2026 6

Ē

2605-370211-04-11-744197

11

2024-2035

2025 9



1-1

2024-2035

204

1 ÄSBçº5ô"dñ0 T ‘’c È`ç° Oô

49.44

2023

2 2024-2035 2030

2035

G2619

3

?ô B j È

4

2035

4943.61

5 4794.98 97.00%

3800 76.87%

6

41 m^3/d

61 $m^3/$, m

10

“ ” m~
“
”
2
“
”

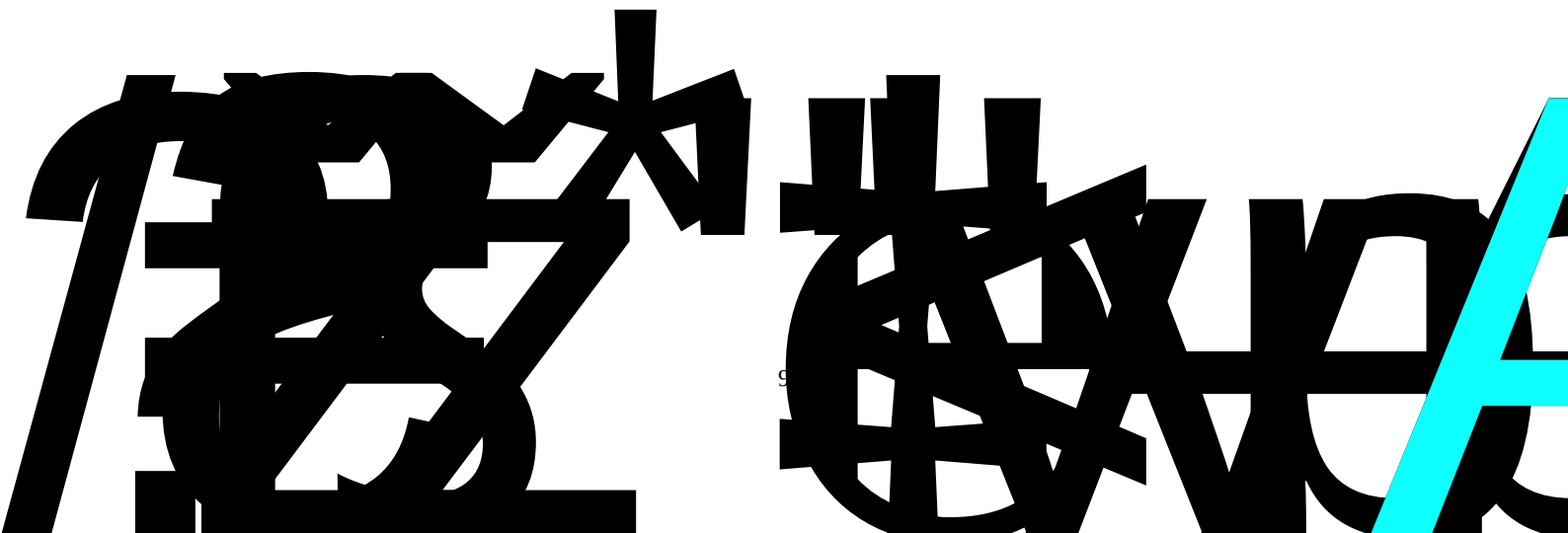
4 500m

5

		2 3 4 ZH37021120009 ZH37021120012 “ ”	ZH37021120009 “ ”
		2022 5 1 2 3 4 5	G2619 2022 5 1 2024 2 3 PSA

	6 2022 17 7 VOCs 8	4 DA004 DA005 5 SO_2 0.342t/a 1.18t/a 0.054t/a 6 7 VOCs 8
	1 2 / 3 GB18597-2023 4 5 6	1. 2. 3. GB18597-2023 4. 5. 500m 6.
	1 2	

	3	



“ ”

“ ”

95%

95% 2035

1

“ ”

2024 2026

29 “ ZH37021120009 ”



1-5

1.

2.

3.

“ ”

[2021]16 2024

2024

1-6

Lƀ'ë

Aî F¦

	2025 28 2023 2025 “ ” 2025 28		

2026 66

“ —90 /

8×6 / ” 90 /

PSA

5000Nm^3/h

PSA

90 / 204

4.0

820m

5 6

90 / PSA

750m^2 5000Nm^3/h PSA 1

“

”

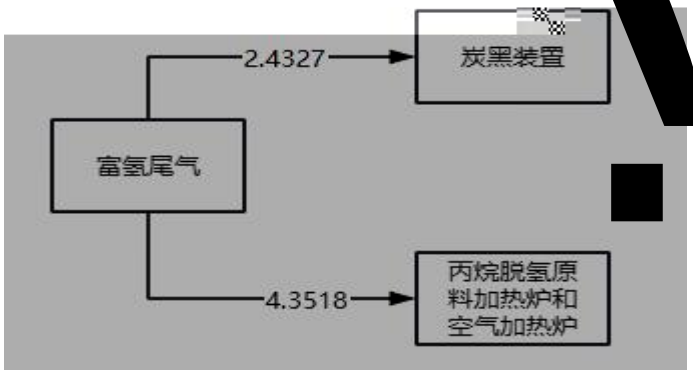
2-1

300m^2 PPPPPP

1

				1 “ —90 / 8 × 6 / ” 90 / 2 D168.3×7.11 550m	
	3			PSA 100m DN100 DA004 DA005	
				10 25000m³/h	
				90 / 17.8m ×14.1m ×2m 500m³ 320m³/h “ CBR ”	
	4				
				35kV PDH	
				2×17700Nm³/h	
				2×13400Nm³/h	
				2160m³/h 600L/s 3h	
				PSA CO_2 H_2 N_2 CH_4 CO DA004 DA005	
	5				

6.7845 t/a 2.4327 t/a 2.6865 t/a



2-1

43 1.158 t/a 2.4327 t/a

2578.03kcal/Nm^3 5000Nm^3/h

2-4

1			90 /	6907.8Nm^3	5526.2×10^{4}Nm^3
2				1425m^3	1.14×10^{7}m^3

2-5

1	H_2	88.27
2	N_2	1.64
3	CO	2.68
4	CO_2	0.21
5		3.9
6		0.02
7		0.43
8		2.8
9	MAPD	0
10		0.04
11		0.01

3

2-6

		40	40	40	40
	MpaG	0.9	1.8	1.75	0.03
	kgmole/h	308.19	308.19	223.07	85.12
	Nm^3/h	6907.80	6907.80	5000.00	1907.80
	kg/h	1447.50	1447.50	449.76	997.74
	kcal/Nm^3	3189.95	3189.95	2578.03	4793.68
H_2		0.882700	0.882700	0.999906	0.546432
CO		0.026800	0.026800	0.000000	0.103690
CO_2		0.002100	0.002100	0.000001	0.008122

CH_4	0.039000	0.039000	0.000003	0.150884
C_2H_2	0.000200	0.000200	0.000000	0.000774
C_2H_4	0.004300	0.004300	0.000000	0.016637
C_2H_6	0.028000	0.028000	0.000000	0.108333
C_3H_6	0.000400	0.000400	0.000000	0.001548
C_3H_8	0.000100	0.000100	0.000000	0.000387
N_2	0.016400	0.016400	0.000090	0.063194

4

2-7

1	DKT-100	Al_2O_3	φ3-5	1.3
2	DKT-200	SiO_2	Φ2-4	5.5

3 10

3		DN1600 V 19.00m^3	Q345R	1
4		DN800 V 1.05m^3	Q345R	1
5		DN2200 V 45.00m^3	Q345R	1
6		DN2200 V 45.00m^3	Q345R	1
7		5μm		1
8		Q=6907.8Nm^3/h 0.90/1.80MPaG 50/40 N=324kw		2 1 1
9		Q=1907.8Nm^3/h 0.03/0.50MPaG 40/40 N=146kw		2 1 1

