	□ ☑ □ □
	99
	40
	300 8 2400 1 3 40

	2017 11		2018 12 1

	42151		650	%	1.54
	45720		695	%	1.52

	1 2 GB16297-1996 2 3 GB12348-2008 3

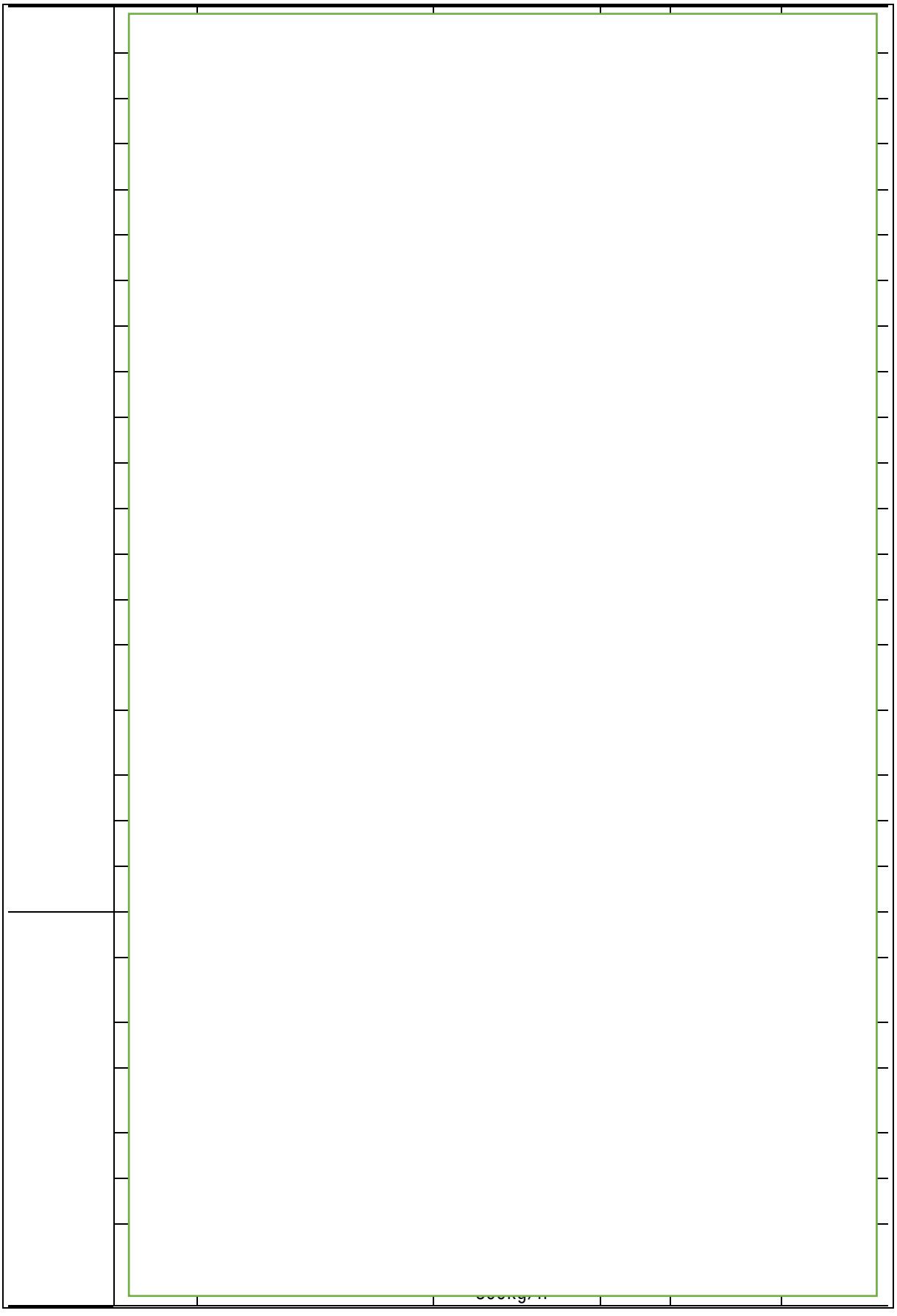
2-1

			mg/	/	t/a	
	1		285	4.8	136.8	576h/72d
			310	3.2	99.2	384h/48d
			350	2.0	70	240h/30d
			230	10.0	230	1200h/150d
	2		380	3.2	121.6	384h/48d

		3000t/a	3000t/a	
		24666.8m^2			
		9907m^2	1	1	
		225m^2			/
		3 “ + + ” 3 “ ” 1 “ ”	3 2 +	3 2 +	
		1			
		150t/d + + +MBR			
		100m^2			
		150m^2			

