105.86	16.43	23.70	13.44	19.39	2.99
SUMMER DESIGN	80 degF / 60 %	(GPM)	287.57	285.37	285.37	284.23	3.00	231.41	187.44	43.97	49.82	144.34	22.41	32.31	18.33	26.44	4.07
PEAK DESIGN	100 degF / 30 %	(GPM)	552.82	550.62	550.62	548.42	3.00	495.61	401.44	94.17	49.82	358.33	55.63	80.19	45.51	65.61	10.11

CASE			13F	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	CONDITION (AMBIENT / RH %)	UNITS	EVAP. COOL'R BLOWDOWN (CTG-CC)	TOTAL EVAP. COOL'R BLOWDOWN	SOFTENER UNITS SUPPLY	SOFTENER UNITS BACKWASH	SOFTENED WATER	2ND PASS RO EDI UNITS DEMIN WATER	2ND PASS RO REJECT & EDI DILUTE	TRUCK DELIVERED DEMIN WATER	TOTAL DEMIN WATER	CTC-CC STEAM CYCLE MAKEUP	CTG-CC STEAM CYCLE BLWD'N TANK VENT	CTG-CC STEAM CYCLE BLWD'N TANK DISCHARGE	WATER TREATMENT BUILDING SUMP DISCHARGE	TOTAL WASTE WATER TO DISCHARGE	TOTAL WATER WASH SUPPLY
AVERAGE DESIGN	60 degF / 60 %	(GPM)	4.31	19.25	43.11	0.42	42.69	34.15	8.54	0.00	34.15	33.63	11.21	72.23	117.28	136.53	0.52
SUMMER DESIGN	80 degF / 60 %	(GPM)	5.87	26.24	43.11	0.42	42.69	34.15	8.54	0.00	34.15	33.63	11.21	72.23	126.50	152.74	0.52
PEAK DESIGN	100 degF / 30 %	(GPM)	14.58	65.15	43.11	0.42	42.69	34.15	8.54	0.00	34.15	33.63	11.21	72.23	177.76	242.91	0.52

CASE			28 (A THRU E)	28F	29 (A THRU E)	29F	30	31	32	33	34	35	36	37
	CONDITION (AMBIENT / RH %)	UNITS	WASH WATER (EA. CTG-SC)	WASH WATER (CTG-CC)	WASH WATER DRAIN TANK (EA. CTG-SC)	WASH WATER DRAIN TANK (CTG-CC)	WELL WATER FOR POTABLE SUPPLY	POTABLE WATER WASTE	TOTAL POTABLE WATER	POTABLE O & M BUILDING	EYE WASH WATER	WATER MIST SKIDS	MMF BACKWASH	FIRE WATER LOOP
AVERAGE DESIGN	60 degF / 60 %	(GPM)	0.08	0.12	0.08	0.12	2.20	0.20	2.00	2.00	0.00	0.00	0.95	0.00
SUMMER DESIGN	80 degF / 60 %	(GPM)	0.08	0.12	0.08	0.12	2.20	0.20	2.00	2.00	0.00	0.00	0.95	0.00
PEAK DESIGN	100 degF / 30 %	(GPM)	0.08	0.12	0.08	0.12	2.20	0.20	2.00	2.00	0.00	0.00	0.95	0.00

PRELIMINARY

JULY 9, 2026

NOT FOR CONSTRUCTION

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Power Engineers Collaborative, L.L.C.
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Brookfield, Wisconsin 53005