1

10 50L/d 0.5m^3/d

8000h 334d 166.67m^3/a

PSA

60m^3/h 1.625% 0.1%

1.3% 0.225% 0.975m^3/h

8000h 7800m^3 P71

2

85% 141.67m^3/a

1080m^3/a



2-2

3

$1.14 \times 10^7 m^3/a$

4

35kV PDH 393.76 kW·h/a

5

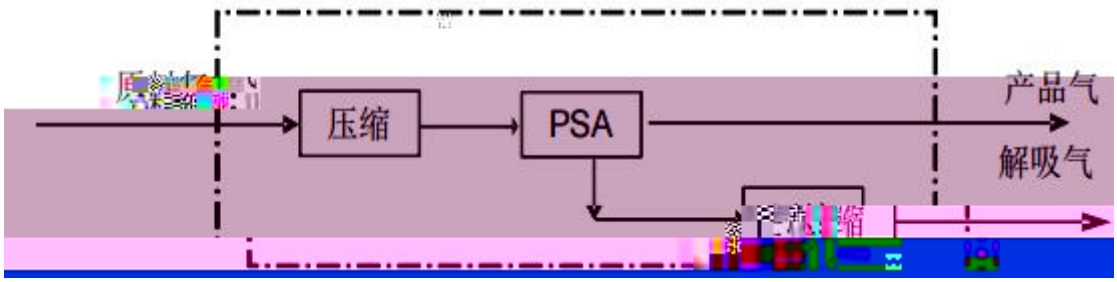
60Nm^3/h

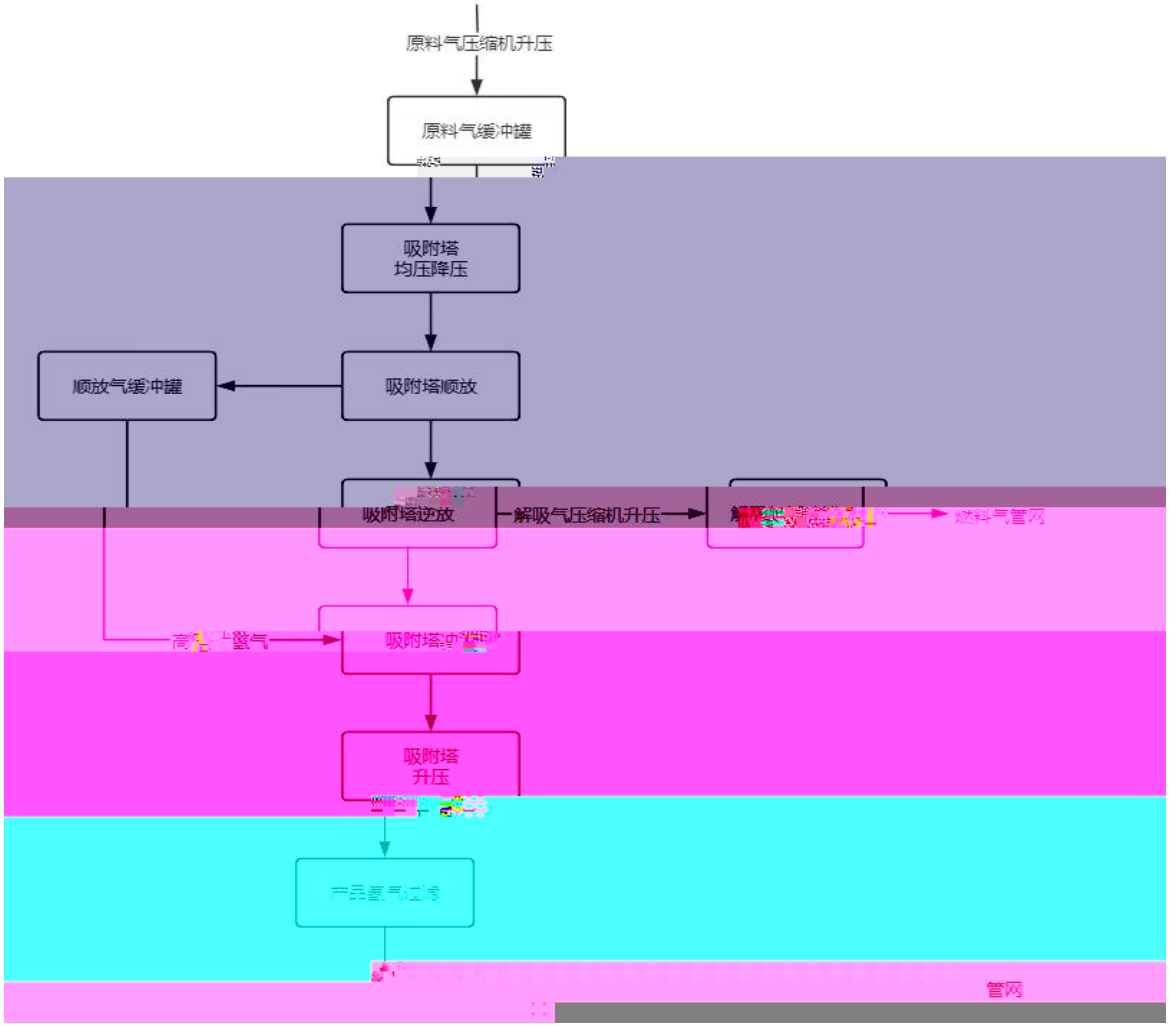
6

60Nm^3/h

10 8000h

“ ” 2-3


压缩
PSA
产品气
解吸气

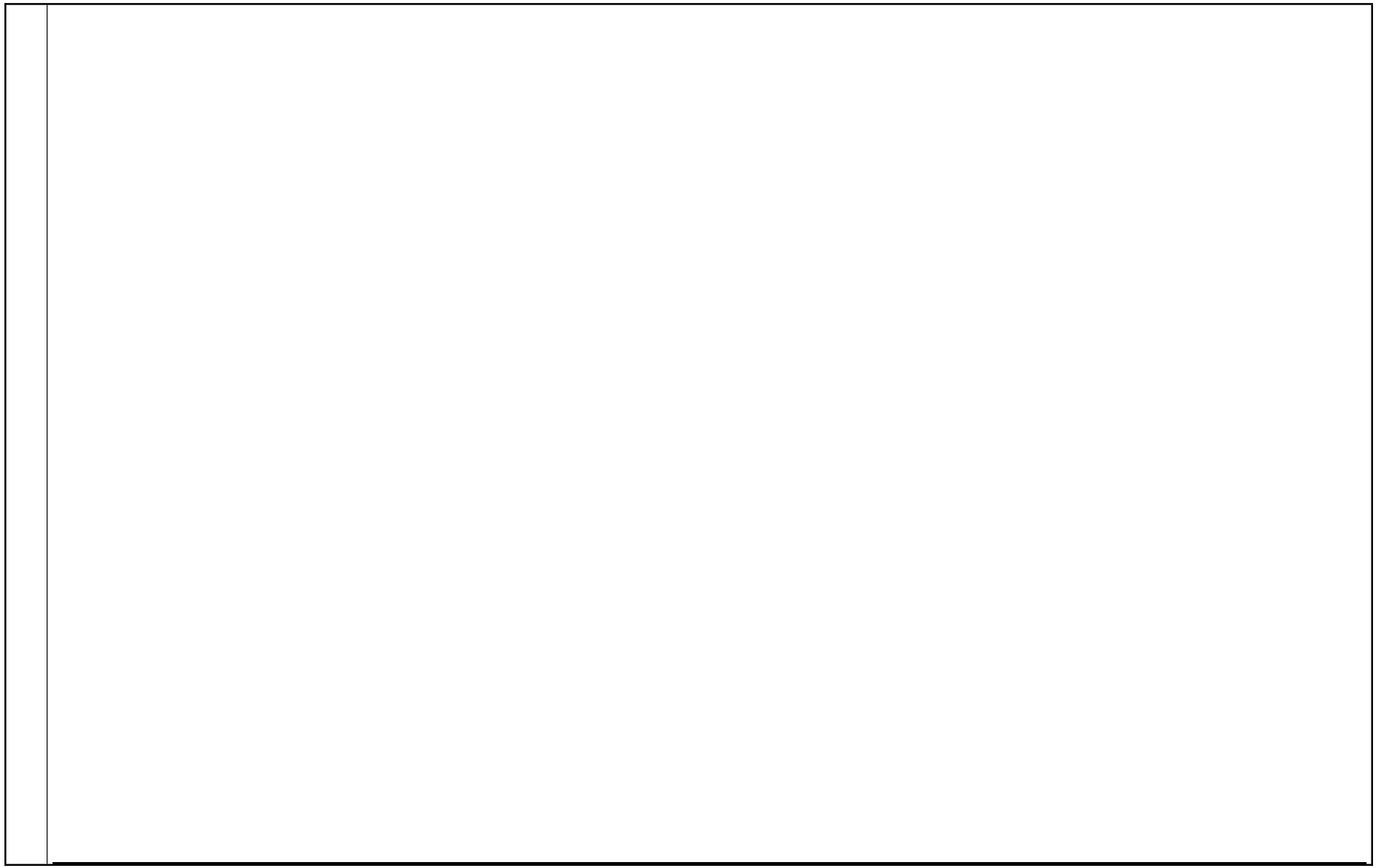

原料气压缩机升压
原料气缓冲罐
吸附塔
均压降压
顺放气缓冲罐
吸附塔顺放
吸附塔逆放
解吸气压缩机升压
燃料气管网
吸附塔
升压
管网

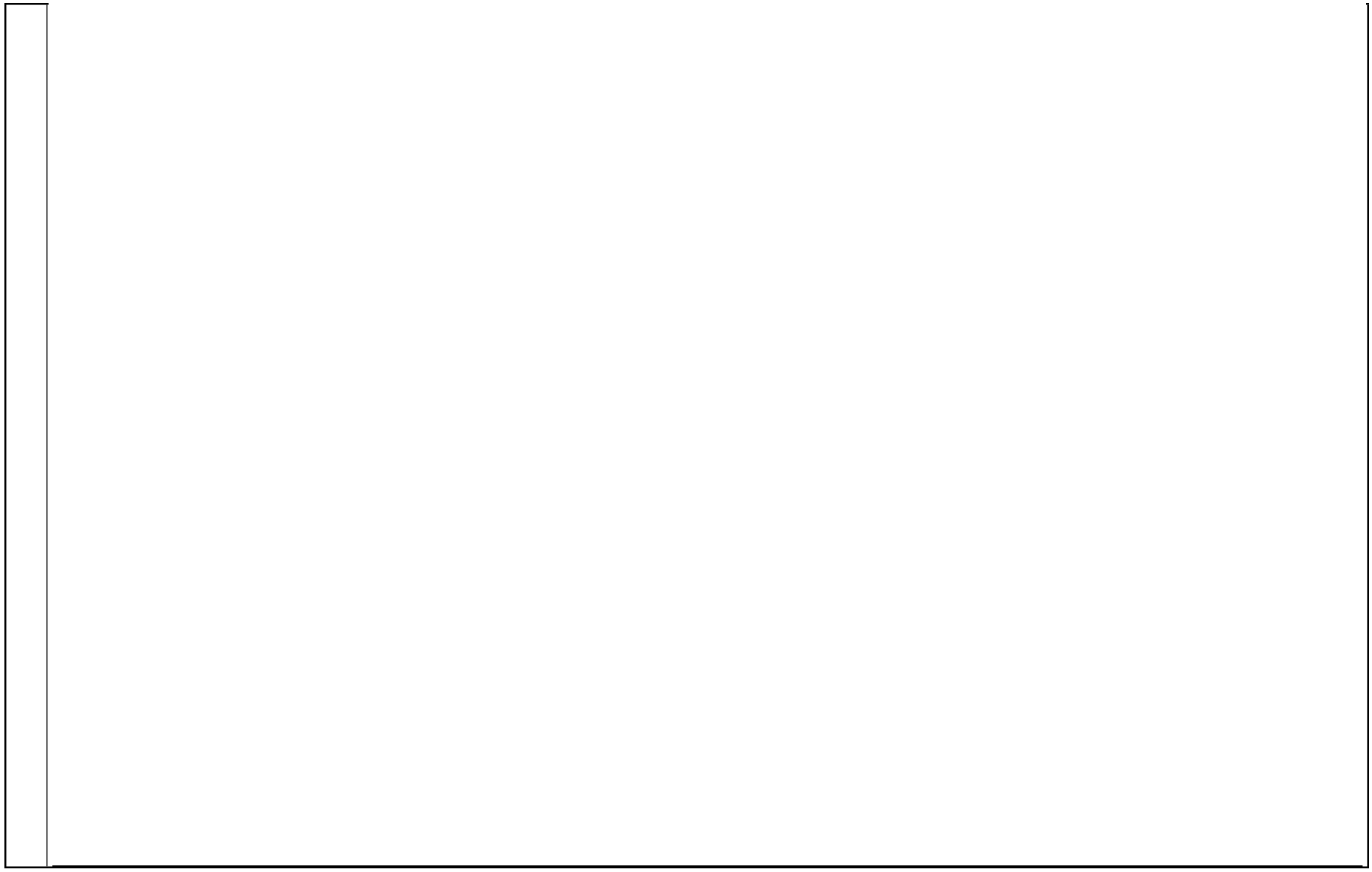
2-3

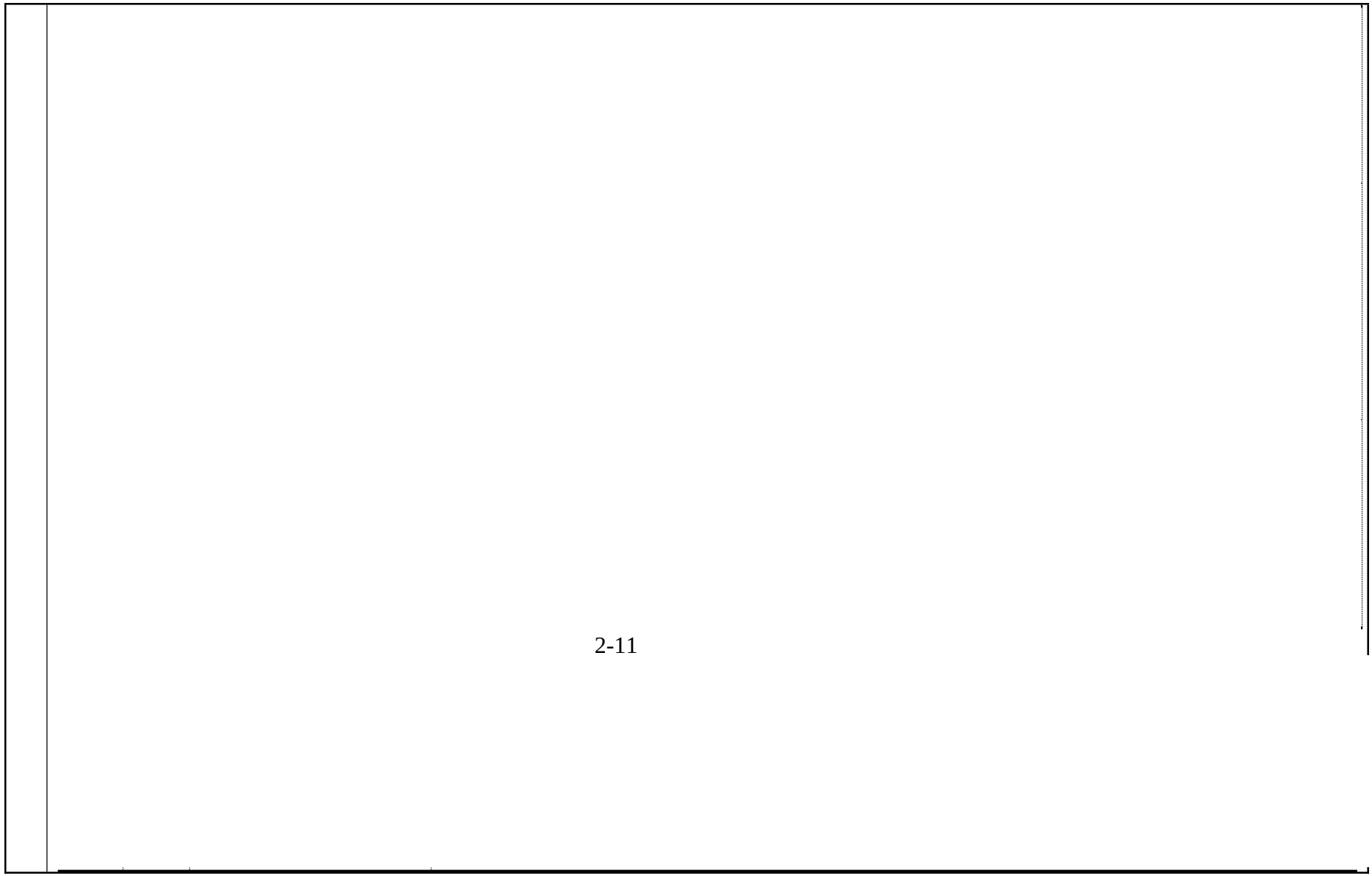
1

2

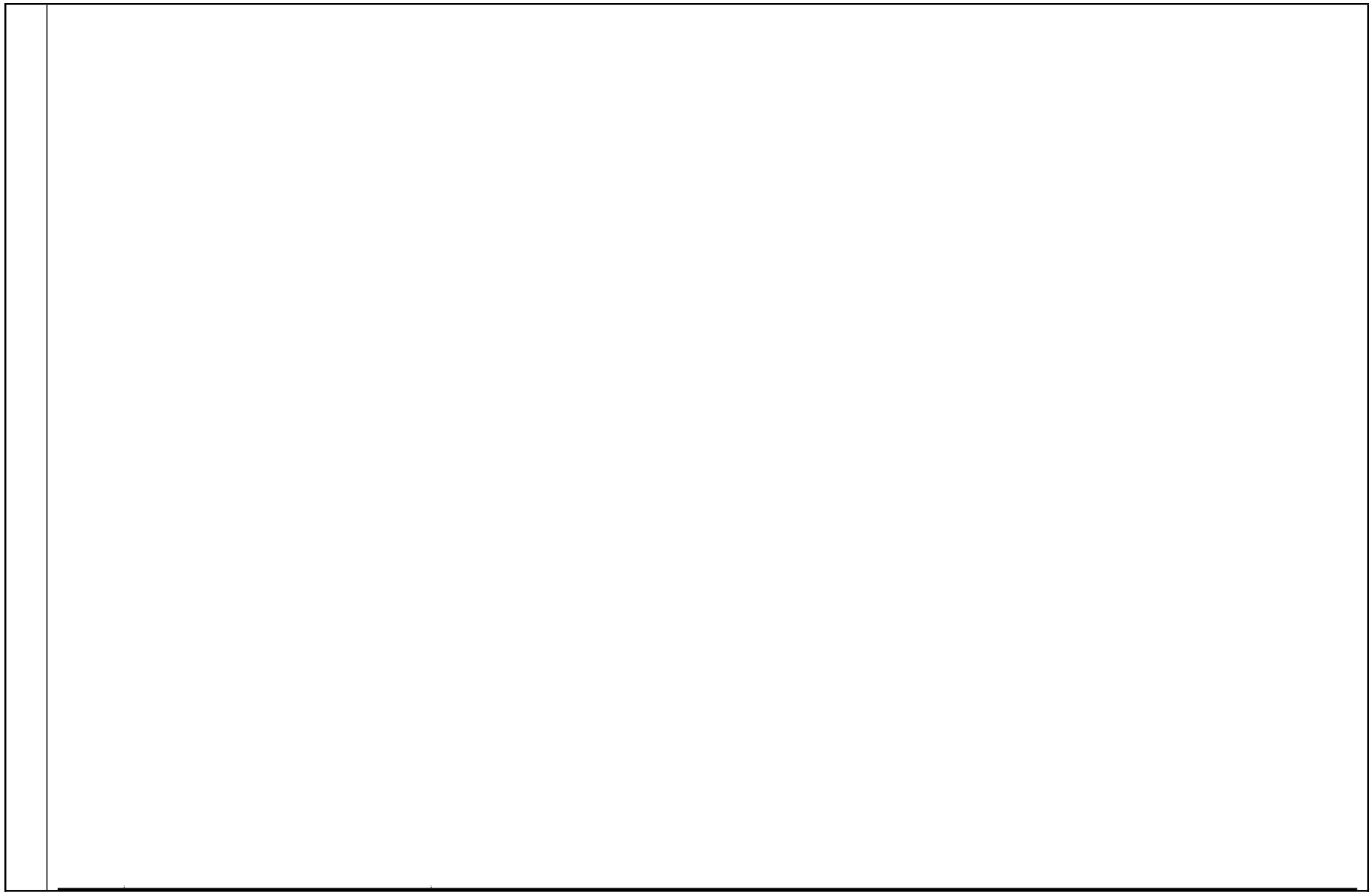
	DA004 DA005 3 4

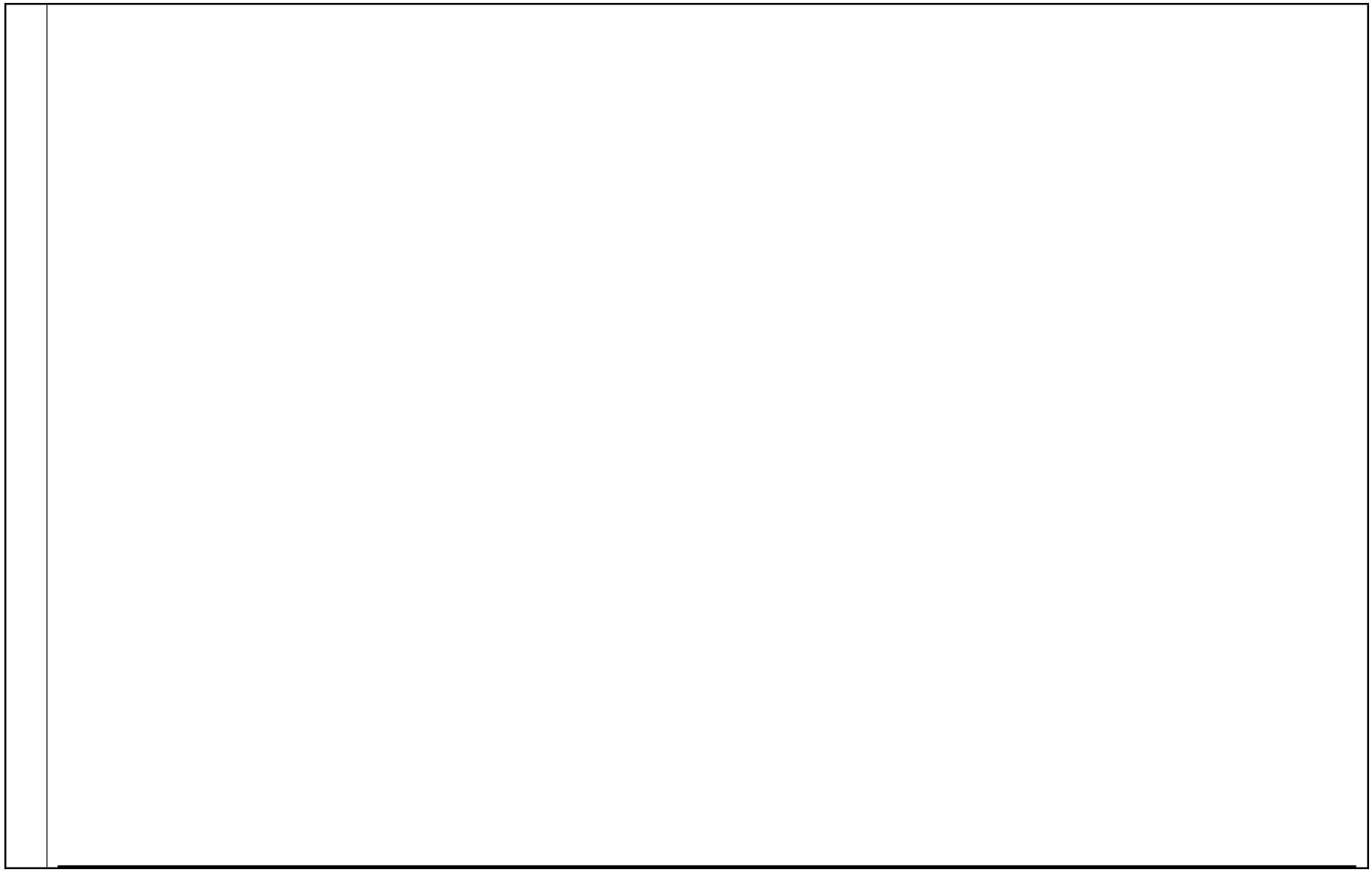





2-11

—

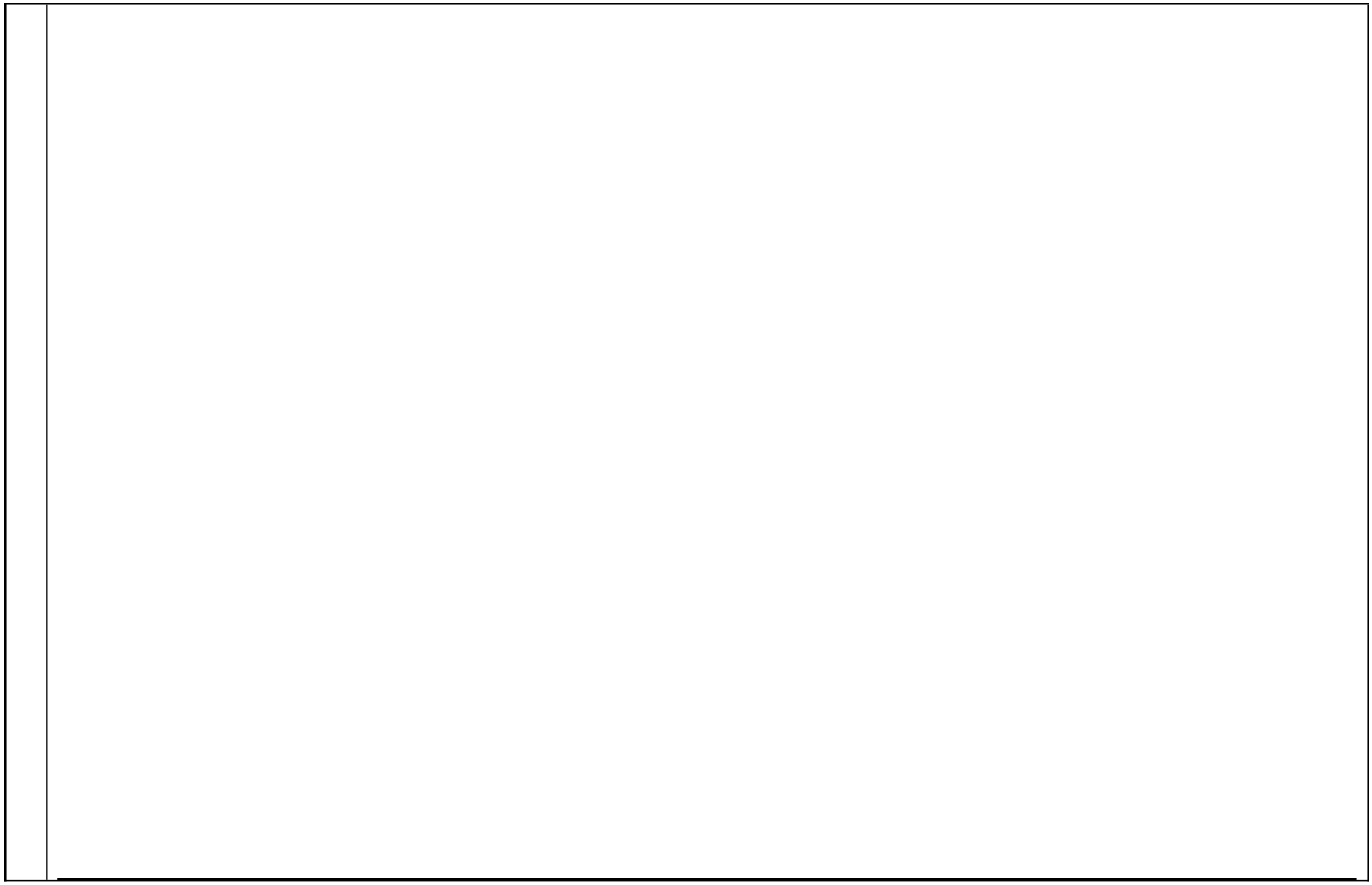