2-3

	1		GMP		2	2
	2		GMP		2	2
	3		GMP		1	1
	4		LHSZ800B		1	1
	5		FG200B			



	32		300t/h		2	2
	33		/		3	3

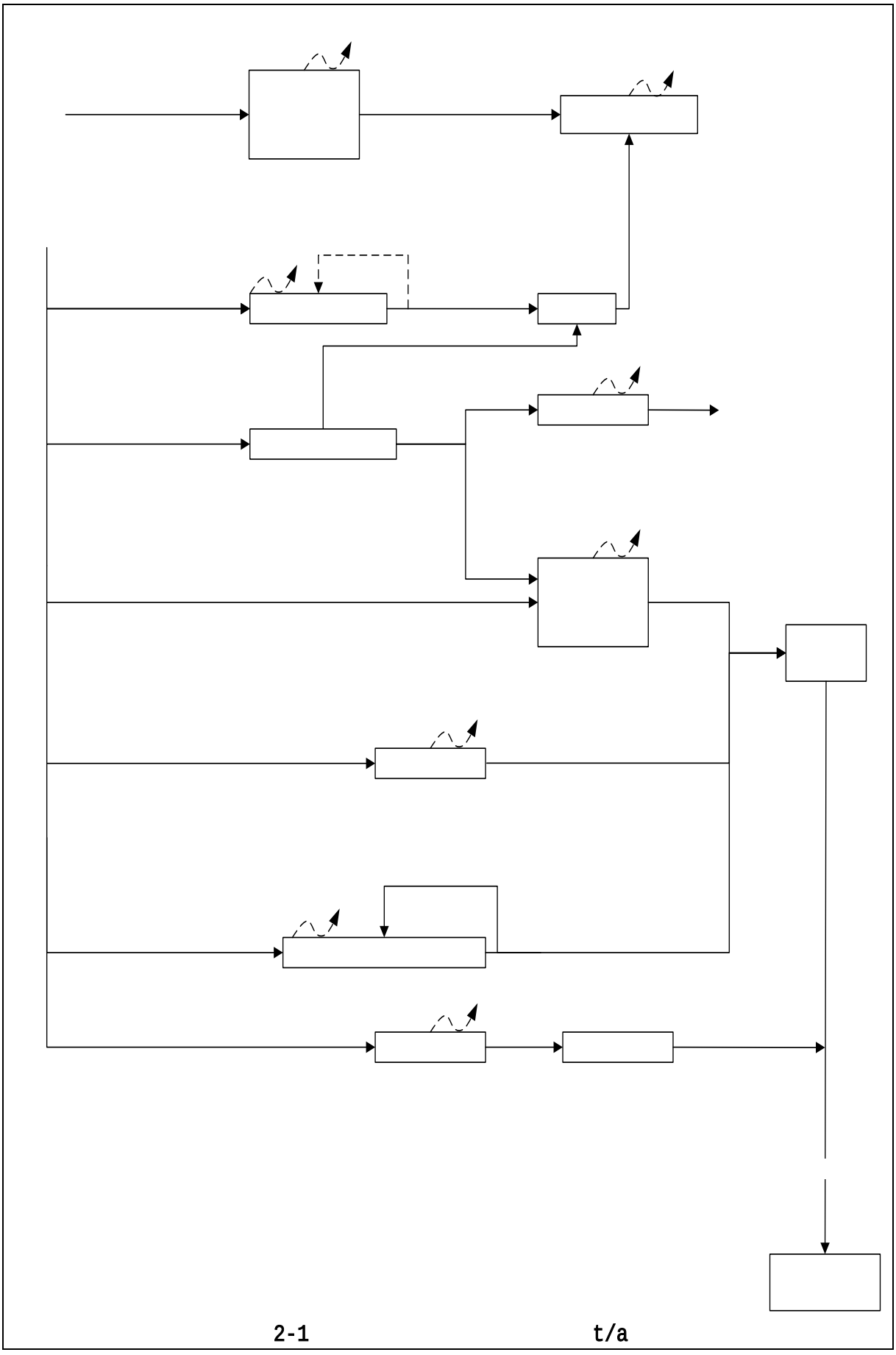
2-4

2-4

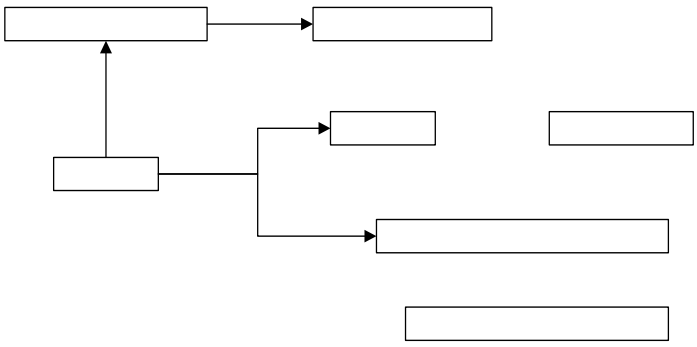
		/	kg	kg	kg
		/	48000	667	652
		/	33600	467	456
		/	48000	667	652
		/	7200	100	97.8
			90000	1250	122.5
		/	28800	600	594
		/	41600	867	858
		/	22400	467	462
		/	6400	133	132
			112000	2333	2310
		/	6400	133	129
		/	96000	2000	1940
		/	16000	333	323
		/	3200	67	65
			82000	1708	1657
		/	4000	[redacted]	128
		/	40000	1333	1280
		/	20000	667	640
		/	2000	66.7	64
			7000	1567	1504
			0800	66.7	66

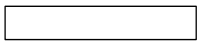
[redacted]

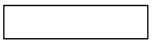
132
660
660
30.6
385
2940
523
327
327
294



