3 1.2

1 1

1.1 1
1.2 1
1.3 2
1.4 3
1.5 4
1.6 47

2 48

2.1 48
2.2 55
2.3 66
2.4 72
2.5 77

3 109

3.1 109
3.2 117
3.3 118
3.4 131
3.5 148
3.6 154
3.7 154

4 156

4.1 156
4.2 169
4.3 194
4.4 195
4.5 221
4.6 238

5 242

5.1 242
5.2 242
5.3 248
5.4 ..... - 261 -

6 ..... - 262 -

6.1 ..... - 262 -
6.2 306

6.3 310
6.4 315
6.5 326
6.6 328
6.7 334
6.8 363

7 369

7.1 369
7.2 403
7.3 417
7.4 418
7.5 423
7.6 427
7.7 472

8 475

8.1 475
8.2 478
8.3 481
8.4 482
8.5 483

9 484

9.1 484
9.2 484
9.3 485

10 486

10.1 486
10.2 493
10.3 499
10.4 498

11 503

11.1 503
11.2 509

1

1.1

2010 8 27

28

102391.61 3.3

“ 3 1.2 ”

3 1.2

“ 3 1.2

”

3 1.2

1.2

1.2.1

2022 3 30

3 1.2

“ 2019

2021

“ ” ”

1.2.2

3.3 500m

18000 12000

12000 4316.73

1.2.3

20000m^3/h

25m P5

“ + +MDEA

” P1 25m

94811t/a

“ ”

1.3

1

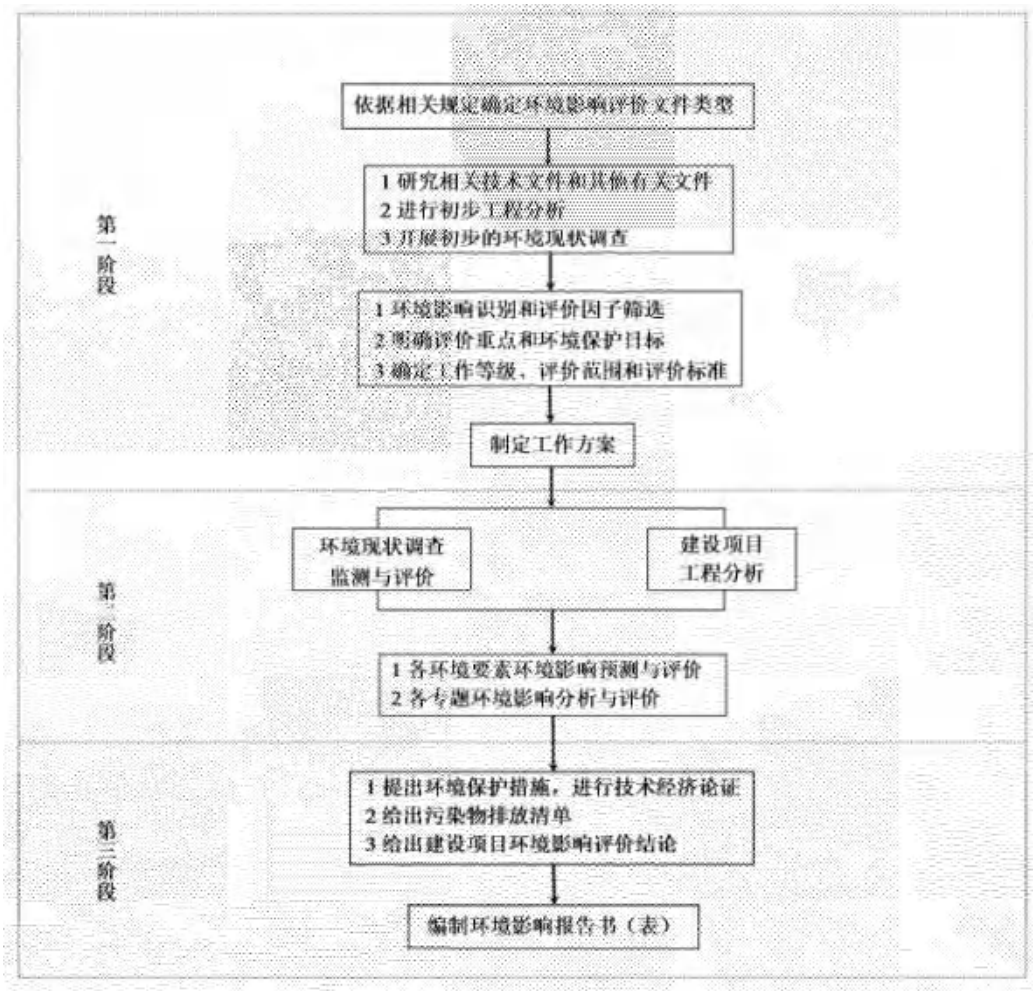
2

3

4

5

1.4


依据相关规定确定环境影响评价文件类型
1 研究相关技术文件和其他有关文件
2 进行初步工程分析
3 开展初步的环境现状调查
第一阶段
1 环境影响识别和评价因子筛选
2 明确评价重点和环境保护目标
3 确定工作等级、评价范围和评价标准
制定工作方案
环境现状调查
监测与评价
建设项目
工程分析
第二阶段
1 各环境要素环境影响预测与评价
2 各专题环境影响分析与评价
1 提出环境保护措施，进行技术经济论证
2 给出污染物排放清单
3 给出建设项目环境影响评价结论
第三阶段
编制环境影响报告书（表）

1.4-1

1.5.2

1.5.2-1

1.5.2-1

2012 2012		
2013 2013		

1.5.3

1.5.3.1 “ ”

“ ” 2021-2025

1.5.3-1

1.5.3-1 “ ”

			“ ” 70% 42.7% 50%		
			“ ” 15% 23%		

			2025		
			“ ” HAZOP	HAZOP	

1.5.3-1 “ ”

2021-2025

1.5.3.2

[2020]21

2.5.5-1

2021-2035

2021-2035

1.5.5.4

2021-2035

1.5.4 “ ”

1.5.4.1

1 “ ” [2020]49

2020 6 21 “ ”

[2020]49 4365

1.5.4-1 1.5.4-1

1.5.4-1 “ ”

1		2020 1 [2018]74 , , , , , , . " , " , 1 , " "	1	

		,	500m	
2		, , 2020 66.8 85.4 149.6 91.2 11.9 29.2 2.7		
3		,		
4		2020 524.15 2020 70% 90% 2020 456.87 390.67		

“ ”

[2020]49

2 **“ ”**

“ ” [2020]78

“ ”

1.5.4-2

“ ”

[2023]23 1.5.5.4 1.5.5.7

1.5.4-2 “ ”

	1. 2. 2022 2022 55 3. 500 4. 121.76 19.93 5. 1 2 3 / 3 4 4 / DMF 5 PCB 6 10	COD1138.25 / 105.025 / 11.383 / 341.475 / 627.315 / 234.074t/a 981.67t/a 499.746t/a	1 2 3 4 5 “ + + ” “ ” 6	1 2 3 2025 10 m^3/ 2035 5 m^3/ 2025 30% 2035 40% 4 2025 0.5 / 2035 0.45 / 5 2035 968.97

	7 VOCs			

2018 74

2020 1

1.52km

1.5.4.2

GB3838-2002 IV

2021 2021 $PM_{2.5}$ PM_{10} O_3 CO 38μg/m^3 66μg/m^3 157μg/m^3 0.9mg/m^3 NO_2 SO_2 25μg/m^3 6μg/m^3 GB3095-2012 O_3 $PM_{2.5}$

2023

2023 3 2023 $PM_{2.5}$ 35μg/m^3 78.5% O_3 160μg/m^3 VOCs 2022 4% 5% 3.0 / •

1 5 40

VOCs

PM_{10} $PM_{2.5}$ $PM_{2.5}$ O_3

GB3096-2008 3

GB/T14848-2017 IV

GB/T14848-2017 III

GB36600-2018

1.5.4.3

1.5.4-3

1.5.4-3

	42799t/a	4 /
	1596 kWh/a	
	456000t/a	88.6t/h

1.5.4.4

1 **2015**

18

1.5.4-4

1.5.4-4 2015 18

	2015 18		
	5 1.5	5km	
	DB32/939-2006	800t/d	

2 2022 2022 7

2022 2022 7 1.5.4-5

1.5.4-5 “ 2022 7 ”

1		—
2		—
3		—
4		—
5		—
6		—
7 “ ” 332		—
8		

9		
10	1.5.3	
11	“ ” 1.5.4-6	

3 < > 2022 2022 55

< > 2022 2022 55 1.5.4-6

1.5.4-6 “ 2022 55 ”

1	(2015-2030 (2017-2035)		
2		3.3	
3	— -		

4			
5			
6			
7	34		
8	(		
9			
10			
11			
12	2022)		
13	( )		
14			
15			

16			
17			
18			
19			

4

[2023]23

1.5.4-7

1.5.4-7 [2023]23

	1 2 3 2019 2022 4	2019 2021
	1 4 / DMF	VOCs

	2 3 4 VOCs	
	1 (2 C B1 B2 B12 E 3 4	1 2 VOCs 2 VOCs 2 1.5 3
	1 2022) 2022 55 2 3 500 4 121.76 19.93	2022 2022 7 1.5.4-5 1.5.4.1
	1 1 2025 $PM_{2.5}$ 33 150 27 / 2 GB3838-2002 3 GB	1 GB3838-2002 IV

	36600-2018 GB 15618-2018 2 1 672.08 / 67.21 / 6.73 / 201.62 / 676.31 / 67.63 / 6.77 / 202.89 / 2 292.799 / 117.769 / 543.566 / 317.303 / 315.322 / 139.21 / 567.997 / 403.903 /	GB36600-2018 2 $SO_2$0.005t/a NOx5.873t/a 0.006t/a VOCs 9.615t/a COD20.933t/a 0.567t/a 1.133t/a 0.009t/a
	1 2 3 4 5 “ + + ” , “ ” 6	1 6.1 2 3 4 5 6
	1 2 2025 10 / 2035 5 / 3 2025 30% 2035 40% 4 2025 0.5 / 2035 0.45 / 5 2035 968.97	1 2 0.41m^3/ ≤10m^3/ 3 83% 4 0.4 / ≤0.5 / 5 3.3

2015 18

1.5.5

1.5.5.1 2021 45

2021 45 1.5.5-1

1.5.5-1 “ 2021 45 ”

2021 45			
“ ”	“ ”	“ ” 2021-2035	
	“ ” ( )		
“ ”	“ ” “ ” -	1 2 TO 3	

		4	
	“ ”		

1.5.5.2 <2020 > 2020 33

<2020 > 1 1 نم نم 1.5.5-2

1.5.5-2 “ 2020 33 ”

VOCs VOCs VOCs

1 VOCs

VOCs

VOCs

2 7 15

VOCs

VOCs "

3 VOCs VOCs

15

VOCs

Cs 2000

LDAR

20

4	VOCs 7 15 VOCs	VOCs DB32/3151-2016 1 GB14554-93 1 DB32/4041-2021 1	
5	“ ” VOCs 0.3 / “ ” VOCs VOCs “ ” VOCs 800 /	“ ” VOCs 0.3 / “ ” VOCs VOCs “ ” 800 /	

1.5.5.3 GB37822-2019

GB37822-2019 1.5.5-3

1.5.5-3 GB37822-2019

		GB37822-2019		
1	VOCs	1 VOCs 2 VOCs VOCs 3	1 4.1-9 VOCs 2	
		1 ≥766kPa ≥276kPa <766kPa ≥75m3 ≥5.2kPa 27.6kPa ≥150m3 1 80% 2 3 2 ( )	1 2	
2	VOCs	1 VOCs VOCs 2 VOCs 3 200mm ≥27.6kPa ≥500m3 ≥5.2kPa 27.6kPa ≥2500m3 90%	1 VOCs 2 VOCs 3	

3	VOCs	1 VOCs VOCs 2 VOCs VOCs 3 VOCs ( ) VOCs VOCs	1 VOCs 2 VOCs 3 VOCs ( ) VOCs	
		1 VOCs 2 ( )	1 VOCs 2	
		1 VOCs 2 VOCs 3 / VOCs 4 VOCs ( ) VOCs	1 VOCs 2 VOCs 3 / VOCs 4 VOCs ( ) VOCs	
		VOCs VOCs	VOCs	
		1 VOCs VoCs VOCs 3 2 VOCs ( ) VOCs VOCs 4 VOCs ( ) 5 6 5 VOCs		

4	VOCs	VOCs VOCs ≥2000	2020	
		VOCs	VOCs	
5	VOCs	VOCs a b 100 mm VOCs ≥100 mmol/mol		
		VOCs 100 mm VOCs ≥100 mmol/mol a b VOCs c	VOCs	
6	VOCs	VOCs VOCs	VOCs VOCs	
		VOCs		
		500mmol/mol 8		
		NMHC ≥2kg/h VOCs 80%	90%	
		15 m	15m	
7		HJ819		

1.5.5.4 2019 53

2019 53

“ …… VOCs

VOCs VOCs VOCs

VOCs

VOCs

VOCs

VOCs 100 VOCs 200ppm

100ppm VOCs

…… “

”

VOCs

0.3 /

VOCs

2000 LDAR

VOCs

VOCs

+ + +

VOCs

VOCs

……

VOCs

3 / 2 /

80%

VOCs

VOCs

VOCs

VOCs

……

VOCs VOCs

…… LDAR

VOCs

VOCs

VOCs

VOCs

VOCs

VOCs TOC

POC 10%

VOCs

5.2 kPa

2.8kPa

VOCs

VOCs ……

VOCs

…… VOCs ……

VOCs VOCs

2000 LDAR ……

VOCs

VOCs

27.6kPa 5.2kPa

+

VOCs

VOCs

VOCs

VOCs

”

97% LDAR

2019 53

1.5.6

1.5.6.1

2020 225

2020 225 1.5.6-1

1.5.6-1 “ [2020]225 ”

“ ”	( )	2021 O_3 $PM_{2.5}$ 2023 2023 3 1 5 40 VOCs PM_{10} $PM_{2.5}$ $PM_{2.5}$ O_3	
	( )		
	( )		
	( ) “ ”	“ ” [2020]78 “ ”	
	( )		
	( )		

		2.2.2.2	
	( ) ( )		
	) “ ”		

1.5.6.2 **2021 20**

2021 20

1.5.6-2

1.5.6-2 “ [2021]20 ”

	“ “	1.5.1	
		1.5.4.4 1	

	1		
	“ “	2021-2035 “ ” [2020]78 “ ”	
		500m	
VOCs		243t/a	
	“ “		

		7.1.3	
	“ ”		
	(LDAR)	LDAR 7.1.3	
	“	“ ”	
	“ ”		

	5000	243t/a	
	2017 43	4.4.3	
		7.5	
(GB12348)		(GB12348)3	
		7.6.2	
	“ ”		

		3.5	
	(HJ819-2017)	9.2	
	RTO PH	9.2.1 PH	
		“ ”	
	“ ”	3.7	
		10.1.9	

1.5.6.3 **2019 15**

2019 15 1.5.6-3

1.5.6-3 “ 2019 15 ”

	1 “ ” “ ” 5	2007 3 2007 40 “ ” 5	
	2 VOCs	243t/a	
	3 500	2007 3 2007 40 500m 2021 1 [2021]1	
	4 500 2000		
	5 1 1 1	1	
	2 GB8978 1996 4 DB32/3151 2016 GB14554 93 GB16297 1996	GB37822-2019 GB14554 93	
	6	“	

	39 GB18597 2001 GB5085.7 2007 HJ2025 2012 “ ”	”	
	1 “ ” “ ”	“ ” “ ” 2400m³	
	2 2015 104	100% 90%	
	3 2016 95 VOCs 90%		
	2		
	2 HJ819 2017	9.3	

	5 CODcr pH CODcr pH RTO	9.3 5#	

1.5.6.4 **2019 3**

2019 3 1.5.6-4

1.5.6-4 “ 2019 3 ”

DB32/3151 2016 GB31571 2015 GB31573 2015	DB32/3151-2016	
1 10 1 26 10 1		
100 500 3 90	500 3	
	2022 3	

	321311202220H	
“ ”	“ ”	

1.5.6.5

2020 94 1.5.6-5

1.5.6-5 2020 94

1 1	[2021]6 “ ” 3 1.2 “ ”	

1.5.6.6 < > 2019 96

2019 96 1.5.6-6

1.5.6-6 **2019 96**

	11		
	12	2019 2012 2012	
	13		
	22	4.4.3	

1.5.6.7 **2020 16**

2020 16 1.5.6-7

1.5.6-7 “ 2020 16 ”

2020 16			

1.5.6.8 2020 101

2020 101

1.5.6-8

1.5.6-8 “ 2020 101 ”

2020 101			
	RTO		

1.5.6.9 [2019]327

[2019]327 1.5.6-9

1.5.6-9 [2019]327

1	2017 43	2017 43	
2	GB34330-2017		

3	15562.2-1995 2019 149 GB	149 2019 GB 15562.2-1995	
4			

1.5.6.10 **2021 6**

2021 6

1.5.6-10

1.5.6-10 **2021 6**

1 1 2019 96 “ ”	3 1.2	

“ ”	“ ”	
“ ” “ ” “ ” 1		

1.5.6.11 [2014]3

[2014]3 1.5.6-11

1.5.6-11 “ [2014]3 ”

1		2018) (2003)	
2			
3			

4	-10°C	25°C +-15°C	
5			
6			
7	; ;	“ ”" “ + + ”	
8	1 “ ” 2 3 (4 5	AO	
9	1	1 2 +	

	2 HC1 NH_3 HF HBr H_2S Cl_2 SO_2 3 4 40℃ 5mg/m^3 50% 25% 50mg/m^3 5	3 TO TO 25%	

1.5.6.12 VOCs 2020 11

VOCs 2020 11 1.5.6-12

1.5.6-12 “ 2020 11 ”

VOCs DB12/ 524-2014 GB37822-2019 VOCs	DB32/3151-2016 GB14554-93 GB37822-2019 VOCs	

VOCs	4.2-3	
VOCs VOCs GB37822-2019 VOCs VOCs VOCs 2000 “ ” LDAR	7.1.3 LDAR 7.1.3	
“ ” VOCs VOCs RCO CO RTO TO VOCs ≥5000ppm VOCs≤1000ppm VOCs RCO CO RTO TO VOCs VOCs “ ”	“ + + ”	
VOCs VOCs VOCs 2 1.5	VOCs	

1.5.6.13

1.5.6-13

1 10

2

3 “ ”

[2019]81

[2019]81 1.5.6-13

[2019]81

1.6

(2019) 2021

2020

2012

2012

“ ”

2

2.1

2.1.1

1 2015 1 1

2 2018 1 1

3 2018 10 26

4 2022 6 5

5 2020 4 29

2020 9 1

6 2019 1 1

7 2018 12 29

8 2012 2 29

9 682 2017 10

1

10 2016 7 2

11 2018 10 26

12 2021

13 736 2021 3 1

14 591 2013 12

7

15 748 2021 12 1

16 2019 29

2020 1 1 2021

17 2021 2021 1 1

18 23 2022 1 1

19 2005 28

20 [2018] 3

21

[2019]53

22 2014 31

23 < >

[2014]197

24 4

2019 1 1

25

[2015]178

26 2015 162

27 < >

[2015]163

28

2016 150

29

[2017]84

30 “

”[2017]99

31 “ ”

32

2021 4

33 2030 2021

23

34 “ ”

2021 33

35

2021 45

36

2021 47

37 “ ”

2021 108

38

2021 277

39 2022 2022 7

40 24

2.1.2

1 [1997]122

2 (2018 5 1)

3 (2018 5 1)

4 2018 5 1

5 2021 5 1

6 2022 9 1

7 2016 12 27

8 [2014]128

9 2022 338

10 [2014]3

11 < > 2014 25

12 [2015]19

13 [2016]154

14 2016 32

15 < >
[2016]95
16 LDAR
[2016]96
17 2016 185
18 “ ”
[2017]6
19 [2017]201
20 [2018]299
21
[2018] 32
22
[2018]18
23
[2018]74
24
[2019]36
25
[2019]149
26
[2019]327
27 <
> [2019]96
28
[2019]15
29
[2020]101
30
[2020]225

31

[2020]401

32

[2020]1

33

2020 94

34

2021 20

35 2021

45

36

2021 364

37 “ ” 2021

837

38 < RTO >

2021 46

39

2021 6

40 < >

2021 11 10

41 VOCs

2022 218

42 2021~2030 [2022]13

43

2022 78

44

2022 3

45 2015

46

2014 57

47

2014 86

48

2015 52

49

[2017]162

50

2017 62

51

2019 81

52

2020 18

53 < “ ” >

2020 78

54

2020 279

2.1.3

1 HJ2.1-2016

2 HJ2.2-2018

3 HJ2.3-2018

4 HJ 610-2016

5 HJ2.4-2021

6 HJ19-2022

7 HJ169-2018

8 HJ 964-2018

9 GB34330-2017

10 HJ 298-2019

11 GB5085.7-2019

12 HJ 2025-2012

13 2017 43

14

HJ1103-2020

15 HJ819-2017

16 HJ884—2018

17 VOCs 2013 31

18 2020

2.1.4

1

2

3

4

[2007]40

5

6

7

8

[2020]21

9

[2021]1

10 2021-2035

11 2021-2035

2.2

2.2.1

2.2.1.1

HJ2.1-2016 2.2.1-1

2.2.1-1

			-1SD	-1SI	-1SD									-1SI	
		-1SD												-1SD	
						-2SD								-1SD	
			-2LD	-1LI											
		-2LD										-1LD		-1LD	
						-1LD									
		-3SD	-3SD	-2SI	-2SD							-2SD		-2SD	

“ ” “-” “L” “S” “0” “1” “2” “3”

“D” “I”

2.2.1.2

2.2.1-2

2.2.1-2

	SO_2 NO_2 PM_{10} $PM_{2.5}$ CO O_3 TVOC	DMF SO_2 NO_X PM_{10} $PM_{2.5}$	VOCs SO_2 NO_X
	pH COD SS	-	COD
	A		
	pH ( ) K^+ Na^+ Ca^{2+} Mg^{2+} $CO3^{2-}$ HCO^{3-} Cl^- $SO4^{2-}$		
	pH 1,1- 1,2- 1,1- -1,2- -1,2- 1,2- 1,1,1,2- 1,1,2,2- 1,1,1- 1,1,2- 1,2,3- 1,2- 1,4- + 2- [a] [a] [b] [k] [a,h] [1,2,3-cd]	pH	

VOCs VOCs

N- DMF

2.2.2

2.2.2.1

1

SO_2 NO_2 TSP PM_{10} CO O_3

GB3095-2012 TVOC

HJ2.2-2018 D.1

2.2.2-1

2.2.2-1

		mg/m³	
SO_2		0.15	(GB3095-2012)
	1	0.5	
		0.06	
NO_2		0.08	
	1	0.2	
		0.05	
TSP		0.3	
		0.2	
$PM_{2.5}$		0.75	
		0.35	
PM_{10}		0.15	
		0.07	
CO		0.004	
	1	0.01	
O_3	8	0.1	
	1	0.16	
	1	3	HJ2.2-2018 D.1
		1	
		0.2	
TVOC	8	0.6	
		0.01	
		3	
		1	
DMF		0.03	
		0.03	
		2.0	

2

2021~2030

GB 3838-2002 IV

IV 2.2.2-2

2.2.2-2 mg/L pH

	IV	
pH	6~9	GB3838-2002
COD	≤30	
P	≤0.3	
	≤1.5	
	≤2.0	
	≤0.05	
	≤1.0	
	≤0.5	
	≤1.5	
	≤0.5	
	≤0.2	
	≤0.01	
	≤0.05	
	≤0.1	GB3838-2002 3
	≤0.9	
	≤0.01	
	≤0.017	
1,2-	≤1.0	
	≤0.02	
	≤0.02	
	≤0.5	
	≤0.5	
	≤0.06	
	≤0.02	
	≤0.7	

3

GB3096-2008 3

2.2.2-3

2.2.2-3 dB(A)

3	65	55

4

GB/T 14848-2017 2.2.2-4

2.2.2-4 **mg/L pH**

	I	II	III	IV	V
pH	6.5~8.5			5.5~6.5 8.5~9	5.5 >9
(NH_4-N)	≤0.02	≤0.1	≤0.5	≤1.5	>1.5
( )	≤0.001	≤0.001	≤0.002	≤0.01	0.01
	≤1.0	≤1.0	≤1.0	≤2.0	>2.0
	≤0.001	≤0.01	≤0.05	≤0.1	>0.1
	≤50	≤150	≤250	≤350	>350
	≤50	≤150	≤250	≤350	>350
(N)	≤2.0	≤5.0	≤20	≤30	>30
(N)	≤0.01	≤0.1	≤1.0	≤4.8	>4.8
($CaCO_3$)	≤150	≤300	≤450	≤650	>650
	≤1.0	≤2.0	≤3.0	≤10.0	>10.0
(Cr^{6+})	≤0.005	≤0.01	≤0.05	≤0.1	>0.1
(As)	≤0.001	≤0.001	≤0.01	≤0.05	>0.05
(Pb)	≤0.005	≤0.005	≤0.01	≤0.1	>0.1
(Cd)	≤0.0001	≤0.001	≤0.005	≤0.01	>0.01
(Hg)	≤0.0001	≤0.0001	≤0.001	≤0.002	>0.002
1,2	≤0.0005	≤0.003	≤0.03	≤0.04	>0.04
(/L)	≤3.0	≤3.0	≤3.0	≤100	>100
	≤300	≤500	≤1000	≤2000	>2000
	≤0.05	≤0.05	≤0.1	≤1.5	>1.5
CFU/mL	≤100	≤100	≤100	≤1000	>1000
	≤0.1	≤0.2	≤0.3	≤2.0	>2.0
		≤0.1	≤0.3	≤0.3	>0.3

5

2.2.2-5

2.2.2-5 **mg/kg**

		CAS				
1		7440-38-2	20	**60**	120	140
2		7440-43-9	20	**65**	47	172
3		18540-29-9	3.0	**5.7**	30	78
4		7440-50-8	2000	**18000**	8000	36000
5		7439-92-1	400	**800**	800	2500
6		7439-97-6	8	**38**	33	82
7		7440-02-0	150	**900**	600	2000
8		56-23-5	0.9	**2.8**	9	36
9		67-66-3	0.3	**0.9**	5	10
10		74-87-3	12	**37**	21	120
11	1,1-	75-34-3	3	**9**	20	100
12	1,2-	107-06-2	0.52	**5**	6	21

13	1,1-	75-35-4	12	**66**	40	200
14	-1,2-	156-59-2	66	**596**	200	2000
15	-1,2-	156-60-5	10	**54**	31	163
16		75-09-2	94	**616**	300	2000
17	1,2-	78-87-5	1	**5**	5	47
18	1,1,1,2-	630-20-6	2.6	**10**	26	100
19	1,1,2,2-	79-34-5	1.6	**6.8**	14	50
20		127-18-4	11	**53**	34	183
21	1,1,1-	71-55-6	701	**840**	840	840
22	1,1,2-	79-00-5	0.6	**2.8**	5	15
23		79-01-6	0.7	**2.8**	7	20
24	1,2,3-	96-18-4	0.05	**0.5**	0.5	5
25		75-01-4	0.12	**0.43**	1.2	4.3
26		71-43-2	1	**4**	10	40
27		108-90-7	68	**270**	200	1000
28	1,2-	95-50-1	560	**560**	560	560
29	1,4-	106-46-7	5.6	**20**	56	200
30		100-41-4	7.2	**28**	72	280
31		100-42-5	1290	**1290**	1290	1290
32		108-88-3	1200	**1200**	1200	1200
33	+	108-38-3, 106-42-3	163	**570**	500	570
34		95-47-6	222	**640**	640	640
35		98-95-3	34	**76**	190	760
36		62-53-3	92	**260**	211	663
37	2-	95-57-8	250	**2256**	500	4500
38	[a]	56-55-3	5.5	**15**	55	151
39	[a]	50-32-8	0.55	**1.5**	5.5	15
40	[b]	205-99-2	5.5	**15**	55	151
41	[k]	207-08-9	55	**151**	550	1500
42		218-01-9	490	**1293**	4900	12900
43	[a,h]	53-70-3	0.55	**1.5**	5.5	15
44	[1,2,3-cd]	193-39-5	5.5	**15**	55	151
45		91-20-3	25	**70**	255	700

2.2.2.2

1

2.2.2-6

pH		6~9	
COD	mg/L	500	
BOD_5	mg/L	300	
SS	mg/L	400	
	mg/L	20	
	mg/L	120	
	mg/L	3	
	mg/L	50	
	mg/L	70	
	—	8000	
	mg/L	0.3	DB32/939-2020 4

2.2.2-7

2.2.2-7

COD	mg/L	50	GB18918-2002 1 A
	mg/L	5(8)	
	mg/L	15	
	mg/L	0.5	
LAS	mg/L	0.5	
pH		6~9	DB32/939-2020
		30	
SS	mg/L	10	
	mg/L	1.0	
	—	10000	
	mg/L	0.3	
	mg/L	0.5	

2

P1 P1 CO

P2~P4 2020 VOCs

P5~P7

“ + + + ”

15m P6

25m P5

“ + + + ”

15m P7

DB32/4041-2021 1

GB14554-93 2 DMF

DB32/3151-2016 GB14554-93

2 2.2.2-8

2.2.2-8

	(m)		(mg/m^3)	(kg/h)	
P2	15		60	3.6	DB32/3151-2016 1
		DMF	30	0.54	
			80	7.2	
			1500	/	
			/	4.9	GB 14554-93 2
			/	0.54	
P3	15		/	4.9	GB 14554-93 2
			/	0.33	
			1500	/	DB32/3151-2016 1
			80	7.2	
P4	15		/	4.9	GB 14554-93 2
			/	0.33	
			1500	/	DB32/3151-2016 1
			80	7.2	
P5	25		20	1	DB32/4041-2021 1
		SO_2	200	/	
		NOx	200	/	
			60	13.1	DB32/3151-2016 1
		DMF	30	2	
			80	26	
			1500	/	
			5	/	DB32/3151-2016 1
			5	/	A
			80	/	
			/	14	GB 14554-93 2
			/	1.5	