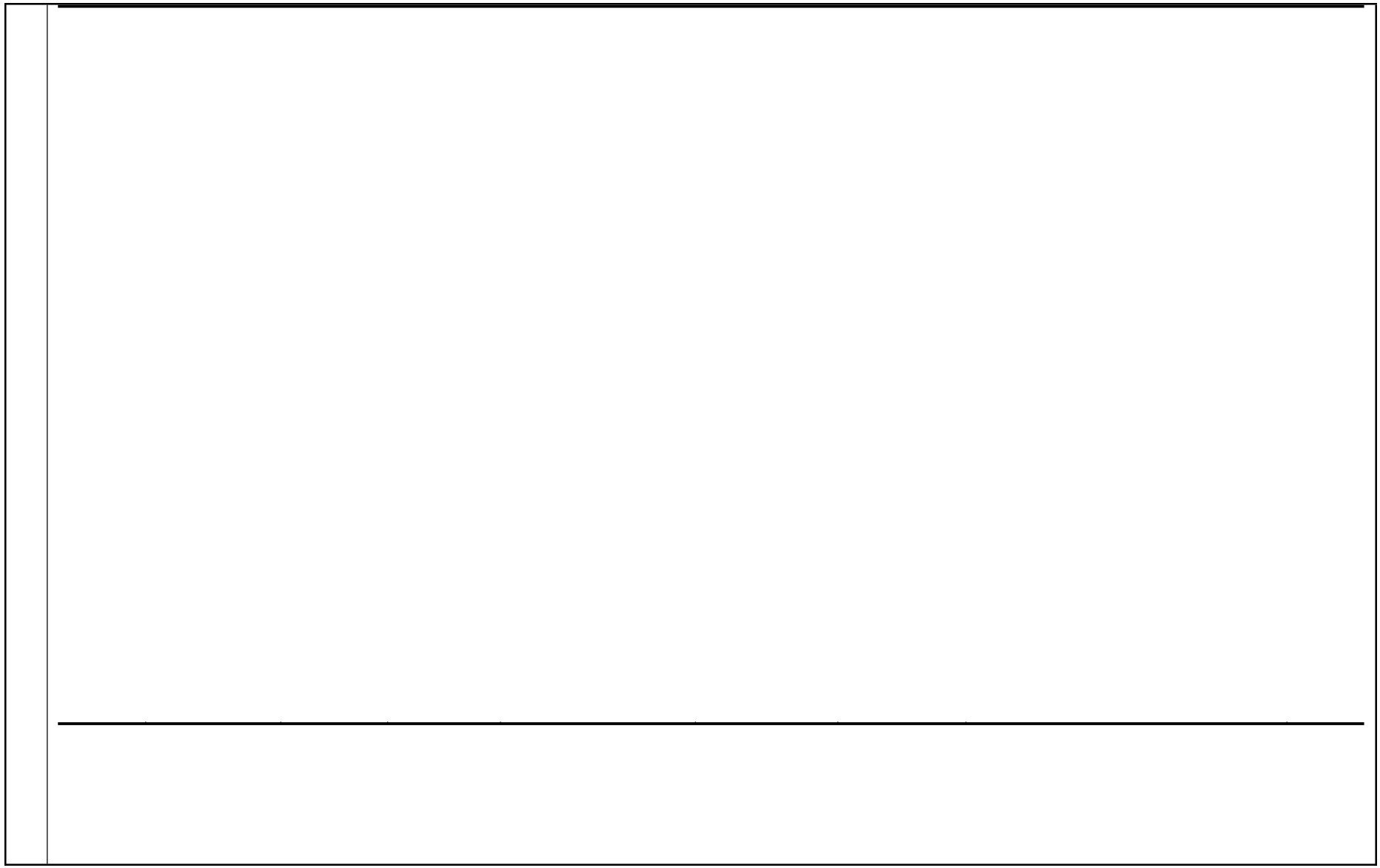
—

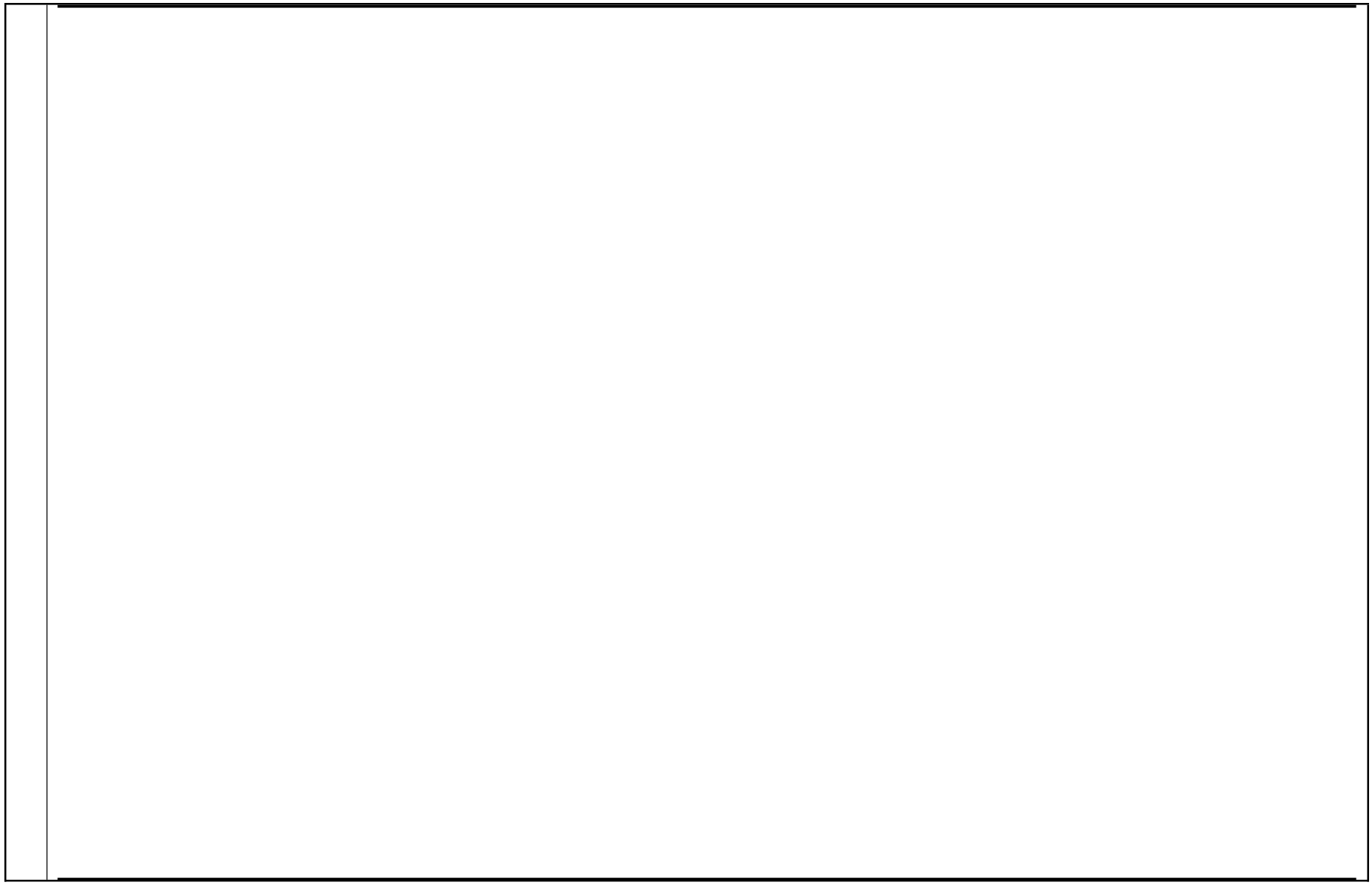
2-13

-

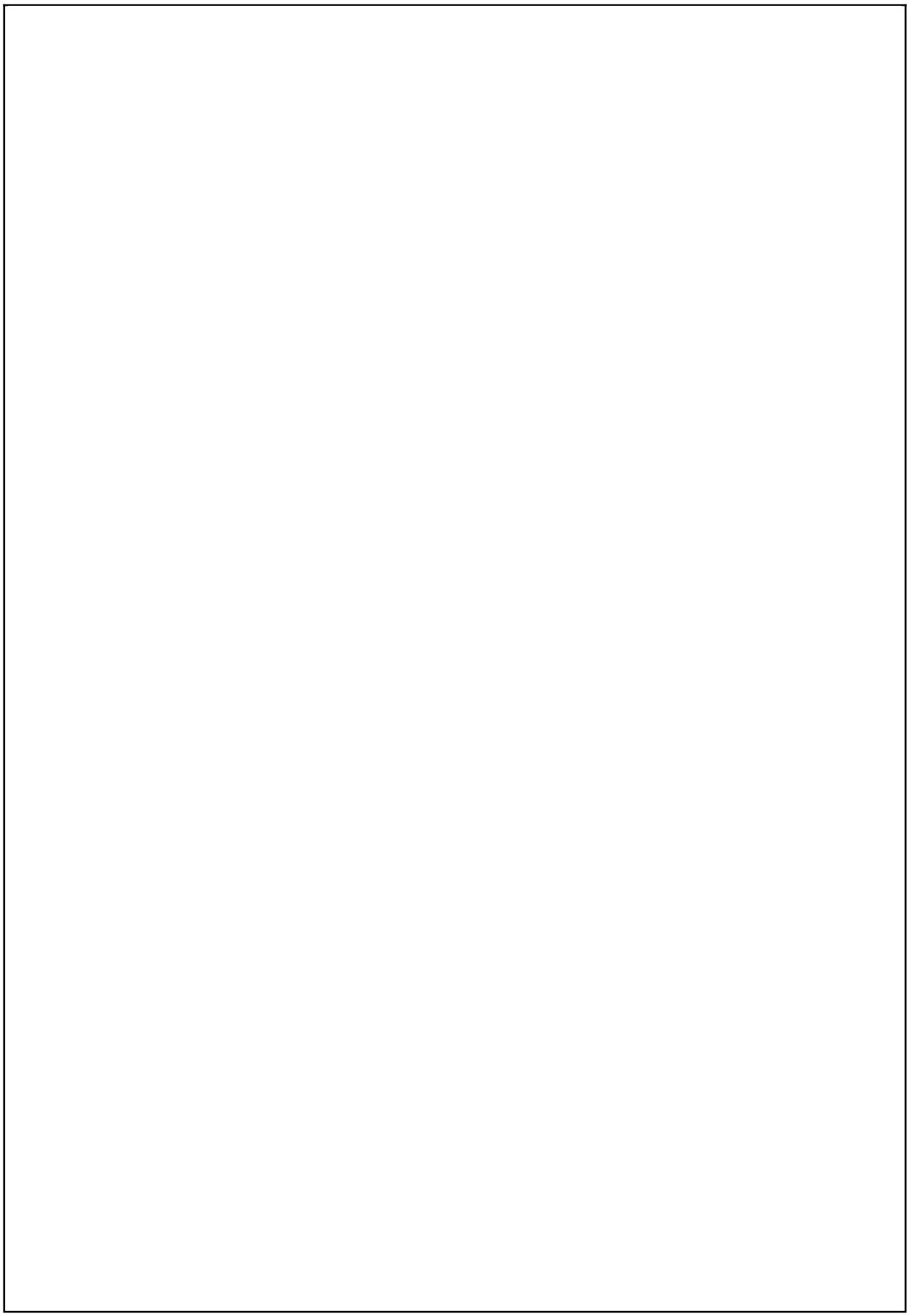


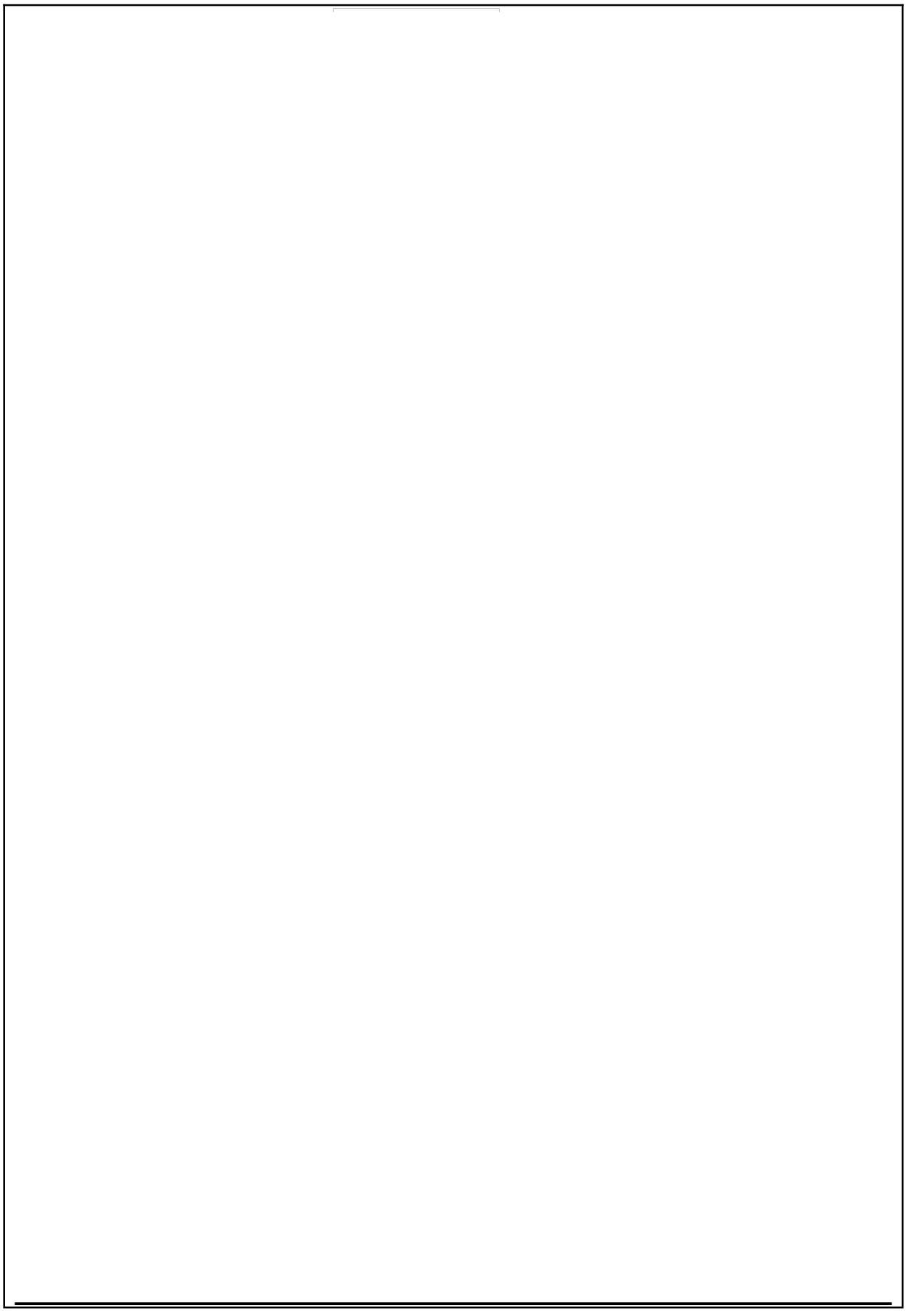


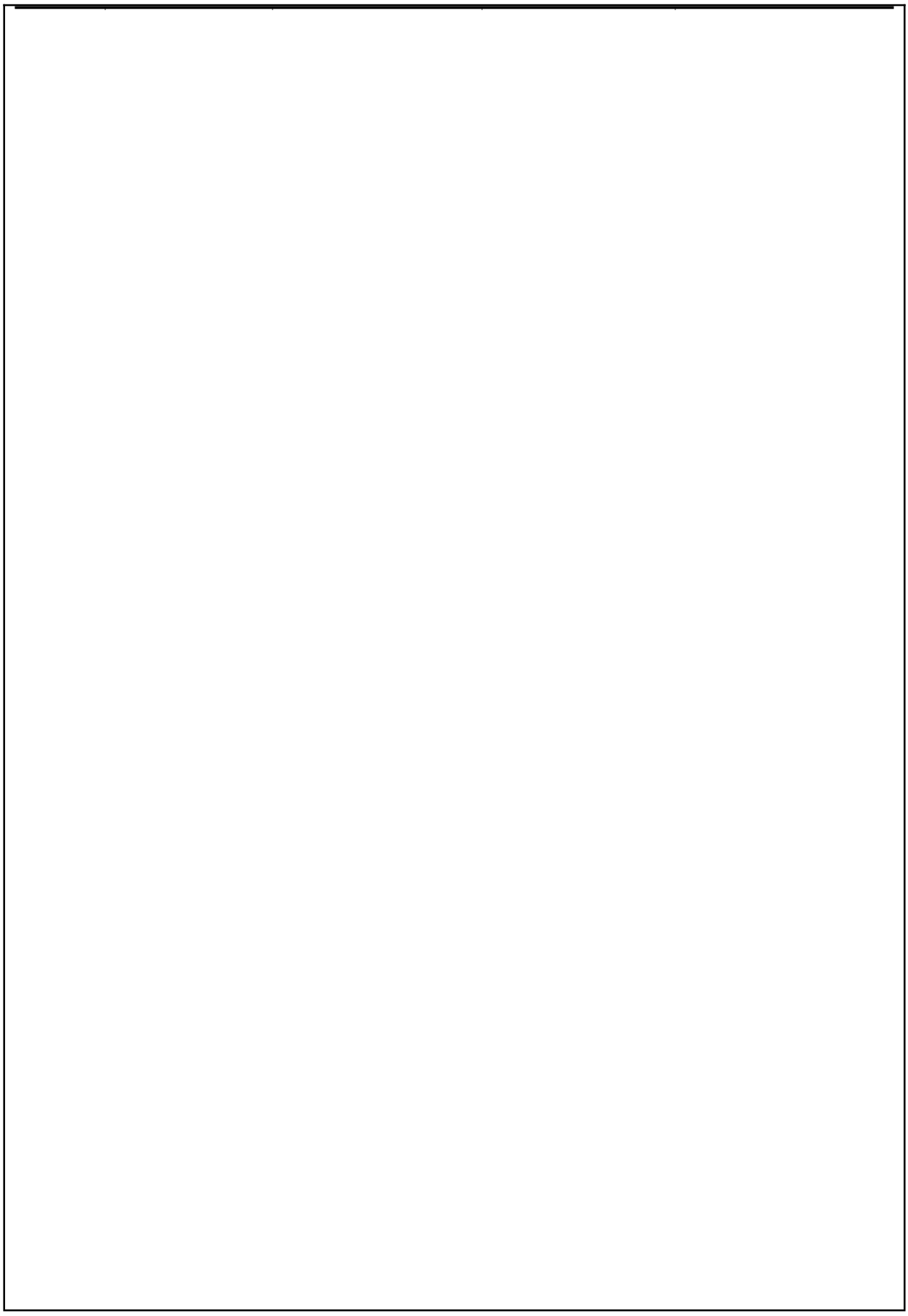


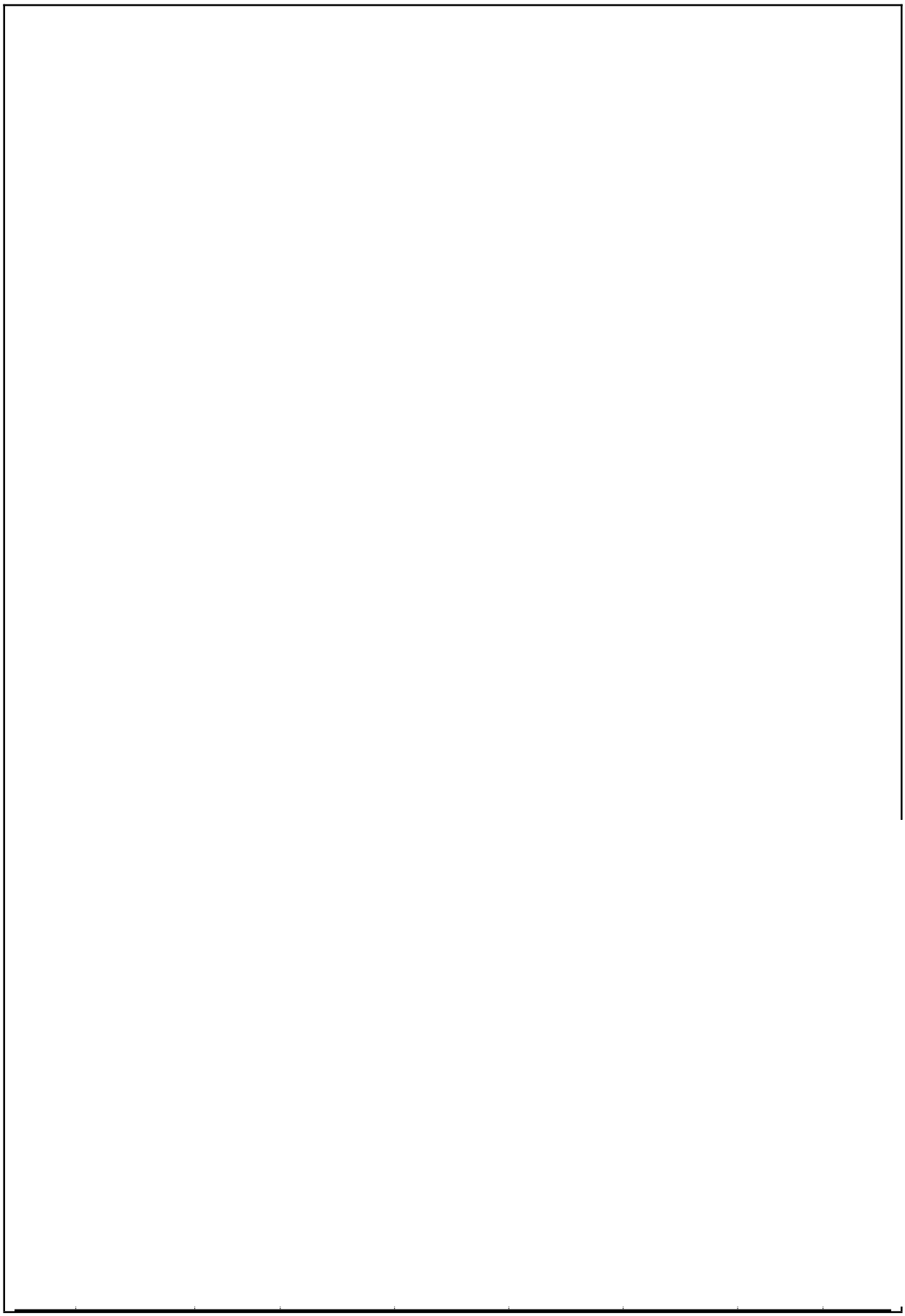


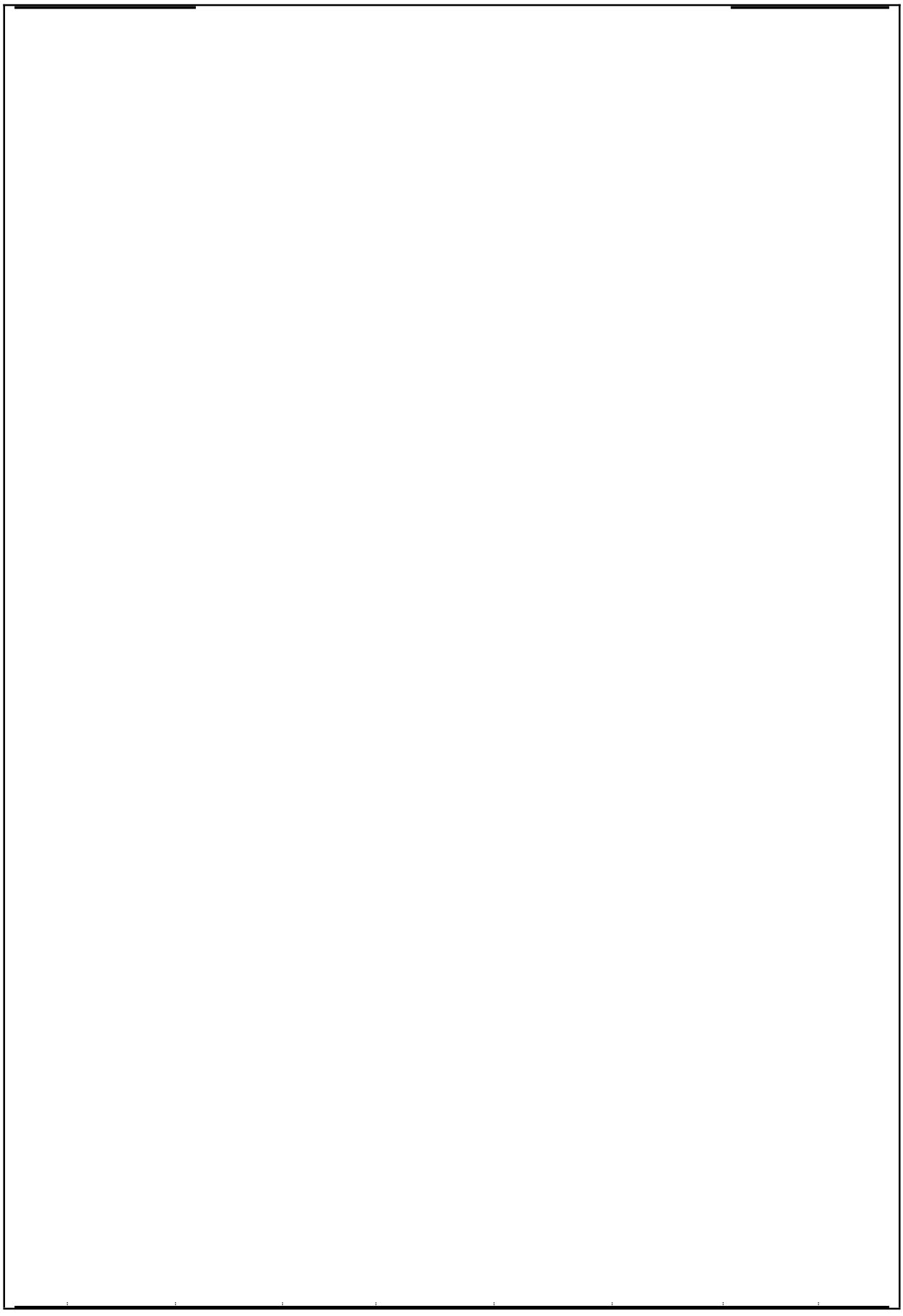
2-14 mg/m³

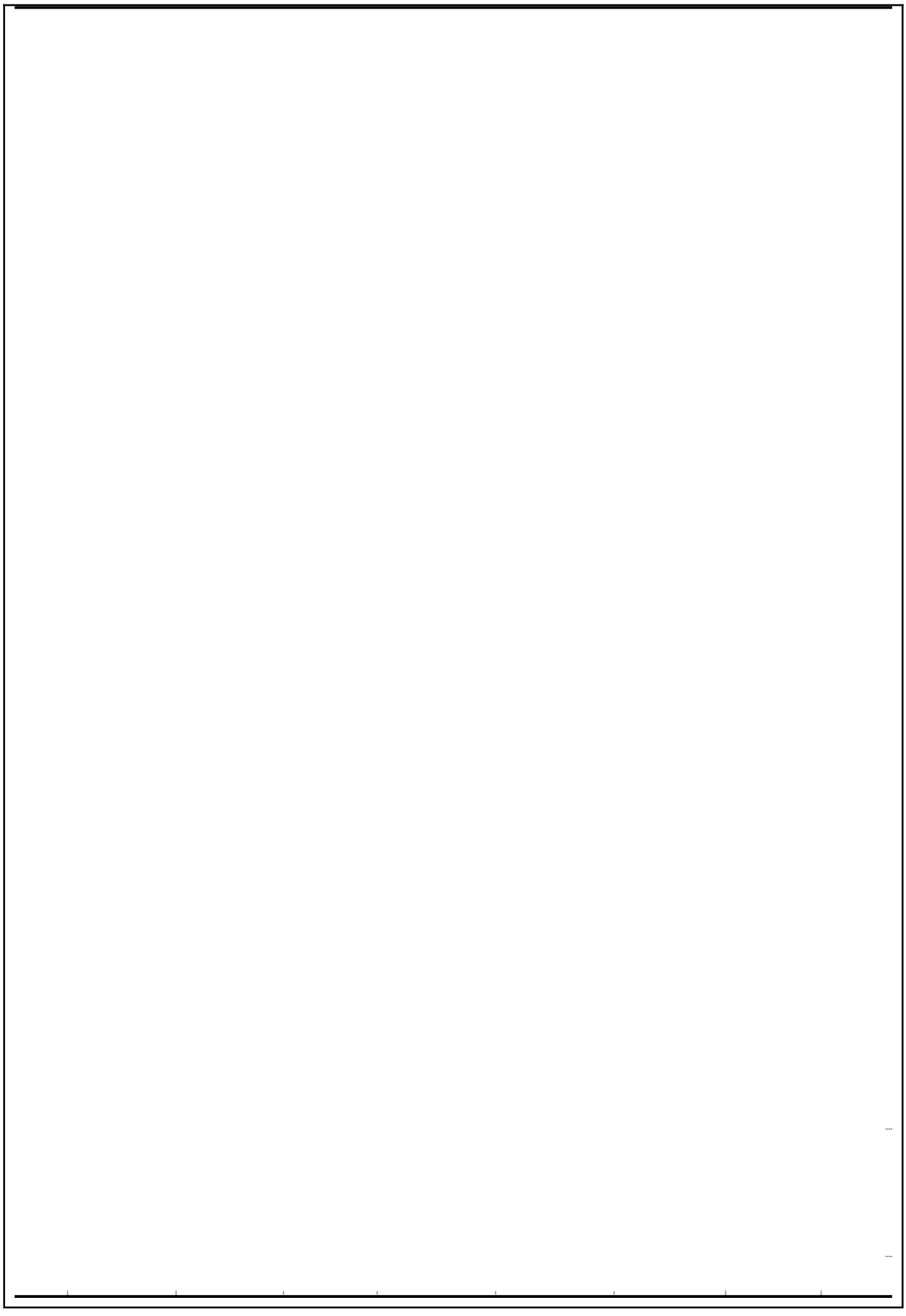


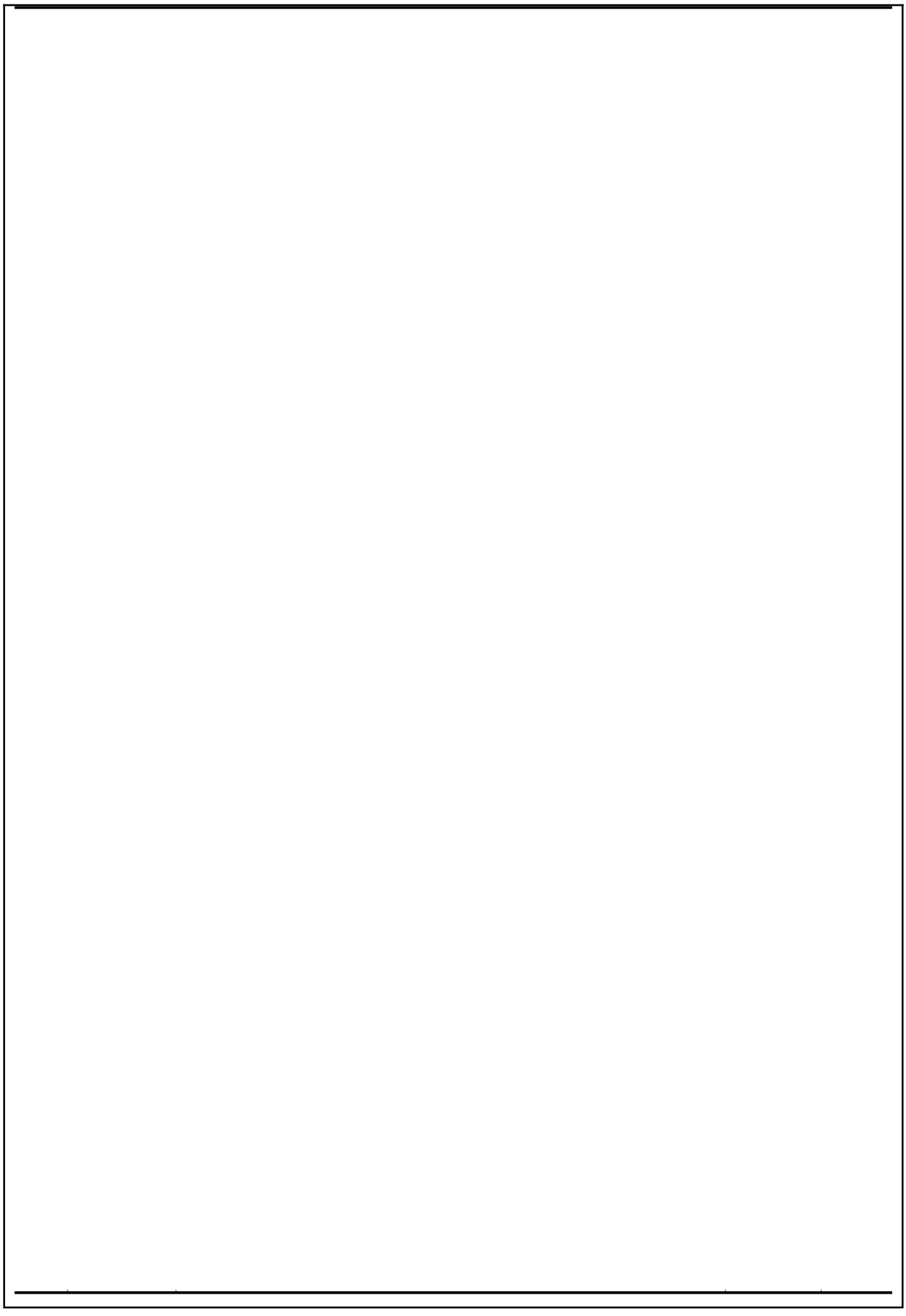


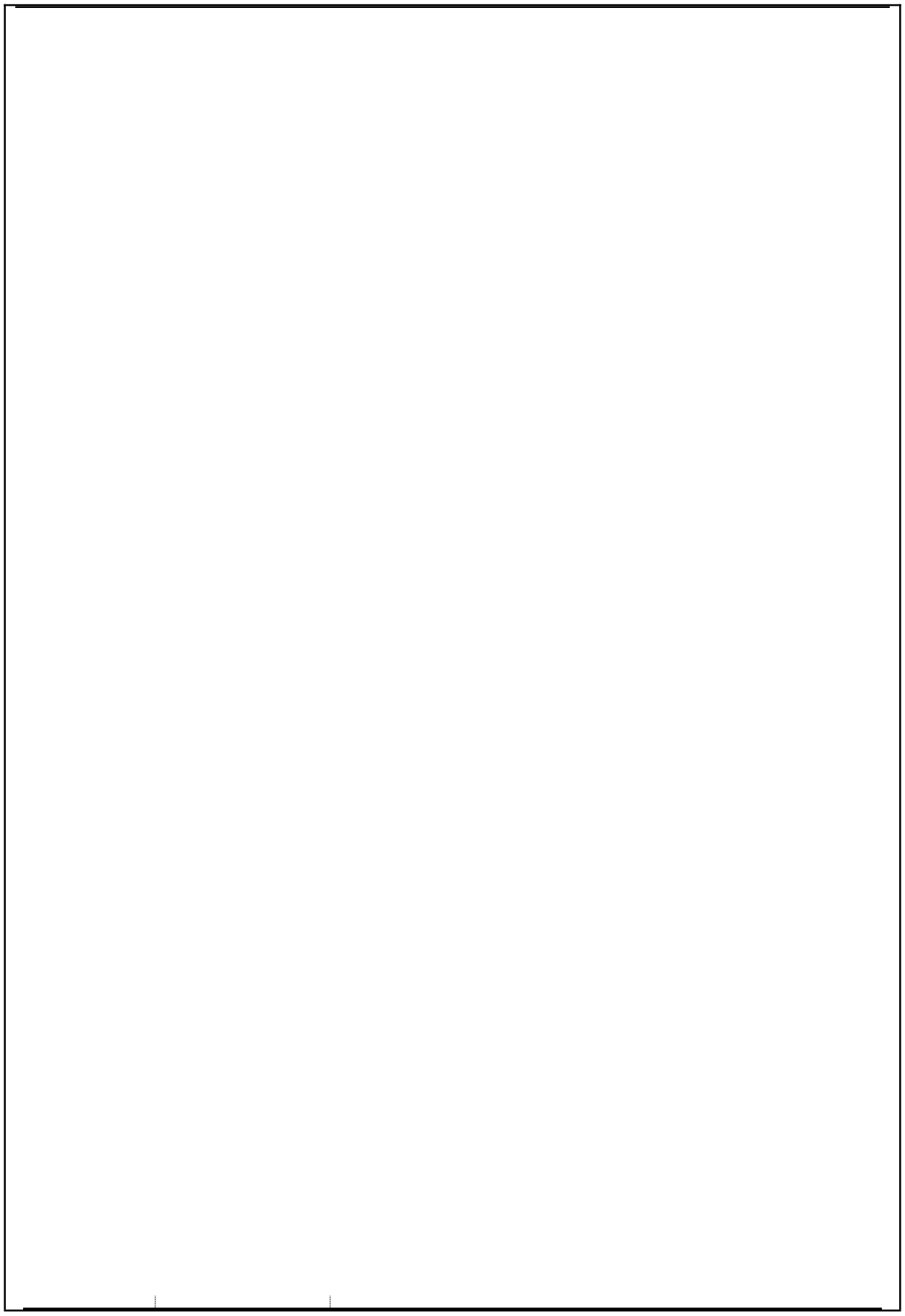












1

2025 2025

$PM_{2.5}$ PM_{10} 24 45 8 22 153

/ 1.1 /

GB3095-2012 2025 $PM_{2.5}$

PM_{10}

GB3095-2026 2026 3 1

2030 12 31

GB3095-2026

2025 2025

100% 20

14 6 66

2 47 16 V

1

1290m

[2018]10

GB3838-2002