2-1 t/a







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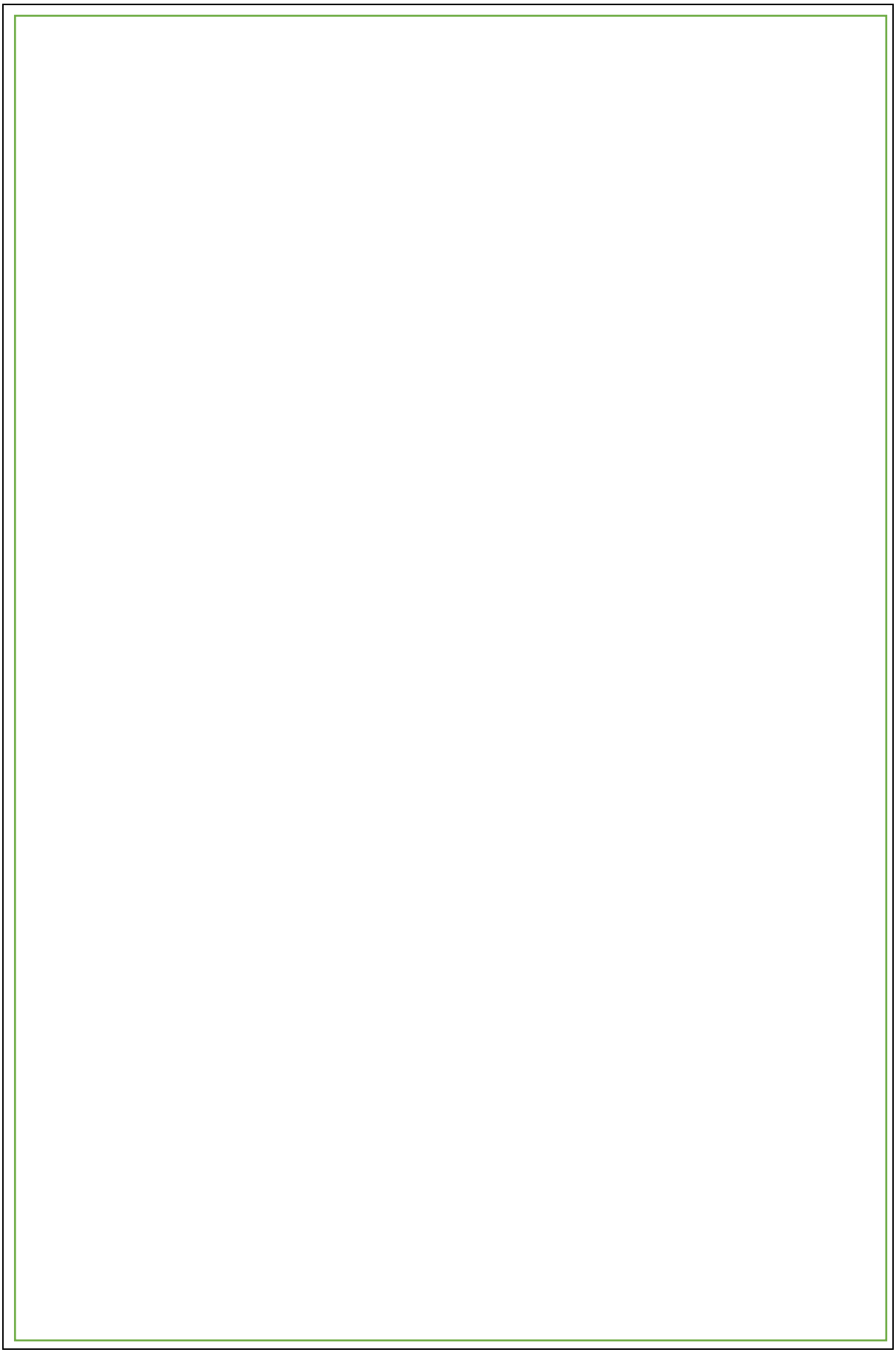
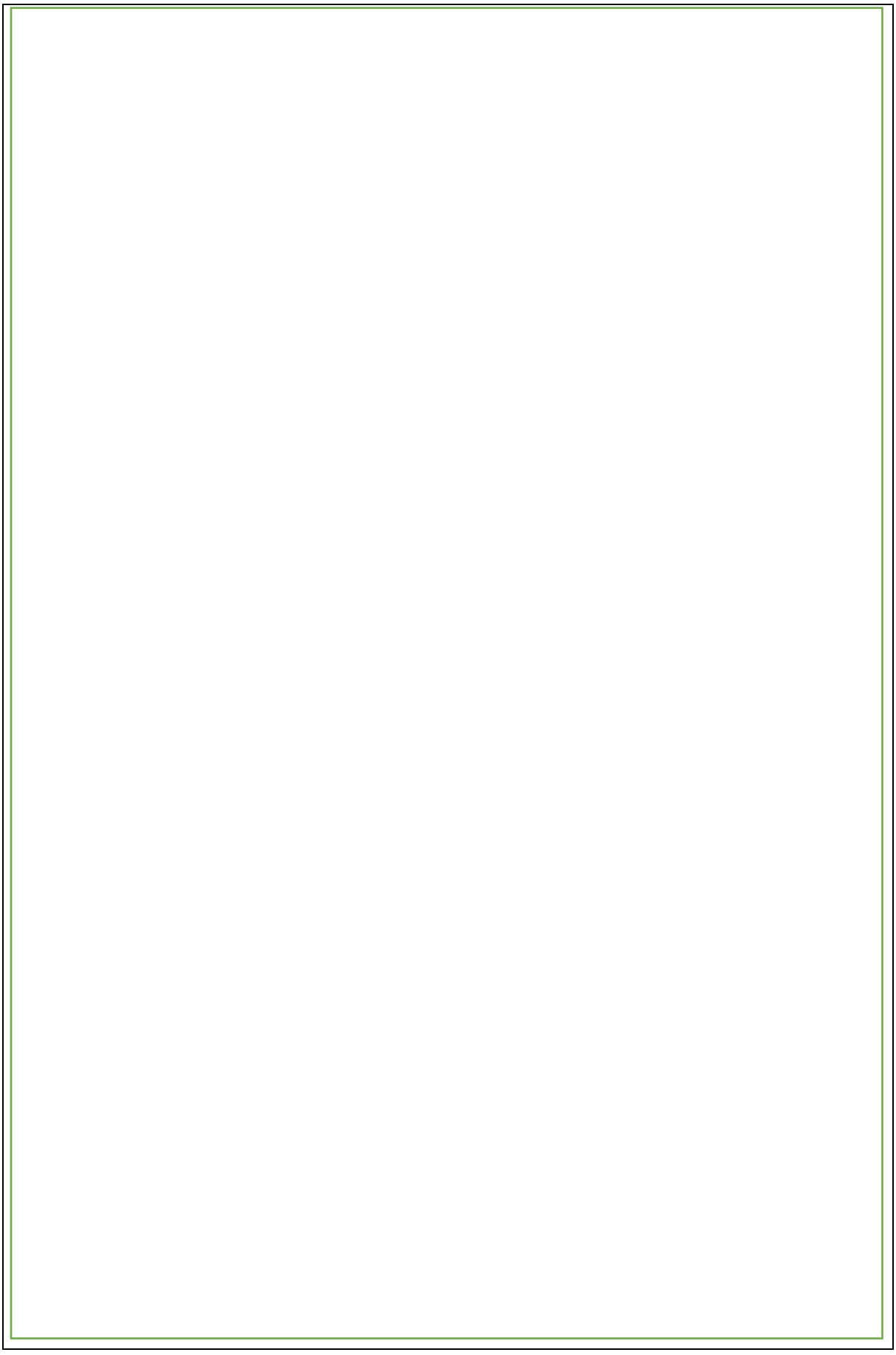