P6	15		7	2	DB32/3151-2016 1
			1500	/	
			/	4.9	GB 14554-93 2
P7	15		7	2	DB32/3151-2016 1
			80	7.2	
			1500	/	
			/	4.9	GB 14554-93 2

[1] RTO

GB37822-2019 1 3%

[2]

DB32/4041-2021 3 DMF

DB32/3151-2016 2 A

GB 14554-93 1 2.2.2-9

2.2.2-9

		(mg/m^3)	
1		0.5	DB32/4041-2021 3
2	SO_2	0.4	
3	NOx	0.12	
4		1	DB32/3151-2016 2
5	DMF	0.4	
6		0.14	
7		4	
8		20	
9		1.5	GB 14554-93 1
10		0.06	
11		0.08	

GB37822-2019

VOCs 2.2.2-10

2.2.2-10 VOCs mg/m^3

NMHC	6	1h	
	20		

3

(GB12348-2008)

3 2.2-11

GB12523-2011 2.2-12

2.2-11 dB(A)

3	65	55

2.2-12 dB(A)

70	55

4

GB18599-2020

GB18597-2023

[2019]149

[2019]327

2.3

2.3.1

HJ2.3-2018

B

2.3.2

HJ2.2-2018

P_i

SO_2 NOx PM_{10} DMF

$$P_i = C_i/C_{oi}\times 100\%$$

P_i—— i %

C_i—— i mg/m^3

C_{oi}—— mg/m^3

GB3095-2012 1 8 h

2

3 6 1h

D

2.3.2-1 Pi

i 1 Pi (P_{max})

2.3.2-1

	$P_{max}\geq 10\%$
	$1\%\leq P_{max}<10\%$
	$P_{max}<1\%$

2.3.2-2

/	/	
		/
/℃		40
/℃		-23.4
		☑ ☐
	/m	90
		☐ ☑
	/km	/
	/°	/

2.3.2-3

2.3.2-3 **P_i** **D_i**

		μg/m³	m	μg/m³	%	$D_{10\%}$ m		km
P2		1.7746	208	3000	0.06	0		5.0×5.0
		4.675685		2000	0.23	0		5.0×5.0
		0.015431		200	0.01	0		5.0×5.0
	DMF	0.108019		30	0.36	0		5.0×5.0
P3		0.25762	70	2000	0.01	0		5.0×5.0
		0.085873		200	0.04	0		5.0×5.0
		0.042937		10	0.43	0		5.0×5.0
P4		0.81682	116	2000	0.04	0		5.0×5.0
		0.096096		200	0.05	0		5.0×5.0
		0.048048		10	0.48	0		5.0×5.0
P5	SO_2	0.087059	420	500	0.02	0		5.0×5.0
	PM_{10}	0.007255		150	0	0		5.0×5.0
	$PM_{2.5}$	0.003627		225	0	0		5.0×5.0
	NOx	5.325109		250	2.13	0		5.0×5.0
		2.604515		3000	0.09	0		5.0×5.0
		7.421952		2000	0.37	0		5.0×5.0
		0.072549		200	0.04	0		5.0×5.0
	DMF	0.159608		30	0.53	0		5.0×5.0
P6		9.8771	208	3000	0.33	0		5.0×5.0
		9.8823		2000	0.49	0		5.0×5.0
		31.28494		200	15.64	655		5.0×5.0
P7		3.8601	208	2000	0.19	0		5.0×5.0
		2.391895		3000	0.08	0		5.0×5.0
		0.462947		200	0.23	0		5.0×5.0
		6.8071	33	2000	0.34	0		5.0×5.0
		4.380809		3000	0.15	0		5.0×5.0
		22.51061		200	11.26	225		5.0×5.0

		6.8071	38	2000	0.51	0		5.0×5.0
		6.355053		3000	0.21	0		5.0×5.0
		3.4837	16	2000	0.17	0		5.0×5.0
		1.74185		200	0.87	16		5.0×5.0
		0.34837		10	3.48	150		5.0×5.0
		3.7989	26	2000	0.19	0		5.0×5.0
		1.6884		200	0.84	0		5.0×5.0
		0.63315		10	6.33	50		5.0×5.0

Pmax

32.37% 10% $D_{10\%}$ 655

5km

2.3-1

2.3.3

GB3096-2008 3

3dB(A)

HJ2.4-2021

2.3.4

1 Q

B

Q 215.74 *Q* 100 2.3.4-1

2.3.4-1

	CAS	qi	Qi	qi/Qi
	1336-21-6	5.895	10	0.59
	75-34-3	1143.38	7.5	152.45
	111-40-0	433.499	50	8.67
	107-15-3	456.909	10	45.69
	1310-73-2	415.677	50	8.31
	/	70.7	2500	0.03
Q	/	/	/	215.74

2 M

C.1

M 1 M

20 2 10 M≤20 3 5 M≤10 4 M=5 M1 M2 M3 M4

2.3.4-2 M

	( ) ( )	10/	2	20
		5/		0
	a	5/ ( )	2	10
/	/	10		0
	( ) ( ) ( ) b( )	10		0
		5		5
a ≥300℃ (P)≥10.0MPa b				
		/	/	35

2

M 35 M1

3 P

C P

0) (M)

2.3.4-3

2.3.4-3 P

Q	M)			
	M1	M2	M3	M4
Q≥100	P1	P1	P2	P3
10≤Q 100	P1	P2	P3	P4
1≤Q 10	P2	P3	P4	P4

4

D 500m

500 1000 5km

1 5

E2

IV F3

10 km

1 2

S3 E3

G3 Mb≥1.0m K≤1.0×10^{-6}cm/s

D3 E3

5

2.3.4-4

2.3.4-4

E)	P			
	P1)	P2)	P3)	P4)
E1)	IV^{+}	IV	III	III
E2)	IV	III	III	II
E3)	III	III	II	I
IV+				

P1

E2 E3 E3

IV III III

IV

6

HJ169-2018

2.3.4-5

2.3.4-5

	IV IV^{+}	**III**	**II**	**I**
				a
a A				

2.3.3-5

2.3.5

HJ 610-2016 A

“L 85 ”

I

HJ610-2016 2

2.3.6

HJ 964-2018

1 A “ ” I

2 3.3 6.95

10.25 “ ”

3

2.3.6-1

2.3.6-1

2.3.6-2

2.3.6-2

	I			II			III		
									-
								-	
“-”									

2.3.7

1

2

3

4

2.4

2.4.1

1

5km 2.3-1

2

500m

500m

3

-

$10km^2$

4 200m

5 5km

2.4-1

500m 500m

$10km^2$

6 200m

2.4.2

1

2.4-1 2.3-1

2.4-1

	/m UTM-WGS84					/m		/	
	X	Y							
	626117	3774282				730	S	127	GB3095–2012
	625544	3774088				850	S	211	
	625015	3774093				1060	S	241	
	624126	3774485				1310	SW	1500	
	623407	3774585				2030	SW	110	
	623146	3773319				2450	SW	180	
	623400	3772406				3300	SW	240	
	627591	3772326				3060	SE	470	
	628792	3773596				2650	SE	220	
	628411	3777994				3330	NE	319	
	626656	3777521				2270	N	387	
	626448	3778006				2450	N	358	
	625351	3777913				2470	NW	361	
	624497	3777174				2230	NW	172	
	623492	3777752				2970	NW	315	
	623203	3775835				2280	W	712	

2

2.4-2

2.4-2

		m	m		
		1450	146km 77.8km		GB3838-2002 IV
		830	3km		GB3838-2002 IV
		850	1.5km		
		280	7km		

3

4

200m

5

200m

6

2.4-3 2.4-1

2.4-3

	5km					
				/m		
	1.		S	730		127
	2.		S	850		211
	3.		S	1060		241
	4.		SW	1310		1500
	5.		SW	2030		110
	6.		SW	2450		180
	7.		SW	3300		240
	8.		SE	3060		470
	9.		SE	2650		220
	10.		NE	3330		319
	11.		N	2270		387
	12.		N	2450		358
	13.		NW	2470		361
	14.		NW	2230		172
	15.		NW	2970		315
	16.		W	2280		712
	17.		SW	2800		530
	18.		SW	3780		420
	19.		SW	4180		90
	20.		SW	4950		1100
	21.		NW	4050		230
	22.		NW	3160		165
	23.		NW	4450		180
	24.		NW	3650		870
	25.		N	4060		320
	26.		N	4950		290
	27.		NE	4010		215
	28.		S	4600		170
	500m					910
	5km					10503
	200 m					
				/m		
	/	/	/	/	/	/
						/

	E					E2
				24 h /km		
	1		IV	/		
	10km (					
					/m	
	E					E3
						/m
	1		G3	/	Mb≥1.0m K≤1.0×10^{-6}cm/s	/
	E					E3

7

1.52km 2.4-4

2.4-2

2.4-4

							(m)
		—		—	3.90	3.90	N 1520
		500 200 4 500 500 1000 5 300 1500 1000 6 1300	—	12.49	—	12.49	W 1995

2.5

2.5.1

“ ”

2003 2

[2003]38

2 15.75 31.5

9.9 2003 4

2003 12

2007 3

2007 40 2011 7

2011 60

2012 8

[2012]21

2012 3 2012

11 2013 8 2014 9

< >

[2014]102 500

2019

500 2019 7

2021 1 3

[2021]1

2020

2020 5

[2020]21

9.9

2020 10 30

2020 94 29

9.9 2022 4 13

2020 12

2021-2030 0 «

2.5.1-1

	[2003]38	31.5 9.9		2003-2020		[2007]40
	[2020]21	9.9		2021-2035	9.9	/

2.5.2

[2020]21

2022

4 13

9.9

2.5.2-1

2.5.3

[2020]21

“2+X” 2

X

2.5.4

[2020]21

2.5.2-1

2.5.5 2021-2035

2021-2035

2021-2035

2.5.5.1

9.9

2.5.5.2

2021-2025 2026-2035 2020

2.5.5.3

“ ”

2.5.5.4

V4

2,4-

2,5- -2,5- -( )

/ / / /

/

SEMI G4

TN/STN

AMOLED

3D

2- -6-

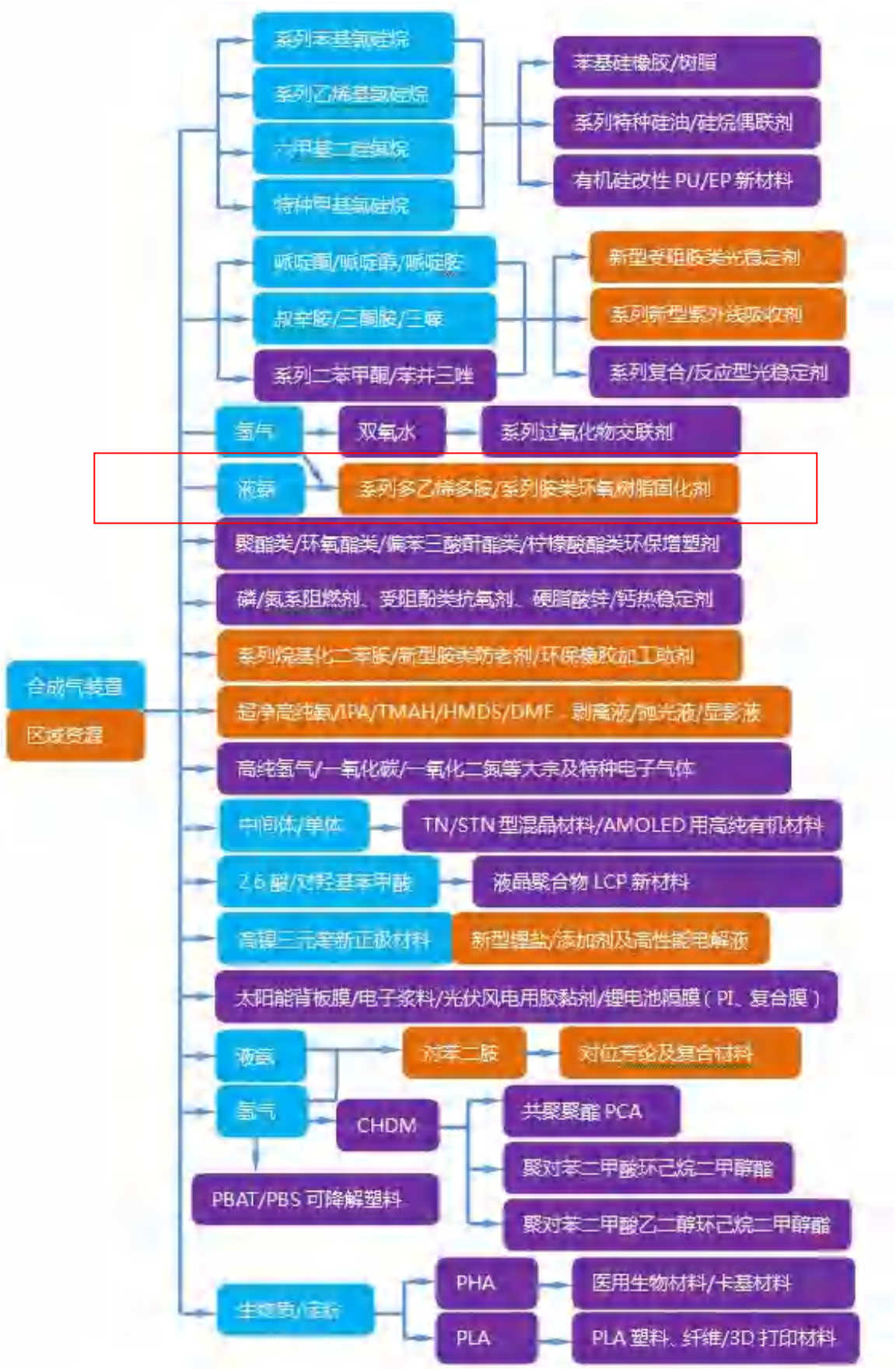
LCP

CHDM 1,4- NDA 2,6-

PCT PETG PEN

“ ” PLA PHA PBAT/PBS

2.5.5-1


系列苯基氯硅烷
系列乙烯基氯硅烷
六甲基二硅氮烷
特种甲基氯硅烷
苯基硅橡胶/树脂
系列特种硅油/硅烷偶联剂
有机硅改性 PU/EP 新材料
哌啶酮/哌啶酮/哌啶胺
叔辛胺/三酚胺/三嗪
系列二苯甲酮/苯并三唑
新型受阻胺类光稳定剂
系列新型紫外线吸收剂
系列复合/反应型光稳定剂
氢气
双氧水
系列过氧化物交联剂
液氨
系列多乙烯多胺/系列胺类环氧树脂固化剂
聚酯类/环氧酯类/偏苯三酸酐酯类/柠檬酸酯类环保增塑剂
磷/氮系阻燃剂、受阻酚类抗氧剂、硬脂酸锌/钙热稳定剂
系列烷基化二苯胺/新型胺类防老剂/环保橡胶加工助剂
合成气装置
区域资源
超净高纯氨/IPA/TMAH/HMDS/DMF、剥离液/抛光液/显影液
高纯氢气/一氧化碳/一氧化二氮等大宗及特种电子气体
中间体/单体
TN/STN 型混晶材料/AMOLED 用高纯有机材料
2,6 酸/对羟基苯甲酸
液晶聚合物 LCP 新材料
高镍三元系新正极材料
新型锂盐/添加剂及高性能电解液
太阳能背板膜/电子浆料/光伏风电用胶黏剂/锂电池隔膜（PI、复合膜）
液氨
对苯二胺
对位芳纶及复合材料
氢气
CHDM
共聚聚酯 PCA
聚对苯二甲酸环己烷二甲醇酯
聚对苯二甲酸乙二醇环己烷二甲醇酯
PBAT/PBS 可降解塑料
生物质/淀粉
PHA
PLA
医用生物材料/卡基材料
PLA 塑料、纤维/3D 打印材料

2.5.5-1

2.5.5.5

“ ”

1

2

3

a

b

a

b

4

2.5.5-2

2.5.5.6

988.9 968.97

97.98% 2.5.5-3

2.5.6

2.5.6.1

25 6 / 5 /

4 / 1.5 /

80

/

2.5.6.2

1

pH COD

2.5.6-1

2022 6 8

“1

40%

2

”

2

2011

12 10

0.7km 34°07′07″ 118°22′43″

2.5 / 2022 4 12

2.5 /

2021

2022—2023 2024

2

“ ”

1 / 1.5 /

2.5.6-1

2.5.6-1

1	1 m^3/d	1	2005/4/20	2007/12/19
2	1.5	1.5	2008/9/20	-
3		1.5	HP 2012031 2012/03/30	201206 2012/12/10
4	25000 /	2.5	201303021 2013/07/01	[2014]14 2014/12/31
5	A	2.5	2019040 2019/11/11	1.5 / 2021 6 11

3

2019 15

2019 3

“ ”

“ ”

1#

2#

pH COD

2019 15 2019 3

pH COD

pH COD 2022

2020

0.87 t/d 1.5 t/d

2.5.6.3

( )

2.5.6-2

		200t/h
		260t/h

28

2.5.6-3 2.5.6-2

( ) 200t/h

2.5.6-3 ( )

1	50t/h	[2014]13	[2016]14	SCR + + 1.6m 50	
2	50t/h	[2018]16	2019.1.26	SCR + + + 1.6m 50	
3	6MW	[2019]41	2020.9.29	/	

2020 2021 4.6-20 4.6-21

2020

2021 2020

2020 2021

1×165t/h +1×CB15MW

2×50t/h

SCR

2024

144.95 / 188.93 / 5.38 /

2.5.6.4

2 /

6270 /

4 /

5.3 /

1

2 /

1 / 2970 /

2014 12 2015 12 30

[2015]26 1 / 2017

1 26 [2017]2 “3300 /

” 2019 11 12 2020 9

29

2

2015 6 25

8 1

4 2016 7 6

[2016]8 2019 3 23

2019 3 6

[2019]6

3

2008 9 5

HP08173-2 2012 11 20

2017 8 31 [2017]17

2018 8 19

4

“

” 30000 3000 / 15000

5000 2018 6

[2018]7

2018 12 29

2019 4 11 30

5

“

” 2015 8

[2015]29 2017 1 10

2018 1 10 5500t/a

3000t/a 1000t/a 6500t/a

6

9

2011 3 14 2013 1 15

4 /

2.5.6.5

2.5.6-4

2.5.6-4

			8 /			
			2.5 m^3/d “ + + + + + ”			
			3×130t/h CFB 2 1 1 XB15MW 1 XC15MW C15 15MW B15 15MW			
	( )		4 4×50t/h			
			2 / 6270 /			
		8	4 /			
		12	5000 ABS 9500 8500 1000 300			
			30000 3000 / 15000 5000			
		28	13000 /			
		9	4 /			

2.5.7

2.5.7.1

1

2.5.7-1

2.5.7-1

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2			
3			
4			
5			
6			
7			
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9			
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12			
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36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
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60			
61			
62			
63			
64			
65			
66			
67			
68			

104

78.61 42.1

5.4

9.86 12.1

2.65

2.5.7-2

2.5.7-2

		88	
		104	
		78.61	
		42.1	
		5.4	
		9.86	
		12.1	
		2.65	
		342.72	/

2020 5 27

[2020]21

500 VOCs

2

82 51 8

5 13 5 4

38 17 1

1 2 4 3 3

2 4 1 1

1 1

2020 94 “ 1 2

”

5 13

2021 6

2.5.7-3

2.5.7-3

1				2022	
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14				2023	
15	/			2024	
16				2035	
17				2035	
18				2035	
19				2025	
20					
21				2023	

3 **2**

4×50t/h

50t/h 2012 8

4

2022-2025

1×165t/h +1×CB15MW

2×50t/h 2×50t/h

1×165t/h +1×CB15MW 2×50t/h

+1×B6MW 2×50t/h

265 / 100 /

SCR

130t/h 14

4

90%

< > GB37822-2019

2019 55 31 VOCs

GB37822-2019 VOCs VOCs

VOCs VOCs

VOCs

2020 11 VOCs 2 1.5

VOCs

5

2020 2021 18.63 / 13.27

/ HG/T 5906-2021 10 /

6500 / 2275 / 3000 /

2100 / 7.3%

2021 13

2021 1047

40%

2.5.7.2

1

2022 5 25 2021

$PM_{2.5}$

2021 $PM_{2.5}$

2020

2035

2

2021 3

693.16

186.29 76.57

[2020]21

2022 4 13

2021-2035

2022 5 24

3

6.6 3.3

4

5

H_2S

10km

GB37822-2019 VOCs

VOCs VOCs

6

7

9 500

500 ~600

510 1500

——

180 ——

660

8

2011 1 8

“ ” “ ”

“ ” “

”

III

13.5km

2021 2022—2023 2024

2.5 /

9

“ “ ”

”

2.5.7.3

2.5.7-4

2.5.7-4

1		[2020]21 2021-2035	2024 6	
2		5 13 8	2025 13	
3	2	1×165t/h +1×CB15MW 2×50t/h 2×50t/h SCR 130t/h	2025	
4		31 VOCs GB37822-2019 VOCs VOCs VOCs VOCs VOCs 2020 11 VOCs 2 1.5 VOCs		

5		40%	2025	
6	2020 $PM_{2.5}$		2025	
7	186.29 76.57	[2020]21 2021-2035	2024 6	
8			2025	
9			2025	
10		GB37822-2019 VOCs VOCs VOCs		
11				

12	510 180 660		2025	
13			2024 6	
14				

2.5.8 [2023]23

[2023]23

2.5.8-1 [2023]23

[2023]23		
“ ” 2025 4 500		

“ ” 2025 $PM_{2.5}$ 33 / IV 2025 5% 2035 15%	GB3838-2002 IV GB36600-2018	
2	1.5.4.4 1.5.4-7	
2025 30% 40%) “ ”	121t/a	
	10.2.1	

“ ” (LDAR)	LDAR	
	—	—
	—	—

3

3.1

3.1.1

28

69510 140

( )

“ ”

2013

10 14

“ ” “

” “

” “15000 / ” “3000Nm³/h

” “15000 /

”

“3000Nm³/h ”

3.1-1

3.1.1-1

1		[2010]2 2010 9	2012 2
2	15000 /	[2014]11 2014 4	
3	3000Nm³/h	[2017]1 2017 1	2020 11

“3000Nm³/h ” 3000Nm³/h

3.1.2

3.1.2-1

3.1.2-1

				t/a		
1						
2						
3						
4						
5						
6	15000 /					
7	3000Nm³/h *					

“3000Nm³/h ” 3000Nm³/h

3.1.2-1

3.1.2-1

3.1.3

1

2 CO_2

3

4.1.5-3

3.1.3-1

3.1.3-1

		2250 kWh/a	-
		339798t/a	-
			-
		24 9 6000m³/h 5600m³/h	400m³/h
		2464m³	
		2400m³	-
		100 kcal/h 63 kcal/h R404A	31.4 kcal/h
		10Nm³/min 6Nm³/min	4Nm³/min
		2400m³/h 1000m³/h	1400m³/h
		266000t/a	-
		10430m² 15%	-
			-
		800m³/d 389.5m³/d	410.5m³/d
		45m	
		CO “ + +MDEA ” 25m P1	
		“ + ” 15m P2	VOCs
		“ + ” 15m P3	
		“ + ” 15m P2	
		300m²	

		810m^2 7810m^2	
	285	12 1465.4m^3	
	286	13 3332m^3	

3.1.3-2 3.3.2-2

3.1.3-2

		L/G	mm	m				/ ℃		/ MPa(G)		
1			80	820					120		1.8	CS
2			300	670					100		1	304
3			100	220					120		0.8	CS
4			80	450					80		0.8	CS

1

2250 kWh/a

2

1

3kg/cm^2 DN400mm

2

6000m^3/h 5600m^3/h

33.0℃

43.0℃ 0.40MPa 0.30MPa

24 250m^3/h 9

COD SS

COD SS 100mg/m^3

3

800t/d 390t/d

4

2

4L-20/8 2400m^3/h 1000m^3/h

10Nm^3/min

6Nm^3/min <100mg/Nm^3 CO_2<100mg/Nm^3 -20℃

5

1.2MPa 0.3MPa

266000t/a

6

216m²

LG20MZA 40% 94.4 kcal/h 63 kcal/h

-5℃

7

2 285 12 1470m²

285

13 2276m²

3.1.3-2

3.1.3-2

		/cm	/cm	/m³			/m³	
1								285
2								
3								
4								
5								
6								
7								286
8								
9								
10								
11								
12								
13								
14								

8

100L/s 0.70MPa DN250

10L/s 25L/s

2464m^3

3.1.4

3.1.4-1

3.1.4-1

3.2

3.2.1

CO 2

3.2-1

3.2.1-1 CO

3.2.2

3.2-2

3.2.3

3.2-3

3.2.4

3.2-4

3.2.5 N-

3.2-5 N-

3.2.6 -

3.2-6 -

3.2.7

3.2-7

3.3

3.3.1

3.3.1.1

139882t/a

3.3.1-1 t/a

3.3.1.2

1

2019

$6m^3/h$

2

800t/d 390t/d “

+ ”

MVR

3.3.1-2

3.3.2

3.3.2.1

CO MDEA

SO_2 CO H_2S

MDEA

3.3.2.2

CO

CO

[2010]2 SO_2

GB13271-2001

GB16297-1996

GB14554-93

20

30m SO_2

GB13271-2014 3

DB32/4041-2021 1 50mg/m^3 1.8kg/h

VOCs 2020

VOCs 2021 4

3.3.2-1 3.3.2-2

3.3.2-1

1

2 CO

MDEA CO SO_2 H_2S

“ + +MDEA ” 25m

P1

3

VOCs

“ + ” 15m P2

4

VOCs “ + ” 15m P3

5

VOCs “ +

” 15m P4

P2~P4

3.3.2.3

1

LDAR

3.3.2-2

2

285 286

“ +

”

3.3.2-3

3

“ + ”

3.3.2-4

4

5

6

15m

7

MDEA

3.3.2-5

3.3.3

70 85dB A

3.3.4

3.3.4.1

2022

3.3.4-1

3.3.4-1

							t/a	
1					HW49	900-000-49	100	
2					HW11	900-013-11	90.84	

3					HW49	772-006-49	150	
4					HW49	900-039-49	6	
5					HW49	900-047-49	1	
6					HW49	900-000-49	1	
7					HW13	900-015-13	14.4 /	
8					HW29	900-023-29	0.5	
9					HW08	900-219-08	15	
10					HW50	261-164-50	7	
11					HW49	900-041-49	15 /	
12		CO			HW49	900-039-49	51.16	
13					HW49	900-000-49	40 /	
14					/	/	98	
15		CO			/	/	0.8	
16					/	/	23.36	

3.3.4.2

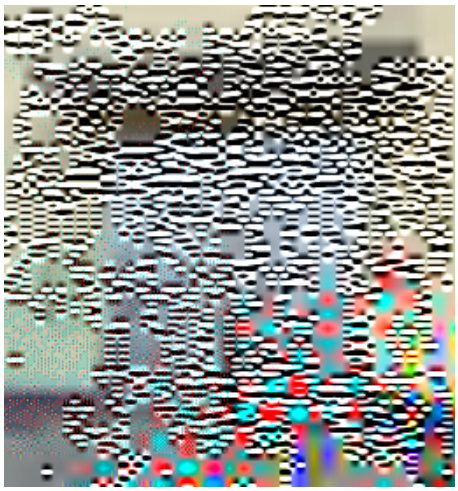
(GB18597-2001)

[2019]327

2019 149 2020 80 134

300

危险废物贮存设施
（第1-1号）



≤10^{-10}cm/s

5 “ + ” 15m P3

6

7

[2019]327 1

8

2019 327

3.3.5

[1997]12

“ ”

1 1 1

2 4

GB/T16157-1996

pH COD

1

3.3.5-1

3.4

3.4.1

3.4.1.1

1 CO P1

TST2022HJ0195-6C-1 TST2022HJ0195-2C-1 TST2022HJ0195-3C-2

P1 3.4.1-1

3.4.1-1 CO P1

			mg/m^3	kg/h
2022.3.30 P1 25m			<3	<1.33×10^{-3}
			<3	<1.35×10^{-3}
			<3	<1.28×10^{-3}
			<3	<1.32×10^{-3}
			200	1.4
			1731	0.767
			1744	0.787
			1721	0.733
			1732	0.762
			2000	15
			0.05	2.22×10^{-5}
			0.07	3.16×10^{-5}
			0.07	2.98×10^{-5}
			/	3.16×10^{-5}
			/	0.33
2022.5.11 P1 25m			<3	<1.12×10^{-3}
			3	1.10×10^{-3}
			3	1.10×10^{-3}
			<3	<9.22×10^{-4}
			200	1.4
			1.73×10^3	0.645
			1.71×10^3	0.628
			1.74×10^3	0.640
			1.73×10^3	0.638
			2000	15
			0.25	9.33×10^{-5}
			0.22	8.07×10^{-5}
			0.23	8.46×10^{-5}
			/	9.33×10^{-5}
			/	0.33
2022.7.26 P1 25m			<3	7.77×10^{-4}
			<3	7.35×10^{-4}
			<3	7.53×10^{-4}
			<3	7.55×10^{-4}
			200	1.4
			978	0.253
			981	0.240
			984	0.247
			981	0.247
			2000	15
			1.53	3.96×10^{-4}
			1.69	4.14×10^{-4}
			1.10	2.76×10^{-4}
			/	4.14×10^{-4}
			/	0.33

P1 3mg/m^3

1.35×10^{-3} kg/h DB32/4041-2021

1 1744mg/m^3

0.787kg/h (DB13/487-2002)