Invenergy

FOREST JUNCTION ENERGY CENTER
WATER BALANCE DIAGRAM FLOW TABLE

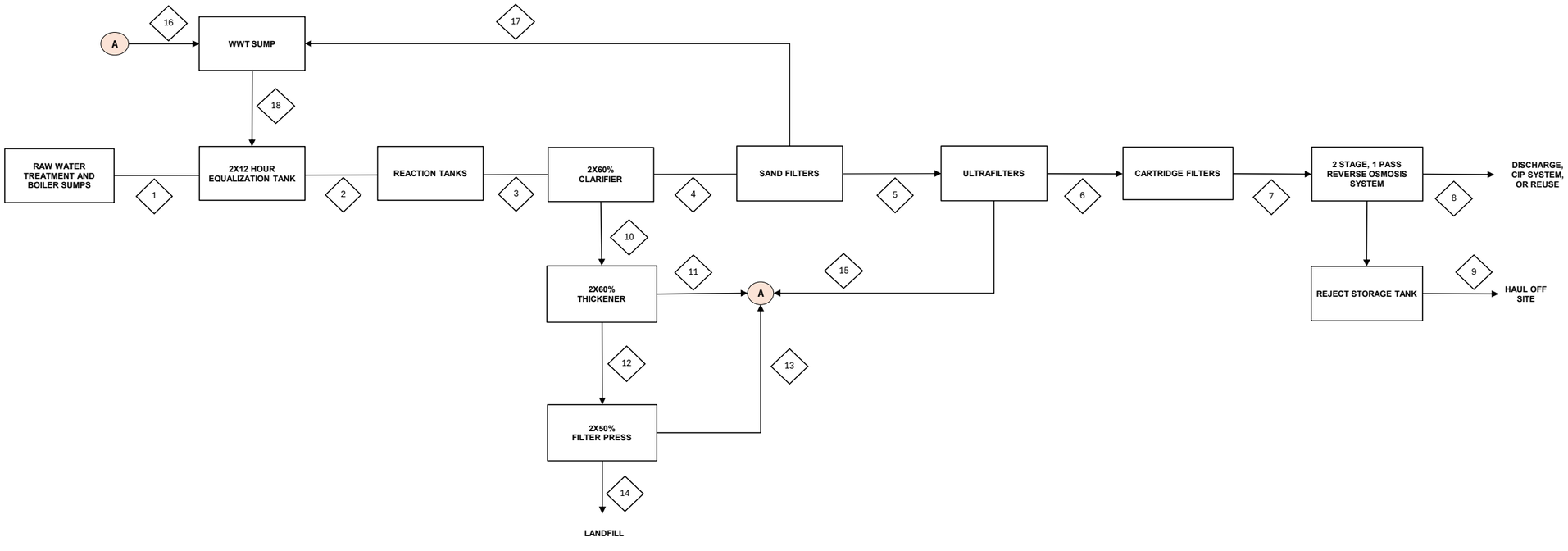
OWNER DWG# FJ-PEC-MQ-DW-050-02-RH

DWG# 866-M-050-02

REV. RH

Case	CONDITION (AMBIENT / RH %)	Stream #: / UNITS	1 Water Treatment Building Sump	2 Reaction Tank Feed	3 Clarifier Feed	4 Sand Filter Feed	5 Ultra Filter Feed	6 Ultra Filter Effluent	7 Reverse Osmosis Feed	8 Reverse Osmosis Effluent	9 Reverse Osmosis Reject
AVERAGE DESIGN	60 degF / 60 %	(GPM)	117.28	147.66	147.66	144.53	130.07	130.07	130.07	117.07	13.01
SUMMER DESIGN	80 degF / 60 %	(GPM)	126.50	159.27	159.27	155.89	140.30	140.30	140.30	126.27	14.03
PEAK DESIGN	100 degF / 60 %	(GPM)	177.76	223.80	223.80	219.06	197.15	197.15	197.15	177.44	19.72

Case	CONDITION (AMBIENT / RH %)	Stream #: / UNITS	10 Clarifier Slurry	11 Thickener Overflow	12 Thickener Slurry	13 Filter Press Permeate	14 Cake (cuft/day)	15 Ultra Filter Reject	16 Combined Reject Flows	17 Sand Filter Reject	18 Sump Recycle
AVERAGE DESIGN	60 degF / 60 %	(GPM)	3.23	2.14	1.19	0.78	97.73	13.01	15.93	14.45	30.38
SUMMER DESIGN	80 degF / 60 %	(GPM)	3.48	2.31	1.28	0.84	105.41	14.03	17.18	15.59	32.77
PEAK DESIGN	100 degF / 60 %	(GPM)	4.90	3.24	1.80	1.18	148.13	19.72	24.14	21.91	46.04



NOTES:

1. Flow rates are in gpm and are rounded to the nearest tenth
2. Dashed lines represent intermittent flows
3. Solid lines represent normal flows

KEY:

A — FLOW TO WASTEWATER TREATMENT SUMP

no.	date	REVISION	DWN	CHD
A	8/11/2026	INITIAL ISSUE	DWR	

Union/Forest Junction Wastewater Treatment
WATER BALANCE

Union Combined Cycle / Forest Simple Cycles

NOT TO BE USED FOR CONSTRUCTION

BURNS McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
(816) 333-9400
Firm Reg. No. F-845

THE REGISTRANT OF THE NEWLY APPLIED DATED SEAL, ONLY ASSUMES RESPONSIBILITY FOR THE CHANGES AS INDICATED BY THE FOLLOWING REVISION(S) _____.

BMCD PROJECT | CONTRACT

UNIT	TYPE	SYS	NUMBER	SHEET
				WMB-WWT01