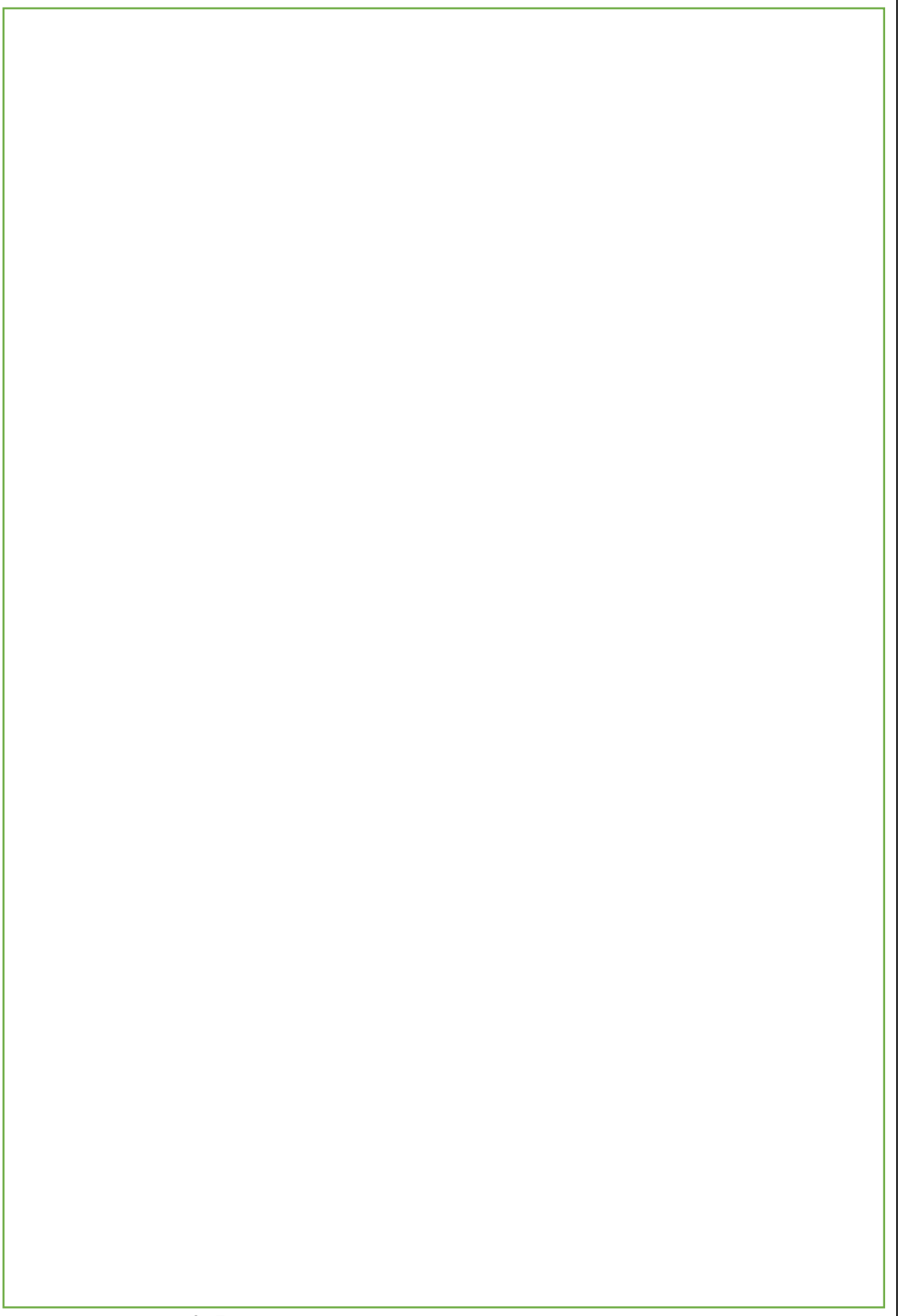
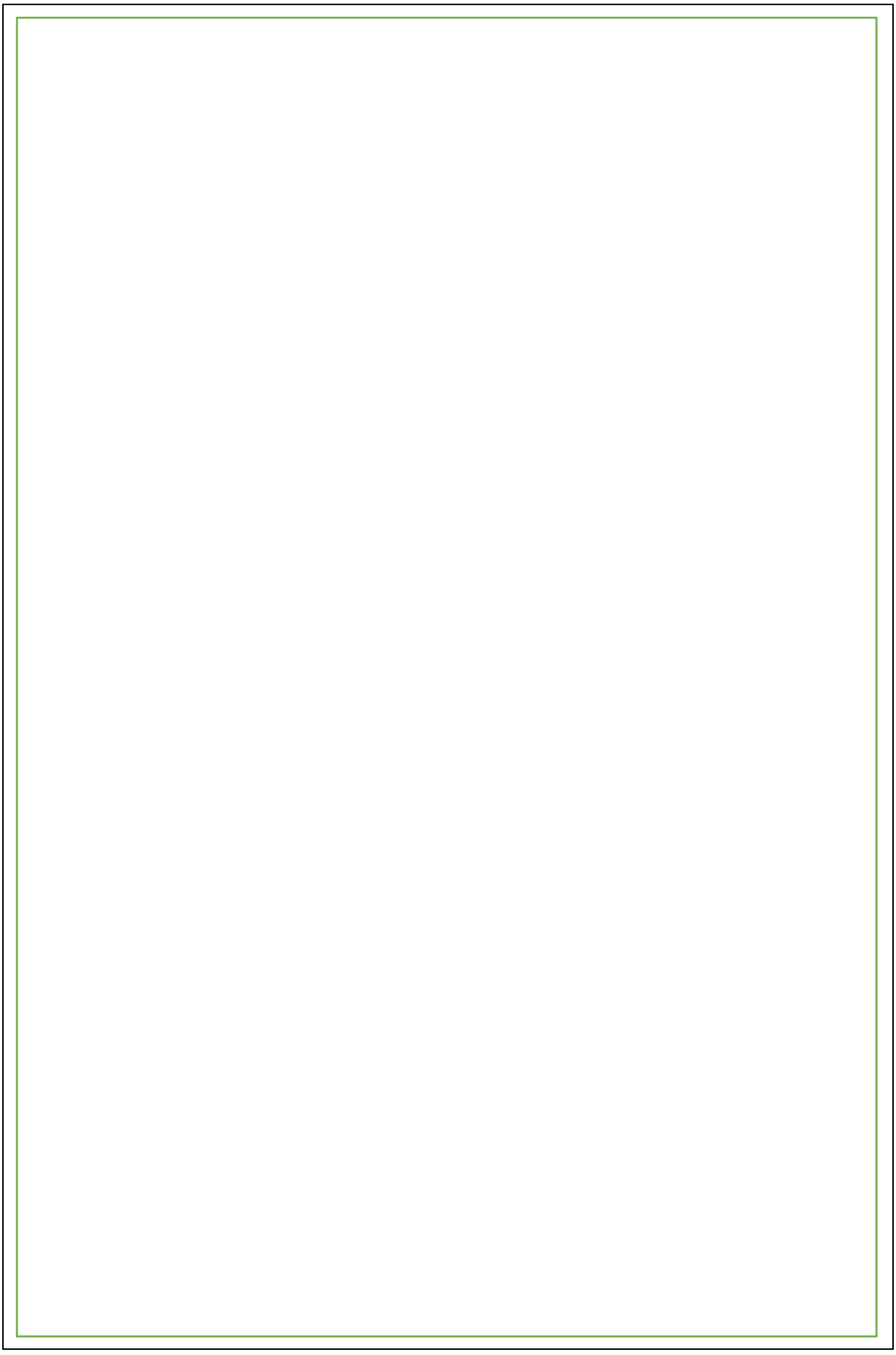
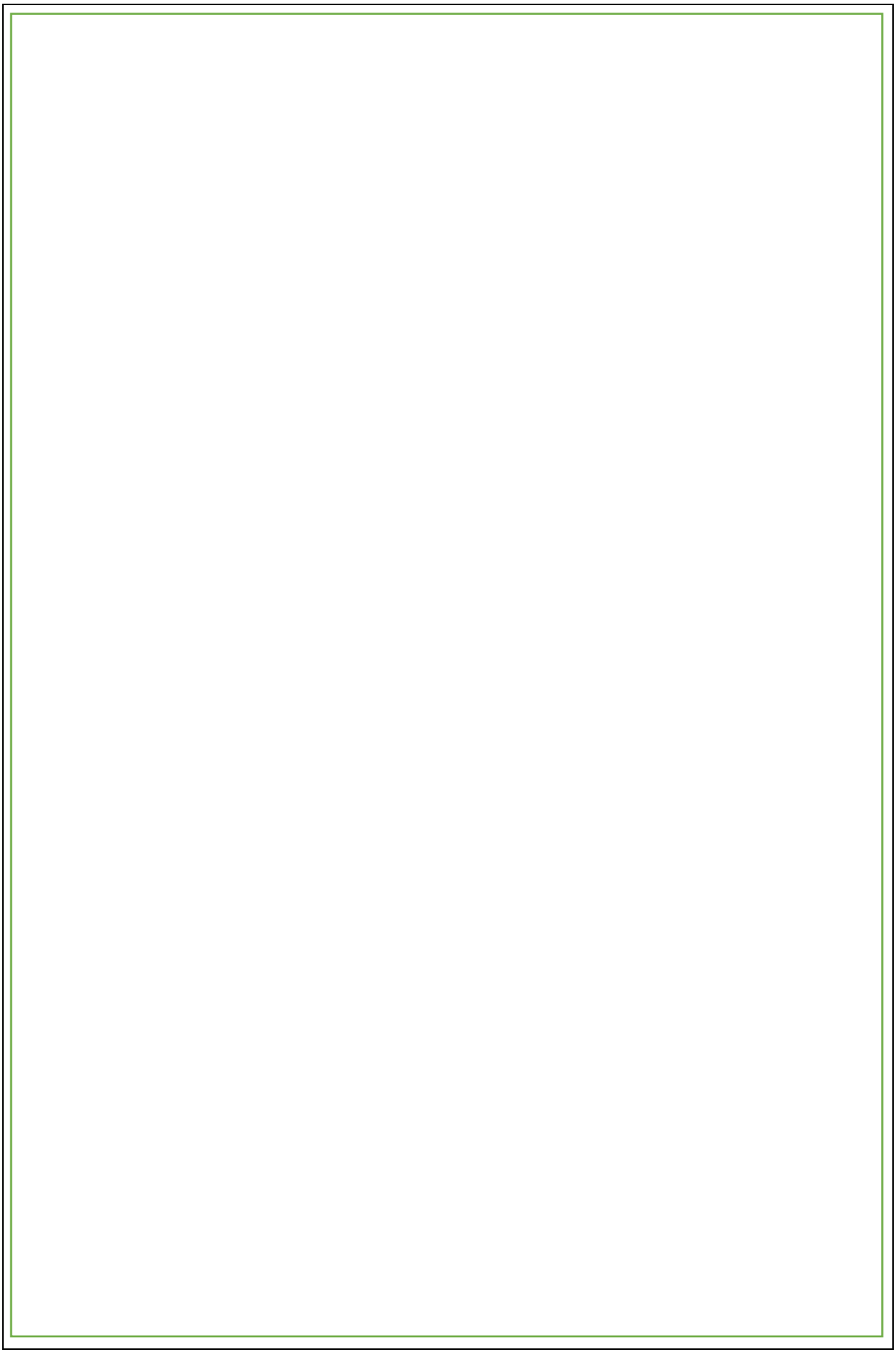
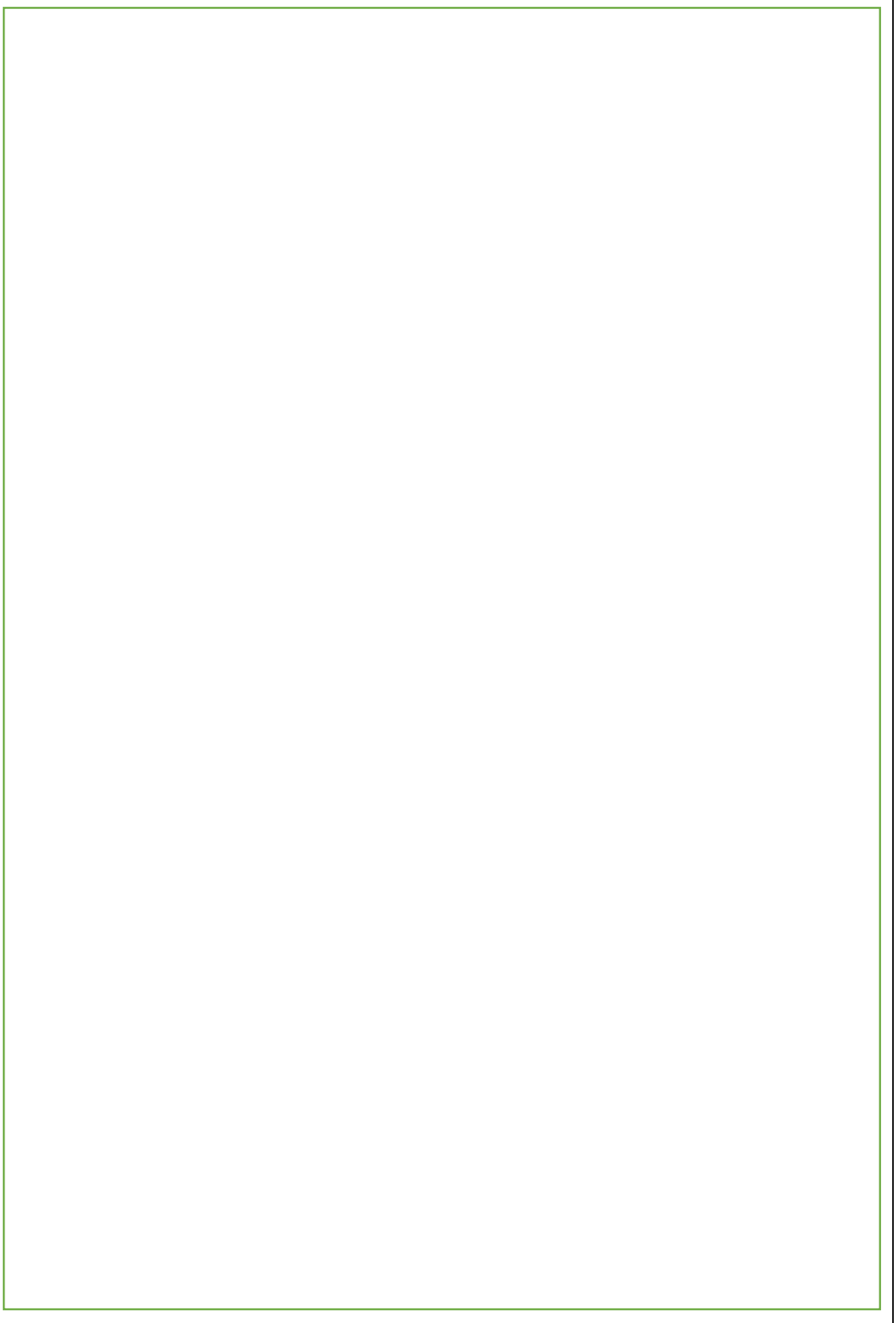