2000mg/m^3 15kg/h

4.14×10^{-4}kg/h GB14554-93

0.33kg/h

2

2021 3.4.1-2

3.4.1-2 2021

			2021.02.27		2021.01.30		2020.12.22	
			mg/m^3	kg/h	mg/m^3	kg/h	mg/m^3	kg/h
1#/45m			1.2	0.278	2.6	0.662	<1.0	<0.182
			1	0.234	2.5	0.615	<1.0	<0.174
			1.1	0.261	2.7	0.672	<1.0	<0.178
			1.1	0.258	2.6	0.65	<1.0	<0.178
			20	/	20	/	20	/
			<3	<0.694	<3	<0.764	<3	<0.545
			<3	<0.703	<3	<0.738	<3	<0.521
			<3	<0.713	<3	<0.747	<3	<0.533
			<3	<0.703	<3	<0.750	<3	<0.533
			50	/	50	/	50	/
			102	23.6	102	26	122	22.2
			97	22.7	99	24.4	116	20.1
			106	25.2	85	21.2	114	20.3
			102	23.8	95	23.8	117	20.9
			150	/	150	/	150	/
			244	56.4	83	21.1	174	31.6
			222	52.1	84	20.7	138	24
			230	54.6	82	20.4	137	24.4
			232	54.4	83	20.7	150	26.6
			/	/	/	/	/	/
	VOCs		0.17	3.93×10^{-2}	0.55	0.14	1.17	0.213
			0.113	3.93×10^{-2}	0.683	0.168	0.598	0.104
			0.136	3.93×10^{-2}	0.41	0.102	0.87	0.155
			0.14	3.93×10^{-2}	0.548	0.137	0.879	0.157
			60	3	60	3	60	3
			<2.5×10^{-3}	<5.78×10^{-4}	<2.5×10^{-3}	<6.37×10^{-4}	<2.5×10^{-3}	<4.54×10^{-4}
			<2.5×10^{-3}	<5.86×10^{-4}	<2.5×10^{-3}	<6.15×10^{-4}	<2.5×10^{-3}	<4.34×10^{-4}
			<2.5×10^{-3}	<5.94×10^{-4}	<2.5×10^{-3}	<6.23×10^{-4}	<2.5×10^{-3}	<4.44×10^{-4}
			/	<5.94×10^{-4}	<2.5×10^{-3}	<6.37×10^{-4}	<2.5×10^{-3}	<4.44×10^{-4}
			/	5.1	/	5.1	/	5.1
			<2	<0.463	<2	<0.510	<2	<0.364
			<2	<0.469	<2	<0.492	<2	<0.347
			<2	<0.475	<2	<0.498	<2	<0.356
			<2	<0.469	<2	<0.500	<2	<0.355

			50	1.8	50	1.8	50	1.8
			2.78	0.643	5.76	1.47	1.91	0.347
			1.81	0.424	5.37	1.32	3.48	0.604
			2.94	0.698	5.14	1.28	2.64	0.469
			/	0.698	5.76	1.47	2.68	0.474
			/	45	/	45	/	45
	( )		977		1318		309	
			724		977		416	
			724		1318		416	
			977		1318		416	
			30000		30000		30000	

2022 JSHJ-2022S-11301

JSHJ-2022S-11306 JSHJ-2022S-11309 3.4.1-3

3.4.1-3 2022

			2022.3.3		2022.5.23		2022.8.18	
			mg/m^3	kg/h	mg/m^3	kg/h	mg/m^3	kg/h
1#/45m			14.0	1.73	17.0	1.23	11.6	1.37
			7.9	0.965	16.5	1.24	15.5	1.79
			10.2	1.21	27.4	2.01	10.7	1.22
			10.7	1.30	20.3	1.50	12.6	1.46
			20	/	20	/	20	/
			ND	/	ND	/	ND	/
			ND	/	ND	/	ND	/
			ND	/	ND	/	ND	/
			ND	/	ND	/	ND	/
			50	/	50	/	50	/
			81	10.1	72	5.21	51	5.99
			81	9.92	72	5.36	56	6.44
			87	10.3	72	5.26	58	6.57
			83	10.1	72	5.28	55	6.33
			150	/	150	/	150	/
			54.7	6.88	252	29.5	9.47	1.09
			54.1	6.78	247	28.7	9.31	1.08
			55.6	6.93	254	29.4	9.56	1.11
			/	6.93	/	29.5	/	1.11
			/	45	/	45	/	45
			1.79×10^{-4}	2.09×10^{-5}	3.51×10^{-4}	2.71×10^{-5}	1.23×10^{-4}	1.48×10^{-5}
			1.75×10^{-4}	2.01×10^{-5}	3.30×10^{-4}	2.59×10^{-5}	1.44×10^{-4}	1.62×10^{-5}
			2.02×10^{-4}	2.30×10^{-5}	3.58×10^{-4}	2.80×10^{-5}	1.44×10^{-4}	1.66×10^{-5}
			1.85×10^{-4}	2.13×10^{-5}	2.46×10^{-4}	2.70×10^{-5}	1.37×10^{-4}	1.58×10^{-5}
			/	/	/	/	/	/
			1		1		1	

2022 6 ~2022 10 3.4.1-4

3.4.1-4 2022 6 ~2022 10

		mg/m3		
2022 12		3.3746	3.3044	52.2503
		5.5791	10.7864	90.7969
		1.8278	0.1478	26.9143
2022 11		2.8924	2.2091	54.5079
		6.0752	6.9698	57.6800
		0.1964	0.8485	49.6124
2022 10		0.6773	1.9141	59.9797
		2.9174	3.7599	68.5844
		0.1836	0.8364	53.2637
2022 9		1.4372	2.3981	66.4252
		1.9587	5.7971	80.1837
		1.0464	0.8704	42.6422
2022 8		2.9766	6.1414	79.4909
		14.2178	25.4637	96.5576
		0.7511	0.4296	55.6858
2022 7		3.7401	9.3476	85.6641
		6.9542	42.1451	126.0209
		1.9723	0.4218	63.3825
2022 6		2.1145	10.4526	91.5452
		3.9841	26.9829	128.5219
		1.0895	6.7679	44.8664
		20	50	150

SO_2

GB13271-2014

3

DB32/4041-2021 1 50mg/m^3

1.8kg/h

GB14554-93

3 P2

VOCs

P2 2023

TST2023HJ0222-3C-1 3.4.1-5

3.4.1-5 P2

			2022.3.31		2022.7.27		2023.3.1		
			(mg/m^3)	kg/h	(mg/m^3)	kg/h	(mg/m^3)	kg/h	
			0.150	8.54×10^{-4}	0.154	7.84×10^{-4}	0.211	1.55×10^{-3}	
			0.125	7.29×10^{-4}	0.151	7.94×10^{-4}	0.199	1.48×10^{-3}	
			0.119	6.76×10^{-4}	0.141	7.19×10^{-4}	0.195	1.48×10^{-3}	
			0.131	7.53×10^{-4}	0.179	7.66×10^{-4}	0.202	1.50×10^{-3}	
			80	7.2	80	7.2	80	7.2	/
			ND	/	48.0	0.244	27.1	0.201	
			ND	/	44.3	0.233	25.3	0.185	
			ND	/	36.5	0.186	19.5	0.145	
			ND	/	42.9	0.221	24.0	0.177	
			60	3.6	60	3.6	60	3.6	/
			3.639	2.10×10^{-2}	10.3	5.24×10^{-2}	1.41	1.03×10^{-2}	
			3.46	2.02×10^{-2}	14.1	7.41×10^{-2}	1.60	1.19×10^{-2}	
			3.34	1.90×10^{-2}	14.9	7.60×10^{-2}	1.51	1.14×10^{-2}	
			/	2.10×10^{-2}	/	7.60×10^{-2}	/	1.19×10^{-2}	
P2			/	4.9	/	4.9	/	4.9	/
			ND	/	ND	/	ND	/	
			ND	/	ND	/	ND	/	
			ND	/	ND	/	ND	/	
			/	/	/	/	/	/	
			/	0.54	/	0.54	/	0.54	/
			ND	/	0.41	2.09×10^{-3}	ND	/	
			ND	/	0.34	1.79×10^{-3}	ND	/	
			ND	/	0.39	1.99×10^{-3}	ND	/	
			/	/	/	2.09×10^{-3}	/	/	
			/	0.33	/	0.33	/	0.33	/
			229		724		851		
			309		977		977		
			549		724		724		
			549		977		977		
			1500		1500		1500		/

"ND" 2mg/m^3 2.5×10^{-3}mg/m^3

0.01mg/m^3

(DB323151-2016)

GB14554-93

4 P3

VOCs

P3

(DB323151-2016) 3.4.1-6

3.4.1-6

			2022.3.31		2022.5.11		2022.7.26		
			(mg/m^3)	kg/h	(mg/m^3)	kg/h	(mg/m^3)	kg/h	
P3			0.068	4.29×10^{-4}	0.276	1.37×10^{-3}	0.309	1.36×10^{-3}	
			0.075	4.67×10^{-4}	0.393	1.92×10^{-3}	0.314	1.41×10^{-3}	
			0.071	4.41×10^{-4}	0.371	1.80×10^{-3}	0.148	6.44×10^{-4}	
			0.071	4.46×10^{-4}	0.347	1.70×10^{-3}	0.257	1.14×10^{-3}	
			80	7.2	80	7.2	80	7.2	/
			/	/	ND	/	0.42	1.84×10^{-3}	
			/	/	ND	/	0.35	1.58×10^{-3}	
			/	/	ND	/	0.40	1.74×10^{-3}	
			/	/	ND	/	/	1.84×10^{-3}	
			/	0.33	/	0.33	/	0.33	/
			1.51	9.54×10^{-3}	1.03	5.10×10^{-3}	9.41	4.13×10^{-2}	
			1.30	8.10×10^{-3}	2.33	1.14×10^{-2}	9.74	4.39×10^{-2}	
			1.51	9.37×10^{-3}	1.58	7.68×10^{-3}	10.3	4.48×10^{-2}	
			/	9.54×10^{-3}	/	1.14×10^{-2}	/	4.48×10^{-2}	
			/	4.9	/	4.9	/	4.9	/
			229		416		977		
			416		309		549		
			173		229		724		
			416		416		977		
			1500		1500		1500		/

"ND" 0.01mg/m^3

5 P4

VOCs

P4 3.4.1-7

3.4.1-7 P4

			2022.3.31		2022.5.11		2022.7.26		
			(mg/m^3)	kg/h	(mg/m^3)	kg/h	(mg/m^3)	kg/h	
P4			0.175	7.43×10^{-4}	0.275	7.13×10^{-4}	0.219	6.17×10^{-4}	
			0.122	5.08×10^{-4}	0.330	8.26×10^{-4}	0.126	3.83×10^{-4}	
			0.149	6.44×10^{-4}	0.456	1.14×10^{-3}	0.142	4.19×10^{-4}	
			0.149	6.32×10^{-4}	0.354	8.94×10^{-4}	0.162	4.73×10^{-4}	
			80	7.2	80	7.2	80	7.2	/
			/	/	1.21	3.14×10^{-3}	0.49	1.38×10^{-3}	
			/	/	1.32	3.31×10^{-3}	0.42	1.28×10^{-3}	
			/	/	0.95	2.38×10^{-3}	0.55	1.62×10^{-3}	
			/	/	1.16	2.94×10^{-3}	/	1.62×10^{-3}	

			/	0.33	/	0.33	/	0.33	/
			1.34	5.69×10^{-3}	8.72	2.26×10^{-2}	12.1	3.41×10^{-2}	
			1.28	5.32×10^{-3}	8.53	2.14×10^{-2}	12.4	3.77×10^{-2}	
			1.09	4.71×10^{-3}	9.65	2.42×10^{-2}	12.7	3.74×10^{-2}	
			/	5.69×10^{-3}	/	2.42×10^{-2}	/	3.77×10^{-2}	
			/	4.9	/	4.9	/	4.9	/
			724		229		549		
			549		549		461		
			416		416		724		
			724		549		724		
			1500		1500		1500		/

VOCs( )

(DB323151-2016)

GB14554-93

3.4.1.2

3.4.1-8

3.4.1-8 **2022.7.27**

		VOCs μg/m³ mg/m³			
		G1	G2	G3	G4
VOCs		12.0	74.5	77.1	22.0
		10.7	26.2	22.6	72.7
		10.9	25.9	22	19.5
		77.1			
		4000			
		0.131	0.359	0.325	0.323
		0.168	0.332	0.306	0.283
		0.174	0.282	0.361	0.32
		0.361			
		1.0			
		0.017	0.03	0.032	0.034
		0.02	0.032	0.034	0.028
		0.021	0.028	0.03	0.036
		0.036			
		0.4			
		0.019	0.025	0.021	0.027
		0.02	0.022	0.024	0.028
		0.017	0.027	0.022	0.025
		0.028			
		0.12			

		<10	12	<10	13
		<10	<10	<10	<10
		<10	14	13	11
		14			
		20			
		0.003	0.004	0.004	0.004
		0.003	0.005	0.006	0.005
		0.002	0.005	0.004	0.004
		0.006			
		0.06			
		0.078	0.098	0.09	0.096
		0.082	0.106	0.093	0.097
		0.086	0.102	0.097	0.106
		0.106			
		1.5			
		ND	ND	ND	ND
		ND	ND	ND	ND
		ND	ND	ND	ND
		ND			
		10			
		ND	ND	ND	ND
		ND	ND	ND	ND
		ND	ND	ND	ND
		ND			
		0.08			
		ND	ND	ND	ND
		ND	ND	ND	ND
		ND	ND	ND	ND
		ND			
		1.0			

ND 0.3mg/m^3 2.5×10^{-3}mg/m^3 0.1mg/m^3

0.361mg/m^3 0.036mg/m^3 0.028mg/m^3

DB32/4041-2021 3

77.1μg/m^3

DB32/3151-2016

GB 14554-93 1

3.4.2

3.4.2.1

pH COD BOD_5

TST2022HJ0195-8 TST2022HJ0195-7 TST2022HJ0195-6C-1 TST2022HJ0195-5 TST2022HJ0195-4 3.4.2-1

3.4.2-1 mg/L pH

			pH	COD	BOD_5					
	2022.1.21		8.5	49	11.8	0.721	0.26	14	53.8	0.08
			8.6	46	11.5	0.564	0.27	16	53.6	0.50
			8.4	47	12.2	0.604	0.23	15	54.7	0.27
			8.5	48	12.6	0.772	0.28	14	53.8	0.17
			/	48	12.0	0.670	0.26	15	54.0	0.26
	2022.2.23		8.3	50	10.4	0.560	2.38	33	62.1	0.33
			8.2	48	10.2	0.482	2.16	36	63.2	0.41
			8.3	48	10.0	0.508	2.08	37	60.4	0.37
			8.1	46	9.5	0.640	2.22	34	61.6	0.44
			/	48	10.0	0.548	2.21	35	61.8	0.39
	2022.3.31		8.3	49	12.6	0.636	0.24	16	40.6	0.56
			8.4	47	11.2	0.490	0.26	14	42.6	0.52
			8.4	45	10.3	0.678	0.30	17	41.8	0.56
			8.3	46	11.8	0.466	0.29	15	41.1	0.66
			/	47	11.5	0.568	0.27	16	41.5	0.58
	2022.4.26		8.5	78	17.5	0.716	0.41	11	46.6	0.24
			8.5	76	18.4	0.822	0.42	13	48.3	0.33
			8.4	73	18.4	0.756	0.40	11	47.6	0.18
			8.4	76	18.6	0.660	0.43	14	46.3	0.30
			/	76	18.2	0.738	0.42	12	47.2	0.26
	2022.5.11		8.1	73	15.2	0.699	0.34	6	60.3	0.36
			8.1	65	14.4	0.808	0.31	7	60.4	0.43
			8	74	15.4	0.640	0.35	5	62.2	0.27
			8.2	74	16.9	1.060	0.32	7	61.6	0.37
			/	72	15.5	0.802	0.33	6	61.1	0.36
	2022.6.7		7.7	69	15.8	1.050	0.18	6	23.6	0.28
			7.8	60	15.2	0.486	0.15	8	24.4	0.30
			7.7	65	16.9	0.710	0.20	9	25.9	0.30
			7.6	68	14.8	0.750	0.20	6	23.6	0.34
			/	66	15.7	0.749	0.18	7	24.4	0.30
	2022.7.27		8.6	54	11.4	1.63	0.35	13	63.2	0.44
			8.5	52	11.2	0.922	0.35	11	62.6	0.45
			8.3	55	11.8	1.15	0.33	11	60.6	0.37
			8.4	54	10.3	1.22	0.36	12	62.1	0.38
			/	54	11.2	1.23	0.35	12	62.1	0.41

	7.9	67	14.4	9.04	0.56	16	49.0	0.28
	7.8	65	14.1	8.64	0.55	16	51.0	0.29
2022.8.16	7.7	60	15.2	10.80	0.60	18	49.8	0.56
	7.8	61	14.5	9.40	0.58	21	50.6	0.61
	/	63	14.6	9.47	0.57	18	50.1	0.44
	8.2	69	14.8	0.958	0.58	14	46.1	0.22
2022.9.3	8.3	67	15.6					

2022.8	320.4	40.42	3.247	8.98
2022.9	207.277	19.548	2.5	8.194
2022.10	77.6	0.65	0.53	8.164
	500	45	8	6~9

2022 1~10 pH 7.18 8.98 6~9 COD 77.6mg/L 421.2mg/L 500mg/L 0.65mg/L 40.42mg/L 50mg/L 0.53mg/L 3.247mg/L 8mg/L pH COD

3.4.2-1

3.4.2-1

3.4.3

2022 2 2022 5 2022 7 TST2022HJ0195-1 TST2022HJ0195-3C-2 TST2022HJ0195-6C-1

3.4.3-1

			1m 1#	1m 2#	1m 3#	1m 4#		
	2022.2.23		56.8	57.2	56.4	58.2	65	
			48.3	47.2	46.5	48.4	55	
	2022.5.11		57.6	57.2	57.7	57.3	65	
			47.7	47.0	46.5	47.3	55	
	2022.7.		58.6	57.1	55.3	55.4	65	

	26		51.4	50.5	50.4	50.1	55	

55.3~58.6dB(A)

46.5~51.4dB(A)

GB12348-2008 3

3.4.4

2021

“ ”

1

2022 9 13

1 28 3 46

pH 7 C10-C40

27 1,1- 1,1-

-1,2- -1,2- 1,1,1-

1,2- 1,2- 1,1,2- 1,1,1,2-

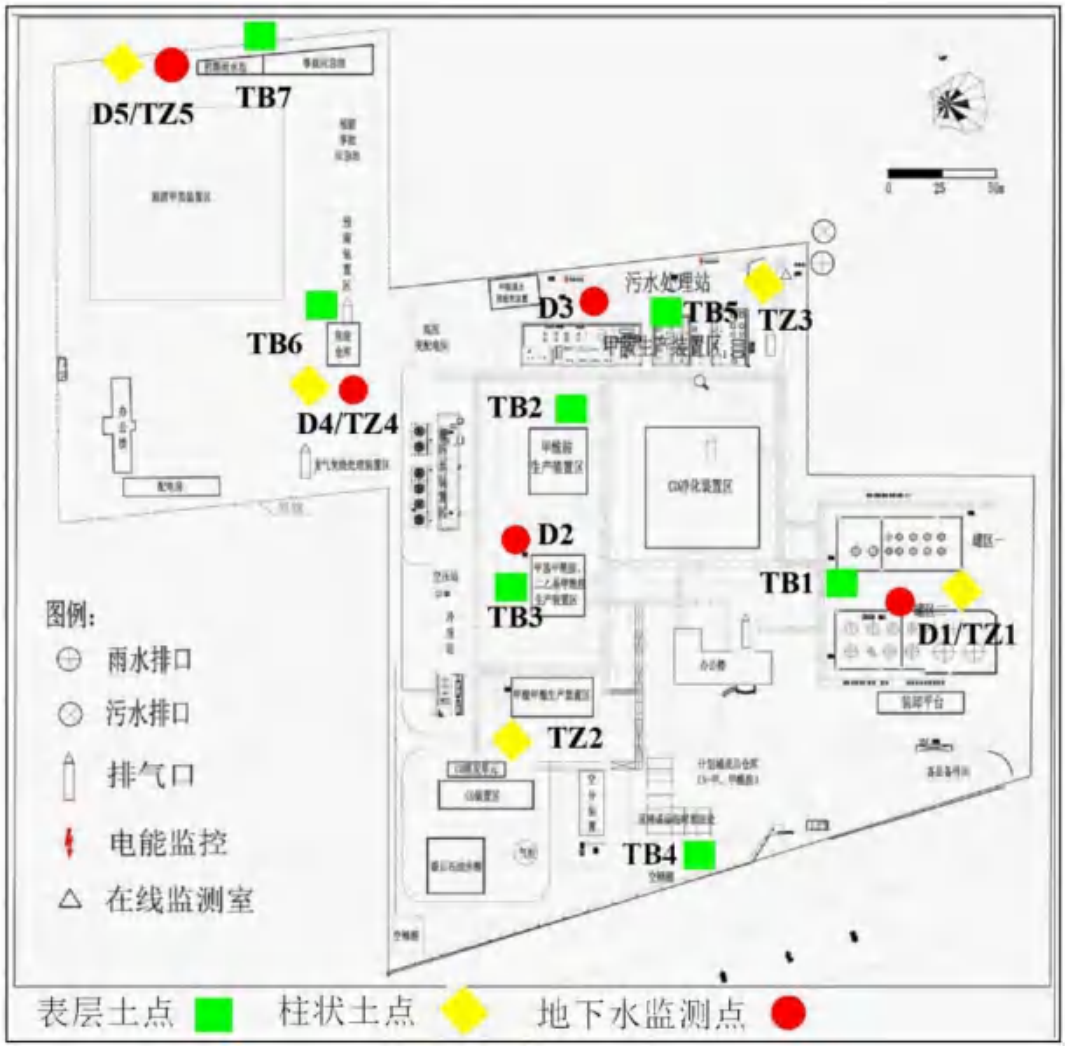
, -

1,1,2,2- 1,2,3- 1,4- 1,2- 11

2- (a) (b) (k)

(a) (1,2,3-cd) (a,h)

3.4.4-1



3.4.4-1

1

3.4.4-1

3.4.4-1 **(mg/kg)**

		(mg/kg)	(mg/kg)	(mg/kg)		
pH	28	7.74	8.98	-	-	-
	28	4.71	24.4	60	40.72%	0
	28	0.08	0.32	65	0.49%	0
	28	16	42	18000	0.23%	0
	28	19.8	49.1	800	6.13%	0
	28	0.007	0.192	38	0.51%	0
	28	18	44	900	4.89%	0

(GB36600-2018)

2

5 7 1

28 11 SVOCs (a)

SVOCs

3.4.4-2

3.4.4-2 SVOCs (mg/kg)

		(mg/kg)	(mg/kg)	(mg/kg)		
(a)	1	0	0.2	1.5	13.3%	0

3

5 7 1

28 C10-C40

3.4.4-3 (mg/kg)

		(mg/kg)	(mg/kg)	(mg/kg)		
(C10-C40)	28	5	52	4500	1.16%	0

4

3.4.4-4

3.4.4-4

		D1	D2	D3	D4	D5	DZW1	IV
pH		7.4	7.5	7.5	7.8	7.6	7.3	5.5~9.0
	μg/L	ND	ND	ND	ND	ND	ND	0.002
	μg/L	5.1	0.6	ND	0.8	0.5	ND	0.05
	mg/L	ND	ND	ND	ND	ND	ND	50
	mg/L	ND	ND	ND	ND	ND	ND	1.5
	mg/L	ND	ND	ND	ND	ND	ND	2
	mg/L	0.1	1.62	0.02	ND	0.06	ND	1.5
	mg/L	ND	ND	ND	ND	ND	ND	5
	mg/L	ND	ND	ND	ND	ND	ND	0.5
	mg/L	81.2	70	83.2	63.1	77.2	51.1	400
	mg/L	ND	ND	ND	ND	ND	ND	0.01
	mg/L	ND	ND	ND	ND	ND	ND	0.1
	mg/L	ND	ND	ND	ND	ND	ND	0.1
	μg/L	ND	ND	ND	ND	ND	ND	0.1
	mg/L	16.6	28	50.3	153	226	143	350
	mg/L	72.9	48.9	149	125	81.2	63.3	350
	mg/L	ND	ND	ND	1.37	ND	ND	4.8
	mg/L	1.51	ND	ND	4.38	1.24	1.25	30
	mg/L	1.64	1.51	1.56	3.52	1.53	1.07	2
	mg/L	242	281	367	352	397	501	650
	mg/L	0.11	0.1	0.16	0.28	0.16	0.1	0.3
	mg/L	536	524	718	621	666	629	2000
	mg/L	1.3	3.8	2.3	3.5	2.1	1.3	10
	mg/L	0.076	0.118	0.104	0.097	0.095	0.033	1.5
	mg/L	ND	ND	ND	ND	ND	ND	0.1
	mg/L	ND	ND	ND	ND	ND	ND	0.1
	mg/L	0.0036	0.0061	0.0016	0.0057	0.003	0.0009	0.01
	mg/L	ND	ND	ND	ND	ND	ND	0.5

	μg/L	ND	ND	ND	ND	ND	ND	50	
1,2-	μg/L	ND	ND	ND	ND	ND	ND	40	
	μg/L	ND	ND	ND	ND	ND	ND	120	
	μg/L	ND	ND	ND	ND	ND	ND	210	
1,2-	μg/L	ND	ND	ND	ND	ND	ND	60	
1,1,2-	μg/L	ND	ND	ND	ND	ND	ND	60	
	μg/L	ND	ND	ND	ND	ND	ND	1400	
	μg/L	ND	ND	ND	ND	ND	ND	300	
	μg/L	ND	ND	ND	ND	ND	ND	600	
*1,1,1,2-	μg/L	ND	ND	ND	ND	ND	ND	900	
	μg/L	ND	ND	ND	ND	ND	ND	600	
-	μg/L	ND	ND	ND	ND	ND	ND	1000	
-	μg/L	ND	ND	ND	ND	ND	ND	1000	
	μg/L	ND	ND	ND	ND	ND	ND	40	
*1,1,2,2-	μg/L	ND	ND	ND	ND	ND	ND	600	
1,2,3-	μg/L	ND	ND	ND	ND	ND	ND	-	
1,4-	μg/L	ND	ND	ND	ND	ND	ND	600	
1,2-	μg/L	ND	ND	ND	ND	ND	ND	2000	
*	μg/L	ND	ND	ND	ND	ND	ND	7400	
*2-	μg/L	ND	ND	ND	ND	ND	ND	2200	
*	μg/L	ND	ND	ND	ND	ND	ND	2000	
	μg/L	ND	ND	ND	ND	ND	ND	-	
*	μg/L	ND	ND	ND	ND	ND	ND	480	
* [a]	μg/L	ND	ND	ND	ND	ND	ND	4.8	
[b]	μg/L	ND	ND	ND	ND	ND	ND	8	
* [k]	μg/L	ND	ND	ND	ND	ND	ND	48	
[a]	μg/L	ND	ND	ND	ND	ND	ND	0.5	
* [a,h]	μg/L	ND	ND	ND	ND	ND	ND	0.48	
* [1,2,3-cd]	μg/L	ND	ND	ND	ND	ND	ND	4.8	
* (C10-C40)	mg/L	0.37	0.4	0.46	0.4	0.42	0.28	1.2	

*1,1- 1,1,1,2- 1,1,2,2- 2-

[a] [k] [a,h] [1,2,3-cd] C10-C40

[2020]62 5

3

(GB36600-2018)

GB/T14848-2017

IV

IV

GB/T14848-2017 IV

3.5

3.5.1

B

3.5.2

1

2

6

j ¼+A(3
)à

2

DN200

4

24

3.5.3

3.5.3-1

3.5.3-1

1			10			15896301038
2			10			15896301038
3			6			13851351554
4			2			13851351554
5			4			13851351554
6			5			13851351554
7			10			13851351554
8			8			13851351554
9			4			13851351554
10			20			13851351554
11			8			13851351554
12			6			13851351554

13			2			13851351554
14			10			15896301038
15			4			15896301038
16			2			13851351554
17			15			15896301038
18			1			13851351554
19			5			15896301038
20			8			15896301038
21			5			13851351554
22			4			15896301038
23			60			15896301038
24			8			15896301038
25			8			15896301038
26		VOC	4			15896301038
27			3			15896301038
28			1			15896301038
29			1			15896301038
30			1			15896301038
31			200			15896301038
32			20			15896301038
33			200m2			15896301038
34			10			15896301038
35			2			15896301038
36			2			15896301038
37			1			15896301038
38			1			15896301038
39			40			15371368323
40			10			15371368323
41			1			15896301038

3.5.4

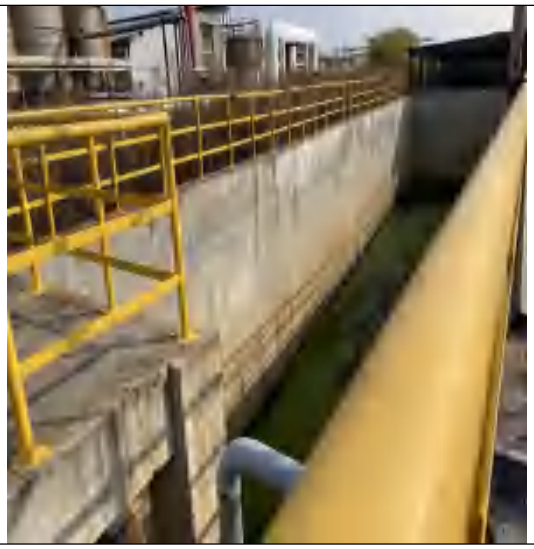
1

2400m^3 60m 8m

5m

2

1 855m^3



3

3.5.4-1

1		PLC
		2400m^3 625m^3
2		

3		

3.5.5

2022 3

321311202220H

1

1

3.5.6

3.5.7

3.5.7-1

3.5.7-1

( )	2400m³	① 24	

3.6

3.6-1

3.5-1 “ ” t/a

		139882	/	139882
	COD	8.694	12.084	8.405
	SS	5.458	/	2.129
		1.76	2.218	0.243
	TN	0	10.17	6.970
		0.007	0.007	0.006
		0.214	/	0.051
*		0.4	0.4	/
		0.08	/	6.85×10^{-4}
	CO	1.52	/	0.4356
	VOCs	0	0.644	0.644
		0	0	0

CO

VOCs

1 VOCs VOCs

P2~P4

2

3.4.1-1

3 2022

139882t/a

3.7

“ ”