2026 2026 3

50m

90 /

500m

820m 50m 500m

6

GB8978-1996

GB18918-2002 A

5 DB37/3416.5-2018

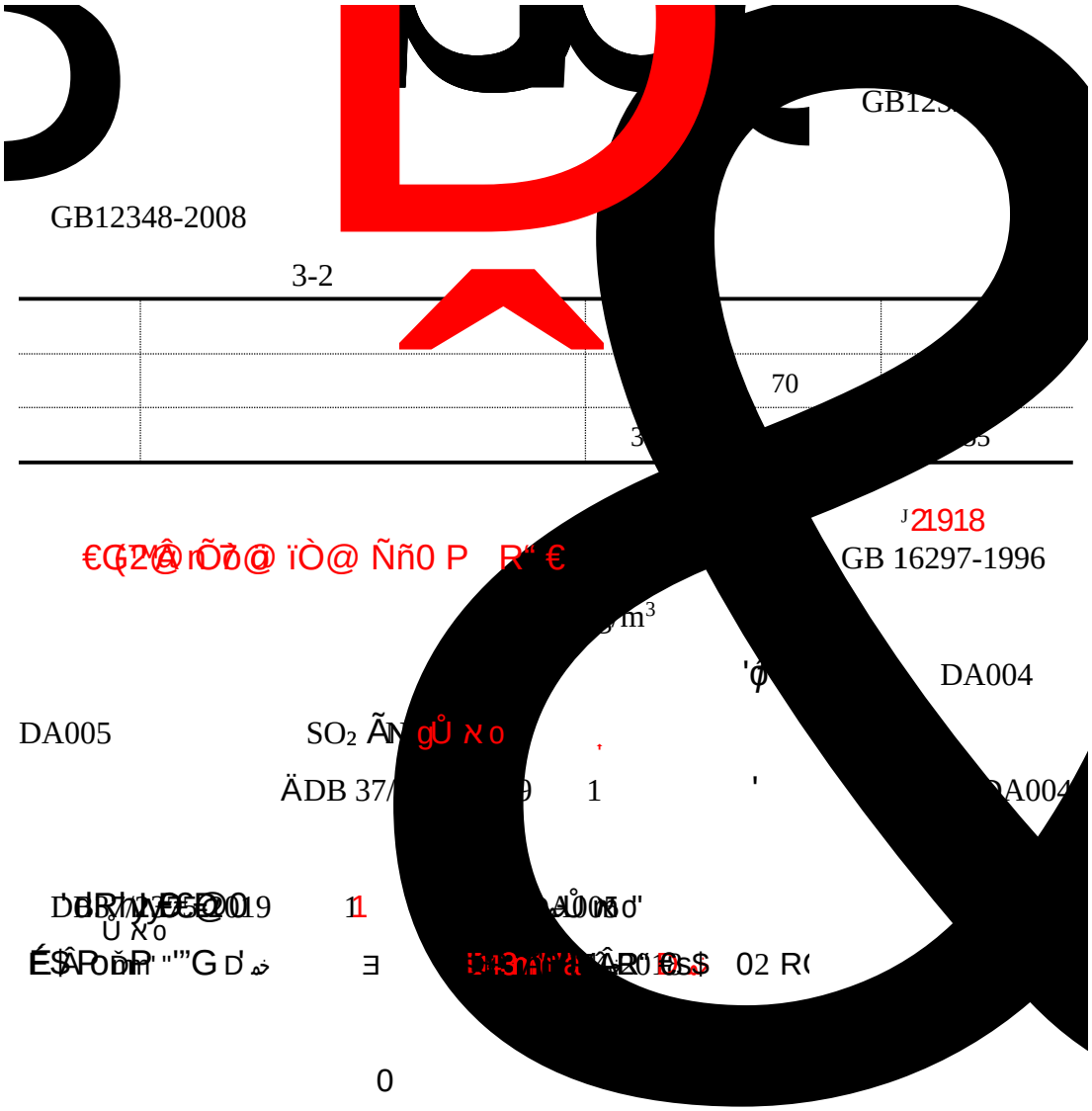
pH COD_{Cr} BOD_5 SS

GB18918-2002 A

3-1 mg/L pH

pH	6~9	GB18918-2002 A
COD_{Cr}	50	
BOD_5	10	
SS	10	
	15	
	0.5	
	5	

5 DB37/3416.5-2018 5.1.6



GB12348-2008

3-2

70

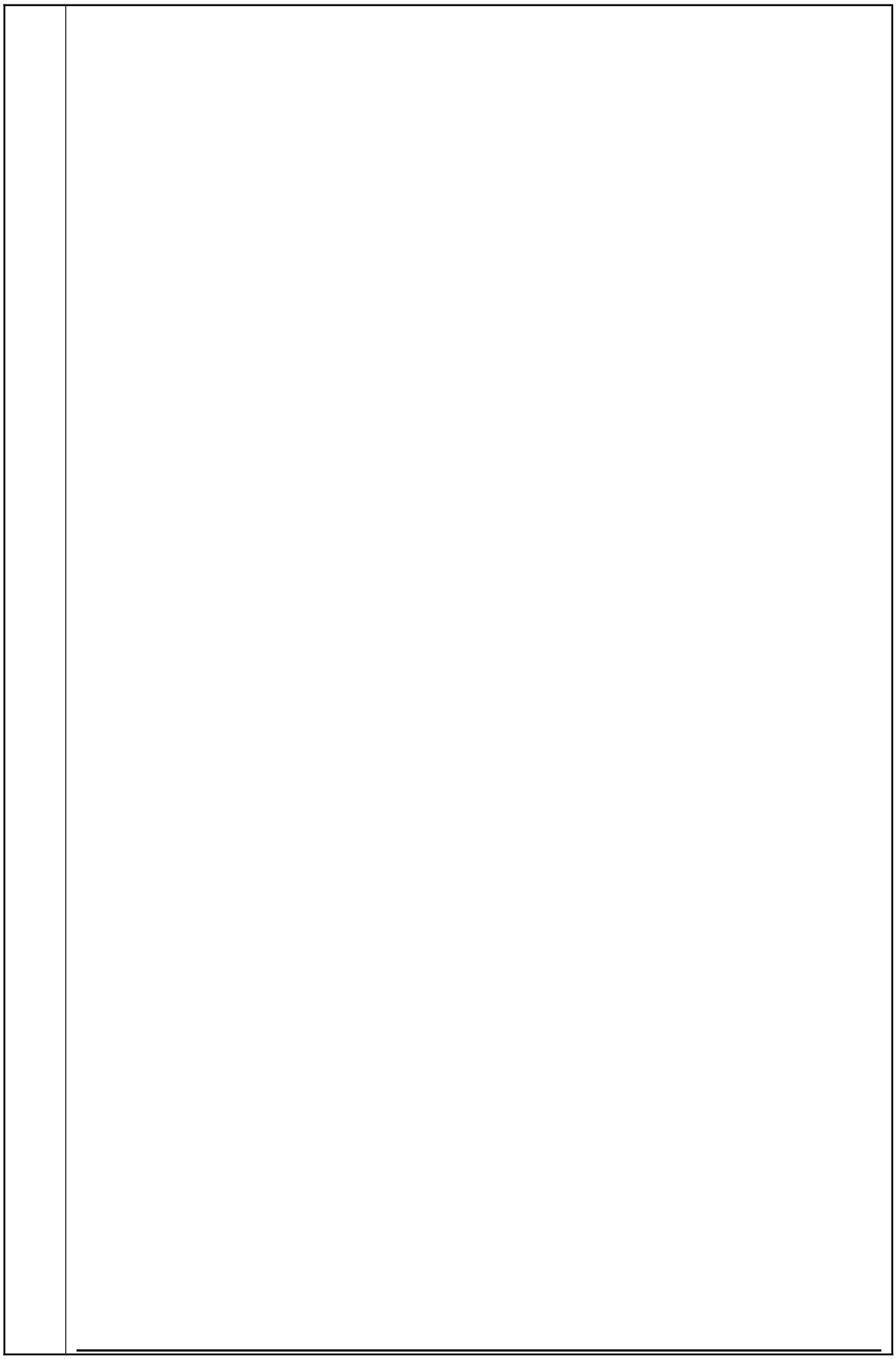
GB 16297-1996

DA004

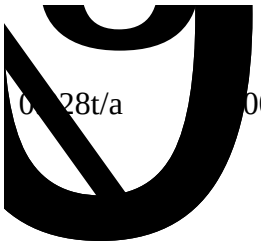
DA005



85~105dB(A)



2

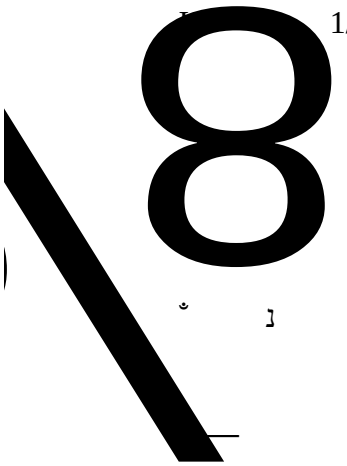


COD_{Cr} 0.064t/a BOD_5 0.035t/a SS

0.028t/a 0.0043t/a



60m^3/h 000h



$P_1=K\times\Delta t$

P_1— % P_1 1.3%

Δt— 0.0

1/ 0.13

P_2 0.1%

P_3

$P_3=P_1/(N-1)-P_2$

— %

P_2— %

N— 5

0.225% ≥

60t/h×8000h×0.225%