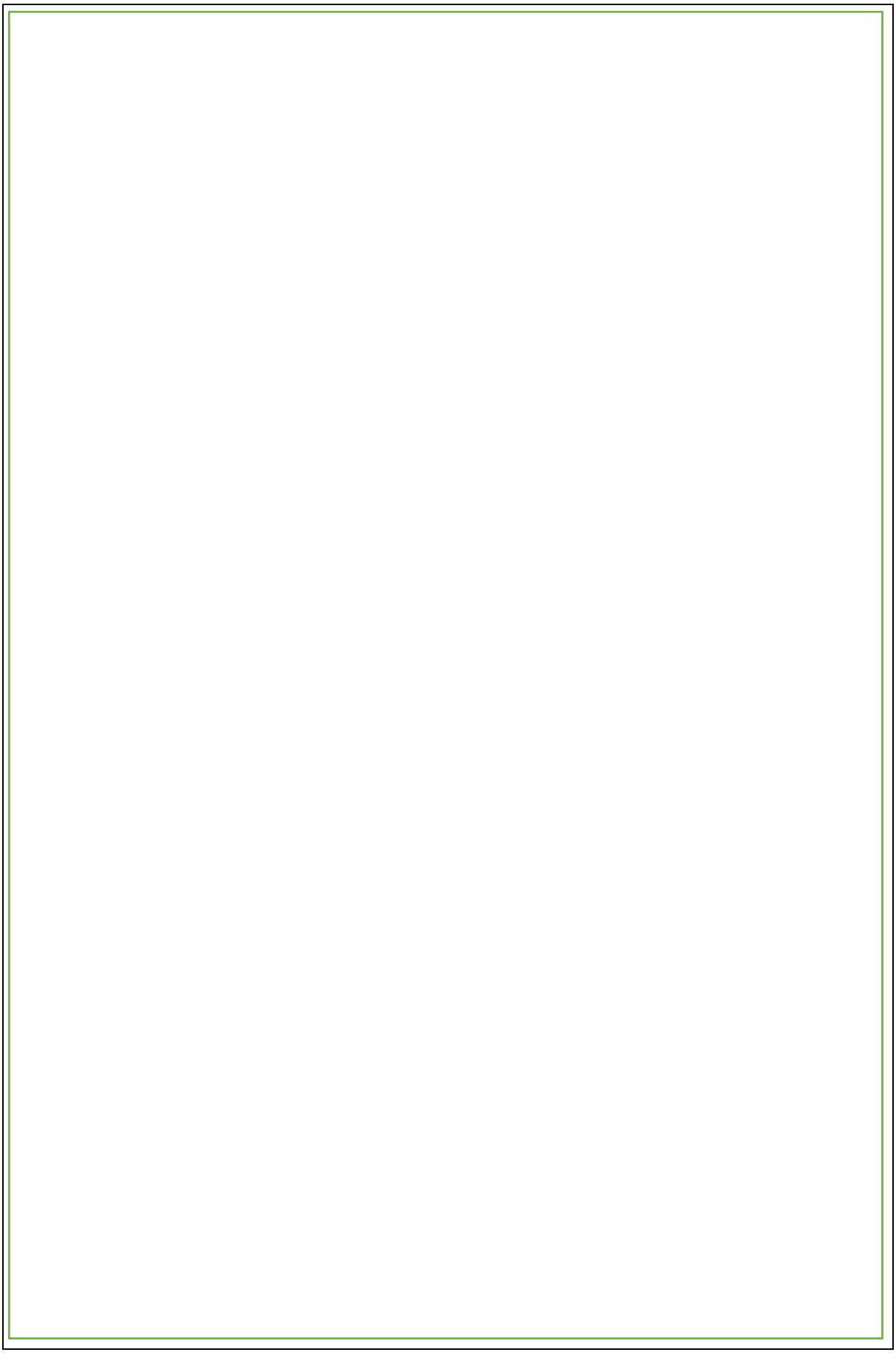


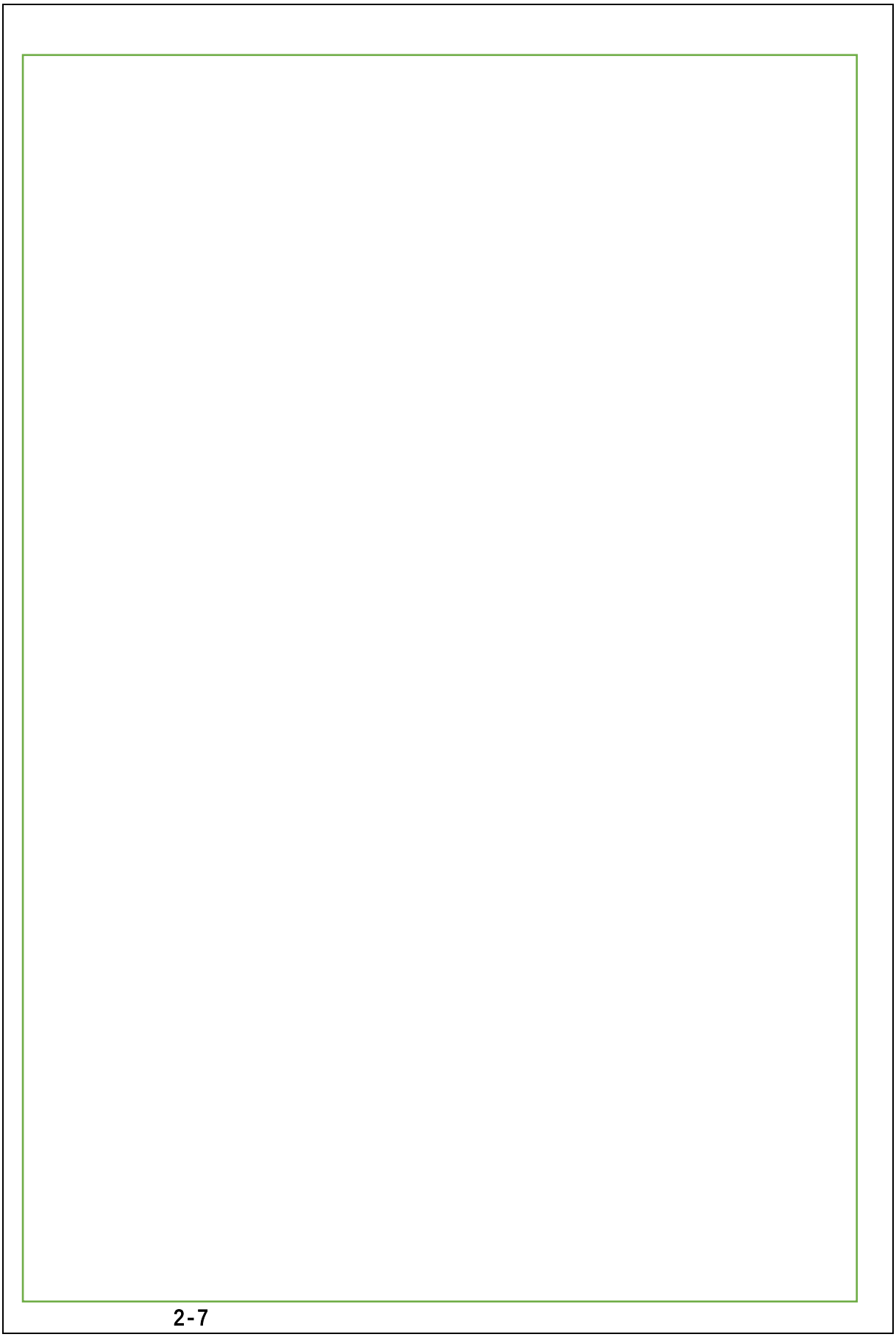