1

20000m^3/h

2 “15000 / ”

3

1

[2014]3 “6

”

2016 95

20000m^3/h“ +SNCR ”

7.1.1

2 “15000 / ”

3

4

4.1

4.1.1

3 1.2

4.1.1-1

3.3

102391.61 650

0.64%

330

8000

80

2023 6

2023 12 2024 12

4.1.2

4.1.2.1

4.1.2-1

4.1.2-1

				t/a		
	1#					
	2#					

4.1.2-2

4.1.2-1

4.1.2-2 **t/a**

1#						
2#						

4.2.1-1

4.1.2.2

4.1.2.3

GB/T 36761-2018

“ ”

4.1.2-3~ 4.1.2-6

4.1.2-3 Q/321311GXY006-2018

1	ω/%	≥99%
2	ω/%	≤0.9%
3	ω/%	≤0.1%

4.1.2-4 Q/321311GXY007-2018

1	ω/%	≥98%
2	ω/%	≤1.5%
3	ω/%	≤0.5%

4.1.2-5 GB/T 36761-2018

1	ω/%	≥99.5%	**≥99%**
2	ω/%	≤0.5%	**≤0.5%**
3	- /Haze	≤20%	**≤30%**

CO_2 CO_2

GB 1886.228-2016

4.1.2-6 CO_2

% ≥	**99.9**	99.9	-	A A.4
/ uL/L ≤	**20**	20	-	A A.5
O_2 uL/L ≤	**30**	30	-	A A.6
CO uL/L ≤	**10**	10	-	A A.7
/ mg/kg ≤	**-**	5	13	A A.8
/ mg/kg ≤	**-**	10	25	A A.9
NO uL/L ≤	**2.5**			A A.10
NO_2 uL/L ≤	**2.5**			A A.10

SO_2 uL/L ≤	**1.0**	A A.11
SO_2 S uL/L ≤	**0.1**	A A.11
CH_4 uL/L ≤	**50** **≤20**	A A.12
C_6H_6 uL/L ≤	**0.02**	A A.13
CH_3OH uL/L ≤	**10**	A A.13
CH_3CHO uL/L ≤	**0.2**	A A.13
CH_2CHO uL/L ≤	**1.0**	A A.13
CH_2CHCl uL/L ≤	**0.3**	A A.13
NH_3 uL/L ≤	**2.5**	A A.14
HCN uL/L ≤	**0.5**	A A.15

4.1.3

4.1.3-1

4.1.3-1

	1#	5000t/a	—	
	2#	—	25000t/a	
		300m³/h	—	
		8031t/a	34768t/a	
		12968t/a	39365t/a	
		2750m³/h 6000m³/h 5600m³/h 3000m³/h		
		1596 kWh/a 2 10.5/0.4kV 1250kVA 2 30		
		76000t/a	386000t/a	
		15 kcal/h 100 kcal/h 63 kcal/h		
		1.67m³/ min 10Nm³/min 6Nm³/min		
		400m³/h 2400m³/h 1000m³/h		
		2464m³ 1080m³		
		3.2m³/h 2400m³		
		4950m² 15%		
		810m² 7810m²		
		2452.9m² 12		
		4472m²		
		6m³/h 3.22m³/h 2.5m³/h		

		A/O 800m^3/d 389.5m^3/d 145.8m^3/d	
		G1 “ + + ” 15m P6	
		20000m^3/h G1 25m P5	
		“ + + + ” 15m P7	
		300m^2	
		4472m^2	

4.1.4

4.1.4.1

1

41799t/a

DN200

2750m^3/h

6000m^3/h 5600m^3/h

3000m^3/h

0.32%

70400m^3/a

2

6m^3/h

3.22m^3/h

2.5m^3/h

48553t/a

2880t/a

800m^3/d

389.5m^3/d 145.8m^3/d

3

4.1.4-1 4.1.4-2 +

4.1.4-3 4.1.4-4

1

4.1.4-1 /

2

4.1.4-2 /

3 +

4.1.4-3 + /

4

4.1.4-4

4.1.4-4 /

4.1.4.2

1596 kWh/a 304

2 10.5/0.4kV 1250kVA 2

30

4.1.4.3

1.67m^3/ min 10Nm^3/min

6Nm^3/min 2400m^3/h

1000m^3/h 400m^3/h

15~20

4.1.4-1

4.1.4-1

1	0.6MPa	Nm^3/h	100	
2	0.6MPa	Nm^3/h	300	
3	0.6MPa	Nm^3/h	100	

4.1.4.4

456000t/a

410400t/a 70400t/a 340000t/a

65t/h

4.1.4.5

50 2

R404A 5℃~15℃

15 kcal/h 100 kcal/h

63 kcal/h

4.1.4.6

100

GB50160-2008 2018 ≤1000000m²

1

GB50974-2014 100hm²

1.5

360m³/h 3 1080m³

2464m³

DN150 100m³/h 48h

2 Q=540m³/h H=80m

1 Q=36m3/h H=90m

DN250mm 60m

SS100/65-1.6

60m 40L/s -

DN250

5

4.1.4.7

1

2

4472m^2

3.1.3 3.1.3-2

12 4.1.4-2

4.1.4-2

								t	t	
1										
2										
3										
4										
5										
6										
7										

4.1.5

3.3

4.1.5-1

4.1.5-2 3.3

4.1.5-3

4.1.5-4

4.1.5-1 4.1.5-2

4.1.5-1

				m²	m²	
1						
2						
3						
4						
5						
6						
7						

4.1.5-2

1		m²	33000
2		m²	7350.7
3		m²	7524.0
4		%	45.0
5		m²	22.2
6		%	0.4
7		%	15

4.2

1# 2#

4.2.1

4.2.1.1

1

2

3

4.2.1.2

1

2

3

4.2.1-1

4.2.2

4.2.2-1 4.2.2-2

4.2.2-1

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4.2.2-2

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4.2.3

4.2.3.1

4.2.3-1

4.2.3-1

			t/a					
1								
2								
3								
4								

4.2.3.2

4.2.3-2

4.2.3-2

	[CH2CH2NH2]n 250℃ 1.070kg/L n20/D 1.5120 110℃			29320-38-5
	C4H13N3 103.17 0.03kPa/20℃ 94℃ -39℃ 207℃ =1 0.96 =1 3.48		LD_{50} 1080mg/kg ( );1090mg/kg( )	
	8.5℃ 116~117.2℃ 15.778mmHg at 25℃ 0.90g/cm^3 33.9℃ OC 43.3℃ CC 43℃ 1.4555-1.4575	385℃ 2.7~16.6%	-	107-15-3

	CAS 107-06-2 $C_2H_4Cl_2$ 98.97 =1 1.26 =1 3.35 -40℃ 83 84℃ -35℃	% 16.0 ℃ 413 ℃ 13 % 6.2	LD_{50} 670mg/kg( )	75-34-3
	NH_3 0.7710 0.5971(=1.00) (132.4℃ 11.2 112.2) -33.5℃ -77.75℃	25℃(77oF) 18603.1kj/kg 7999.3BTU/1b 16.1%(φ) 25%(φ)	-	1336-21-6
	CAS :1310-73-2 :NaOH :41.0045 : 318.4℃ 1390℃ (=1)1.37 : 739℃ : :			1310-73-2
	: 5 (=1) 1.00-1.10			

4.2.4

4.2.4.1

1

4.2.4-1 4.2.4-1

4.2.4-1

		kg/h	t/a			kg/h	t/a
99.9%							
5%				H1			
99.5%							
99%							
				H2			
H5							
				G1			
H6				G2			
H7							
H8							
H9							

4.2.4-1 **kg/h**

2

4.2.4-2 4.2.4-2

4.2.4-2

		kg/h	t/a			kg/h	t/a
H2				G3			
				G4			
				G5			
				G6			
				G7			
				H3			
				H4			
				H5			

4.2.4-2 kg/h

3

4.2.4-3 4.2.4-3

4.2.4-3

		kg/h	t/a			kg/h	t/a

4.2.4-3 **kg/h**

4.2.4.2

1

4.2.4-4 4.2.4-4

4.2.4-4

		kg/h	t/a			kg/h	t/a

4.2.4-4 **kg/h**

2

4.2.4-5 4.2.4-5

4.2.4-5

		kg/h	t/a			kg/h	t/a

3

4.2.4-6 4.2.4-6

4.2.4-6

		kg/h	t/a			kg/h	t/a

4.2.4-6 **kg/h**

4.2.4.3 +

1 +

4.2.4-7 4.2.4-7

4.2.4-7 +

		kg/h	t/a			kg/h	t/a

4.2.4-7 + kg/h

2 +

4.2.4-8 4.2.4-8

4.2.4-8 +

3 +

4.2.4-9 4.2.4-9

4.2.4-9 +

		kg/h	t/a			kg/h	t/a

4.2.4-9 + kg/h

4.2.4.4

1

4.2.4-9

4.2.4-9

1

4.2.4-11

4.2.4-11

	kg/h	t/a			kg/h	t/a

4.3

4.3.1

4.3.1.1

4.3.2

4.3.2-1

4.3.2-1

			(mm)	(mm)	m^3	t
1						
2						
3						
4						
5						
6						
7						
8						

4.3.3

4.3.3-1

4.3.3-1

1				
2				
3				

4.2.3-2

4.2.3-2

O_2%	N_2%	CO%	CO_2%	H_2O%	H_2Sppm	COSppm	CS_2ppm	SO_2ppm

4.3.4

4.3.4-1

4.3.4-1 **t/a**

		m^3/a		m^3/a			/	/

4.4

4.4.1

1

W1 151433.28t/a

125689.92t/a 25746t/a

COD2000mg/L SS1200mg/L 600mg/L 30mg/L 6m^3/h

W2

25758t/a 4293t/a 21465t/a

4.4.1-1

4.4.1-1

		(mg/L)	(t/a)			(mg/L)	(t/a)
		-	4291			-	4293
	COD	2000	8.582		COD	1200	5.152
	SS	1200	5.149		SS	720	3.091
		600	2.575			180	0.773
		900	3.863			270	1.159
		30	0.129			18	0.077
		-	21455			-	21465
	COD	2000	42.91		COD	1200	25.758
	SS	1200	25.746		SS	720	15.455
		600	12.873			180	3.864
		900	19.31			270	1.932
		30	0.644			18	0.386
		-	25746			-	25758
	COD	2000	51.492		COD	1200	30.91
	SS	1200	30.895		SS	720	18.546
+		600	15.448			180	4.636
		900	23.172			270	6.955
		30	0.772			18	0.464

2 W3

50t/ 600t/a 90

550t/a 90 t/a 460t/a

COD1000mg/L SS600mg/L 600mg/L 130mg/L 2mg/L

2mg/L

3 W4

10L/ m^2·

3 7715m^2 310t/a

250t/a 120t/a 130t/a

COD1000mg/L SS500mg/L 600mg/L

130mg/L

4 W5

G1

900t/a 150t/a

750t/a COD1000mg/L SS600mg/L

20mg/L 20mg/L

5 W6

70400t/a

4 17600t/a COD

SS COD 100mg/L SS

100mg/L 2000mg/L

6 W7

$q=10579(1 \quad 0.828\lg P)/(t+46.4)^{0.99}$

q (l/s·ha);

P ( ) P=2

t (min)

3.3 10 10

146.5t/ 30

4395t/a COD 600mg/L SS500mg/L 40mg/L

7 W8

80 20 60 150L/

3600t/a 80% 2880t/a 720t/a

2160t/a

4.4.1-2

4.4.1-3 + 4.4.1-4

4.4.1-2

	m^3/a		(mg/L)	(t/a)			(mg/L)	(t/a)	(mg/L)		(mg/L)	(t/a)	(mg/L)	
	4395	COD	600	2.637			—	12968	—		—	12968	—	
		SS	500	2.198		COD	248.349	3.221	500		50	0.648	50	
			40	0.176		SS	170.305	2.209	400		10	0.13	10	
	4293	COD	1200	5.152			2.613	0.034	50		5	0.065	5	
		SS	720	3.091			3.605	0.047	70		15	0.195	15	
			180	3.864			5.475	0.071	20		1	0.013	1	
			270	1.932			0.108	0.001	0.3		0.1	0.001	0.3	
			18	0.077			2.393	0.031	—		1.5	0.019	—	
	90	COD	1000	0.09			0.308	0.004	3		0.1	0.001	0.5	
		SS	600	0.054			493.523	6.4	5000		493.523	6.4	—	
			20	0.002										
			30	0.003										
			130	0.012										
			2	0.0002										
			2	0.0002										
	120	COD	1000	0.12										
		SS	500	0.06										
			20	0.002										
			30	0.003										
			130	0.016										
	150	COD	1000	0.15										
		SS	600	0.09										
			20	0.003										
			30	0.0045										
			20	0.003										
	3200	COD	100	0.32										
		SS	100	0.32										
			2000	6.4										
	720	COD	500	0.36										
		SS	400	0.288										
			35	0.025										
			60	0.043										
			5	0.004										

4.4.1-3

m^3/a		(mg/L)	(t/a)		(mg/L)	(t/a)	(mg/L)	(mg/L)	(t/a)	(mg/L)
	COD	1200	25.758		—	39365	—	—	39365	—
	SS	720	15.455	COD	310.108	12.207	500	50	1.968	50
21465		180	3.864	SS	160.307	6.310	400	10	0.394	10
		270	1.932		44.408	1.748	50	5	0.197	5
		18	0.386		57.037	2.245	70	15	0.59	15
	COD	1000	0.46		1.042	0.041	20	1	0.039	1
	SS	600	0.276		0.091	0.004	0.3	0.1	0.004	0.3
		20	0.009		2.387	0.094	—	1.5	0.059	—
460										

4.4.1-4 +

m^3/a		(mg/L)	(t/a)		(mg/L)	(t/a)	(mg/L)		(mg/L)	(t/a)	(mg/L)
	COD	600	2.637		—	52333	—		—	52333	—
4395	SS	500	2.198	COD	294.81	15.428	500		50	2.617	50
		40	0.176	SS	0						

4.4.2

4.4.2.1

1 G1

2 G2

3 G3

4 G4

5 G5

6 G6

7 G7

8 G8

9 G9

10 G10

11 G11

G2~G11

95%

6.88t/a 29.28t/a

4.4.2.2

5200m^3

18800m^3

0.02S / -

18.71 / -

1992 2.4kg/ m^3

GB17820-2018 ≤100 /

$SO_2$1.04kg/a NO_x 9.73kg/a

PM_{10}1.25kg/a $SO_2$3.76kg/a NO_x 35.19kg/a PM_{10}4.51kg/a

4.4.2.3

VOCs

266 VOCs 114

42.9% 0.036t/a 0.013t/a

VOCs0.021t/a

VOCs

5m 1500m^3

6 9000m^3/h 90%

“ + + ”

P3

4.4.2.4

139882t/a 52333t/a

37.4%

NH_3 H_2S VOCs 0.053t/a 0.027t/a 0.153t/a

VOCs

4.4.2.5

1

“ ”

$$L_W = 4.188\times10^{-7}\times M\times P\times K_N\times K_C$$

L_W— 20%

kg/m^3

K_N— N N≤36 K_N=1 N>220

K_N=0.26 36<N<220 K_N=11.467×N$^{-0.7026}$

KC— 1.0

M— g/mol

P—

80%

2

“ ”

( )

$$L_B \quad 0.191\times M\left(\frac{P}{101283-P}\right)^{0.68}\times D^{1.73}\times H^{0.51}\times \Delta T^{0.45}\times F_P\times C\times K_C$$

L_B 20%

kg/a

D— m 6

H— m 80% 1.8m

T— (℃) 12℃

Fp— 1 1.5 1.25

C— 0 9m C =1-0.0123(D -9)^2

9m C =1 6m C 0.8893

“ + + + ”

4.4.2-1

4.4.2-1

		m^3		t	t/a		Kn	M	P (kPa)	L_B kg/a	L_W kg/m^3	t/a
		250	4	1134	75076.8	66.21	0.6	98.97	15.33	596.2889	0.000382951	4.556
		250	2	455.4	12000	26.35	1	60.1	1.43	65.1555	3.59929E-05	2.761

4.4.2.6

G1

“ + + ” G1 15m

P6

25m P5

“ + + ” 15m

P7

P2~P4 2020 “VOCs

”

VOCs

4.4.2-2

4.4.2-2

		Nm^3/h		mg/m^3	kg/h	t/a		t/a		Nm3/h			mg/m^3	kg/h	t/a	mg/m^3	kg/h	m	℃	m
P3		9000		0.083	0.0008	0.006	90%	0.005	“ + + ”	9000		90%	0.008	0.00007	0.0005	/	4.9	0.5	25	15
				0.031	0.0003	0.002	90%	0.002				90%	0.003	0.00002	0.0002	/	0.33			
				0.040	0.0004	0.003	90%	0.003				52%	0.017	0.00015	0.0012	80	7.2			
P4		7525		0.148	0.0011	0.009	90%	0.008	“ + + ”	7525		90%	0.013	0.00010	0.0008	/	4.9	0.5	25	15
				0.074	0.0006	0.004	90%	0.004				90%	0.007	0.00005	0.0004	/	0.33			
				0.423	0.0032	0.025	90%	0.023				70.5%	0.112	0.00084	0.0068	80	7.2			
P5		2500		50	0.125	1	99%	0.99	+ +SNCR	12500		99%	0.131	0.003	0.021	/	14	0.5	120	25
				1000	2.5	20	99%	19.8				97%	0.206	0.004	0.033	/	1.5			
				200	0.5	4	99%	3.96				97%	17.925	0.359	2.868	60	13.1			
				55	0.138	1.1	99%	1.089			DMF	97%	1.106	0.022	0.177	30	2			
				63	0.158	1.26	99%	1.247			*	97%	53.328	0.933	7.464	80	26			
		2000		50	0.1	0.8	99%	0.792			SO_2	—	0.008	0.0001	0.001	200	/			
				937.5	1.875	15	99%	14.85			NOx	40%	42.8	0.535	4.281	200	/			
				578.125	1.156	9.25	99%	9.158				—	0.008	0.0001	0.001	20	/			
	N-	1500		83.333	0.125	1	99%	0.99												
				841.667	1.263	10.1	99%	9.999												
			NMF	1500	2.25	18	99%	17.82												
	-	2500		250	0.625	5	99%	4.95												
				237.5	0.594	4.75	99%	4.703												
			DMF	300	0.75	6	99%	5.94												
		2500		1617.955	8.899	71.19	99%	70.478												
				1255.455	6.905	55.24	99%	54.688												
				723.182	3.978	31.82	99%	31.502												
	1# G2~G11	1500		95.583	0.143	1.147	99%	1.135												
				406.667	0.61	4.88	99%	4.831												
P6	1# G1	3500		1547.143	5.415	43.32	99%	42.887	+ + +	3500		98%	30.571	0.107	0.858	—	4.9	0.5	25	15
				308.571	1.08	8.64	99%	8.554				98%	6	0.021	0.171	7	2.5			
												98%	6	0.021	0.171	80	7.2			
P7	1#	1250		44.800	0.056	0.445	90%	0.4	+ + +	2750		95%	1.818	0.005	0.041	7	2.5	0.5	25	15
				8.800	0.011	0.086	90%	0.078				98%	0.364	0.001	0.008	/	4.9			
				4.800	0.006	0.049	90%	0.044				95%	2.909	0.008	0.066	80	7.2			
		1500		63.333	0.095	0.759	99%	0.752												
				38.667	0.058	0.46	99%	0.456												

* NMF DMF

4.4.2-3

4.4.2-3

		Nm³/h		mg/m³	kg/h	t/a				Nm³/h			mg/m³	kg/h	t/a	mg/m³	kg/h	m	℃	m
P3		9000		0.417	0.0038	0.030	90%	0.027	“ + + ”	9000		90%	0.038	0.0003	0.0027	/	4.9	0.5	25	15
				0.153	0.0014	0.011	90%	0.010				90%	0.014	0.0001	0.0010	/	0.33			
				0.198	0.0018	0.014	90%	0.013				52%	0.086	0.0008	0.0062	80	7.2			
P4		7525		0.739	0.0056	0.045	90%	0.040	“ + + ”	7525		90%	0.067	0.0005	0.0040	/	4.9	0.5	25	15
				0.370	0.0028	0.022	90%	0.020				90%	0.033	0.0003	0.0020	/	0.33			
				2.114	0.0159	0.127	90%	0.115				70.50%	0.561	0.0042	0.0338	80	7.2			
P5	2# G2~G11	7500		95.55	0.7166	5.733	99%	5.676	+ +SNCR	7500		99%	0.946	0.0071	0.057	/	14	0.5	120	25
				406.667	3.0500	24.4	99%	24.156				97%	12.100	0.0908	0.726	80	26			
	—										SO_2	—	0.067	0.0005	0.004	200	/			
											NOx	40%	26.533	0.1990	1.592	200	/			
												—	0.083	0.0006	0.005	20	/			
P6	2# G1	17500		1547.143	27.075	216.60	99%	214.434	+ + +	17500		98%	30.633	0.5361	4.28868	/	4.9	0.5	25	15
				308.571	5.4	43.20	99%	42.768				98%	6.110	0.1069	0.85536	7	2.5			
												98%	6.110	0.1069	0.85536	80	7.2			
P7	2#	6250		44.460	0.278	2.223	90%	2.001	+ + +	7750		95%	3.355	0.0260	0.208	7	2.5	0.5	25	15
				8.640	0.054	0.432	90%	0.389				98%	0.645	0.0050	0.04	/	4.9			
				4.880	0.031	0.244	90%	0.220				95%	5.371	0.0416	0.333	80	7.2			
		1500		316.417	0.475	3.797	99%	3.759												
				191.750	0.288	2.301	99%	2.278												

4.4.2-4

4.4.2-4

		Nm³/h		mg/m³	kg/h	t/a		t/a		Nm3/h			mg/m3	kg/h	t/a	mg/m³	kg/h	m	℃	m
P2		7000		0.714	0.005	0.04	90%	0.036	“ + + ”	7000		95%	0.029	0.0002	0.002	/	4.9	0.5	25	15
				5	0.035	0.282	90%	0.254				85%	0.043	0.0003	0.002	/	0.54			
				2.286	0.016	0.127	90%	0.114				85%	3.286	0.023	0.184	60	3.6			
				0.286	0.002	0.016	90%	0.014			DMF	85%	0.2	0.0014	0.011	30	0.54			
				3.714	0.026	0.211	90%	0.19			*	85%	8.643	0.0605	0.484	80	7.2			
				24.286	0.17	1.361	90%	1.225												
				13.857	0.097	0.778	90%	0.701												
				8	0.056	0.448	90%	0.404												
				0.429	0.003	0.025	90%	0.023												
			NMF	4.571	0.032	0.254	90%	0.228												
			DMF	1.571	0.011	0.085	90%	0.076												
P3		9000		1.667	0.015	0.12	90%	0.108	“ + + ”	9000		90%	0.111	0.001	0.0108	/	4.9	0.5	25	15
				0.667	0.006	0.044	90%	0.04				90%	0.056	0.0005	0.004	/	0.33			
				0.778	0.007	0.057	90%	0.0515				52%	0.333	0.003	0.025	80	7.2			
P4		7525		2.924	0.022	0.178	90%	0.16	“ + + ”	7525		90%	0.266	0.002	0.016	/	4.9	0.5	25	15
				1.462	0.011	0.089	90%	0.08				90%	0.133	0.001	0.008	/	0.33			
				8.505	0.064	0.509	90%	0.458				70.50%	2.259	0.017	0.135	80	7.2			
P5		1500		50	0.125	1	99%	0.99	+ +SNCR	20000		99%	0.488	0.01	0.078	-	14	1	120	25
				1000	2.5	20	99%	19.8				97%	0.206	0.004	0.033	-	1.5			
				200	0.5	4	99%	3.96				97%	17.925	0.359	2.868	60	13.1			

				55	0.138	1.1	99%	1.089			DMF	97%	1.106	0.022	0.177	30	2			
				63	0.158	1.26	99%	1.247			**	97%	51.187	1.023	8.19	80	26			
		2000		50	0.1	0.8	99%	0.792			SO_2	—	0.03	0.0006	0.005	200	—			
				937.5	1.875	15	99%	14.85			NOx	40%	36.706	0.734	5.873	200	—			
				578.125	1.156	9.25	99%	9.158				—	0.038	0.001	0.006	20	—			
	N-	1500		83.333	0.125	1	99%	0.99												
				841.667	1.263	10.1	99%	9.999												
			NMF	1500	2.25	18	99%	17.82												
	-	2500		250	0.625	5	99%	4.95												
				237.5	0.594	4.75	99%	4.703												
			DMF	300	0.75	6	99%	5.94												
		1500		1617.955	8.899	71.19	99%	70.478												
				1255.455	6.905	55.24	99%	54.688												
				723.182	3.978	31.82	99%	31.502												
	G2~G11	9000		95.556	0.86	6.88	99%	6.811												
				406.667	3.66	29.28	99%	28.987												
P6	G1	21000		1547.143	32.49	259.92	99%	257.321	+			98%	30.619	0.643	5.146	—	4.9			
				308.571	6.48	51.84	99%	51.322	+ +	21000		98%	6.095	0.128	1.026	7	2.5	0.5	25	15
												98%	6.095	0.128	1.026	80	7.2			
P7		7500		44.467	0.3335	2.668	90%	2.4012				95%	3.456	0.031	0.249	7	2.5			
				8.64	0.0648	0.518	90%	0.467				98%	0.667	0.006	0.048	/	4.9			
				4.88	0.0366	0.293	90%	0.264	+ +	9000		95%	5.537	0.05	0.399	80	7.2	0.5	25	15
		1500		379.63	0.569	4.556	99%	4.51												
				230.08	0.345	2.761	99%	2.733												

* NMF DMF

** NMF DMF

4.4.2.7

1

99% 0.267t/a 0.052t/a 0.081t/a

2

90% 0.004t/a 0.001t/a 0.001t/a

3

90% 0.006t/a 0.002t/a 0.014t/a

4

“ ”

99% “ ”

4.4.2-5

4.4.2-5

			t/a	m	m	m^2	m
1			0.267	54	35	1890	10
			0.052				
			0.081				
2			0.046	61	40	2440	6
			0.074				
3			0.004	30	10	300	5
			0.001				
			0.001				
4			0.006	50	10	500	6
			0.002				
			0.014				

4.4.3

1

94811t/a “ +

” 4.2.3 99.1% 0.4%

0.2% 0.3%

2019 1

4.4.3-1

4.4.3-1

1	g/100g	99.41
2	g/100g	0.03
3	g/100g	0.1
4	Mg^{2+} g/100g	0.031
5	$SO4^{2-}$ g/100g	0.0022

LD_{50}

5000mg/kg

(2021)

(2021)

HJ/T 298

GB5085.7

2

115t/a 4.33t/a

3

$$S=K_4Q+K_3C$$

S— 80% t/a

K_3— /

- (2010) 3

2.44~6.55 6.55

K_4— /

(2010) 3

3.8~11.3 10.5

Q— t/a 52333t/a

C— t/a 20t/a

80%

186t/a 54t/a 30% 9t/a

45t/a

4

1t/a 5t/a

4t/a

5

5

18m^3 0.72-0.80g/ml

14t/

6

5t/a 25t/a

30t/a

7

G1

5.93t/a

30t/a

VOCs

[2022]218

$T=m\times s\div c\times10^{-6}\times Q\times t$

T——

m—— kg

s—— % 10%

c—— VOCs mg/m^3

Q—— m^3/h

t—— h/d

T=42

[2021]218

500 3 1

8

1kg/d 20 60

80 6.6t/a 19.8t/a

26.4t/a

4.4.3-2

4.4.3-3

4.4.3-3

					t/a					
							+			GB34330-2017
1					15801.84	79009.2	94811.04	√		4.2m
2					115	0	115	√		4.1 c
3					4.33	0	4.33	√		
4					5	25	30	√		
5					9	45	54	√		4.3 e
6					1	5	6	√		
7					14t/			√		
8					5	25	30	√		4.3m
9					6.6	19.8	26.4	√		5.1b

4.4.3-4

								t/a	t/a	t/a				
1				—	—	—		15801.84	79009.2	94811.04				
2				HW49	900-041-49	T		115	0	115				
3				HW49	900-041-49	T		4.33	0	4.33				
4				HW49	900-041-49	T		5	25	30				
5				HW49	772-006-49	T		9	45	54				
6				HW49	900-000-49	T		1	5	6				
7				HW13	900-015-13	T		14t/						
8				HW49	900-039-49	T		5	25	30				
9			—	—	—	—		6.6	19.8	26.4				

4.4.4

4.4.4-1

4.4.4-1

			dB(A		X	Y	Z			
1	1#		85	74	0	28.5	0.5		20	
2			85	3	15.7	24.2	1.2		15	
3			85	2	-4.1	33.7	1.5		15	
			85	1	-23.5	18.7	1.2		15	
4	2#		85	30	0	0	0.5		20	
5			85	2	8.5	1.2	1.2		15	
6			85	2	4.1	5.2	1.5		15	
7			85	1	170.4	-107.3	0.5		15	
8			80	22	-31.3	-56.2	0.5		20	
9			80	3	50.9	50.7	0.5		20	
10			85	2	-14.4	64.5	0.5		20	
11			85	1	9.1	95.2	0.5		20	
12			80	2	88.9	-101.5	0.5		/	
13			85	2	89.5	-108.4	0.5		20	
14			85	2	88.8	-113.5	0.5		20	
15			85	2	22.8	-59.6	1.5		15	
16			85	1	153.5	-54.6	0.5		20	

0,0 118°21′57.415″N, 34°06′34.019″E X/Y

4.4.5

4.4.5.1

( ) VOCs

1

“ + + + ”

2

( )

3

4

4.4.5.2

1

DCS DCS

2

3

4

4.4.5.3

1

2

1 50%

2

30%

130%

4.4.5-1

4.4.5-1

	m^3/h										
			mg/m^3	kg/h	m	m	℃				
P5	20000		24.38	0.49	25	1.0	120		1~2h/	1~2 /	
			27.81	0.56							
			3.44	0.07							
			298.75	5.98							
			170.94	3.42							
			73.44	1.47							
		DMF	18.44	0.37							
			260.31	5.21							
		SO_2	0.60	0.01							
		NOx	36.71	0.73							
		PM_{10}	0.04	0.001							