GB50014-2021

Q=q×Φ×F

Q— L/s

q— (L/s · hm²);

Φ— 0.85~0.95 0.9

F— hm² 0.075

$$q = \frac{1782(1+1.12\lg P)}{(t+10)^{0.7}}$$

P— 2

t— 15min

q=250 / •

15min

Q=250×0.9×0.075×15×60/1000=15.19m³

90 /

500m³ 350m³

150m³

750m² 763mm

15%

85.8m³/a COD SS COD

100~150mg/L SS 50~100mg/L

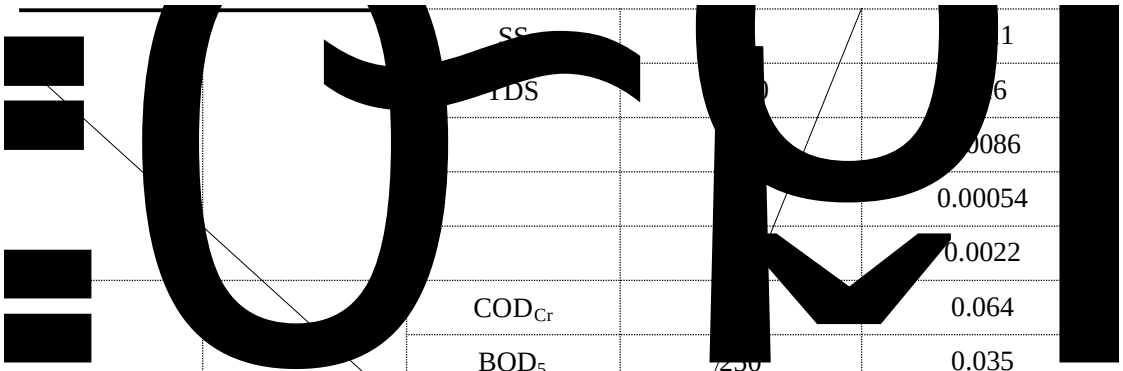
1307.47m³/a 141.67m³/a

1165.8m³/a

4-4

4-4

	1080	COD_{Cr}	45	0.049



		SS		1
		TDS	0	6
				0086
				0.00054
				0.0022
	141.67	COD_{Cr}		0.064
		BOD_5	250	0.035
		SS	200	0.028
			30	0.0043
	85.8	COD_{Cr}	150	0.013
		SS	100	0.0086
	1307.47	COD_{Cr}		0.126
		SS		0.0476
		BOD_5		0.035
		TDS		2.16
				0.0086
				0.00054
				0.0065

2 /

GB18918-2002 A

COD 0.125t/a SS