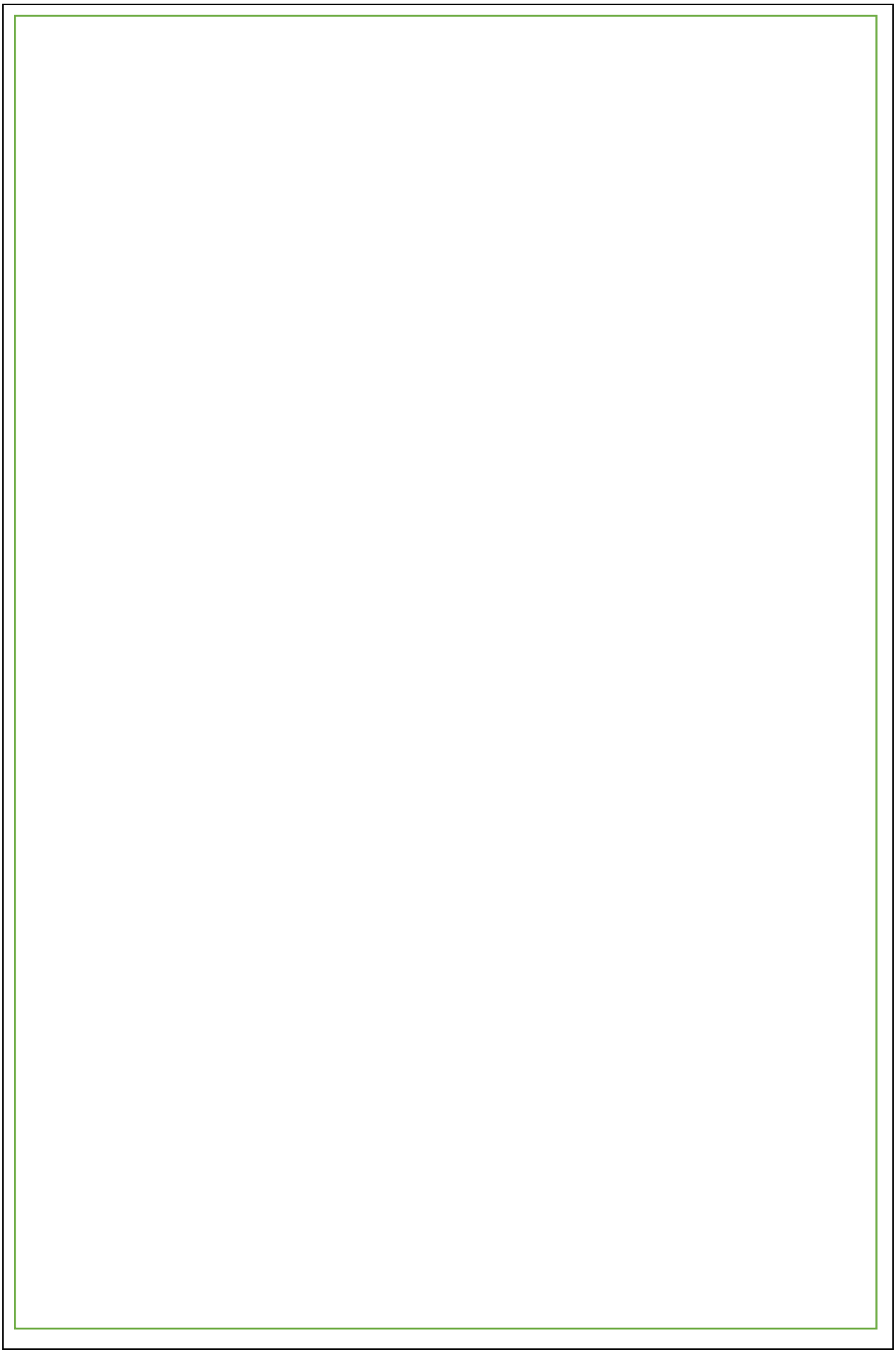


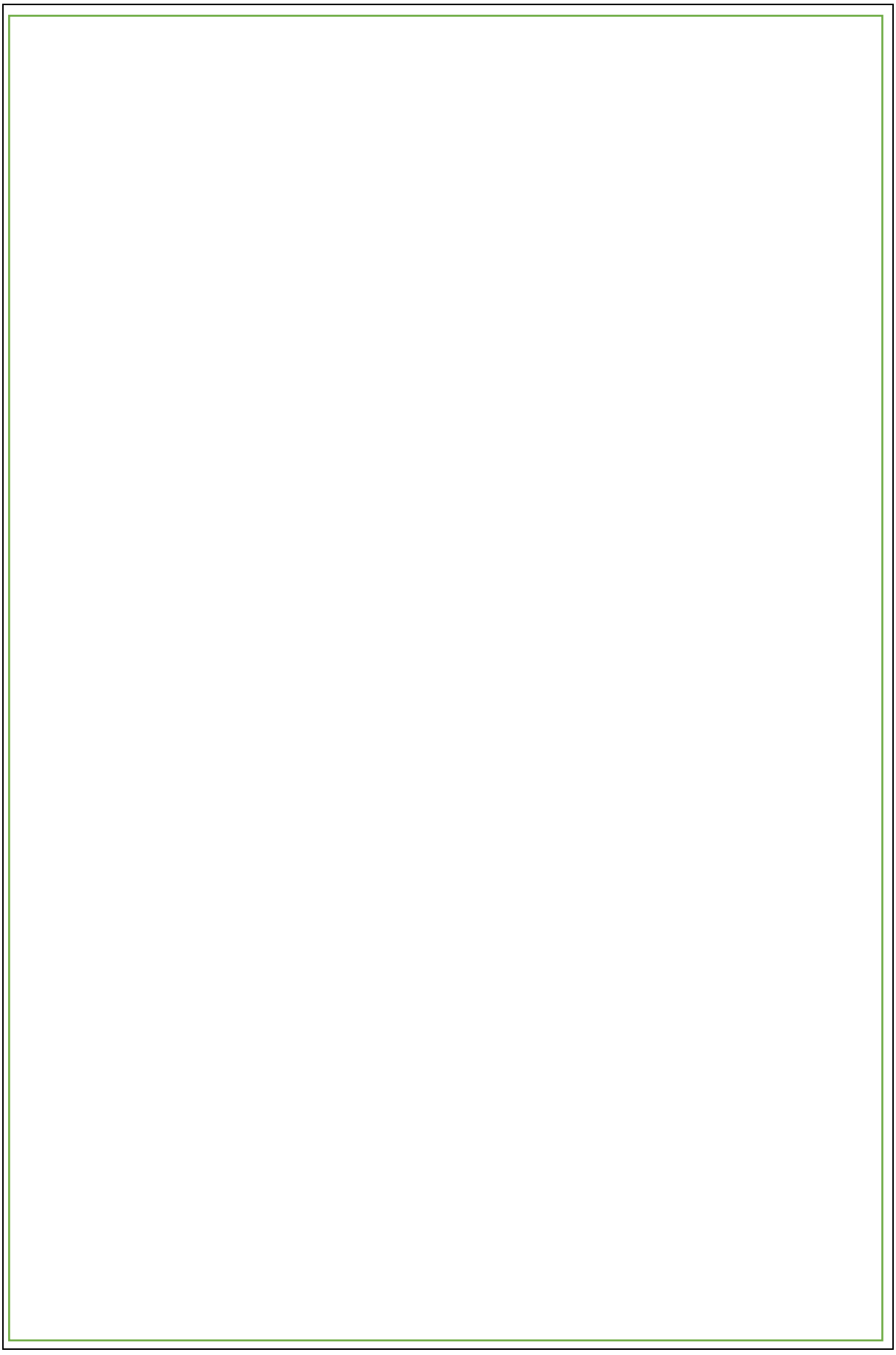












[2018]6 2.