4.4.6

4.4.6-1

4.4.6-2 +

4.4.6-3 4.4.6-4

4.4.6-1 t/a

		12968	0	12968	12968
	COD	12.259	9.038	3.221	0.648
	SS	8.159	5.95	2.209	0.130
		2.607	2.573	0.034	0.065
		3.9165	3.8695	0.047	0.195
		0.204	0.133	0.071	0.013
		0.0032	0.0022	0.001	0.001
		0.1292	0.0982	0.031	0.019
		0.004	0	0.004	0.001
		6.4	0	6.4	6.4
		45.425	44.537	/	0.888
		0.006	0.0054		0.0006
		1.089	1.056	/	0.033
		95.585	92.717	/	2.868
	DMF	5.940	5.763	/	0.177
		9.384	9.172	/	0.212
		266.706	258.997	/	7.709
	SO_2	0.001	0	/	0.001
	NOx	7.135	2.854	/	4.281
		0.001	0	/	0.001
		15801.84	15801.84	/	0
		115	115	/	0
		4.33	4.33	/	0
		5	5	/	0
		9	9	/	0
		1	1	/	0
		14t/	14t/	/	0
		5	5	/	0
		6.6	6.6	/	0

4.4.6-2 t/a

		39365	0	39365	39365
	COD	46.77	34.563	12.207	1.968
	SS	28.841	22.531	6.31	0.394
		12.976	11.228	1.748	0.197
		19.4805	17.2355	2.245	0.590
		0.077	0.036	0.041	0.039
		0.016	0.012	0.004	0.004
		0.645	0.551	0.094	0.059
		0.011	0.004	0.010	0.004
		28.8	0	28.8	28.8
		222.177	217.785	/	4.392
		0.03	0.027	/	0.003
		46.916	45.853	/	1.063
		73.697	71.743	/	1.954
	SO_2	0.004	/	/	0.004
	NOx	2.653	1.061	/	1.592

		0.005	/	/	0.005
		79009.2	79009.2	/	0
		25	25	/	0
		45	45	/	0
		5	5	/	0
		14t/	14t/	/	0
		25	25	/	0
		19.8	19.8	/	0

4.4.6-3 + t/a

		52333	0	52333	52333
	COD	59.029	43.601	15.428	2.617
	SS	37	28.481	8.519	0.523
		15.583	13.801	1.782	0.262
		23.396	21.104	2.292	0.785
		0.281	0.169	0.112	0.052
		0.019	0.014	0.005	0.005
		0.773	0.648	0.125	0.078
		0.014	0	0.014	0.005
		35.2	0	35.2	35.2
		267.602	262.322	/	5.28
		0.036	0.0324	/	0.0036
		1.089	1.056	/	0.033
		95.585	92.717	/	2.868
	DMF	5.94	5.763	/	0.177
		56.3	55.025	/	1.275
		340.403	330.74	0	9.663
	SO_2	0.005	/	/	0.005
	NOx	9.788	3.915	/	5.873
		0.006	/	/	0.006
		94811.04	94811.04	/	0
		115	115	/	0
		4.33	4.33	/	0
		30	30	/	0
		54	54	/	0
		6	6	/	0
		14t/	14t/	/	0
		30	30	/	0
		26.4	26.4	/	0

4.4.6-4 t/a

				/					
		139882	139882	52333	0	192215	192215	+52333	52333
	COD	8.694	8.405	15.428	0	23.833	23.833	+15.428	15.139
	SS	5.458	2.219	8.519	0	10.738	10.738	+8.519	5.28
		1.76	0.243	1.782	0	2.025	2.025	+1.782	0.265
		10.17*	6.970	2.292	0	9.262	9.262	+2.292	0
		0.214	0.051	0.112	0	0.163	0.163	+0.112	0
		0	0	0.005	0	0.005	0.005	+0.005	0.005
		0	0	0.125	0	0.125	0.125	+0.125	0.125
		0.007	0.006	0.014	0	0.02	0.02	+0.014	0.013
		0	115.92	35.2	0	151.12	151.12	+35.2	151.12
		0	0.0208	5.28	0	5.3008	5.3008	+5.28	5.3008
		0.08	0.0884	0.0036	0.08	0.012	0.012	+0.0036	0
		0	0.002	0.033	0	0.035	0.035	+0.033	0.033
		0	0.184	2.868	0	3.052	3.052	+2.868	2.868
	DMF	0	0.011	0.177	0	0.188	0.188	+0.177	0.177
		0	0	1.275	0	1.275	1.275	+1.275	1.275
	VOCs	0.644*	0.644	9.663	0	10.307	10.307	+9.663	9.663
	SO_2	0.4	0.4	0.005	0.4	0.005	0.005	+0.005	0.005
	NOx	0	0	5.873	0	5.873	5.873	+5.873	5.873
		0	0	0.006	0	0.006	0.006	+0.006	0.006
	CO	1.52	1.52	0	1.52	0	0	-1.52	0
	/	0	0	0	0	0	0	0	0

* VOCs

4.5

4.5.1

4.5.1.1

HJ169-2018

B 4.4.5-1

/ CO

4.5.1-1

4.5.1-1

4.5.1-1

			℃	℃	℃						
1	107-15-3		8.5	116	33.9	385℃ 2.7~16.6%		LD_{50} 1298mg/kg( )	3	GB30000.18	
2	1336-21-6		-77.75	-33.5	-	16.1%(φ) 25%(φ)		LD50 350mg/kg	2	GB30000.18	
3	75-34-3		-35	83	13	6.2%~16%		LD_{50} 670mg/kg( )	3	GB30000.18	
4	29320-38-5		-	250	110	-			-	-	
5	111-40-0		-39	207	94	-		LD_{50} 1080mg/kg ( );1090mg/kg( )	3	GB30000.18	
6	1310-73-2		318.4	1390	-	-			-	-	
7	630-08-0		-	-	-	-		LC50:2069mg/m^3 4h	3	GB30000.18	
8	10102-44-0		-11	21	-	-		LC50:126mg/m^3 4	1	GB30000.18	
9	75-44-5		-118	8.2	-	-		LC50:1400mg/m^3 1/2	2	GB30000.18	
10	HCl 7647-01-0		-114.2	-85	-	-		LD50:900mg/kg	4	GB30000.18	
11		-	-	-	-	-	-		-	-	

4.5.1.2

4.5.1-2

4.5.1-2

			t
			9.38
			1.499
			2.234
			1.509
			6.877
			2.895
			1134
			432
			432
			455.4
			408.8
			3
		NMF	
		DMF	
			115
			4.33
			36
			6
			14
			129
			30

C C.1

[2009]116

[2013]3

1

2 20℃ 15%~27%

3

4

4.5.1-3

4.5.1-3

			/	
			/	
		HCl	/	
		HCl	/	
		NMF DMF		
			/	

4.5.1.3

1

2

3

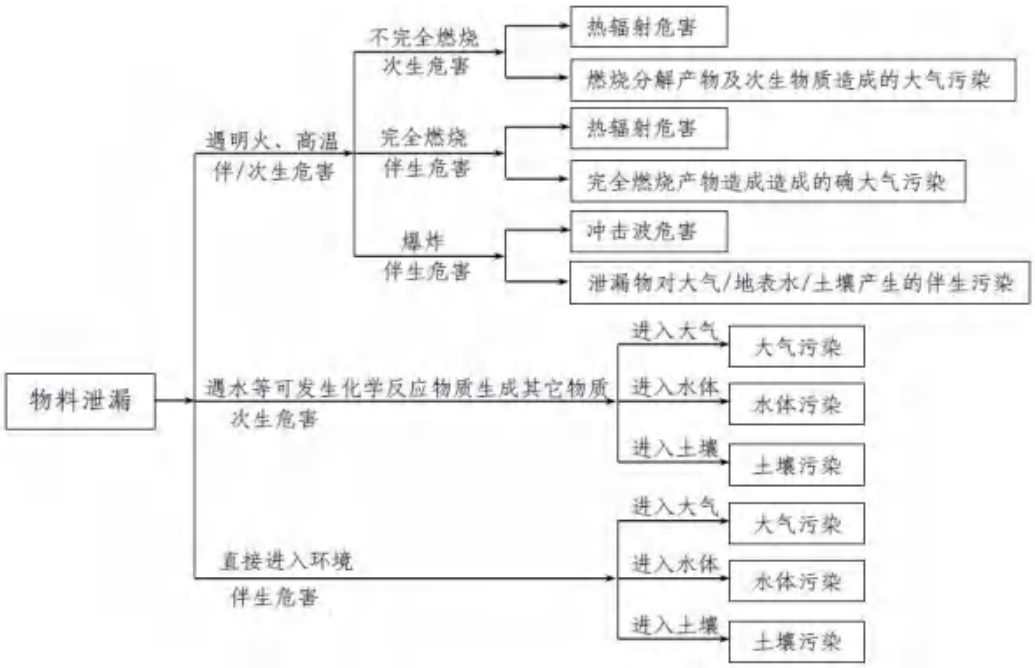
4.5.1.4 /

/

CO_2 CO HCl

/

4.5-1



4.5.1-1

4.5.1.5

4.5.1-4

4.5-4

1						/	
2							
3						/	
4						/	—
5				/			—
6			pH COD			/	—
				/			—
7						/	—

					/	—

4.5.2

4.5.2.1

1 2400m^3

< >

[2006]43

“ ”

[2006]43

$V = V_1 + V_2 - V_3 \quad _{max} + V_4 + V_5$

$V_1 + V_2 - V_3$ max V1+ V_2- V_3

V_1—

V_2— m^3

V_3— m^3

V_4— m^3

V_5— m^3

1 V_1

1000m^3

2 V_2

GB50974-2014

360m^3/h 3 1080m^3

3 V_3

1500m^3

4 V_4

3.22m^3/h 3h

9.66m^3

5 V_5

146.5m^3/

6 V

V = 1000+1080-1500 +9.66+146.5=736.16m^3

736.16m^3

1020m^3 2400m^3

4.5.2.2

(GB18597-2023)

6.4

4.5.2.3

1

2

1

C H O Cl / CO

/ CO CO

/ CO HCl

2

3

HJ169-2018 E 4.5.2-1

4.5.2-1

/ / /	10 mm 4000 min	1.00×10^{-4} /a 5.00×10^{-5} /a 6.00×10^{-6} /a
	10 mm 10 min	1.00×10^{-4} /a 5.00×10^{-6} /a 5.00×10^{-6} /a
	10 mm 10 min	1.00×10^{-4} /a 1.25×10^{-8} /a 1.25×10^{-8} /a
		1.00×10^{-8} /a
≤75mm	10%	5.00×10^{-6} / m·a 1.00×10^{-6} / m·a
75mm≤ ≤150mm	10%	2.00×10^{-6} / m·a 3.00×10^{-7} / m·a
150mm	10% 50 mm	2.40×10^{-6} / m·a 1.00×10^{-7} / m·a
	10% 50 mm	5.00×10^{-4} /a 1.00×10^{-4} /a

28.6% 42.8% 4.5.2-2

4.5.2-2

	1	2	3	1	7
%	14.3	28.6	42.8	14.3	100
	2	1	2	2	7
%	28.6	14.3	28.6	28.6	100

CO HCl

/

4.5.3

4.5.3.1

30min 30

F 1.5m/s

25℃ 50% 3 1

20

D 2.2m/s 27.2℃ 70.5%

1

Bernoulli

$$Q_L = C_d A\rho\sqrt{\frac{2(P-P_0)}{\rho}+2gh}$$

Q_L— kg/s

C_d—

A— m^2

P— Pa

P_0— Pa

ρ——

g— 9.81m/s^2

h— m

1

$$F_v = \frac{C_p(T_T - T_b)}{H_v}$$

$Q_l=Q_L\times F_v$

F_v——

T_T—— K

T_b—— K

H_v—— J/kg

C_p—— J/(kg·K)

Q_1—— kg/s

Q_L—— kg/s

2

$$Q_2 = \frac{\lambda S\left(T_0 - T_b\right)}{H\sqrt{\pi \alpha t}}$$

Q_2—— kg/s

T_0—— K

T_b—— K

H—— J/kg

t—— s

λ—— W/ m·K

S—— m^2

α—— m^2/s

3

$$Q_3 = \alpha p \frac{M}{RT_0} u^{\frac{(2-n)}{(2+n)}} r^{\frac{(4+n)}{(2+n)}}$$

Q_3—— kg/s

p—— Pa

R—— J/ mol·K

T_0—— K

M—— kg/mol

u—— m/s

r—— m

α n——

$$W_p = Q_1 t_1 + Q_2 t_2 + Q_3 t_3$$

W_p—— kg

Q_1—— kg/s

Q_2—— kg/s

Q_3—— kg/s

t_1—— s

t_2—— s

t_3 —— s

10 m

1

= 0.1343893 (atm)

= 1.0003E-01 (kg/s)

= 25 (°C)

= 1.5697E+00 (kg/m^3)

5.4360E-01 (Kg/m^3)

= 1.0003E-01 (kg/s), 6001.571 (g/mim)

= 1.1511E+00 (Kg/m^3)

Ri = 0.1548203 Ri<1/6 AFTOX

= 0.1290056 (atm), (ANTOINE)

= 8.2780E-02 (kg/s)

= 25 (°C)

= 1.5543E+00 (kg/m^3)

5.2182E-01 (kg/m^3)

= 8.2780E-02 (kg/s) 4966.806 (g/mim)

= 1.1854E+00 (kg/m^3)

Ri = 0.166116,Ri<1/6 AFTOX

2

= 1.43 (atm)

= 5.5746E-01 (kg/s)

= 25 (℃)

= 2.4574E+00 (kg/m3)

= 5.5746E-01 (kg/s), 33447.52 (g/mim)

= 1.1854E+00 (Kg/m3)

Ri = 0.4068004,Ri≥1/6 SLAB

= 1.43 (atm)

= 5.6998E-01 (kg/s)

= 25 (℃)

= 2.4574E+00 (kg/m3)

= 5.6998E-01 (kg/s), 34198.54 (g/mim)

= 1.1511E+00 (Kg/m3)

Ri = 0.3558551,Ri≥1/6 SLAB

3

HJ169-2018 F.1.1

Φ100 100% 20% A

$$A = \left(\frac{100 \times 0.2}{1000}\right)^2 \times \pi / 4 = 0.000314 m^2$$

Bernoulli

3.256kg 15

2930.4kg

= 0.18

= 0.82

= -33.35 (℃)

= 4.7085E+00 (Kg/m3)

= 6.8280E+02 (Kg/m3)

= 8.6548E-01 (Kg/m3)

=85.83 (m2)

= 62930.4(kg)

=7.25 (m)

= 1.1511E+00 (Kg/m3)

SLAB

4.5.3.2 /

/

HCl

1

$$m_f = \frac{0.001H_c}{C_p(T_b - T_a) + H_V}$$

m_f—— kg/(m^2·s)

H_c—— J/kg

C_p—— J/(kg·K)

T_b—— K

T_a——

H_V—— J/kg

80m^2

4.5.3-1

H_c J/kg	1891.9	1244.8
C_p J/(kg·K)	2.95×10^3	1.169×10^3
T_b K	390.3	356.65
T_a K	298.15 307.03	298.15 307.03
H_V J/kg	2035900	357130
m_f kg/(m²·s)	0.0076 0.069	0.021
a m²	80	80
kg/s	0.61 0.55	1.71 1.45

2 CO

CO

Gco=2330qCQ

Gco——CO kg/s

C —— C

q—— % 5%

Q—— t/s

4.5.3-2 CO

Q t/s		6.1×10^{-4}	1.71×10^{-3}
		5.5×10^{-4}	1.45×10^{-3}
C		39.93%	24.25%
q		5%	5%
G_{CO} kg/s		0.028	0.048
		0.026	0.041

3 HCl

HCl HCl

G_{HCl}=1028×CQ

G_{HCl}—HCl g/s

C— % 71.74%

HCl 0.426kg/s

0.34kg/s

4

NO_2 NO_2

0.284kg/s 0.256kg/s

5

5%

0.0855kg/s 0.0725kg/s

4.5.3-3

4.5.3-3

					kg/s		min m	kg	kg/s
1						3.256	15	2930.4	/
						3.256		2930.4	/
2						1.2302E+01	15	11071.8	0.08278
						1.2171E+01		10953.9	0.1
						6.1757		5558.13	0.55746
						6.1757		5558.13	0.56998
3			CO			0.028	15	25.2	/
						0.026		23.4	/
			NO2			0.284		255.6	/
						0.256		230.4	/
4			CO			0.048	15	43.2	/
						0.048		43.2	/
			HCl			0.426		1103.4	/
						0.34		936	/
						0.0855		76.95	/
						0.0725		65.25	/

4.6

4.6.1

EDC

1

2 EDC

3

4

60%

5

6

4.6.2

1 DCS

2

3

UPS

4

5

6

7

( ) (

) (2010)

(2019 2021)

4.6.3

4.6.4

4.6.5

“

”

5

5.1

4.1-1

33°8' 34°25' 117°56' 119°10'

71.2m 2.8m

15km

30km

30km 20km 80km 100km

5.2

5.2.1

8

N_2S

24m 17m

5.2.2

—

- —

5.2.3

(2007 12)

1

1 : ~

:0.50 1.80m 0.93m :14.06 15.33m 14.90m

:0.50 1.80m 0.93m

2-1 :

:0.70 1.70m 1.08m 13.20 14.23m 13.78m

1.60 2.60m 2.04m

2-2 : ~

:0.50 2.20m 1.14m :12.34 14.01m 13.15m

:1.80 3.50m 2.67m

2 :

:0.60 5.30m, 3.00m :9.79 14.14m 11.65m

:1.70 6.00m 4.17m

3 :

:0.00 5.80m 1.86m :4.92

11.72m 9.88m :4.10 10.90m 5.94m

4-1 :

:1.10 1.30m 1.20m :7.20 7.32m 7.26m

:8.50 8.60m 8.55m

4 :

:0.50 5.30m 2.33m

:5.32 9.92m 7.75m :5.90 10.50m 8.07m

5-1 :

:-1.60 8.60m, 1.53m :0.73 9.22m

7.01m :6.60 15.10m 8.81m

5 :

:6.50 9.30m 7.97m :-1.96

-0.98m -1.43m :16.80 17.80m 17.27m

6 :

6.30m

100m

2 Q

20.00m

1 8.10 m 40.5 4 11.90m 59.5

0.68

2.0m

4.86m

12.10m PH 7.21 7.56 458 520mg/l

HCO_3—Ca

2.00m

5.2-1

5.2-2

5.2-1

	(m)	(m)	(m)	(m)	(m)	(m)
8	4.60	4.80	4.68	38.26	38.57	38.41

5.2-2

	(m)	(m)	(m)	(m)	(m)	(m)
8	4.80	5.00	4.86	38.06	38.37	38.22

4.86m

38.37m 2.00m

40.37m

5.2-3

5.2-3

		K_v (cm/s)
2		1.40×10^{-5}
3		4.19×10^{-5}
4		6.57×10^{-5}

4.86m

38.37m

5.2.4

5.2-4

375

7.5

2 km

5.2-1

5.2-4

	——	m^3/s				
	-	6900	146km 77.8km	1.3 3km		IV III
	—		13 km			IV
	—		5 km			IV
	(—		68.85km	4 95m		III
	—		113.6km	20 90m		IV (2010) III (2020)
	—	1040	111.15km			III
	—	1240	111km	45-102m		III
	—		10.5km	250		III
	—	3150	26.13km	350-360m		III
	—	1720	31.8km	20—130m		III
	—		19km	40-20m		III
	—		29.15km	30-54m		III
	—		18.65km	115m		IV (2010) III (2020)

5.2.5

20 2002~2021

4.2-5 33°59 N 118°16

E 27.8

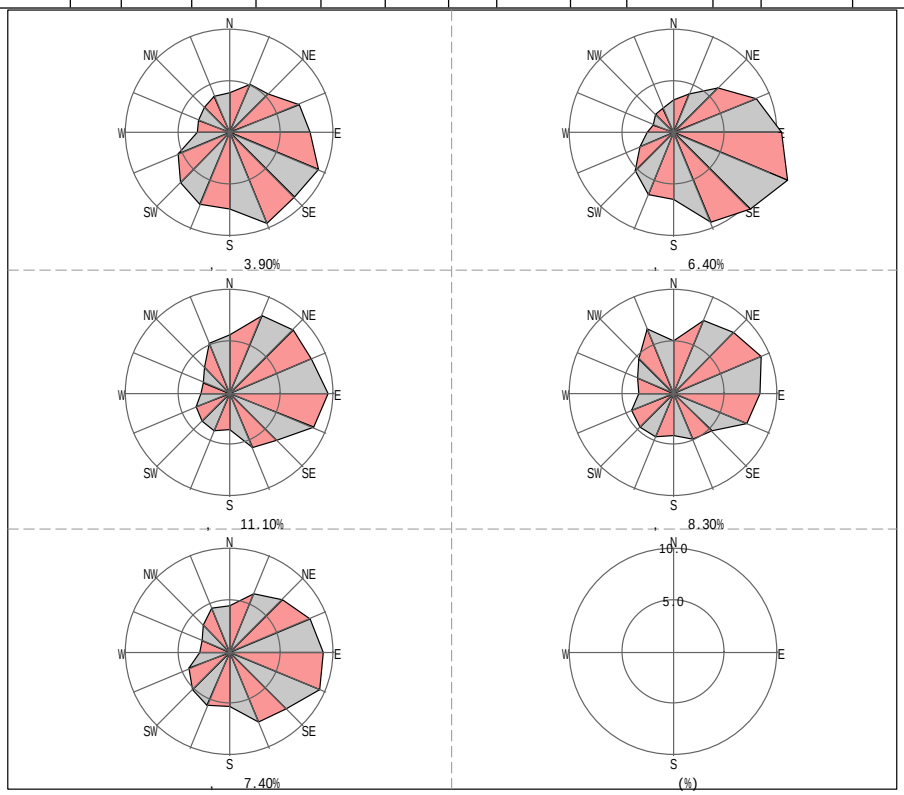
5.2-5　　20

	20　　℃	15.2
	℃	38.6
	℃	-13.4
		70.5
		89
		49
	(　　)	1518.0
	(　　)	537.8
	(　　)	939.3
	(　)	208
	(　　)	2069.4
	(m/s)	2.2
	10	32.9

5.2-6　　5.2-2

5.2-6　　%

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	C
	3.9	5.0	5.3	7.2	7.7	9.2	8.8	9.4	7.3	7.4	6.7	5.4	3.1	3.2	3.5	3.8	3.9
	3.2	4.0	6.1	8.6	10.4	11.8	10.4	9.3	6.4	6.4	5.2	3.5	2.5	2.1	2.5	2.6	6.4
	5.6	8.0	8.6	8.5	9.4	8.7	6.4	5.7	3.5	3.9	3.8	3.5	2.8	2.7	3.5	5.2	11.1
	5.0	7.5	8.2	9.1	8.3	7.6	5.2	4.8	4.1	4.6	4.6	4.4	3.3	3.7	4.7	6.7	8.3
	4.4	6.1	7.1	8.4	9.0	9.4	7.7	7.3	5.3	5.6	5.1	4.2	2.9	2.9	3.6	4.6	7.4



5.2-2

ENE ESE 26.7%

E SE 32.7%

939.3mm 2003 1555.0mm 2003 2005 2007

1000mm 2004 551.4mm

6-8 2003 6-8 1063.2mm

68.4% 2004 6-8 222.3mm

40.3%

1518.0mm 537.8mm 250.9mm

2004 7 19 4 6-9

6 7 20

≥0.1mm 91.4 143 47

5.2.6

6700

610

400 4 280

49

23

7

11

5.3

5.3.1

5.3.1.1

5.3.1-1 SO_2

NOx HCl

VOCs

5.3.1-2

47.45%

15.04% 6.33%

5.46%

5.3.1.2

11

5.3.1-3

5.3.1-4 SO_2 NOx HCl

VOCs

5.3.1-5

56.59% 17.30%

13.55% 12.57%

5.3.1-1 **t/a**

		SO2		NOX	HCl											HF	TEQg	VOC	CO	CS2				
1		0.041	0.0304	3.744	0.0908	0.4415			1.277		1.853		1.24		0.203			16.247						
2					0.002				0.188									5.124		0.046				
3					0.0104			0.056	0.096		0.054							0.654						
4		3.55	5.106	2.88	2.25	3.086												3.055						
5			2.627		2.482			0.732	0.962									37.914						
6					0.126				1.511		0.696	0.338						3.942						
7		0.033	0.748	0.182	0.3016				0.201		0.327		0.058		0.07			5.566						
8			0.03						0.265		0.242			0.031				2.005						
9		0.0261	0.084	2.65			0.00047		0.395			2.108	0.0006		2.628			7.555						
10		0.836	0.529	2.01	4.779		0.018		0.3645	0.023		0.34	0.763				0.32296	14.783	19.297					
11			0.294						0.2936			1.268	0.382		0.004			2.366						
12		77.02	31.06	300									10											
13			0.2	2.27	0.24	0.04			1.71		0.943		0.3					6.683						
14			1.8																					
15		36.1	11.729	54.1	9		0.39	1.489					0.205			0.9	0.081	38.461			0.009	0.09	0.09	0.009
16					0.545		0.00126		1.208		2.703		0.1418					6.092						
17			0.215						0.7135		5.128							7.1717						
18		1.932									0.229	0.462			0.369			3.212						
19						0.336																	0.382	
20		1.366			0.452				2.12		0.8		0.149		0.093			24.884						
21			3.53		1.11							0.62		0.69				2.73						
22			0.81			0.033												3.81						
23		161.27	38.94	202.88	0.41	2.21	44.33									0.16	1.4×10^{-4}			214.24	1×10^{-6}	3×10^{-6}	1.6×10^{-5}	1.1×10^{-4}
24	/	0	0	0			0.0002						0.022					3.415						
25		8.467	4.76	6.3	17.4		0.52		9.338		3.978	0.03		0.04	0.1			35.042						
26																		0.624						
27	( )	199.17	39.393	88.64														0						
28		1.7	1.6	3.4	1.687								2.581					2.821						
29			3.52	2.847	0.62								10.86					7.42						
30		8.07			0.873				4.12	0.3	0.158		0.054					10.556						
31			0.7		0.17	1.92												0.5						
32		0.996	0.064			0.2641	0.006						0.4133					5.2872						
33			0.23		0.105						0.033	0.1709						0.7867						
34		0.00076			0.0124	0.00012												0						
35			0			1.4271												0					0.3518	
36		6.5681	3.838	47.682	1.037		0.0083		0.065			1.529	0.348		0.926	0.158	0.0108	4.6086	3.24					
37		0.4305	4.7335	1.755		0.0973	0.0019						0.056					0						
38			0.005		3.78×10-4	1.4×10-5						0.018						0.207						
39		0	0	0			0.08						0.5					2.16	1.52					
40		33.8	21.84	85.3	15.6		0.4						2.35			2.08	0.052	20.85	14.53		0.0078		0.12	0.0052
41			0.022								0.264							1.0047						
42			0						0.27									0.3375						
43		0.0019	0.0626	0.0936			0.0048		0.057		0.057	0.057	0.0475		0.057			1.8425						
44						0.025			0.99		1.54							2.955						
45			0.64		1			1.2										0						
46		0.1159	0.4596	0.5429	0.365	0.468												0.0063						
47							0.0414						2.17					0						
48																		0						
49		0.062			0.11	1×10-6	0.0013	0.427	3.415		3.8844		0.6624		0.1346			20.534						
50																		0.972						
51																		0.45						

		SO2		NOX	HCl											HF	TEQg	VOC	CO	CS2				
52		37.4	15.363	54.8														12.5						
53		104.61	43.86	167.4														3.04						
54		10.24	4.2	15.02																				
55		0.5	0.64	0.73		1.78																		
56		3.57	0.16	1.67	0.03											0.03		1.2						
57		4.2	6.54	6.16									0.211			0.237								
58		0.8	0.05	0.8	0.07					0.46								3.66						
59		0.11	0.27	0.71										0.1163				0.1877						
60		53.2	65.4	77.67																				
61		9.89	48.17	14.44																				
62		30.4	65.4	44.38																				
63			3.6			2.52																	1.14	
64				1.705	1.1	0.42		0.055	0.61	0.45	1.13	0.74				0.09		5.157						
		796.476	433.25	1192.7	61.978	15.068	45.804	3.959	30.17	1.233	24.02	7.68	33.51	0.877	4.584	3.655	0.4669	340.38	38.587	214.28	0.0168	0.09	2.084	0.01431