0.0472t/a BOD_5 0.035t/a 0.0086t/a 0.0065t/a

HJ 819-2017

4-5

1

$$_{p}(\ ) = \ _{p}(\ _{0}) + \quad -(\ _{div} + \ _{atm} + \ _{gr} + \ _{bar} + \ _{misc})$$

$_{p}(\ )$——

$_{p}(\ _{0})$

dB

GB12348-2008 3

HJ819-2017

HJ 947-2018

3			
		0.02t	HW49
900-041-49			

HJ1259-2022

1

PSA

2

6-2

H1

HJ1209-2021

2025

4-11

pH

m "

7

/

CH_4 CO

DCS

SIS DCS

“

- - / ”

15000m^3

V_1— m^3

186.8m^3

V_2— m^3

GB50160-2008 8.4.3 300L/s

4h 4320m^3

V_3— m^3

0

V_4— m^3 0

V_5— m^3

$V_5=10qF$

q— mm q=qa/n

qa—— mm 763mm

n—— 70

F—— ha 0.075ha

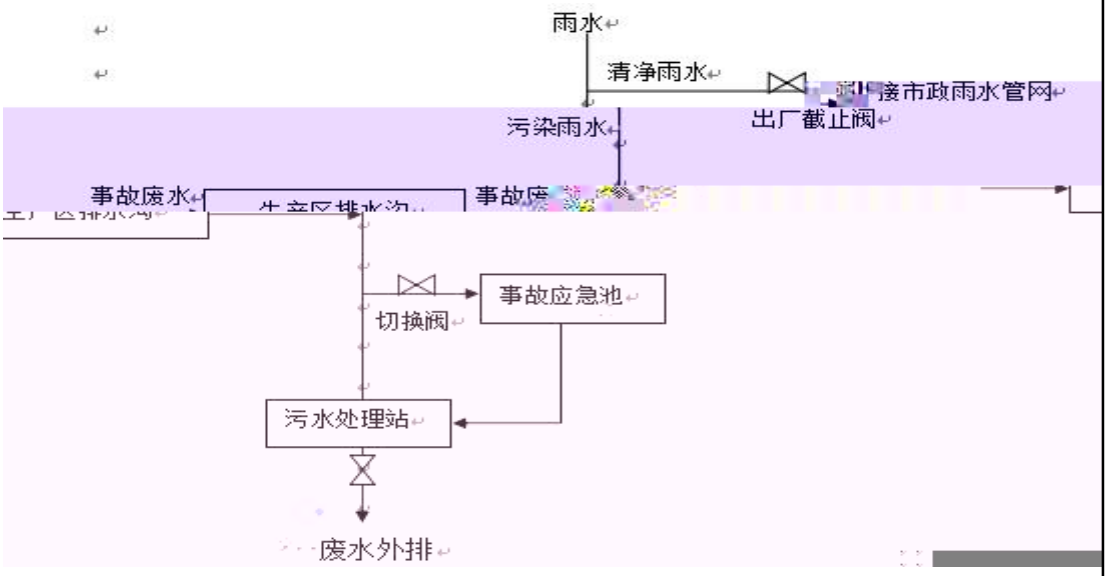
$V_5=10qF =10\times0.075\times763/70=8.175m^3$

V =4514.98m^3

1

15000m^3

4-3



4-3

“ ”

“ ”