[2015]256

2-5

2-6

2-5

	[2018]6		
1	50% 30%		
2			
3			
4			
5			
6	10%		
7			
8			
9			

2-6

	[2015]256		
1			
2	30%		
3	30%		
4	30%		
5			
6			
7			
8			
9			
10			

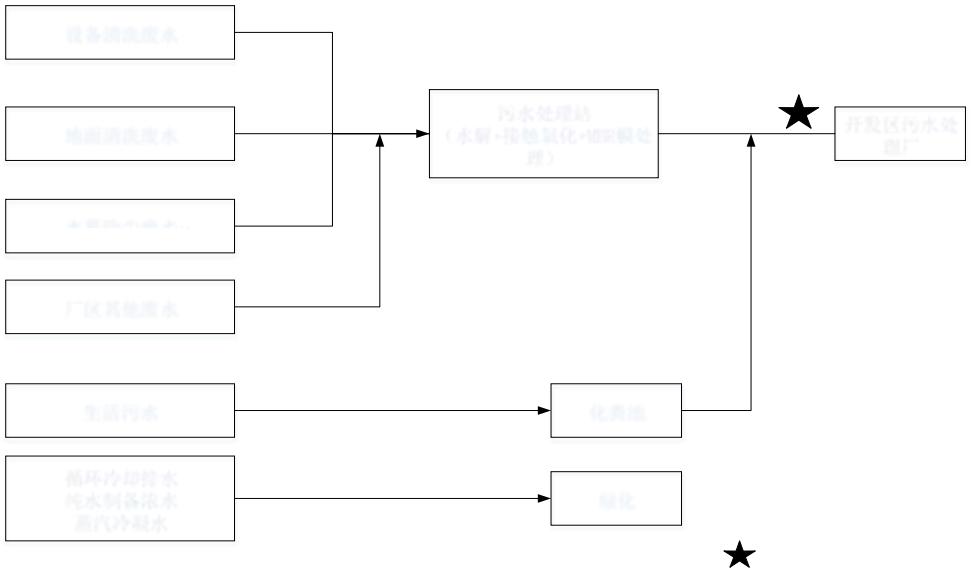
COD

42336.3 / 141t/d

150t/d

3-1

3-1



3-1

3-1

					t/a			
			COD SS		3600			

					800			
					96			
			COD SS		720			

1 15 FQ-05

1 15 FQ-08

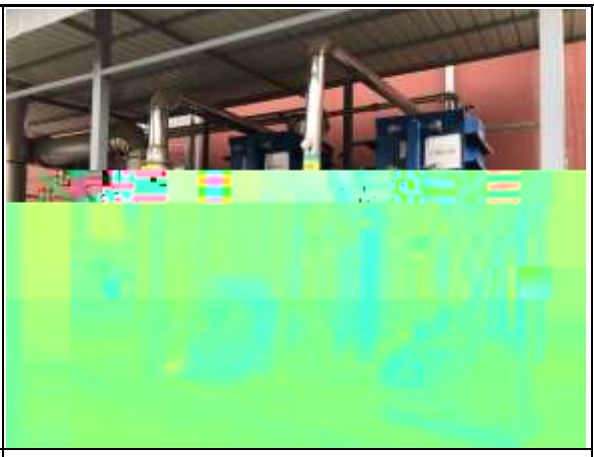
2 1

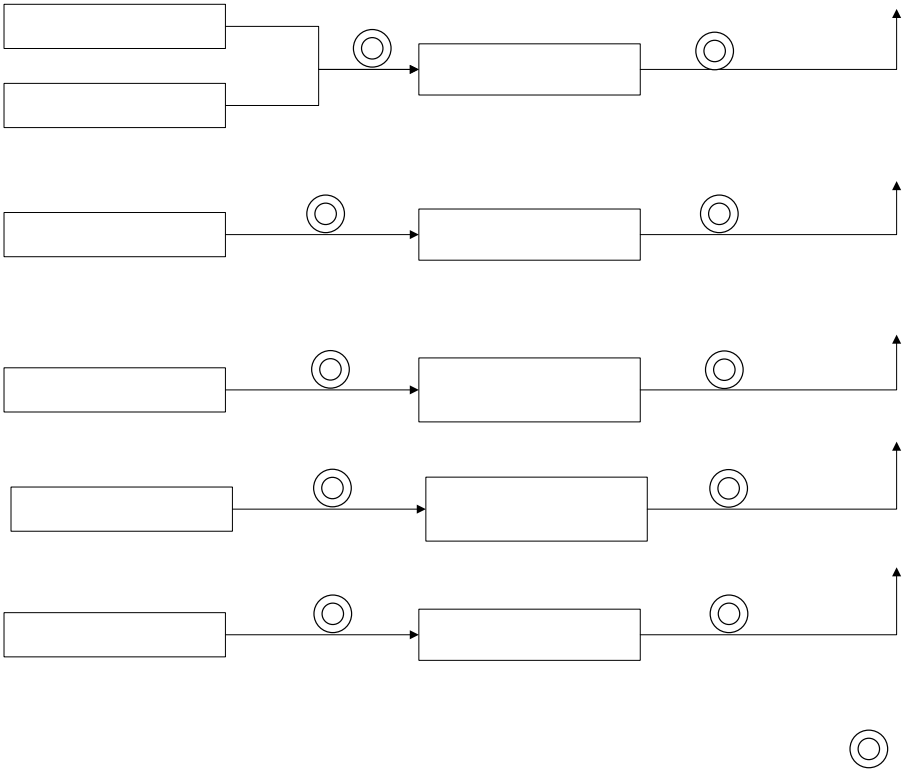
+ 2 15 FQ-06 FQ-07

1 15 FQ-04

3-2

3-2





3-2

3-2

				60min/d	+15	+15
				50min/d	+15	+15

	1			60min/d	+ +15	+ +15	
	2			60min/d	+ +15	+ +15	

	/		HW49 900-041-49	0.04	0.03		
			HW02 272-005-02	1.06694	0.95		
			/	0.3	5		
			/	4.5	4		

“ ”

45720 695 1.52%

3-5

		COD SS NH_3-N TP				
		COD SS	1 100t/d + + +MBR	1 150t/d + + +MBR		
			1 1500m³/h 2 4000m³/h 100% 99%	3	550	580
			2 4000m³/h + 100% 99.5%	2 +		

					15	20
			150m²	150m²		
		/	100m²	100m²		
		/	/	/		
		/				
		DN150			85	95
					650	695

1

2

1 : 100%

99% + 99.5%

GB16297-1996 15m

2 :

5576t/a

3 :

20-25dB A

3

4

3

:

1

2

99

40 6321 650

" " :

1

;

2

; ;

+ ;

(GB16297-1996)

2

3

(GB12348-2008)

3

4

; ; /

(GB18597-2001)

5

6): ≤5576 30315

COD≤1.586 8.936 NH_3-N≤0.032(0.392)

COD≤0.558 3.028 NH_3-N≤0.032(0.392)

: ≤0.00506 0.00706)

" "

5

4-1

1	;	
2	; ; + ; (GB16297-1996) 2	; ; + ; (GB16297-1996) 2
3	(GB12348-2008) 3	(GB12348-2008) 3
4	; ; /	; ; /

	(GB18597-2001)	
5		
6	): ≤5576 30315 COD≤1.586 8.936 NH_3-N≤0.032(0. 392) COD≤0.558 3.028 NH_3-N≤0.032(0.392) : ≤0.00506 0.00706)	5216 / COD_{Cr}0.871 / SS 0.183 / 0.029 / 0.0028 / 42336.3 / COD_{Cr}7.070 / SS 1.482 / 0.238 / 0.023 / 0.0047 /

5-1

					/
	pH	pH	GB/T6920-1986	/	pH PHB-1 JSGHEL-YQ-112-2
	COD_{Cr}		HJ 828-2017	4 mg/L	50mL JSGHEL-YQ-115-2
	SS		GB/T11901——1989	4 mg/L	BSA224S JSGHEL-YQ-102
			HJ 535-2009	0.025 mg/L	UV201 JSGHEL-YQ-38
			GB 11893-1989	0.01 mg/L	UV201 JSGHEL-YQ-38
			HJ 637-2018	0.06 mg/L	JLBG-125 JSGHEL-YQ-35
			HJ 836-2017	1.0 mg/m^3	3012H JSGHEL-YQ-8-1 3012H JSGHEL-YQ-8-2 DV215CD JSGHEL-YQ-84
			GB12348-2008	/	AWA6228 JSGHEL-YQ-121-3

(HJ459-2009)

HJ494-2009 HJ493-2009 HJ/T91-2001

10%

5-2

					%		%			
pH	11	/	11	/	0	/	±0.1	/		/
CODcr	11	2	2	2	3.57 3.82	0 3.45	20	10		
SS	11	/	/	/	/	/	/	/	/	/
	8	2	2	2	1.09 2.40	0.96 1.81	20	10		
	8	2	2	2	0.88 1.10	0.97 1.03	20	10		
	8	2	2	/	1.10 3.51	/	20	/		/

5-3

				%	%	
pH	11	/	/	/	/	/
CODcr	11	2	/	/	/	/
SS	1	/	/	/	/	/
	8	2	2	95.8 102.8	90 105	
	8	2	2	105.5 106.8	90 110	
	8	2	/	/	/	/

5-4

		mg/L	mg/L	
pH	/	/	/	/
CODcr	(GSB 07- 3161-2017 200197)	169±9	172 164	
	(GSB 07- 3161-2017	50.7±3.0	51.8 49.2	

	2001108)			
SS	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/

GB/T16157-1996

HJ/T373-2007

HJ/T397-2007

HJ/T55-2000

GB16297 C

5-5

							%		%		
		12	4	/	/	/	/	/	/	/	/

6-1 2 3-1

6-1

		/	/			
	S1		+ + +MBR	pH COD SS NH3-N TP		4 / 2
	S2	/	/	pH COD SS	/	1 / 2
	S3					

6-2 2 3-2

6-2

		/	/			
	Q1					
(FQ-04)	Q2					3 / 2
	Q3					
	Q4					

6-4

	mg/L,pH	
pH	6-9	
	500	
	400	
	35	
	3.0	

GB16297-1996 2

GB16297-1996 7.2

$$\overline{\frac{\quad}{1}}$$

h-

h_1, h_2- 1 2

$$Q=Q_1+Q_2$$

Q-

Q_1, Q_2 1 2

GB16297-1996 7.1

200m 5m

50%

15m, 200m

5m 50%

6-5

6-5

JSGHEL2019200

2019 3 21 2019 3 22

75% “ ”

7-1 7-2

7-1

			/	/	/	%
2019 3 21	1		4.8	0.0667	0.0652	97.8
	2		6.0	0.0667	0.0654	98.0
2019 3 21	1		4.8	0.0667	0.0652	97.8
	2		6.0	0.0667	0.0654	98.0

7-2

			%	kPa	m/s	
2019 3 21		/	/	/	2.4	
2019 3 22		/	/	/	2.1	

7-3

7-3

			(mg/L)		
2019 3 21	S1	pH	7.32 7.41	6 9	
		COD_{Cr}	149	500	
			5.61	35	
			0.54	3.0	
			35	400	
			2.10	/	/
	S2	pH	7.51	/	/
		COD_{Cr}	12	/	/
			9	/	/
	S3	pH	7.60	/	/
		COD_{Cr}	16	/	/
			6	/	/
2019 3 22	S1	pH	7.35 7.43	6 9	
		COD_{Cr}	167	500	
			4.40	35	
			0.47	3.0	
			35	400	
			45.9	/	/
	S2	pH	7.47	/	/
		COD_{Cr}	14	/	/
			8	/	/