5.3.1-2

		Pii ×106																								
		SO2		NOX	HCl											HF	TEQg	VOC	CO	CS2					Pi	Ki%
1		322.54	86.533	811.52	8.200	7.367	4433.0									8.000	0.039			5355.9	0.033	0.083	0.005	0.367	11033.59	47.45
2		72.200	26.064	216.40	180.00		39.00	14.89					1.025			45.000	22.50	19.231			300.00	2500.0	30.00	30.000	3496.31	15.04
3		154.04	69.022	1200.0									50.00												1473.06	6.33
4		67.600	48.533	341.20	312.00		40.00						11.75			104.0	14.444	10.425	1.453		260.0		40.00	17.33	1268.74	5.46
5		209.22	97.467	669.60														1.520							977.81	4.21
6	( )	398.340	87.540	354.560																					840.44	3.61
7		106.40	145.333	310.680																					562.41	2.42
8		16.934	10.578	25.20	348.000		52.000		3.113		19.89	0.150		0.800	0.125			17.521							494.31	2.13
9			8.000			8.400																	380.00		396.40	1.70
10		60.800	145.33	177.52																					383.65	1.65
11		74.800	34.140	219.20														6.250							334.39	1.44
12		13.136	8.529	190.73	20.740		0.830		0.022			7.645	1.740		1.158	7.900	3.00	2.304	0.324						258.06	1.11
13		1.672	1.176	8.040	95.580		1.800		0.122	0.209		1.700	3.815				89.711	7.391	1.93						213.15	0.92
14		19.780	107.044	57.760																					184.58	0.79
15						1.120																	127.333		128.45	0.55
16						4.757																	117.27		122.02	0.52
17		20.480	9.333	60.080																					89.89	0.39
18			7.822	11.388	12.400								54.300					3.710							89.62	0.39
19		7.100	11.347	11.520	45.000	10.287												1.528							86.78	0.37
20			5.838		49.640			7.320	0.321									18.957							82.08	0.35
21		3.400	3.556	13.600	33.740								12.905					1.411							68.61	0.30
22		8.400	14.533	24.640									1.055			11.850									60.48	0.26
23				6.820	22.000	1.400		0.550	0.203	4.091	5.650	3.700				4.500		2.579							51.49	0.22
24			7.844		22.200							3.100		13.800				1.365							48.31	0.21
25		16.140			17.460				1.373	2.727	0.790		0.270					5.278							44.04	0.19
26		0.082	0.068	14.974	1.816	1.472			0.426		9.267		6.200		0.253			8.124							42.68	0.18
27		0.124			2.200	3×10-6	0.130	4.270	1.138		19.422		3.312		0.168			10.267							41.03	0.18
28			1.422		20.000			12.000																	33.42	0.14
29			0.478						0.238		25.640							3.586							29.94	0.13
30		2.732			9.040				0.707		4.000		0.745		0.116			12.442							29.78	0.13
31					10.900		0.126		0.403		13.515		0.709					3.046							28.70	0.12
32		0.052	0.187	10.600			0.047		0.132			10.540	0.003		3.284			3.777							28.62	0.12
33			0.444	9.080	4.800	0.133			0.570		4.715		1.500					3.342							24.58	0.11
34		0.861	10.519	7.021		0.324	0.190						0.280												19.20	0.08

35		7.140	0.356	6.680	0.600											1.500		0.600							16.88	0.07
36							4.140						10.850												14.99	0.06
37		0.066	1.662	0.728	6.032				0.067		1.637		0.290		0.088			2.783							13.35	0.06
38		1.600	0.111	3.200	1.400					4.182								1.830							12.32	0.05
39		0.232	1.021	2.172	7.300	1.560												0.003							12.29	0.05
40							8.00						2.500					1.080	0.152						11.73	0.05
41			1.556		3.400	6.400												0.250							11.61	0.05
42		1.000	1.422	2.920		5.933																			11.28	0.05
43			0.653						0.098			6.340	1.910		0.005			1.183							10.19	0.04
44					2.520				0.504		3.480	1.690						1.971							10.16	0.04
45						0.083			0.33		7.700							1.478							9.59	0.04
46		3.864									1.145	2.310			0.461			1.606							9.39	0.04
47		1.992	0.142			0.880	0.600						2.067					2.644							8.32	0.04
48		0.220	0.600	2.840										2.326				0.094							6.08	0.03
49			0.511		2.100						0.165	0.854						0.393							4.02	0.02
50			4.000																						4.00	0.02
51			1.800			0.110												1.905							3.82	0.02
52					0.040				0.063									2.562		1.150					3.81	0.02
53			0.067						0.088		1.210			0.620				1.003							2.99	0.01
54		0.004	0.139	0.374			0.480		0.019		0.285	0.285	0.238		0.071			0.921							2.82	0.01
55			0.049								1.320							0.502							1.87	0.01
56	/						0.020						0.110					1.708							1.84	0.01
57					0.208			0.560	0.032		0.270							0.327							1.40	0.01
58																		0.486							0.49	0.002
59																		0.312							0.31	0.001
60									0.090									0.169							0.26	0.001
61		0.002			0.248	0.0004																			0.25	0.001
62																		0.225							0.23	0.001
63			0.011		0.008	0.00005						0.090						0.104							0.21	0.001
64																									0.00	0.000

5.3.1-3 **t/a**

					VOCs	TEQg	HCl						CO									
1			0.238		1.427		0.107	0.054	0.039		0.845											
2			0.0296		0.2838																	
3			0.325				0.0009	0.351				0.0002										
4		11.169	4.467	33.506	10.9432	0.022337	8.3009	0.7929	0.0028	0.0003	0.447		2.234	1.6691	0.086	1.3379		0.025				
5					0.2626			0.0076	0.00029						0.1029		0.1286					
6		0.002	0.0021	0.05	1.442		0.0024	0.125	0.0032													
7		6.955	6.267	53.001	9.121	0.04467	0.497	0.127	0.0013		0.223	0.0127	3.351	2.145		0.798	0.108					
8		1.41	0.542	4.766	1.544			0.002	0.019													
9					0.0335		1.393															
10		26.64	6.93	39.96	1.733	0.02398	6.66	1.053	0.153		0.333		13.32									
11												1.9029										

12			0.03		3.514			0.0072	0.0052			0.375		0.294		2.859					
13		0.476	0.339	0.69	0.5124			0.013	0.018				6.337	0.0634					0.0962	0.17	0.0058
		46.652	19.17	131.973	30.8165	0.090987	16.9612	2.5327	0.24179	0.0003	1.848	2.2908	25.242	4.1715	0.1889	4.9949	0.2366	0.025	0.0962	0.17	0.0058

5.3.1-4

		Pii ×10⁶																						Ki	Pi%
		SO_2	PM	NOx	VOCs	TEQg	HCl			Cl_2			CO							Hg	Cd	Pb	As		
1		53.280	46.200	159.840	0.867	6.661	133.200	5.265	15.300		16.650		1.332							15.000	223.33	22.333	611.111	1310.37	56.59
2		22.338	29.780	134.024	5.472	6.205	166.018	3.965	0.280	0.003	22.350		0.223	0.556	0.108	6.690		2.500						400.51	17.30
3		13.910	41.780	212.004	4.561	12.408	9.940	0.635	0.130		11.150	0.042	0.335	0.715		3.990	2.160							313.76	13.55
4												6.343										140.967		147.31	6.36
5			1.587		0.714		2.140	0.270	3.900		42.250													50.86	2.20
6		2.820	3.613	19.064	0.772			0.010	1.900															28.18	1.22
7					0.017		27.860																	27.88	1.20
8			0.200		1.757			0.036	0.520			1.250		0.098		14.295								18.16	0.78
9		0.952	2.260	2.760	0.256			0.065	1.800				0.634	0.021					0.850					9.60	0.41
10			2.167				0.018	1.755				0.001												3.94	0.17
11					0.131			0.038	0.029						0.129		2.572							2.90	0.13
12		0.004	0.014	0.200	0.721		0.048	0.625	0.320															1.93	0.08
13			0.197		0.142																			0.34	0.01
Ki		93.304	127.798	527.892	15.408	25.274	339.224	12.664	24.179	0.003	92.400	7.636	2.524	1.391	0.236	24.975	4.732	2.500	0.850	15.000	223.333	163.300	611.111	2315.73	100.00
Pi%		4.03	5.52	22.80	0.67	1.09	14.65	0.55	1.04	0.00	3.99	0.33	0.11	0.06	0.01	1.08	0.20	0.11	0.04	0.65	9.64	7.05	26.39	100.00	/

5.3.2

1

5.3.2-1

COD　SS

5.3.2-2

50.77%　8.81%

6.46%　4.76%

2

5.3.2-3

COD　SS

5.3.2-4

35.02%

17.25%　7.61%

5.3.2-1 **t/a**

		( )	COD	SS																				
1		26.36	117.43	92.66	3.99	0.08	0.47		1.3				0.13			1186		0.07	0.13					
2		11.99	11.986	8.39	0.59	0.13	0.051		0.12							564.75							0.0016	
3		1.08	0.833	0.413	0.093		0.003									0.361								
4		16.35	67.35	40.7	6.274	0.144	0.158	0.07	0.48	0.53						817.55								
5		6.38	9.008	6.796	1.995		0.05	0.102	0.049	0.098						45.513								
6		5.34	26.64	10.656	1.598	0.19	0.213						0.027	0.032	0.043	266.45		0.087						
7		2.95	14.73	5.82	0.433		0.018			0.028			0.0059			28.04	0.351							
8		2.32	9.288	6.966	0.697	0.023							0.012		0.093	69.66								
9		19.45	97.25	10.95	1.76	1.41	0.02							0.194		470.62								
10		7.07	30.63	15.577	1.1342		0.1152							0.0528		44.9	1.86					0.073		
11		3.79	4.106	0.985	0.076		0.004							0.005	0.004	0.67								
12		30.00	16.95		10.23	0.849		0.012			0.007													
13		4.51	20.22	2.87	0.32		0.02						0.02			17	0.63							
14		125.18	998	374.814	0.1452		0.0288									12000								
15		3.71	13.919	1.302	0.464	0.119	0.042										0.248				0.003			0.003
16		7.53	31.19	7.17	2.67		0.127	0.014					0.025											
17		4.96	4.96	0.19	0.2		0.023					9.27	0.005			13.62								
18		0.99	0.399	0.943	0.099		0.005																	
19		1.30	2.115	1.957	0.203																			
20		4.78	24.49	9.69	1.15		0.045						0.011			398.3		0.003						
21		62.25	186.6		1.36		0.17	1.24														0.47		
22		10.56	35.28	6.72	0.18	0.01	0.078	0.458																
23		1544.5	682	810.56	59.4		6.82				15.01						204.6			30.02				
24	/	126.75	63.38	63.375	6.34		0.634										15.0							
25		29.77	159.72	22.93	1.597		0.4178						0.101		0.04	608.81				0.28				
26		1.53	3.83	1.53	0.02		0.03																	
27	( )	2.38	9.5	5.94	0.59																			
28		7.78	38.908	25.313	0.868		0.0236																	
29		12.85	42.15	5.08	2.22		0.3									535.2								
30		1.47	10.234	6.09	0.3908		0.01576									4.68			0.0028					
31		7.47	37.3	1.513	0.043	0.3	0.3		0.1							597.4				0.37		0.15	0.034	
32		6.22	26.006	12.447	1.864	0.056	0.151			0.011	0.051		0.021	0.002	0.045	94.579	1.63	0.009						
33		0.39	0.4789	0.1188	0.054	0.00205	0.004						0.00017	0.0033										
34		2.71	5.476	10.498	0.656	0.054	0.052									24.126	1.312			0.039		0.013	0.013	
35		11.60	36.75	27.56	2.23		0.464														0.0134			
36		13.49	60.45	14.49	4.84	0.66	0.0694							0.1		215.8								
37		3.66	14.65	10.988	0.369	0.369	0.074									2.669				0.066				
38		0.88	3.081	1.921	0.189		0.07															0.0032	0.0032	0.006399
39		13.99	8.694	5.458	1.76	0.214	0.007																	
40		1.88	7.54	3.05	0.377	0.188	0.04									62.19					0.0188		0.0188	0.0283
41		0.24	0.704	0.416	0.056		0.0064						0.00048											
42		0.08	0.348	0.18	0.018	0.0024	0.003																	
43		3.20	11.324	3.571	0.649	0.236	0.096																	
44		2.72	20.65	8.57	0.12	0.02	0.02						0.0043			83.47								
45		28.52	28.5	114.1	0.1		0.01									538.1								
46		11.58	9.2671	5.8414	0.3	0.5841	0.27									19.68	0.5593			0.0292		0.0047	0.0078	0.000159
47	( )	0.29	0.4	0.31	0.023																			
48		9.28	46.38	9.28	4.64		0.02						0.05			463.76		0.03						
49		59.16	158.2	126.14	11.78		1.78																	

		( )	COD	SS																				
50		0.07	0.0713	0.05	0.011																			
51		101.62	1016.2	508.1	30.2		0.04																	
52		66.61	58.52	34.72	0.51		0.125																	
53		148.43	884.46	296.87	15.44		0.203																	
54		1.71	1.368	1.026	0.257		0.017																	
55		0.30	0.68	0.773	0.02		0.002			0.048						2.8								
56		1.45	0.28	0.41	0.2		0.006			0.27														
57		1.82	16.5	0.8	0.04		0.004																	
58		2.48	9.919	4.122	0.443	0.071	0.0044		0.019						0.089	11.37								
59		20.59	147.03	117.62	11.76																			
60		58.80	147.03	117.62	11.76																			
61		59.29	147	117.62	11.76		1.78																	
62		0.60	0.6		0.09		0.006																	
63		4.27	23.95	9.58	0.25											13.7	0.84							
*		2731.3	5662.90	3112.15	219.90	5.71	15.51	1.90	2.07	0.99	15.07	9.27	0.41	0.39	0.31	19202	227.03	0.20	0.13	30.80	0.04	0.71	0.08	0.04

/ **1060.05** /

5.3.2-2

		Pi ×10⁶																					
		COD	SS																			Pi	Ki%
1		1.3640	2.0264	1.1880		2.2733				15.0100					2.9229		6.0040					30.79	50.77
2		1.9960	0.9370	0.0029		0.0096								2.4000								5.35	8.81
3		2.0324	1.2703	0.6040		0.0133																3.92	6.46
4		1.7689	0.7422	0.3088		0.0677																2.89	4.76
5		0.2349	0.2317	0.0798	0.0040	0.1567		0.2600			0.2600			0.2372		0.1300						1.59	2.63
6		0.3164	0.3154	0.2356		0.5933																1.46	2.41
7		0.2940	0.2941	0.2352		0.5933																1.42	2.34
8		0.3732		0.0272		0.0567	0.6200												0.2350			1.31	2.16
9		0.3194	0.0573	0.0319		0.1393					0.2020		0.0080	0.1218			0.0560					0.94	1.54
10	/	0.1268	0.1584	0.1268		0.2113									0.2716							0.89	1.48
11		0.2941	0.2941	0.2352																		0.82	1.36
12		0.2941	0.2941	0.2352																		0.82	1.36
13		0.1347	0.1018	0.1255	0.0072	0.0527	0.0350	0.0960	0.0265					0.1635								0.74	1.22
14		0.1945	0.0274	0.0352	0.0705	0.0067						0.1940		0.0941								0.62	1.03
15		0.0746	0.0038	0.0009	0.0150	0.1000		0.0200						0.1195			0.0740		0.0750	0.0340		0.52	0.85
16		0.0570	0.2853	0.0020		0.0033								0.1076								0.46	0.75
17		0.1209	0.0362	0.0968	0.0330	0.0231						0.1000		0.0432								0.45	0.75
18		0.0928	0.0232	0.0928		0.0067					0.1000			0.0928								0.41	0.67
19		0.0735	0.0689	0.0446		0.1547												0.0134				0.36	0.59
20		0.0843	0.0127	0.0444		0.1000								0.1070								0.35	0.57
21		0.0706	0.0168	0.0036	0.0005	0.0260	0.2290															0.35	0.57
22		0.0533	0.0266	0.0320	0.0095	0.0710					0.0540	0.0320	0.0086	0.0533								0.34	0.56
23		0.0520	0.0311	0.0373	0.0028	0.0503			0.0006	0.0510	0.0420	0.0020	0.0090	0.0189	0.0233							0.32	0.53

		Pi ×10⁶																					
		COD	**SS**																			**Pi**	**Ki%**
24		0.0339		0.2046	0.0425		0.0060			0.0070												0.29	0.48
25		0.0613	0.0389	0.0227		0.0384						0.0528		0.0090	0.0266				0.0365			0.29	0.47
26		0.1170	0.0868	0.0102		0.0417																0.26	0.42
27		0.0624	0.0179	0.0534		0.0423	0.0070				0.0500											0.23	0.38
28		0.0240	0.0210	0.0118	0.0065	0.0170		0.0240						0.1130						0.0016		0.22	0.36
29		0.0490	0.0242	0.0230		0.0150					0.0220			0.0797								0.21	0.35
30		0.0185	0.0146	0.0060	0.0292	0.0900								0.0039	0.0080		0.0058		0.0024	0.0078	0.0001	0.19	0.31
31		0.0180	0.0170	0.0399		0.0167	0.0510	0.0098	0.0049					0.0091								0.17	0.27
32		0.0778	0.0633	0.0174		0.0079																0.17	0.27
33		0.0151	0.0076	0.0075	0.0094	0.0133								0.0124				0.0188		0.0188	0.0189	0.12	0.20
34		0.0110	0.0262	0.0131	0.0027	0.0173								0.0048	0.0187		0.0078		0.0065	0.0130		0.12	0.20
35		0.0293	0.0275	0.0074	0.0185	0.0247								0.0005			0.0132					0.12	0.20
36		0.0404	0.0072	0.0064		0.0067					0.0400			0.0034	0.0090							0.11	0.19
37		0.0186	0.0174	0.0139	0.0012						0.0240		0.0186	0.0139								0.11	0.18
38		0.0413	0.0214	0.0024	0.0010	0.0067					0.0086			0.0167								0.10	0.16
39		0.0479	0.0240	0.0050										0.0027	0.0120							0.09	0.15
40		0.0226	0.0089	0.0130	0.0118	0.0320																0.09	0.15
41		0.0295	0.0146	0.0087		0.0060			0.0014		0.0118			0.0056	0.0050							0.08	0.14
42		0.0174	0.0136	0.0352	0.0107	0.0023																0.08	0.13
43		0.0278	0.0033	0.0093	0.0060	0.0140									0.0035			0.0030			0.0020	0.07	0.11
44		0.0198	0.0103	0.0089	0.0036	0.0015		0.0038					0.0178	0.0023								0.07	0.11
45		0.0205	0.0152	0.0078		0.0053								0.0009		0.0028						0.05	0.09
46		0.0062	0.0048	0.0038		0.0233													0.0016	0.0032	0.0043	0.05	0.08
47	( )	0.0190	0.0149	0.0118																		0.05	0.08
48		0.0330	0.0020	0.0008		0.0013																0.04	0.06
49		0.0099	0.0005	0.0040		0.0077					0.0100			0.0027								0.03	0.06
50		0.0077	0.0038	0.0004		0.0100																0.02	0.04
51		0.0006	0.0010	0.0040		0.0020			0.0135													0.02	0.03
52		0.0082	0.0025	0.0015		0.0013						0.0050	0.0008	0.0001								0.02	0.03
53		0.0027	0.0026	0.0051		0.0057																0.02	0.03
54		0.0042	0.0049	0.0041																		0.01	0.02
55		0.0010	0.0003	0.0011	0.0001	0.0013					0.0003	0.0033										0.01	0.01
56		0.0014	0.0019	0.0004		0.0007			0.0024					0.0006								0.01	0.01
57		0.0008	0.0024	0.0020		0.0017																0.01	0.01
58		0.0014	0.0010	0.0011		0.0021					0.0010											0.01	0.01
59		0.0017	0.0010	0.0019		0.0010								0.0001								0.01	0.01
60		0.0012		0.0018		0.0020																0.01	0.01

		Pi ×10⁶																					
		COD	**SS**																			**Pi**	**Ki%**
61		0.0007	0.0005	0.0004	0.0001	0.0010																0.00	0.00
62		0.0008	0.0008	0.0005																		0.00	0.003
63		0.0001	0.0001	0.0002																		0.00	0.001

5.3.2-3 **t/a**

			COD	SS			TP														
1		4.79	2.397	0.479	0.240	0.719	0.024	0.048	191.733	0.479	0.013										
2		0.14	0.576	0.432	0.043	0.050	0.004														
3		7.47	5.978	5.231	1.121	1.121	0.034	0.177	373.614			0.037	0.075	0.075							
4		20.61	10.307	2.061	1.031	3.092	0.103	0.206	1030.615	2.061						0.103	0.062	0.021			
5		0.28	0.557	0.417	0.028	0.028	0.003														
6		4.04	16.152	14.133	0.808	1.211	0.020	0.808	121.140								0.202	0.020			
7		22.40	87.919	59.903	1.249	11.032	0.077	1.236	197.564									0.092	3.950	1.054	
8		1.47	7.335	5.868	0.734	1.027	0.012	0.293	29.340												
9		2.65	11.940	5.490	0.110	0.150	0.010	0.010	26.530												
10		2.98	14.910	10.437	0.239	0.596	0.060	0.447	117.000												
11		9.60	30.010	22.510	1.818		0.192								0.006						
12		5.29	16.140	6.900	0.260	0.371	0.007		80.469									0.021			
13		1.99	5.210	12.747	0.550	1.860	0.070														0.032
		83.715	209.431	146.608	8.231	21.257	0.616	3.225	2168.005	2.540	0.013	0.037	0.075	0.075	0.006	0.103	0.264	0.154	3.950	1.054	0.032

5.3.2-4

		Pii ×10⁶																Pi	Ki%
		COD	SS			TP													
1		0.1758	0.1498	0.0250	0.1576	0.0256	0.0618	0.0395							0.1836	0.2108		1.03	35.02
2		0.0206	0.0052	0.0206	0.0442	0.0343	0.0103	0.2061	0.1031					0.0206	0.0420			0.51	17.25
3		0.0048	0.0012	0.0048	0.0103	0.0080	0.0024	0.0383	0.0240	0.1300								0.22	7.61
4		0.0600	0.0563	0.0364		0.0640							0.0059					0.22	7.57
5		0.0323	0.0353	0.0162	0.0173	0.0067	0.0404	0.0242							0.0400			0.21	7.23
6		0.0120	0.0131	0.0224	0.0160	0.0113	0.0089	0.0747			0.0370	0.0150						0.21	7.16
7		0.0104	0.0319	0.0110	0.0266	0.0233											0.0318	0.13	4.59
8		0.0298	0.0261	0.0048	0.0085	0.0200	0.0224	0.0234										0.13	4.59
9		0.0323	0.0173	0.0052	0.0053	0.0024		0.0161							0.0420			0.12	4.10
10		0.0147	0.0147	0.0147	0.0147	0.0040	0.0147	0.0059										0.08	2.83
11		0.0239	0.0137	0.0022	0.0021	0.0033	0.0005	0.0053										0.05	1.74
12		0.0012	0.0011	0.0009	0.0007	0.0013												0.01	0.17
13		0.0011	0.0010	0.0006	0.0004	0.0008												0.004	0.13
Pi		0.4189	0.3665	0.1646	0.3037	0.2052	0.1613	0.4336	0.1270	0.1300	0.0370	0.0150	0.0059	0.0206	0.3076	0.2108	0.0318	2.94	100.00
Ki%		14.25	12.47	5.60	10.33	6.98	5.49	14.75	4.32	4.42	1.26	0.51	0.20	0.70	10.46	7.17	1.08	100.00	/

5.3.3

2019 96 26 5 13

8 2021-2035

5.3.3-1 5.3.3-2

5.3.3-1 **t/a**

		SO_2		NO_X	HCl										VOC	
1		37.4	15.363	54.8											12.5	
2		104.61	43.86	167.4											3.04	
3		10.24	4.2	15.02												
4		0.5	0.64	0.73		1.78										
5		3.57	0.16	1.67	0.03									0.03	1.2	
6		4.2	6.54	6.16								0.211		0.237		
7		0.8	0.05	0.8	0.07				0.46						3.66	
8		0.11	0.27	0.71									0.1163		0.1877	
9		53.2	65.4	77.67												
10		30.4	65.4	44.38												
11			3.6			2.52										1.14
12				1.705	1.1	0.42	0.055	0.61	0.45	1.13	0.74			0.09	5.157	
13			0.64		1		1.2									
		245.03	206.123	371.045	2.2	4.72	1.255	0.61	0.91	1.13	0.74	0.211	0.116	0.357	25.745	1.14

5.3.-32 **t/a**

		SO_2		NO_X	HCl				VOC		
1						0.336				0.382	
2	/						0.0002	0.022	3.415		
3			0.7		0.17	1.92			0.5		0.18
4						1.4271				0.3518	
5									0.972		
6									0.45		
7		9.89	48.17	14.44							
8			1.8								
		9.89	50.67	14.44	0.17	3.6831	0.0002	0.022	5.337	0.7338	0.18

5.4

6

6.1

6.1.1

33.97º 118.22º 24km 2021

2021 8760

16

6 02 05 08 11 14 17

20 23 3 08 14 20

AERMET

2021

6.1-1~ 6.2-5 6.2-1~ 6.2-4

6.1-1 2021

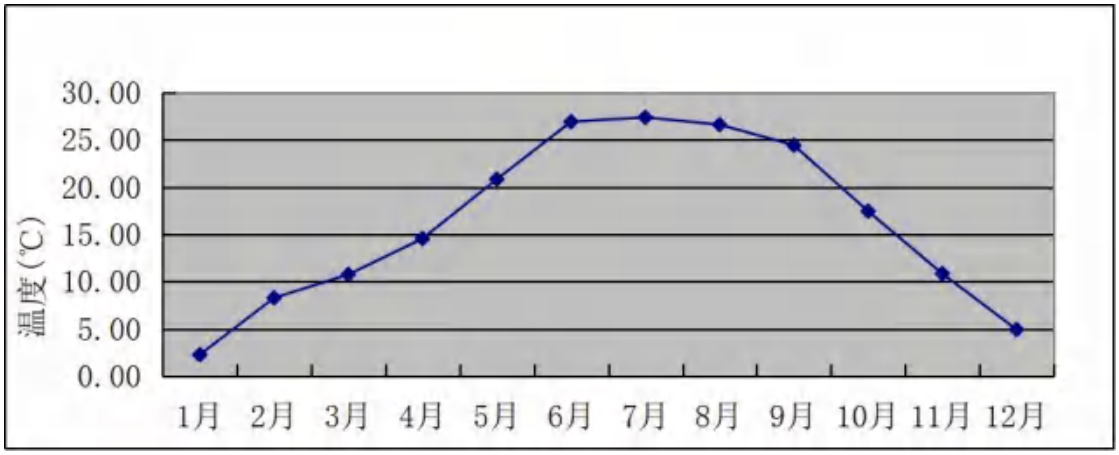
	1	2	3	4	5	6	7	8	9	10	11	12
℃	2.26	8.27	10.74	14.55	20.84	26.93	27.39	26.62	24.44	17.45	10.84	4.92

6.1-2 2021

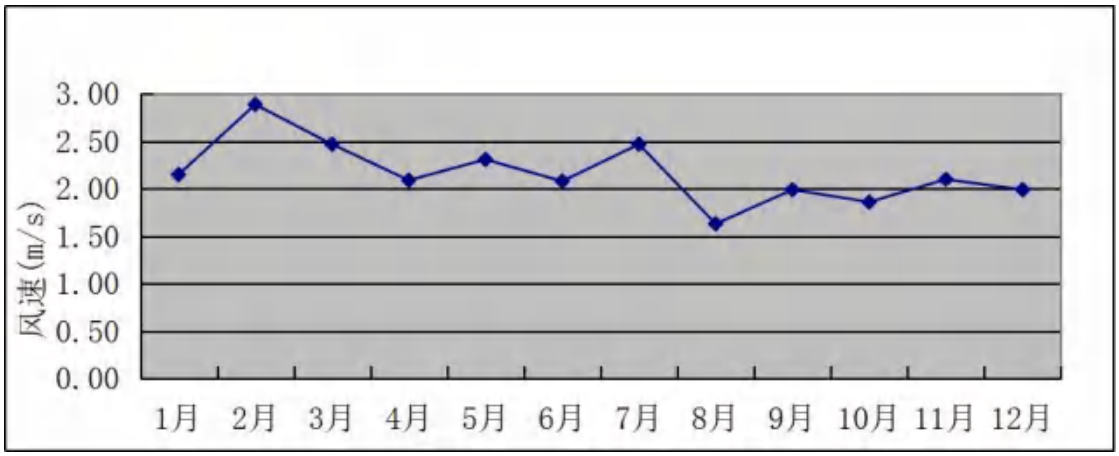
	1	2	3	4	5	6	7	8	9	10	11	12
m/s	2.15	2.89	2.47	2.09	2.31	2.08	2.47	1.63	1.99	1.86	2.10	1.99

6.1-3 2021

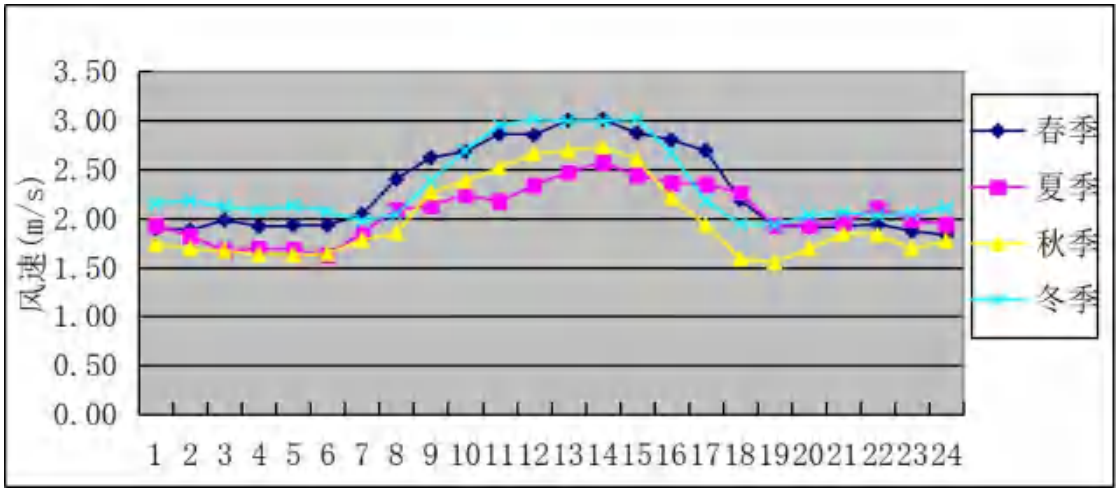
h	1	2	3	4	5	6	7	8	9	10	11	12
	1.89	1.88	1.98	1.92	1.93	1.93	2.04	2.40	2.62	2.68	2.86	2.85
	1.93	1.82	1.67	1.69	1.68	1.62	1.85	2.09	2.13	2.24	2.17	2.34
	1.74	1.69	1.67	1.63	1.63	1.64	1.78	1.85	2.26	2.38	2.52	2.66
	2.15	2.18	2.12	2.08	2.13	2.07	1.97	2.04	2.38	2.69	2.95	3.01
h	13	14	15	16	17	18	19	20	21	22	23	24
	3.00	3.01	2.87	2.80	2.69	2.19	1.92	1.91	1.92	1.94	1.87	1.83
	2.47	2.57	2.44	2.36	2.35	2.26	1.93	1.93	1.96	2.10	1.98	1.94
	2.69	2.73	2.60	2.21	1.93	1.59	1.55	1.69	1.84	1.83	1.69	1.77
	2.99	2.99	3.02	2.67	2.18	1.94	1.93	2.03	2.06	2.03	2.05	2.11