1700m^3

3400m^3

600 3.5m

6.18km 147 m^3

9

27000m^3 34000m^3

/

/ 9.2-26

4-12 /

	CO NO NO_2 NO_x VOCs	CO VOCs NO_x	

6

DB

37/2376-2019 1

DA004

DA004

DA005

DB37/2375-2019 1

DA005

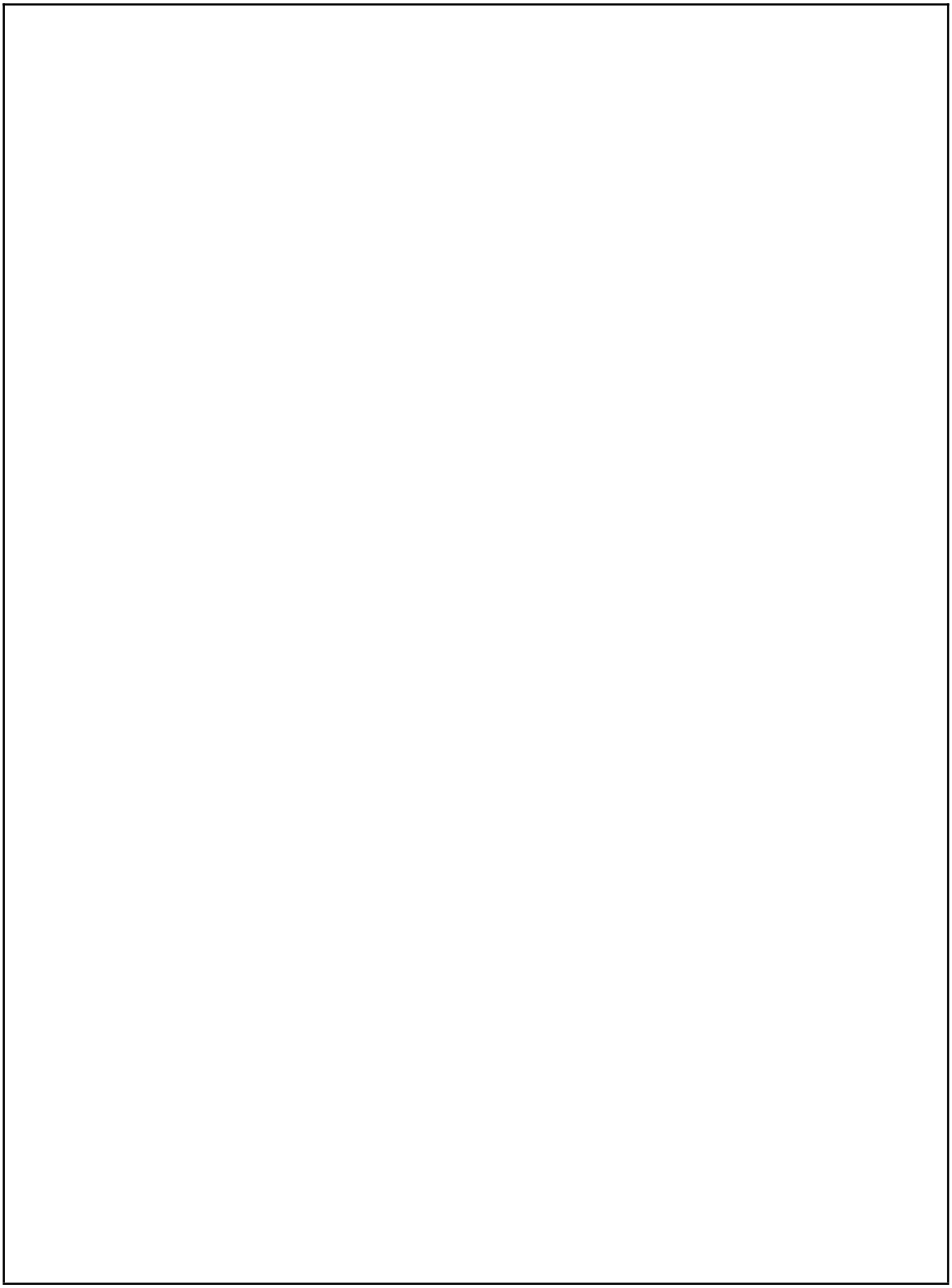
DB37/2374-2018 2

COD_{Cr} SS

BOD_5

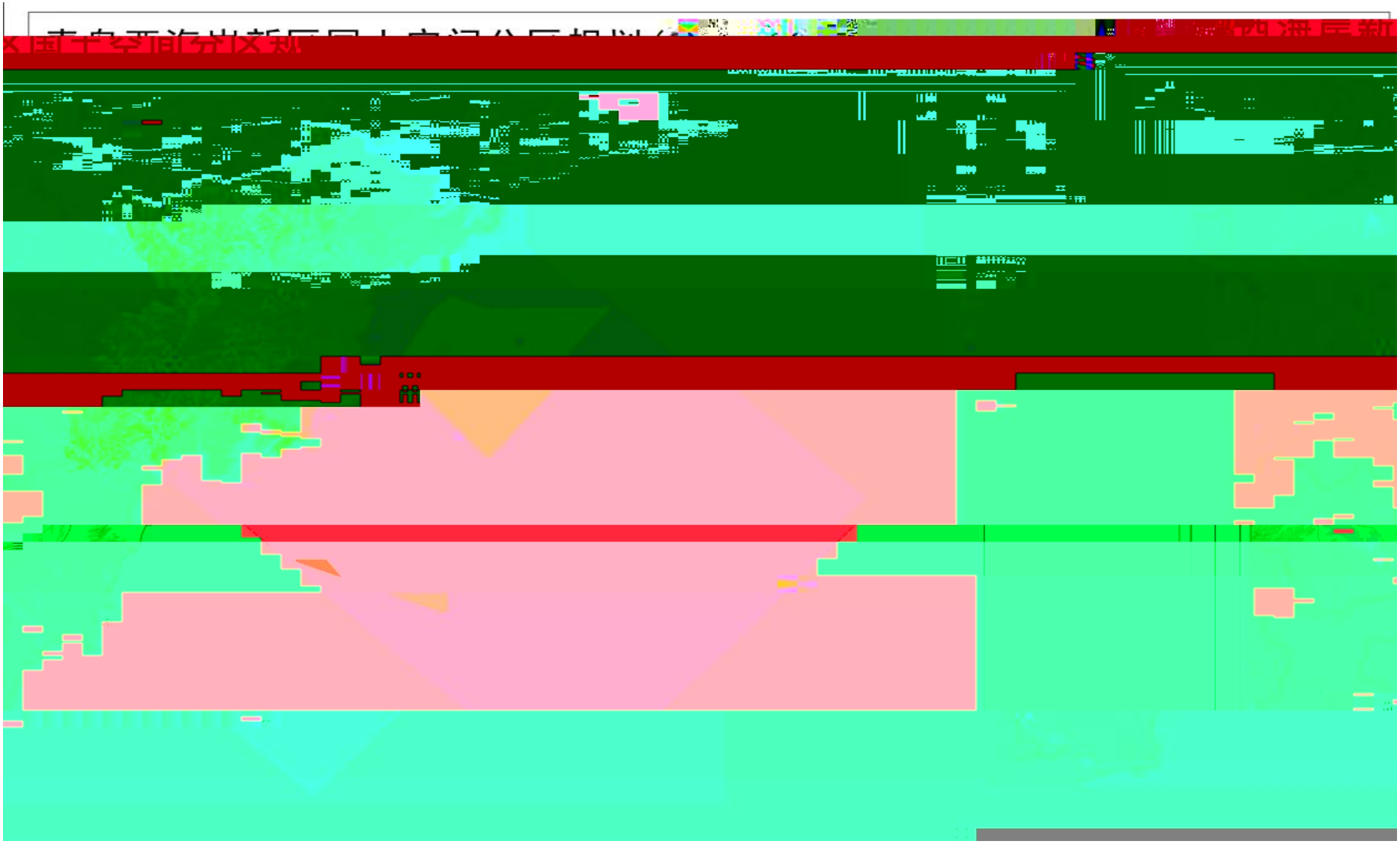
TDS

	1 2019 “ -26-45- 261 2619 ” “ ” 2 5



					0.342	/		+0.342
					-0.054	/		-0.054
					1.18	/		+1.18
					/	/		0
	VOCs				/	/		0
					0.13	/		+0.13
	COD				0.126	/		+0.125
					0.0065	/		+0.0065
					0.0086	/		+0.0086
	SS				0.0476	/		+0.0476
	BOD_5				0.035	/		+0.035
					0.00054	/		+0.00054
					9.43	/		+9.43
					/	/		0
					1.67	/		+1.67

= + + - = -



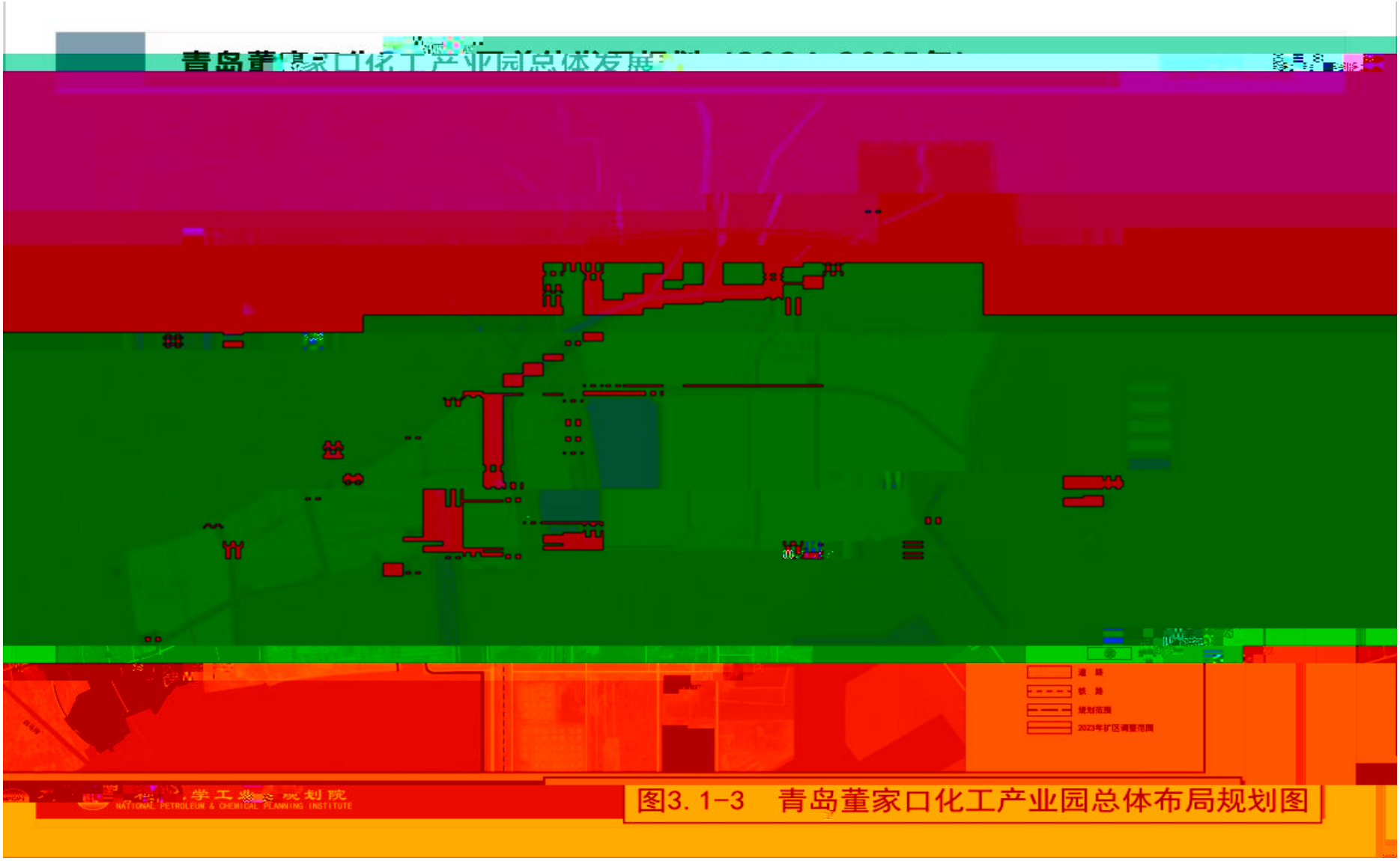
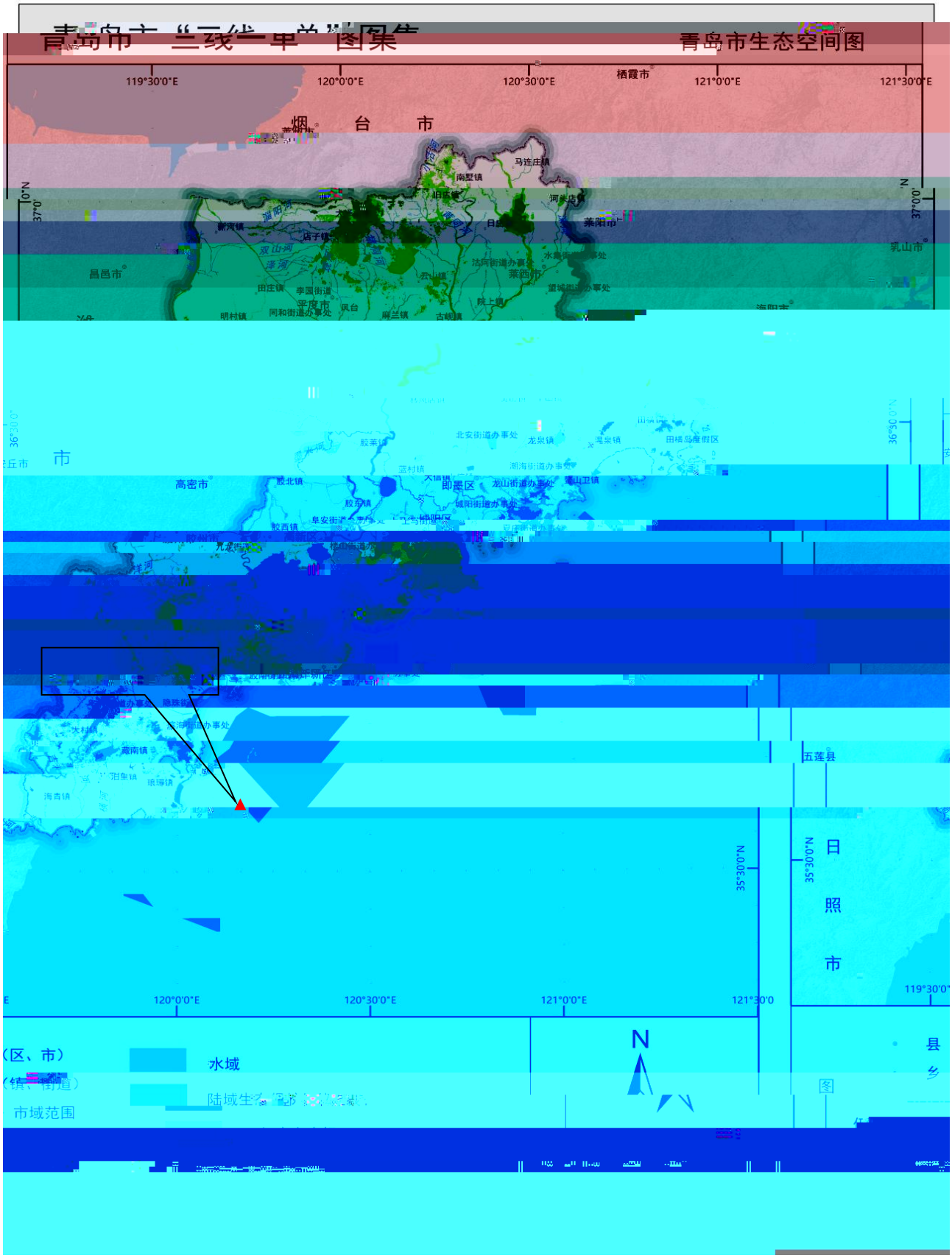
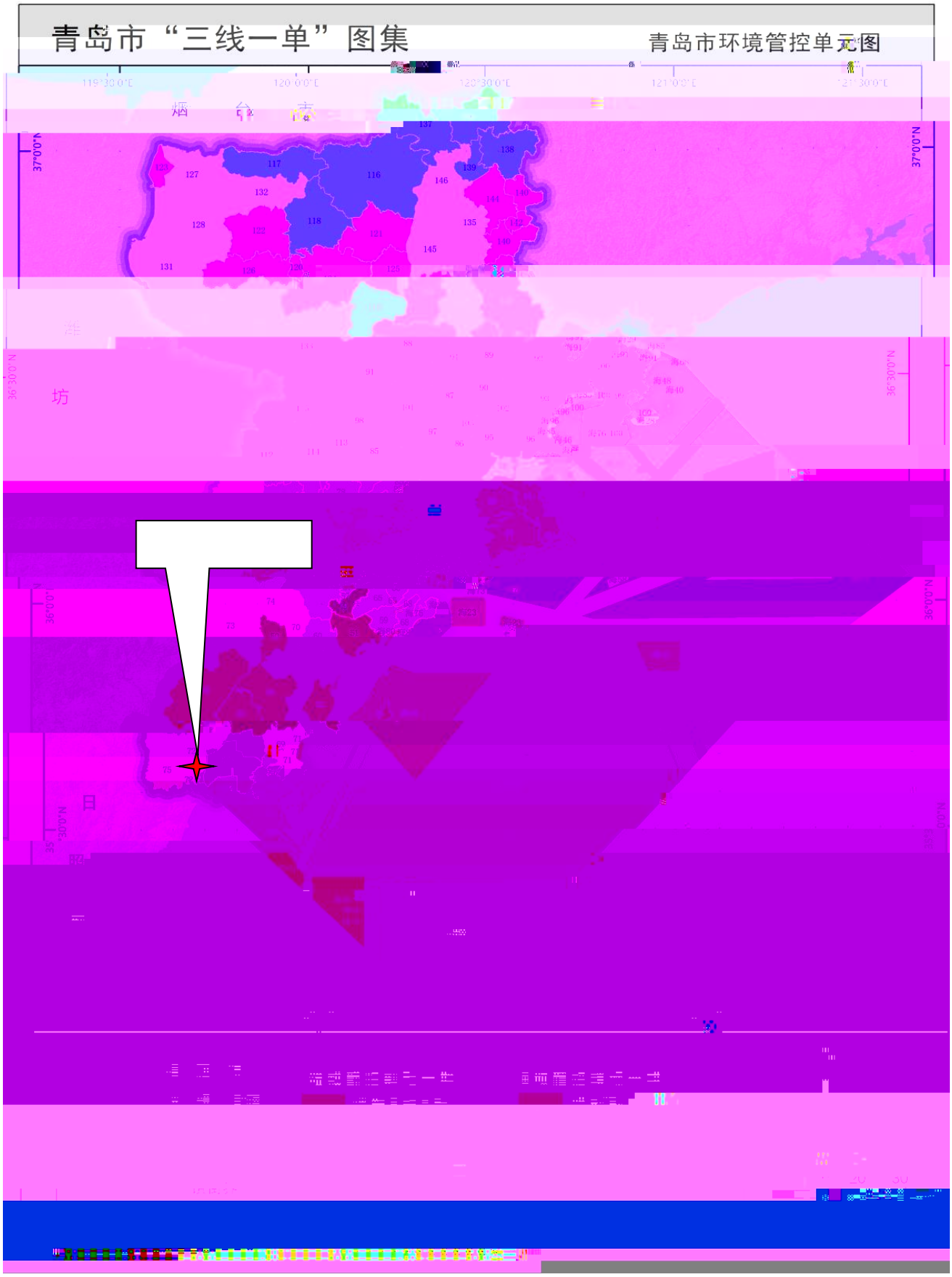
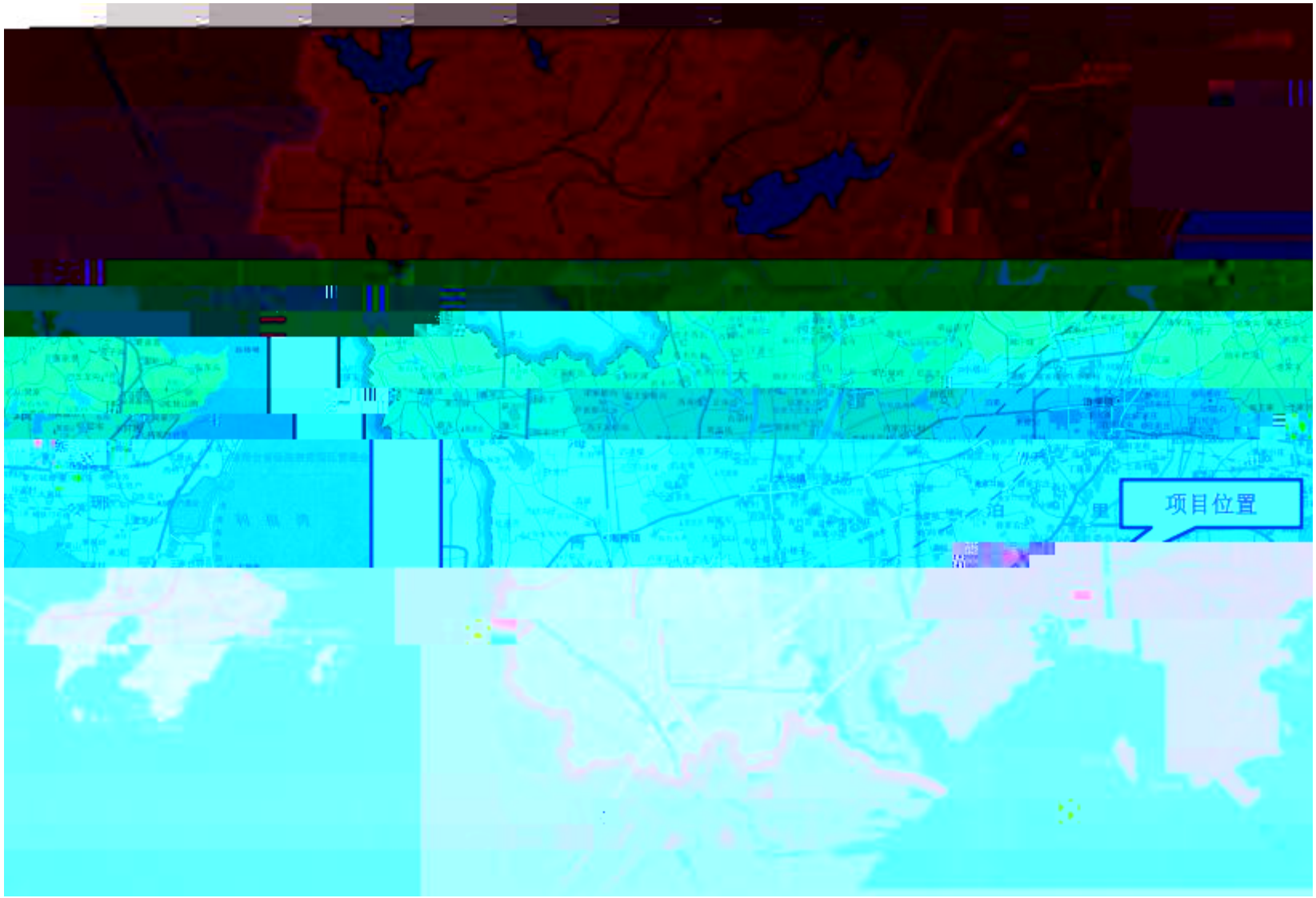
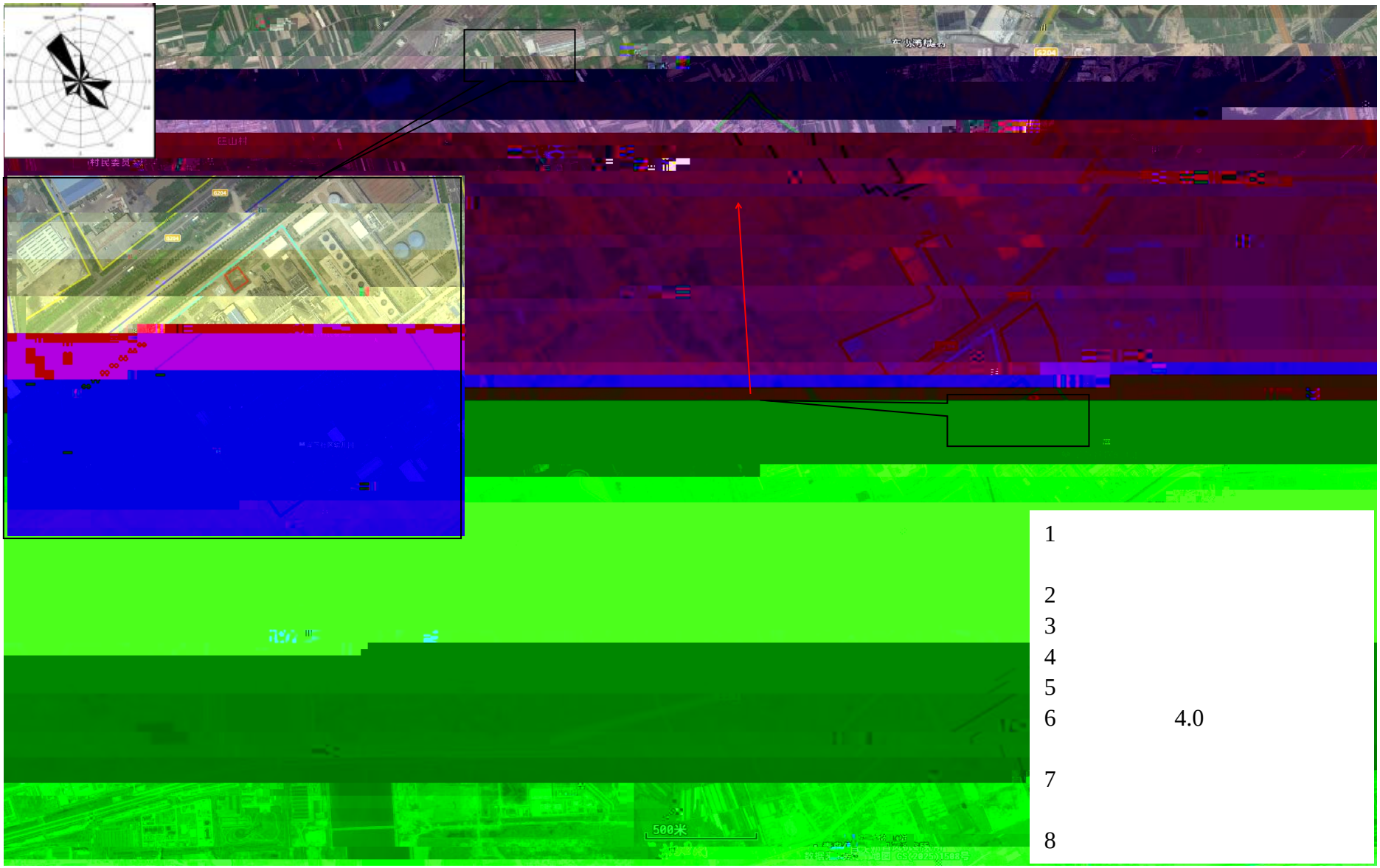