2019 3 21 2019 3 22

FQ-04 Q2

FQ-05 Q4 1 + FQ-06 Q6 2

+ FQ-07 Q8 FQ-08

Q10

16297-1996 2

16297-1996 2

92.6% 96.0%

95.9% 98.3% 1

+ 93.7% 96.0% 2 +

92.4% 95.0%

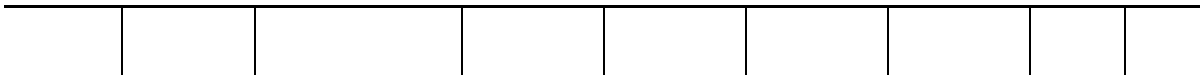
93.8% 97.0%

7-4 7-5

7-6 2 3-2

7-1 7-2

7-4



Q1

	3 22	mg/m³						
		kg/h	8.97×10^{-3}	9.54×10^{-3}	1.09×10^{-2}	9.54×10^{-3}	/	/
Q4	2019 3 21	mg/m³	1.2	1.1	1.2	1.2	120	
		kg/h	2.34×10^{-4}	2.26×10^{-4}	2.46×10^{-4}	2.46×10^{-4}	1.75	
	2019 3 22	mg/m³	1.8	1.3	1.6	1.8	120	
FQ-05		kg/h	3.67×10^{-4}	2.52×10^{-4}	3.25×10^{-4}	3.67×10^{-4}	1.75	
Q5 1+	2019 3 21	mg/m³	15.0	12.5	15.7	15.7	/	/
		kg/h	0.134	0.112	0.141	0.141	/	/
	2019 3 22	mg/m³	15.6	14.0	15.8	15.8	/	/
		kg/h	0.140	0.126	0.142	0.142	/	/
Q6 1+	2019 3 21	mg/m³	1.3	1.1	1.2	1.3	120	
		kg/h	6.27×10^{-3}	5.16×10^{-3}	5.59×10^{-3}	6.27×10^{-3}	1.75	
	2019 3 22	mg/m³	1.4	1.7	1.5	1.7	120	
FQ-06		kg/h	6.51×10^{-3}	7.96×10^{-3}	6.95×10^{-3}	7.96×10^{-3}	1.75	
Q7 2+	2019 3 21	mg/m³	11.2	10.6	13.5	13.5	/	/
		kg/h	4.45×10^{-2}	4.25×10^{-2}	5.51×10^{-2}	5.51×10^{-2}	/	/
	2019 3 22	mg/m³	15.8	15.8	12.9	15.8	/	/
		kg/h	6.38×10^{-2}	6.26×10^{-2}	5.25×10^{-2}	6.38×10^{-2}	/	/
Q8 2	2019 3 21	mg/m³	1.4	1.2	1.3	1.4	120	
			3.39×10^{-3}	2.91×10^{-3}	3.05×10^{-3}	3.39×10^{-3}	1.75	

+		kg/h						
FQ-07	2019 3 22	mg/m³	1.5	1.4	1.1	1.5	120	
		kg/h	3.57×10^{-3}	3.43×10^{-3}	2.65×10^{-3}	3.57×10^{-3}	1.75	
Q9	2019 3 21	mg/m³	13.0	16.0	17.0	17.0	/	/
		kg/h	6.50×10^{-2}	7.84×10^{-2}	8.42×10^{-2}	8.42×10^{-2}	/	/
	2019 3 22	mg/m³	13.6	14.4	16.8	16.8	/	/
		kg/h	6.97×10^{-2}	7.27×10^{-2}	8.57×10^{-2}	8.57×10^{-2}	/	/
Q10	2019 3 21	mg/m³	1.1	1.1	1.1	1.1	120	
		kg/h	2.88×10^{-3}	2.95×10^{-3}	2.88×10^{-3}	2.95×10^{-3}	1.75	
FQ-08	2019 3 22	mg/m³	1.6	1.4	1.3	1.6	120	
		kg/h	4.29×10^{-3}	3.71×10^{-3}	2.57×10^{-3}	4.29×10^{-3}	1.75	

7-5 **kg/h**

	2019 3 21			2019 3 22		
Q1	6.04×10^{-3}	5.06×10^{-3}	5.08×10^{-3}	8.43×10^{-3}	8.05×10^{-3}	7.26×10^{-3}
Q2 FQ-04	3.06×10^{-4}	3.24×10^{-4}	3.06×10^{-4}	3.38×10^{-4}	4.32×10^{-4}	5.38×10^{-4}
%	94.9	93.6	94.0	96.0	94.6	92.6
Q3	1.35×10^{-2}	1.18×10^{-2}	1.19×10^{-2}	8.97×10^{-3}	9.54×10^{-3}	1.09×10^{-2}
Q4	2.34×10^{-4}	2.26×10^{-4}	2.46×10^{-4}	3.67×10^{-4}	2.52×10^{-4}	3.25×10^{-4}

	FQ-05						
	%	98.3	98.1	97.9	95.9	97.4	97.0
	Q5 1 +	0.134	0.112	0.141	0.140	0.126	0.142
	Q6 1 + FQ-06	6.27×10^{-3}	5.16×10^{-3}	5.59×10^{-3}	6.51×10^{-3}	7.96×10^{-3}	6.95×10^{-3}
	%	95.3	95.4	96.0	95.4	93.7	95.1
	Q7 2 +	4.45×10^{-2}	4.25×10^{-2}	5.51×10^{-2}	6.38×10^{-2}	6.26×10^{-2}	5.25×10^{-2}
	Q8 2 + FQ-07	3.39×10^{-3}	2.91×10^{-3}	3.05×10^{-3}	3.57×10^{-3}	3.43×10^{-3}	2.65×10^{-3}
	%	92.4	93.2	94.5	94.4	94.5	95.0
	Q9	6.50×10^{-2}	7.84×10^{-2}	8.42×10^{-2}	6.97×10^{-2}	7.27×10^{-2}	8.57×10^{-2}
	Q10 FQ-08	2.88×10^{-3}	2.95×10^{-3}	2.88×10^{-3}	4.29×10^{-3}	3.71×10^{-3}	2.57×10^{-3}
	%	95.6	96.2	96.6	93.8	94.9	97.0

7-6

		kg/h	kg/h	kg/h	
	FQ-04 Q2	5.38×10^{-4}	0.017	1.75	
	FQ-05 Q4	3.67×10^{-4}			
	1 + FQ-06 Q6	7.96×10^{-3}			
	2 +	3.57×10^{-3}			

	FQ-07 Q8				
	FQ-08 Q10	4.29×10^{-3}			

2019 3 21 2019 3 22

59.3dB(A)

GB12348-2008 3

7-7

7-7

				dB(A)	dB(A)		
2019 3 21	Z1	1		55.5	65		
	Z2	1		59.3	65		
	Z3	1		52.3	65		
	Z4	1		52.3	65		
	Z5	1		52.0	65		
	Z6	1		55.8	65		
2019 3 22	Z1	1		59.1	65		
	Z2	1		56.4	65		
	Z3	1		51.9	65		
	Z4	1		51.9	65		
	Z5	1		51.0	65		
	Z6	1		53.2	65		

1

5216 / COD_{cr}0.871 / SS 0.183 / 0.029 / 0.0028 /

42336.3 / COD_{cr}7.070 / SS 1.482 / 0.238 / 0.023 /

“ ”

COD

42336.3 / 141t/d

150t/d

S1

pH7.32 7.41 COD_{cr}167mg/L 5.61mg/L 0.54mg/L 35mg/L

1 15 FQ-05

1 15 FQ-08

2 1

+ 2 15 FQ-06 FQ-07

1 15 FQ-04

FQ-04 Q2

FQ-05 Q4 1 +

FQ-06 Q6 2 + FQ-07 Q8

FQ-08 Q10

16297-1996 2

16297-1996 2

92.6% 96.0%

95.9% 98.3% 1

+ 93.7% 96.0% 2 +

92.4% 95.0%

93.8% 97.0%

59.3dB(A)

GB12348-2008 3

/

/

1

2

0.0047 /

“ ”

“ ”

1

2

“ ”

( ) ( ): ( )

			/		99	
	( )	[C2720]		/	118 ° 88'65" 32 ° 14'05"	
		40		40		
				[2017]99		
		2017 11		2018 12 1		/
						/
	( )	42151	( )	650	(%)	1.54
	( )	45720	( )	695	(%)	1.52
	( )	/ ( ) / ( ) /	( )	/	( )	/ ( ) /
		/		/		/
				/		2019 5 21

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	“ ” (8)	(9)	(10)	(11)	(12)
		/	0.5216	0.5576	/	/	0.5216	0.5576	/	4.23363	3.0315	/	+0.5216
		/	167	500	/	/	0.871	1.586	/	7.070	8.936	/	+0.871
		/	5.61	35	/	/	0.029	0.032	/	0.238	0.392	/	+0.029
		/	35	400	/	/	0.183	0.525	/	1.482	6.675	/	+0.183
		/	0.54	3.0	/	/	0.0028	0.003	/	0.023	0.063	/	+0.0028
(		/	/	120	/	/	0.00407	0.00506	/	/	/	/	+0.00407
		/	/	/	/	/	/	/	/	/	/	/	/
)		/											
		/	/	/	/	/	/	/	/	/	/	/	/
		/	/	/	/	/	/	/	/	/	/	/	

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