6.1-1 2021

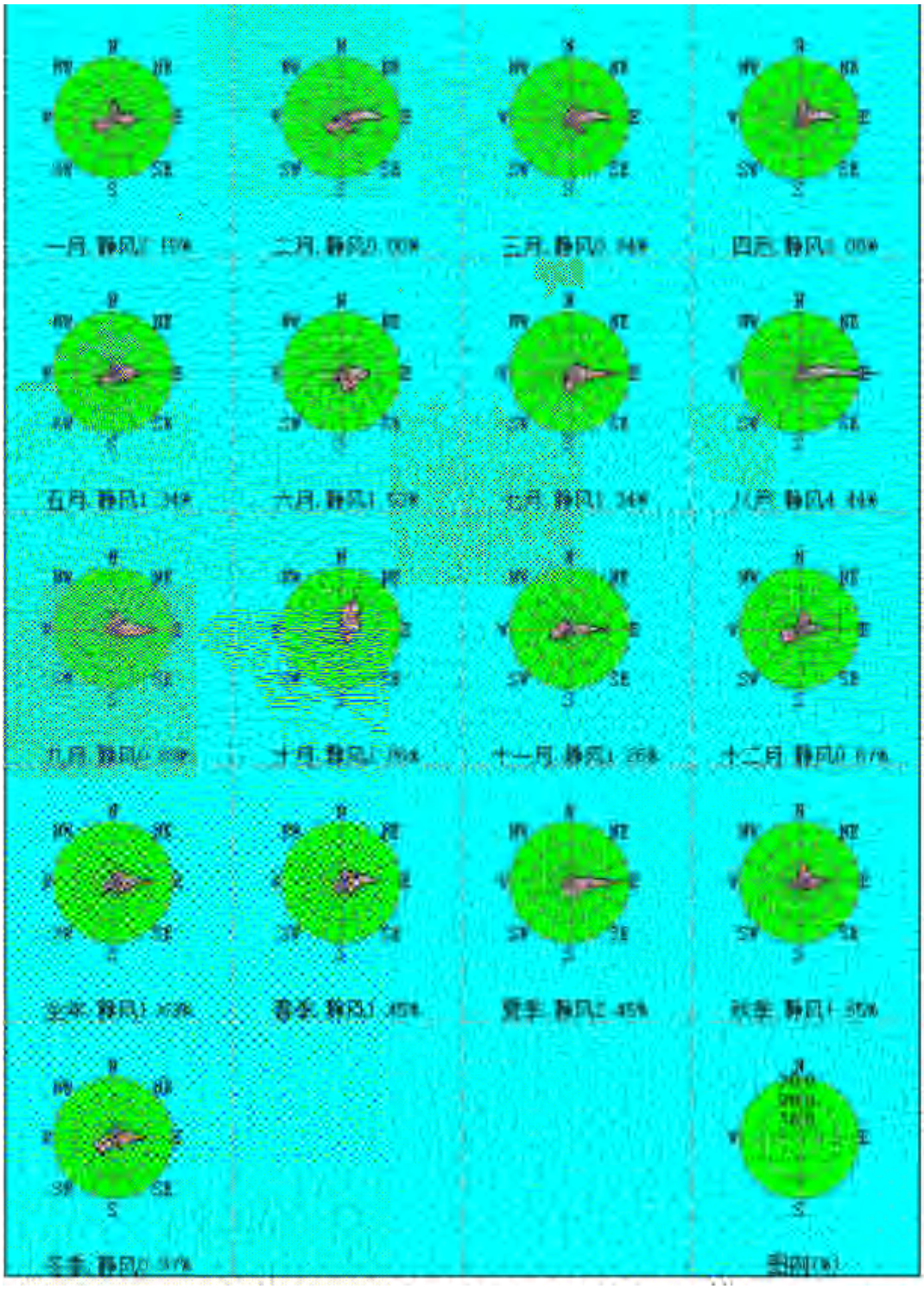


6.1-2 2021



6.1-3 2021

6.1-4



6.1-5 **2021**

AERMOD

WRF

27km×27km 1000 100

40 23km

- USGS

6.1.2

HJ2.2-2018 3

AERMOD ADMS CALPUFF

2021 2021 ≤0.5m/s

72h 20 ≤0.2m/s 35%

3km

CALPUFF A

AERMOD

6.1.2.1

1

3 1

2021

2

2021

58131 118.217°E 33.967°N 25.0m

WRF

6.1-6 6.1-7

6.1-6

			°		/km	/m		
	58131		118.22	33.97	24	25	2021	

6.1-7

°		/km			
118.291	33.873	23	2021		WRF-ARW

3

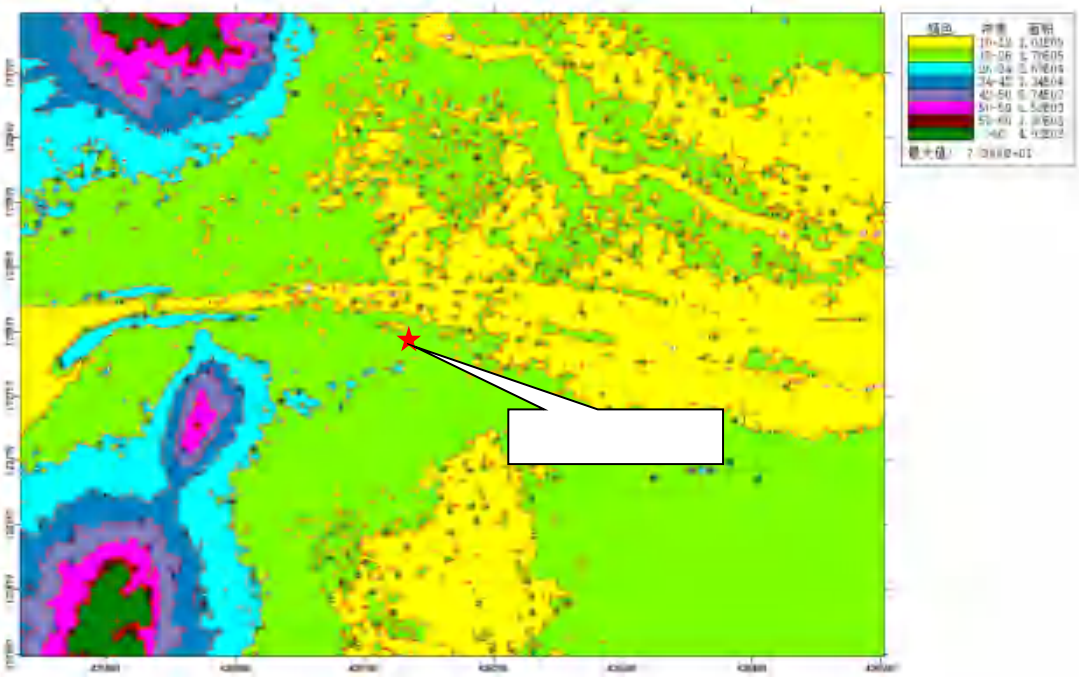
SRTM Shuttle Radar Topography Mission 90m

http://srtm.csi.cgiar.org srtm60-06

DEM SRTM

DEM (90m)

6.1-6



6.1-6

6.1.2.2

1

5km×5km

16

100m

6.1-8

6.1-8

		/m UTM-WGS84				
		X	Y		/m	
1		626117	3774282		730	S
2		625544	3774088		850	S
3		625015	3774093		1060	S
4		624126	3774485		1310	SW
5		623407	3774585		2030	SW
6		623146	3773319		2450	SW
7		623400	3772406		3300	SW
8		627591	3772326		3060	SE
9		628792	3773596		2650	SE
10		628411	3777994		3330	NE
11		626656	3777521		2270	N
12		626448	3778006		2450	N
13		625351	3777913		2470	NW
14		624497	3777174		2230	NW
15		623492	3777752		2970	NW
16		623203	3775835		2280	W

2

SO_2 NOx PM_{10} $PM_{2.5}$ NH_3 H_2S

DMF

3

4

1

HJ664

SO_2 NOx NO_2/NOx=0.9 PM_{10}

2021 1

NH_3 H_2S

6.1.3

$PM_{2.5}$

HJ2.2-2018

5 6.1-9

6.1-9

		SO_2 NOx NH_3 DMF		
		SO_2 NOx PM_{10} $PM_{2.5}$		
		SO_2 NOx PM_{10} $PM_{2.5}$		
- +		NH_3 DMF		
		SO_2 NOx PM_{10}		
		SO_2 NOx PM_{10}		
		$PM_{2.5}$		
		SO_2 NOx PM_{10} $PM_{2.5}$ NH_3 DMF		

1

1h

2

“ ”

3 $PM_{2.5}$ k

4

6.1.4

1

6.1-10 6.1-11

6.1-12

2

2021-2035

5.3-1

6.1-14

“ ”

[2021]2 < “ ”

>

PM SO_2 NOx 5 25

30mg/m3 PM SO_2 NOx 15 50 200mg/m^3

“ ”

“ ”

6.1-10

6.1-10

1				2022
2				2022
3				2022
4				2022
5				2022
6				2022
7				2022
8				2022
9				2022
10				2024
11				2022
12				2023
13				2035
14				2035
15				2035
16				2025

6.1-15

6.1-11

	m									kg/h									
	X	*Y*	/m	/m	/m	/°C	/(Nm³/h)		/h	SO_2	PM_{10}	$PM_{2.5}$	NOx						DMF
P5	626019	3775050	21	25	1	120	20000		7920	0.0006	0.001	0.0005	0.734	0.359	1.023		0.01		0.022
P6	625945	3775169	19	15	0.5	25	21000		7920						0.128	0.128	0.643		
P7	626038	3775159	19	15	0.5	25	9000		7920						0.05	0.031	0.006		
P2	626336	3774977	20	15	0.5	25	7000		7920					0.023	0.0605		0.0002		0.0014
P3	626026	3775110	20	15	0.5	25	9000		7920						0.003		0.001	0.0005	
P4	626366	3775141	19	25	0.5	25	7525		7920						0.017		0.002	0.001	

NO_2/NOx=0.9 $PM_{2.5}$/ PM_{10}=0.5 UTM 50

6.1-12

		m									kg/h			
		X	*Y*	/m	/m	/m	/ °	/h	/m					
1		625988	3775157	19	54	35	90	7920	10		0.0334	0.0065		0.0101
2		625993	3775196	19	61	40	90	7920	6			0.0058		0.0093
3		626035	3775101	20	30	10	90	7920	5		0.0005		0.0001	0.0001
4		626233	3775102	20	50	10	0	7920	6		0.0008		0.0003	0.0018

0,0 UTM 50

6.1-13

	m								kg/h							
	X	*Y*	/m	/m	/m	/°C	/(Nm³/h)		SO_2	PM_{10}	$PM_{2.5}$	NOx				DMF
P5	626019	3775050	21	25	1	120	20000		0.01	0.001	0.0005	0.73	5.98	5.28	0.49	0.37

UTM 50

6.1-14

		m							g/s							
		X	*Y*	/m	/m	/m	/°C	/(Nm³/h)	SO_2	PM_{10}	$PM_{2.5}$	NOx				
	1#	627045	3775678	21	15	0.4	20	12000	0	0	0	0	0.0005	0.0023	0	0
	2#	627203	3775612	15	25	0.4	20	12000	0	0	0	0	0.0013	0.0216	0.0005	0
	3#	627203	3775565	15	15	0.4	20	12000	0.000011	0	0	0	0.0029	0.009	0.0000273	0
	4#	627067	3775520	16	25	0.4	20	17000	0	0.000028	0.000014	0	0.0314	0.1973	0.0266	0
	5#	627215	3775509	17	25	1.2	80	220000	0.012	0.0006	0.0003	0.0056	0.0806	0.5778	0	0
	6#	627081	3775614	15	35	0.8	80	31000	0.431	1.294	0.647	0.192	0	0	0	0
	7#	627256	3775703	16	15	0.4	20	8000	0	0	0	0	0.0000556	0.0008	0.0004	0.000083
	1#	624419	3775251	22	30	0.5	25	8499	0	0.0072	0.0036			0.1041	0	0
	1#	626958	3775783	18	25	0.5	20	19987	0	0				0.044	0	0
	2#	626894	3775757	19	25	0.35	20	9994	0	0.0092	0.0046			0.0019	0	0
	3#	626775	3775757	17	25	0.35	20	9994	0	0				0.0021	0	0
	4#	626884	3775706	19	25	0.35	20	16454	0	0				0.0039	0	0
	5#	626846	3775744	19	15	0.2	20	4997	0	0				0.0012	0.0019	0.0014
	6#	626768	3775805	19	15	0.2	20	4997	0	0				0.0003	0	0
	1#	627484	3775775	17	15	0.35	20	7997	0	0.0078	0.0039			0	0	0
	2#	627394	3775783	17	15	0.35	20	7997	0	0				0	0.0083	0
	4#	627489	3775696	16	15	0.35	20	7997	0	0.0078	0.0039			0	0	

	5#	627557	3775672	14	15	0.35	20	8000	0	0				0	0.0083	0
	6#	627368	3775723	18	15	0.3	20	6002	0	0				0	0.0000139	
	7#	627593	3775656	15	15	0.4	20	9993	0	0.0158	0.0079			0	0	
	8#	627560	3775751	15	15	0.5	20	37656	0	0				0	0.0078	0
	9#	627411	3775769	17	15	0.2	20	4002	0	0.0039	0.00195			0	0	0
	1#	625187	3775792	18	15	0.6	25	9990	0	0	0	0	0	0.0016	0	0
	3#	625188	3775730	22	15	0.3	25	3998	0	0	0	0	0	0	0.0004	0.0000139
	1#	628340	3775448	15	25	0.8	25	24995	0.0000694	0.0000361	0.00001805	0.00189	0.00033	0.0023	0	0
	2#	628469	3775486	16	25	0.8	25	31995	0	0.0000278	0.0000139	0	0.0000556	0.0523	0.0044	0.0001
	1#	628501	3775058	16	18	1.8	50	99803	0.006	0.022	0.011	0.163	0.0447	0.2264	0.0044	0.0001
	3#	628486	3774849	17	15	0.5	25	10032	0	0	0	0	0.1319	0.0618	0	0
	4#	628581	3774900	17	35	1.1	140	31049	0.259	0.172	0.086	1.916	0	0.043	0	0
	5#	628629	3774985	17	15	0.5	50	16815	0.0219	0.131	0.0655	0.423	0	0	0	0
	6#	628585	3774889	17	15	0.5	50	6132	0.005	0.03	0.015	0.09667	0	0	0	0
	7#	628710	3774956	17	25	0.35	80	3476	0.000033	0.017	0.0085	0.0544	0	0	0	0
	8#	628549	3774881	16	15	0.5	25	21287	0	0	0	0	0	0.0122	0	0
	9#	628482	3774959	14	15	0.5	25	12011	0	0	0	0	0.0042	0.0136	0.001	0
	2#	624953	3775070	18	20	0.6	80	14955	0.014	0.001	0.0005	0.0222	0	0.0131	0.0001	0.0008
	3#	624894	3775035	19	20	0.6	50	14955	0.041	0.02	0.01	0.181	0	0	0	0
	1#	626355	3775749	17	50	1.2	50	17987	0	0	0	0	0	0.0013	0	0
	1#	624676	3775655	24	25	0.85	25	30157	0	0	0	0	0.0108	0.1833	0.000333	0.000222
	2#	624744	3775613	22	25	0.2	25	1500	0	0.0064	0.0032	0	0	0	0	0
	3#	624666	3775599	21	25	0.15	25	1500	0	0.0022	0.0011	0	0	0	0	0
	4#	624691	3775594	22	25	0.85	25	29994	0	0	0	0	0.0000556	0.000889	0	0
	1#	624284	3775862	19	35	1.2	50	17987	0	0.7278	0.3639	0	0.0022	0.0198	0	0
	2#	624071	3775644	24	15	0.5	30	1999	0	0	0	0	0	0	0.0005	0.0006

UTM 50

6.1-15

		m					/°C		kg/h			
		X	*Y*	/m	/m	/m		/(Nm³/h)	SO_2	$_{PM10}$	PM2.5	NOx
	1#	626707	3775089	21	30	1.6	80	54186	1.394	0.713	0.3565	8.588
	2#	626598	3775070	20	30	0.8	130	80000	2.674	1.079	0.5395	10.42
	1#	626188	3775178	20	50	1.6	50	123095	0.342	0.171	0.0855	0.513
	2#	626325	3775171	19	50	1.6	50	123095	4.382	0.758	0.379	0.236
	1#	625471	3775870	18	50	0.45	130	11390	0.475	0.158	0.079	0.316
	2#	625479	3775972	17	50	0.45	130	11390	0.475	0.158	0.079	0.316
	3#	625514	3775858	18	50	1	130	112000	0	0.0006	0.0003	0
	1#	626287	3775573	21	35	0.9	145	15000	0.142	0.05	0.025	0
	1#	625718	3775700	24	50	1	120	36000	1.731	0.711	0.3555	2.536
	2#	625874	3775866	17	15	0.5	25	10000	0	0.0039	0.00195	0
	1#	625514	3775665	21	45	2	80	60000	1	0.7	0.35	1.6
	1#	626849	3775551	19	35	0.8	85	5657	0.344	0.503	0.2515	0.147
	1#	625386	3775178	20	25	0.3	65	3256	0.138	0.006	0.003	0.064
	1#	624786	3775775	20	25	0.4	150	1750	0.162	0.252	0.126	0.238
	1#	625279	3775964	18	11	0.7	50	3650	0.222	0.014	0.007	0.222

	1#	626895	3775285	18	25	/	150	2523	0.004	0.009	0.0045	0.025
	1#	624443	3775666	22	45	0.8	85	12000	2.053	0.623	0.3115	2.997
	2#	624480	3775659	23	15	1.2	15	58935	0	1.736	0.868	0
	1#	624480	3775755	21	45	0.45	85	30000	0.382	0.122	0.061	0.557
	2#	624460	3775803	20	20	0.3	15	2356.7	0	1.736	0.868	0
	1#	624360	3775364	20	45	0.8	85	12000	2.053	0.623	0.3115	2.997
	2#	624415	3775453	18	15	1.2	15	58935	0	1.736	0.868	0
	1#	625211	3775889	18	50	1.5	150	52000	0	0.139	0.0695	0.044
	1#	628835	3775645	16	15	0.5	20	3000	0	0.025	0.0125	0
	1#	625703	3775270	19	15	0.56	50	5000	0	0.025	0.0125	0
	2#	625710	3775346	19	15	0.8	25	20000	0	0.0011	0.00055	0
	3#	625821	3775382	19	15	0.8	25	10000	0	0.0011	0.00055	0
	4#	625702	3775367	19	15	0.8	25	30000	0	0.0011	0.00055	0
	5#	625827	3775293	19	15	0.8	25	12000	0	0.0005	0.00025	0
	6#	625796	3775321	19	15	0.8	25	15000	0	0.0005	0.00025	0
	7#	625848	3775398	19	15	0.8	25	10000	0	0.0012	0.0006	0
	8#	625818	3775239	19	15	0.8	25	15000	0	0.0012	0.0006	0
	9#	625692	3775280	19	15	0.8	25	10000	0	0.0011	0.00055	0
	10#	625671	3775290	19	15	0.8	25	20000	0	0.0011	0.00055	0
	11#	625713	3775250	19	15	0.8	25	8000	0	0.0011	0.00055	0
	12#	625787	3775255	18	15	0.8	25	8000	0	0.0005	0.00025	0
	13#	625731	3775394	19	15	0.8	25	10000	0	0.0015	0.00075	0
	14#	625775	3775402	19	15	0.8	25	15000	0	0.0012	0.0006	0
	15#	625852	3775399	19	15	0.8	25	30000	0	0.0012	0.0006	0
	16#	625820	3775360	19	15	0.8	25	6000	0	0.0014	0.0007	0
	1#	625124	3775613	21	25	0.6	25	15000	0	0.027	0.0135	0
	1#	627506	3775129	19	20	1.5	40	43000	0	0.0011	0.00055	0
	2#	627770	3775032	16	20	1.5	40	32000	0	0.0011	0.00055	0
	3#	627981	3774977	16	20	1.5	40	32000	0	0.0011	0.00055	0
	4#	627534	3774944	19	20	1.5	25	22000	0	0.0005	0.00025	0
	5#	627893	3774878	17	20	1.2	25	45000	0	0.0015	0.00075	0
	6#	628097	3774804	18	20	1.2	25	48000	0	0.0012	0.0006	0
	7#	627422	3774899	18	20	0.9	25	42000	0	0.0012	0.0006	0
	8#	627576	3774844	20	20	1.5	40	43000	0	0.0011	0.00055	0
	9#	627770	3774782	17	20	1.5	40	32000	0	0.0011	0.00055	0
	10#	627825	3774795	17	20	1.5	40	32000	0	0.0011	0.00055	0
	11#	627986	3774748	18	20	1.2	25	22000	0	0.0005	0.00025	0
	12#	627422	3774852	18	20	1	25	45000	0	0.0015	0.00075	0
	13#	627815	3774705	18	20	1	25	48000	0	0.0012	0.0006	0
	14#	627997	3774664	18	20	1	25	42000	0	0.0012	0.0006	0
	15#	627562	3774751	21	20	1	40	35000	0	0.0014	0.0007	0

UTM 50

3

24.93 / 11.22 /

13.71

20t/ 12465 /

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6km 20L/100km

14958L 12.5

6.1-16 g/L

	CO	**NO_X**	**THC**
	27.0	44.4	4.44

6.1-17

6.1-17

	CO	**NO_X**	**THC**
t/a	0.404	0.664	0.066

6.1.5

6.1.5.1

6.1-16~ 6.1-27

6.1-16 SO_2

			/μg/m³		/μg/m3	/%	
1			0.02769	21041708	500	0.01	
			0.00331	210423	150	0	
			0.00049		60	0	
2			0.04119	21021009	500	0.01	
			0.00634	211224	150	0	
			0.00043		60	0	
3			0.0321	21021409	500	0.01	
			0.00654	210225	150	0	
			0.00036		60	0	
4			0.02626	21102308	500	0.01	
			0.0036	210401	150	0	
			0.00034		60	0	

5			0.02434	21012110	500	0	
			0.00474	210224	150	0	
			0.00029		60	0	
6			0.024	21121509	500	0	
			0.0028	210401	150	0	
			0.00019		60	0	
7			0.02127	21021409	500	0	
			0.0023	210225	150	0	
			0.00014		60	0	
8			0.01266	21010617	500	0	
			0.00144	210107	150	0	
			0.00007		60	0	
9			0.01378	21061807	500	0	
			0.00185	211130	150	0	
			0.00006		60	0	
10			0.01279	21092104	500	0	
			0.00237	210921	150	0	
			0.00013		60	0	
11			0.01475	21071001	500	0	
			0.00146	210713	150	0	
			0.0001		60	0	
12			0.02183	21062119	500	0	
			0.0018	210709	150	0	
			0.00009		60	0	
13			0.02191	21062019	500	0	
			0.00195	210711	150	0	
			0.00012		60	0	
14			0.01977	21053019	500	0	
			0.00303	211003	150	0	
			0.00017		60	0	
15			0.01723	21092618	500	0	
			0.00333	210602	150	0	
			0.00015		60	0	
16			0.0191	21081907	500	0	
			0.00416	210119	150	0	
			0.00027		60	0	
17			0.05944	21061309	500	0.01	
			0.0181	210426	150	0.01	
			0.00174		60	0	
18			0.12924	21061710	500	0.03	
			0.02381	210426	150	0.02	
			0.00332		60	0.01	

6.1-17 NOx

			/μg/m³		/μg/m³	/%	
1			1.69358	21041708	250	0.68	
			0.2026	210423	100	0.2	
			0.03017		50	0.06	
2			2.51923	21021009	250	1.01	
			0.38809	211224	100	0.39	
			0.0264		50	0.05	
3			1.96367	21021409	250	0.79	
			0.40012	210225	100	0.4	
			0.02219		50	0.04	
4			1.60606	21102308	250	0.64	
			0.22	210401	100	0.22	
			0.02079		50	0.04	
5			1.48889	21012110	250	0.6	
			0.29017	210224	100	0.29	
			0.01744		50	0.03	
6			1.46821	21121509	250	0.59	
			0.17132	210401	100	0.17	
			0.01179		50	0.02	
7			1.3013	21021409	250	0.52	
			0.14042	210225	100	0.14	
			0.00885		50	0.02	
8			0.77445	21010617	250	0.31	
			0.08797	210107	100	0.09	
			0.00406		50	0.01	
9			0.843	21061807	250	0.34	
			0.11337	211130	100	0.11	
			0.0038		50	0.01	
10			0.78222	21092104	250	0.31	
			0.1449	210921	100	0.14	
			0.008		50	0.02	
11			0.90248	21071001	250	0.36	
			0.08904	210713	100	0.09	
			0.0064		50	0.01	
12			1.33554	21062119	250	0.53	
			0.1102	210709	100	0.11	
			0.00542		50	0.01	
13			1.34006	21062019	250	0.54	
			0.11908	210711	100	0.12	
			0.00739		50	0.01	
14			1.20945	21053019	250	0.48	
			0.18504	211003	100	0.19	
			0.01049		50	0.02	
15			1.05366	21092618	250	0.42	
			0.20384	210602	100	0.2	

			0.00939		50	0.02	
16			1.16819	21081907	250	0.47	
			0.25444	210119	100	0.25	
			0.01665		50	0.03	
17			3.63578	21061309	250	1.45	
			1.10718	210426	100	1.11	
			0.10621		50	0.21	
18			7.90488	21061710	250	3.16	
			1.45624	210426	100	1.46	
			0.2032		50	0.41	

6.1-18 PM_{10}

			/μg/m^3		/μg/m^3	/%	
1			0.00231	21041708	450	0	
			0.00028	210423	150	0	
			0.00004		70	0	
2			0.00343	21021009	450	0	
			0.00053	211224	150	0	
			0.00004		70	0	
3			0.00268	21021409	450	0	
			0.00055	210225	150	0	
			0.00003		70	0	
4			0.00219	21102308	450	0	
			0.0003	210401	150	0	
			0.00003		70	0	
5			0.00203	21012110	450	0	
			0.0004	210224	150	0	
			0.00002		70	0	
6			0.002	21121509	450	0	
			0.00023	210401	150	0	
			0.00002		70	0	
7			0.00177	21021409	450	0	
			0.00019	210225	150	0	
			0.00001		70	0	
8			0.00106	21010617	450	0	
			0.00012	210107	150	0	
			0.00001		70	0	
9			0.00115	21061807	450	0	
			0.00015	211130	150	0	
			0.00001		70	0	
10			0.00107	21092104	450	0	
			0.0002	210921	150	0	
			0.00001		70	0	
11			0.00123	21071001	450	0	
			0.00012	210713	150	0	
			0.00001		70	0	

12			0.00182	21062119	450	0	
			0.00015	210709	150	0	
			0.00001		70	0	
13			0.00183	21062019	450	0	
			0.00016	210711	150	0	
			0.00001		70	0	
14			0.00165	21053019	450	0	
			0.00025	211003	150	0	
			0.00001		70	0	
15			0.00144	21092618	450	0	
			0.00028	210602	150	0	
			0.00001		70	0	
16			0.00159	21081907	450	0	
			0.00035	210119	150	0	
			0.00002		70	0	
17			0.00495	21061309	450	0	
			0.00151	210426	150	0	
			0.00014		70	0	
18			0.01077	21061710	450	0	
			0.00198	210426	150	0	
			0.00028		70	0	

6.1-19 $PM_{2.5}$

			/μg/m^3		/μg/m^3	/%	
1			0.00115	21041708	225	0	
			0.00014	210423	75	0	
			0.00002		35	0	
2			0.00172	21021009	225	0	
			0.00026	211224	75	0	
			0.00002		35	0	
3			0.00134	21021409	225	0	
			0.00027	210225	75	0	
			0.00002		35	0	
4			0.00109	21102308	225	0	
			0.00015	210401	75	0	
			0.00001		35	0	
5			0.00101	21012110	225	0	
			0.0002	210224	75	0	
			0.00001		35	0	
6			0.001	21121509	225	0	
			0.00012	210401	75	0	
			0.00001		35	0	
7			0.00089	21021409	225	0	
			0.0001	210225	75	0	
			0.00001		35	0	
8			0.00053	21010617	225	0	
			0.00006	210107	75	0	

			0		35	0	
			0.00057	21061807	225	0	
			0.00008	211130	75	0	
			0		35	0	
			0.00053	21092104	225	0	
			0.0001	210921	75	0	
			0.00001		35	0	
			0.00061	21071001	225	0	
			0.00006	210713	75	0	
			0		35	0	
			0.00091	21062119	225	0	
			0.00008	210709	75	0	
			0		35	0	
			0.00091	21062019	225	0	
			0.00008	210711	75	0	
			0.00001		35	0	
			0.00082	21053019	225	0	
			0.00013	211003	75	0	
			0.00001		35	0	
			0.00072	21092618	225	0	
			0.00014	210602	75	0	
			0.00001		35	0	
			0.0008	21081907	225	0	
			0.00017	210119	75	0	
			0.00001		35	0	
			0.00248	21061309	225	0	
			0.00075	210426	75	0	
			0.00007		35	0	
			0.00538	21061710	225	0	
			0.00099	210426	75	0	
			0.00014		35	0	

14			10.50214	21081823	200	5.25	
15			8.57782	21081822	200	4.29	
16			9.39046	21083103	200	4.7	
17			62.93915	21070807	200	31.47	
18			73.7416	21010209	200	36.87	

6.1-21

			/μg/m^3		/μg/m^3	/%	
1			0.86799	21041708	3000	0.03	
2			1.26293	21021009	3000	0.04	
3			1.02157	21021409	3000	0.03	
4			0.89794	21102308	3000	0.03	
5			0.83301	21012110	3000	0.03	
6			0.85208	21121509	3000	0.03	
7			0.71004	21021409	3000	0.02	
8			0.43104	21010617	3000	0.01	
9			0.48532	21110817	3000	0.02	
10			0.42691	21092104	3000	0.01	
11			0.45821	21071001	3000	0.02	
12			0.68693	21062119	3000	0.02	
13			0.70621	21062019	3000	0.02	
14			0.62805	21053019	3000	0.02	
15			0.56683	21092618	3000	0.02	
16			0.62192	21081907	3000	0.02	
17			1.78412	21061309	3000	0.06	
18			3.87569	21061710	3000	0.13	