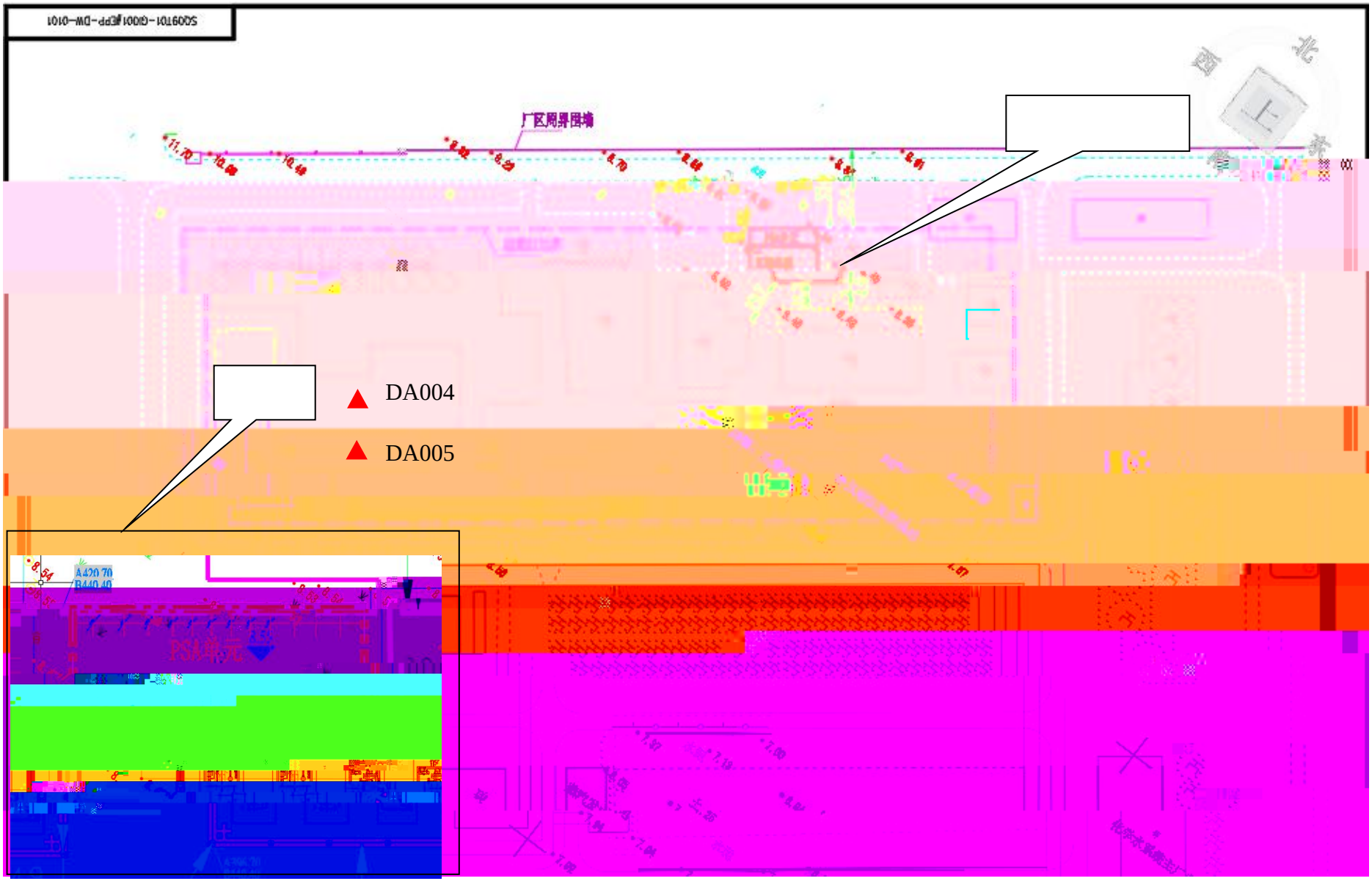
图3.1-3　青岛董家口化工产业园总体布局规划图

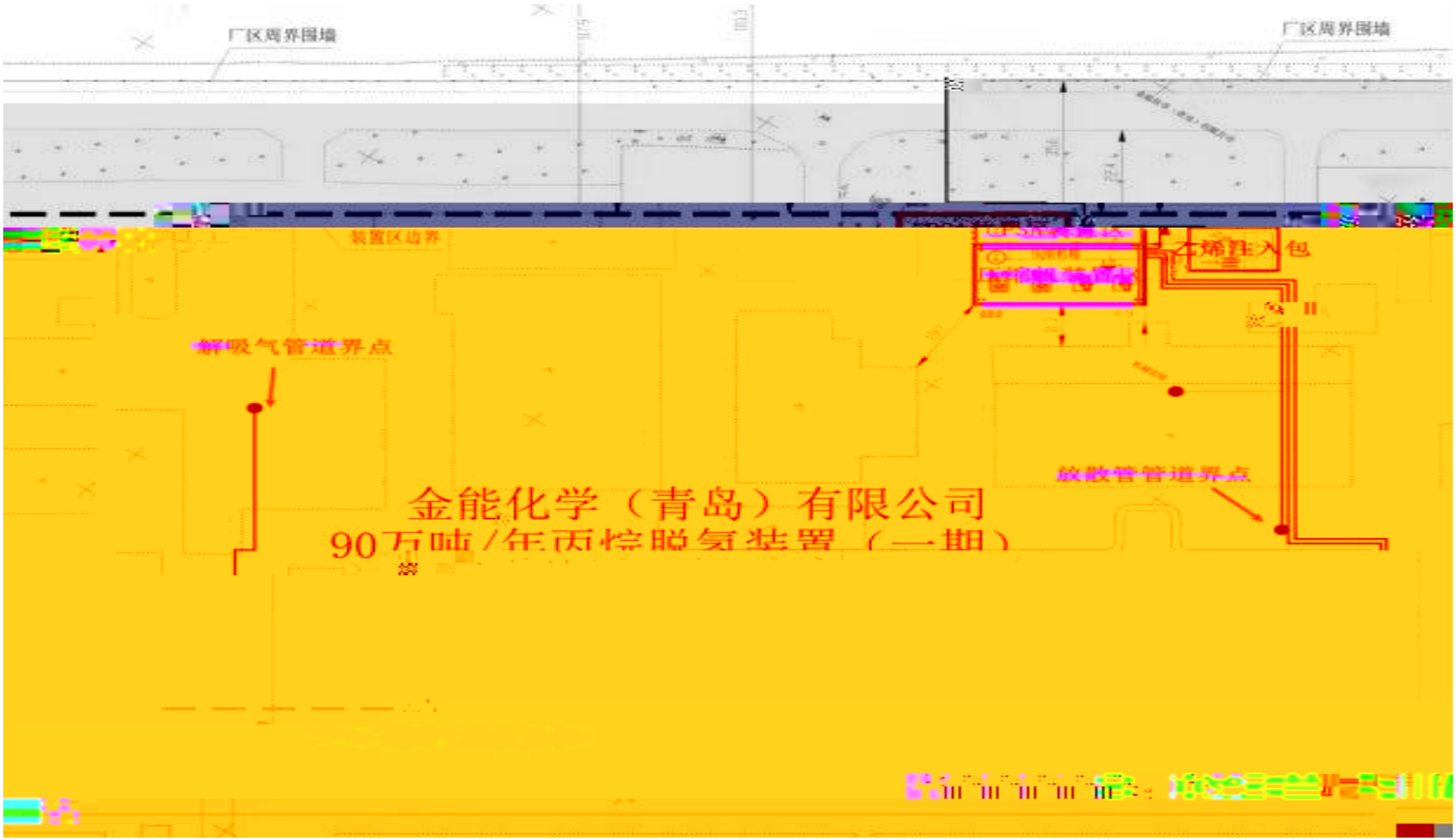

青岛市生态空间图
119°30'0"E
120°0'0"E
120°30'0"E
121°0'0"E
121°30'0"E
烟 台 市
栖霞市
莱阳市
乳山市
昌邑市
高密市
即墨区
五莲县
日照市
N
水域
市域范围


青岛市“三线一单”图集
青岛市环境管控单元图


项目位置


1
2
3
4
5
6 4.0
7
8
500米


厂区周界围墙
DA004
DA005


厂区周界围墙
厂区周界围墙
装置区边界
解吸气管道界点
放散管管道界点
金能化学（青岛）有限公司
90万吨/年丙烷脱氢装置（一期）