6.1-22

			/μg/m^3		/μg/m^3	/%	
1			19.92112	21031004	3000	0.66	
2			19.99312	21012206	3000	0.67	
3			19.63467	21111618	3000	0.65	
4			14.35314	21041803	3000	0.48	
5			13.08203	21062705	3000	0.44	
6			8.4744	21062803	3000	0.28	
7			9.88528	21111618	3000	0.33	
8			6.58326	21052403	3000	0.22	
9			5.9493	21042307	3000	0.2	
10			5.91708	21021808	3000	0.2	
11			6.66568	21042707	3000	0.22	
12			5.40742	21073020	3000	0.18	
13			8.07749	21040621	3000	0.27	
14			12.00196	21120607	3000	0.4	
15			10.60169	21112601	3000	0.35	
16			6.06912	21031519	3000	0.2	

17			51.2111	21011109	3000	1.71	
18			69.27115	21010209	3000	2.31	

6.1-23

			/μg/m^3		/μg/m^3	/%	
1			22.69007	21042620	2000	1.13	
2			19.14685	21090306	2000	0.96	
3			17.8844	21111618	2000	0.89	
4			15.6829	21101301	2000	0.78	
5			15.14206	21080823	2000	0.76	
6			5.36041	21031205	2000	0.27	
7			9.08873	21111618	2000	0.45	
8			8.01434	21052403	2000	0.4	
9			6.89483	21111302	2000	0.34	
10			6.97001	21120401	2000	0.35	
11			5.39298	21042707	2000	0.27	
12			5.47447	21070822	2000	0.27	
13			7.38789	21040621	2000	0.37	
14			13.68863	21120607	2000	0.68	
15			12.24268	21112601	2000	0.61	
16			8.32471	21112522	2000	0.42	
17			30.02477	21011109	2000	1.5	
18			51.76471	21122924	2000	2.59	

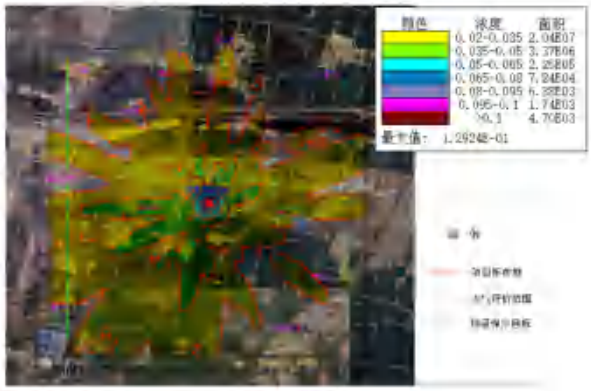
6.1-24

			/μg/m^3		/μg/m^3	/%	
1			0.46045	21042620	10	4.6	
2			0.41905	21010601	10	4.19	
3			0.41864	21051501	10	4.19	
4			0.44869	21101301	10	4.49	
5			0.35695	21090303	10	3.57	
6			0.11111	21102406	10	1.11	
7			0.19328	21051503	10	1.93	
8			0.17769	21052403	10	1.78	
9			0.17835	21111302	10	1.78	
10			0.17309	21120401	10	1.73	
11			0.13356	21073104	10	1.34	
12			0.12146	21070822	10	1.21	
13			0.19636	21012822	10	1.96	
14			0.28112	21120607	10	2.81	
15			0.26619	21112601	10	2.66	
16			0.21215	21112522	10	2.12	
17			0.74178	21102908	10	7.42	
18			1.11944	21122924	10	11.19	

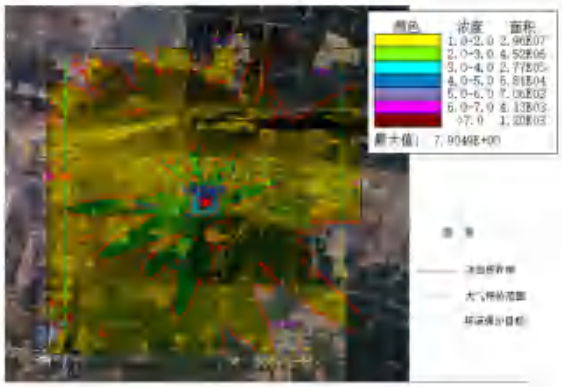
6.1-25 DMF

			/μg/m³		/μg/m³	/%	
1			0.05318	21041708	30	0.18	
2			0.07738	21021009	30	0.26	
3			0.06258	21021409	30	0.21	
4			0.05498	21102308	30	0.18	
5			0.051	21012110	30	0.17	
6			0.05216	21121509	30	0.17	
7			0.04348	21021409	30	0.14	
8			0.02639	21010617	30	0.09	
9			0.02971	21110817	30	0.1	
10			0.02614	21092104	30	0.09	
11			0.02807	21071001	30	0.09	
12			0.04208	21062119	30	0.14	
13			0.04326	21062019	30	0.14	
14			0.03847	21053019	30	0.13	
15			0.03471	21092618	30	0.12	
16			0.03809	21081907	30	0.13	
17			0.10933	21061309	30	0.36	
18			0.2375	21061710	30	0.79	

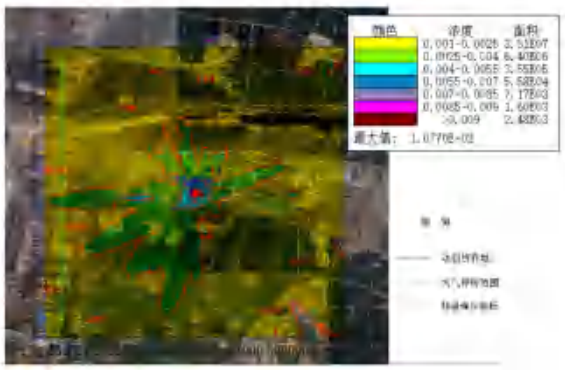
≤100% SO_2 NO_x PM_{10} $PM_{2.5}$ ≤30%



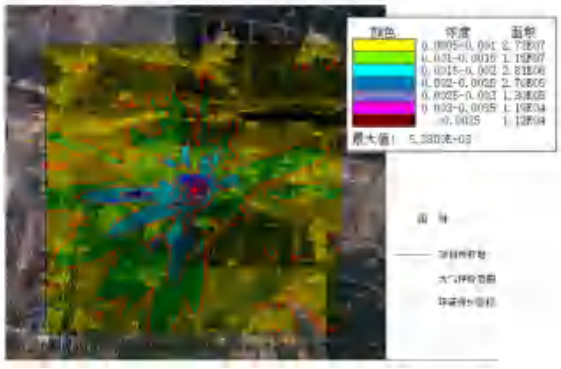
SO_2



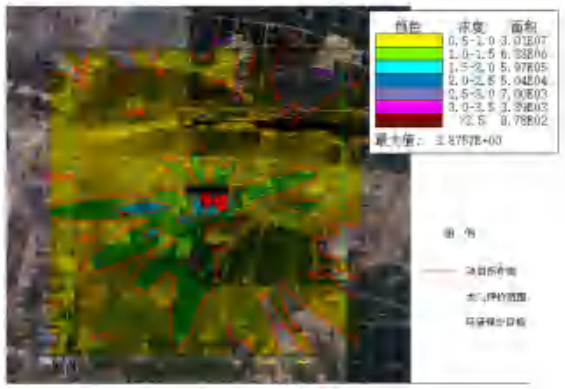
NOx

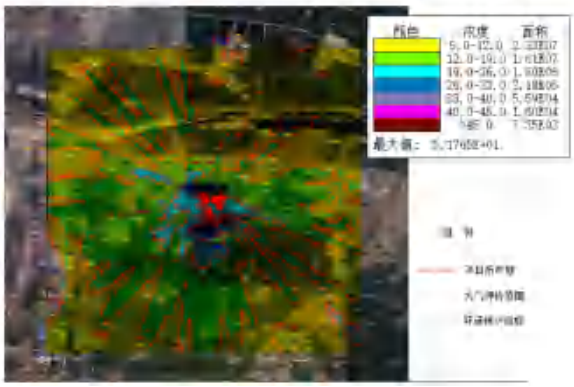


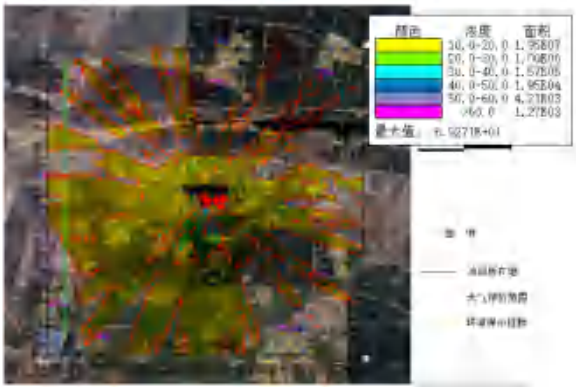
PM_{10}

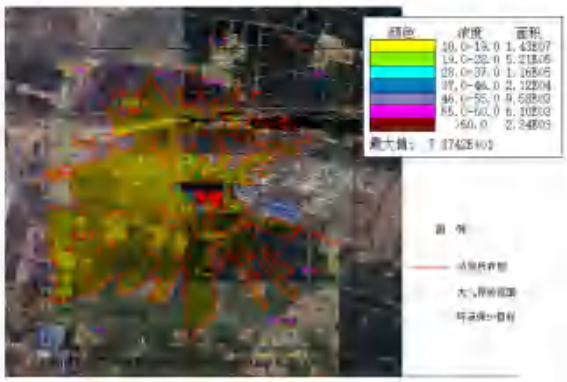


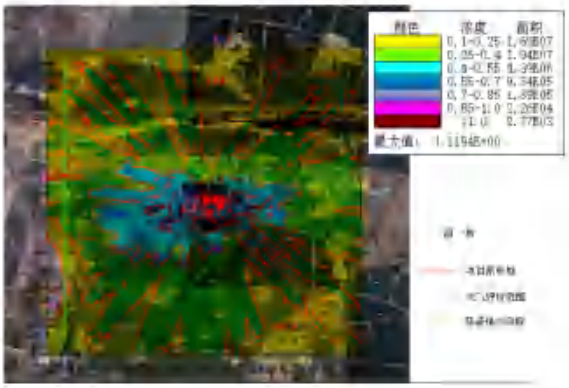
$PM_{2.5}$

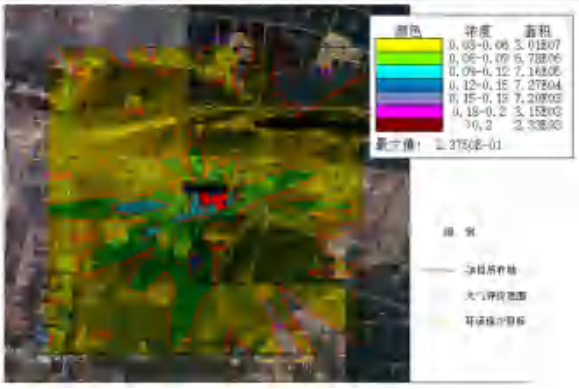






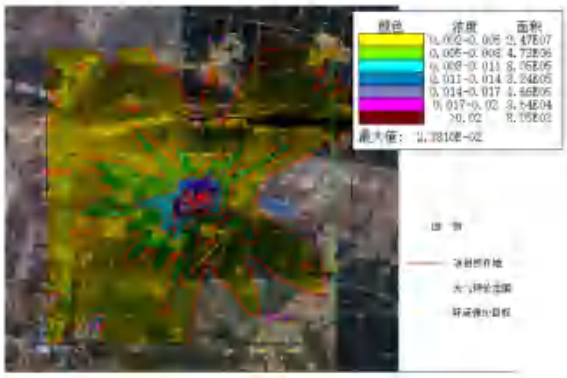




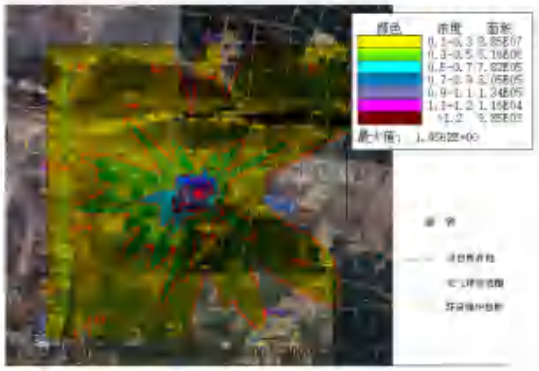


DMF

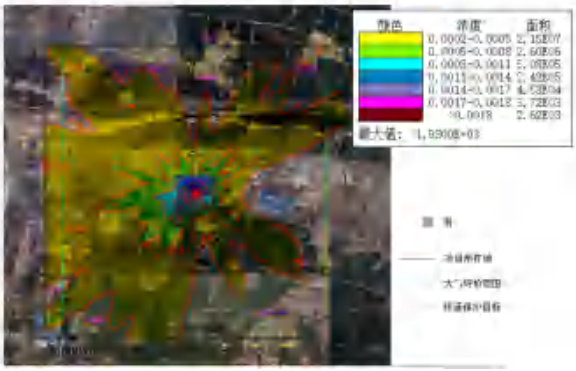
6.1-7 1 μg/m³



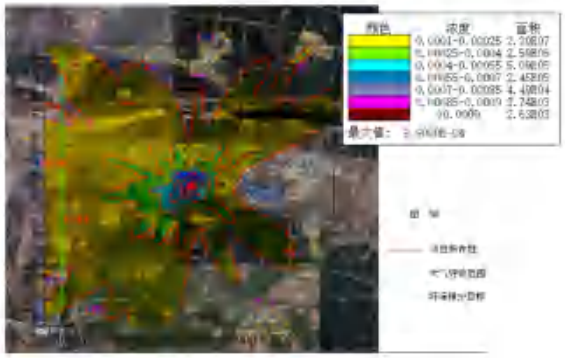
SO_2



NOx

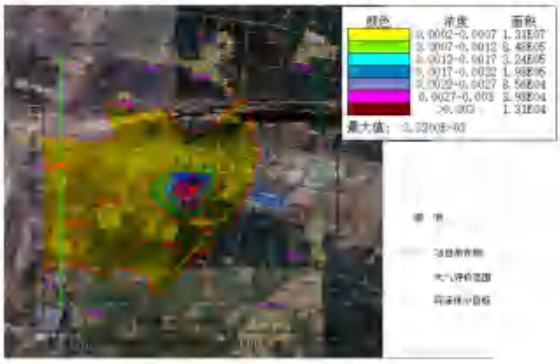


PM_{10}

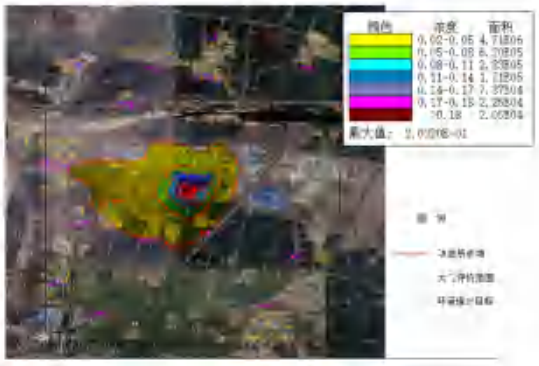


PM2.5

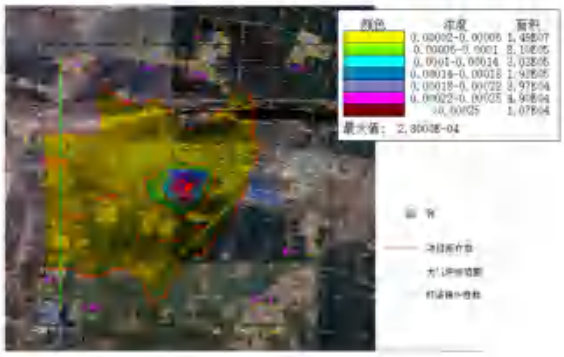
6.1-8 24 μg/m³



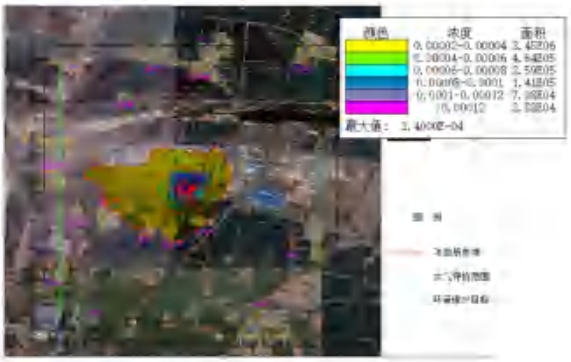
SO_2



NOx



PM_{10}



PM2.5

6.1-9 μg/m³

6.1.5.2

$PM_{2.5}$

$PM_{2.5}$ “ -

” $PM_{2.5}$

k k≤-20%

k

$$k = \frac{\left[\overline{C}_{本项目(a)} - \overline{C}_{区域削减(a)}\right]}{\overline{C}_{区域削减(a)}} \times 100\%$$

k —— %

—— μg/m³

—— μg/m³

$PM_{2.5}$

9.2738E-06μg/m³ $PM_{2.5}$

5.4701E-02μg/m³ $PM_{2.5}$

-99.98% k <= -20% $PM_{2.5}$

SO_2 NO_2 PM_{10} 2021

SO_2 NO_2 98%

PM_{10} 95%

$$C_{xz(x,y)} = MAX\left[\frac{1}{n}\sum_{j=1}^{n} C_{jc(j,t)}\right]$$

$C_{xz(x,y)}$ —— x,y

μg/m³

$C_{jc(j,t)}$—— j t μg/m³

n——

3

6.1-26

				/μg/m³		/μg/m³	/μg/m³	/μg/m³	/%	
SO2	1			0.047667	211106	20	20.04767	150	13.37	
				-1.077633		8.9	7.822367	60	13.04	
	2			0.002909	211217	20	20.00291	150	13.34	
				-0.846886		8.9	8.053114	60	13.42	
	3			0.000225	210224	20	20.00023	150	13.33	
				-0.873035		8.9	8.026965	60	13.38	
	4			-0.028157	211214	20	19.97184	150	13.31	
				-1.176725		8.9	7.723275	60	12.87	
	5			0.041231	210126	20	20.04123	150	13.36	
				-0.967318		8.9	7.932681	60	13.22	
	6			0.077905	210227	20	20.07791	150	13.39	
				-0.601684		8.9	8.298316	60	13.83	
	7			0.00382	210202	20	20.00382	150	13.34	
				-0.492648		8.9	8.407351	60	14.01	
	8			0.039325	211224	20	20.03933	150	13.36	
				-0.240332		8.9	8.659667	60	14.43	
	9			0.048443	210216	20	20.04844	150	13.37	
				-0.222655		8.9	8.677344	60	14.46	
	10			0.050051	210215	20	20.05005	150	13.37	
				-0.360989		8.9	8.53901	60	14.23	
	11			0.337458	210904	20	20.33746	150	13.56	
				-0.520227		8.9	8.379773	60	13.97	
	12			0.120736	210614	20	20.12074	150	13.41	
				-0.412522		8.9	8.487478	60	14.15	
	13			0.104176	210530	20	20.10418	150	13.4	
				-0.433067		8.9	8.466932	60	14.11	
	14			-0.009974	210413	20	19.99003	150	13.33	

				-0.717068		8.9	8.182932	60	13.64	
	15			0.023819	210609	20	20.02382	150	13.35	
				-0.525296		8.9	8.374704	60	13.96	
	16			0.009674	210202	20	20.00967	150	13.34	
				-1.203266		8.9	7.696733	60	12.83	
	17			-0.071657	210112	20	19.92834	150	13.29	
				-2.727132		8.9	6.172868	60	10.29	
	18			71.00781	210301	20	91.00781	150	60.67	
				8.330964		8.9	17.23096	60	28.72	
NOx	1			0.814893	210223	56.67	57.48489	100	57.48	
				-2.061466		24.44	22.37853	50	44.76	
	2			0.567816	210223	56.67	57.23781	100	57.24	
				-1.529732		24.44	22.91027	50	45.82	
	3			0.355428	211128	56.67	57.02542	100	57.03	
				-1.482424		24.44	22.95758	50	45.92	
	4			-0.037751	210119	56.67	56.63225	100	56.63	
				-1.868139		24.44	22.57186	50	45.14	
	5			-0.024086	211218	56.67	56.64591	100	56.65	
				-1.560432		24.44	22.87957	50	45.76	
	6			0.119014	210309	56.67	56.78901	100	56.79	
				-0.975887		24.44	23.46411	50	46.93	
	7			0.186675	210317	56.67	56.85667	100	56.86	
				-0.826946		24.44	23.61305	50	47.23	
	8			0.459066	211008	56.67	57.12907	100	57.13	
				-0.377857		24.44	24.06214	50	48.12	
	9			0.618773	210123	56.67	57.28877	100	57.29	
				-0.320354		24.44	24.11965	50	48.24	
	10			0.145645	210606	56.67	56.81564	100	56.82	
				-0.666117		24.44	23.77388	50	47.55	
	11			0.519839	210114	56.67	57.18984	100	57.19	

				-0.74545		24.44	23.69455	50	47.39	
	12			0.419367	210625	56.67	57.08937	100	57.09	
				-0.624653		24.44	23.81535	50	47.63	
	13			0.154261	210228	56.67	56.82426	100	56.82	
				-0.737889		24.44	23.70211	50	47.4	
	14			-0.017241	210925	56.67	56.65276	100	56.65	
				-1.123582		24.44	23.31642	50	46.63	
	15			0.029438	210609	56.67	56.69944	100	56.7	
				-0.827382		24.44	23.61262	50	47.23	
	16			-0.027075	211218	56.67	56.64292	100	56.64	
				-1.844877		24.44	22.59512	50	45.19	
	17			-0.112831	210226	56.67	56.55717	100	56.56	
				-4.546166		24.44	19.89384	50	39.79	
	18			31.554	210301	56.67	88.224	100	88.22	
				1.429464		24.44	25.86946	50	51.74	
PM10	1			-0.054024	211213	142.5	142.446	150	94.96	
				-1.096562		66.29	65.19344	70	93.13	
	2			-0.046056	210322	142.5	142.4539	150	94.97	
				-0.936744		66.29	65.35326	70	93.36	
	3			-0.039864	211123	142.5	142.4601	150	94.97	
				-1.094969		66.29	65.19503	70	93.14	
	4			-0.057692	211229	142.5	142.4423	150	94.96	
				-2.520776		66.29	63.76923	70	91.1	
	5			-0.039414	211108	142.5	142.4606	150	94.97	
				-2.354432		66.29	63.93557	70	91.34	
	6			-0.03136	211227	142.5	142.4686	150	94.98	
				-2.963225		66.29	63.32677	70	90.47	
	7			-0.023991	210303	142.5	142.476	150	94.98	
				-1.391396		66.29	64.89861	70	92.71	
	8			-0.025897	210129	142.5	142.4741	150	94.98	

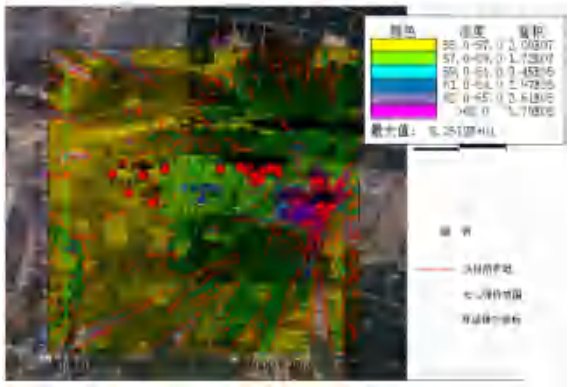
				-0.533378		66.29	65.75662	70	93.94	
	9			-0.024968	210115	142.5	142.475	150	94.98	
				-0.592597		66.29	65.6974	70	93.85	
	10			-0.028013	210317	142.5	142.472	150	94.98	
				-1.187808		66.29	65.1022	70	93	
	11			-0.034715	210208	142.5	142.4653	150	94.98	
				-1.291904		66.29	64.9981	70	92.85	
	12			-0.033181	210208	142.5	142.4668	150	94.98	
				-1.965131		66.29	64.32487	70	91.89	
	13			-0.03348	210208	142.5	142.4665	150	94.98	
				-1.410704		66.29	64.8793	70	92.68	
	14			-0.0439	211108	142.5	142.4561	150	94.97	
				-1.682257		66.29	64.60774	70	92.3	
	15			-0.027054	210107	142.5	142.4729	150	94.98	
				-2.104415		66.29	64.18559	70	91.69	
	16			-0.048643	211123	142.5	142.4514	150	94.97	
				-4.736918		66.29	61.55308	70	87.93	
	17			-0.129544	210220	142.5	142.3705	150	94.91	
				-1.552663		66.29	64.73734	70	92.48	
	18			0.188583	211005	142.5	142.6886	150	95.13	
				-0.450396		66.29	65.83961	70	94.06	
	1			7.80437	21100423	50	57.80437	3000	1.93	
	2			7.11336	21081206	50	57.11336	3000	1.9	
	3			6.76407	21080603	50	56.76407	3000	1.89	
	4			6.24187	21081820	50	56.24187	3000	1.87	
	5			5.775	21062924	50	55.775	3000	1.86	
	6			7.76582	21081302	50	57.76582	3000	1.93	
	7			5.05757	21062804	50	55.05757	3000	1.84	
	8			6.88153	21070305	50	56.88153	3000	1.9	
	9			7.20622	21083119	50	57.20622	3000	1.91	

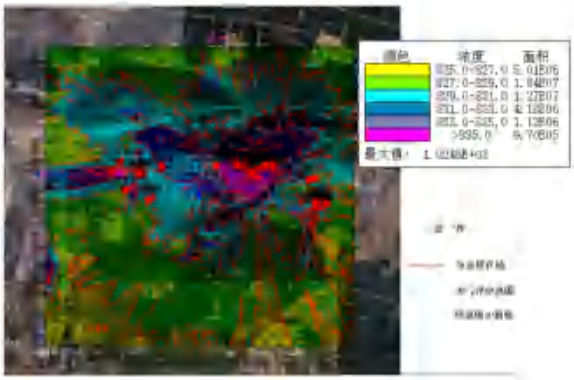
	10			6.91638	21062120	50	56.91638	3000	1.9	
	11			7.02588	21090824	50	57.02588	3000	1.9	
	12			7.13574	21082123	50	57.13574	3000	1.9	
	13			6.20407	21082203	50	56.20407	3000	1.87	
	14			5.63237	21070521	50	55.63237	3000	1.85	
	15			4.66364	21062922	50	54.66364	3000	1.82	
	16			5.80769	21061305	50	55.80769	3000	1.86	
	17			7.70045	21080719	50	57.70045	3000	1.92	
	18			32.5117	21112121	50	82.5117	3000	2.75	
	1			10.15508	21063021	820	830.1551	2000	41.51	
	2			8.48267	21072620	820	828.4827	2000	41.42	
	3			8.79	21042423	820	828.79	2000	41.44	
	4			7.69565	21020804	820	827.6957	2000	41.38	
	5			7.70632	21070303	820	827.7063	2000	41.39	
	6			6.99254	21072423	820	826.9926	2000	41.35	
	7			6.27688	21072623	820	826.2769	2000	41.31	
	8			5.98204	21053003	820	825.9821	2000	41.3	
	9			7.05498	21012808	820	827.055	2000	41.35	
	10			8.21233	21060501	820	828.2123	2000	41.41	
	11			9.19231	21061323	820	829.1923	2000	41.46	
	12			8.60991	21090422	820	828.6099	2000	41.43	
	13			8.54589	21052222	820	828.5459	2000	41.43	
	14			9.19475	21100418	820	829.1948	2000	41.46	
	15			8.68022	21070521	820	828.6802	2000	41.43	
	16			8.73008	21070124	820	828.7301	2000	41.44	
	17			10.83855	21061605	820	830.8386	2000	41.54	
	18			204.5993	21112121	820	1024.599	2000	51.23	
	1			19.92112	21031004	10.1	30.02112	3000	1.00	
	2			19.99312	21012206	10.1	30.09312	3000	1.00	
	3			19.63467	21111618	10.1	29.73467	3000	0.99	

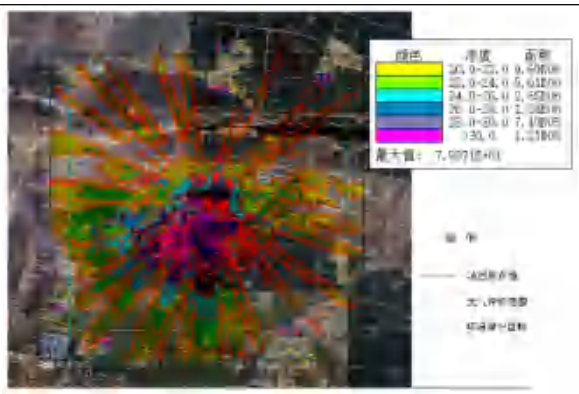
	4			14.35314	21041803	10.1	24.45314	3000	0.82	
	5			13.08203	21062705	10.1	23.18203	3000	0.77	
	6			8.4744	21062803	10.1	18.5744	3000	0.62	
	7			9.88528	21111618	10.1	19.98528	3000	0.67	
	8			6.58326	21052403	10.1	16.68326	3000	0.56	
	9			5.9493	21042307	10.1	16.0493	3000	0.53	
	10			5.91708	21021808	10.1	16.01708	3000	0.53	
	11			6.66568	21042707	10.1	16.76568	3000	0.56	
	12			5.40742	21073020	10.1	15.50742	3000	0.52	
	13			8.07749	21040621	10.1	18.17749	3000	0.61	
	14			12.00196	21120607	10.1	22.10196	3000	0.74	
	15			10.60169	21112601	10.1	20.70169	3000	0.69	
	16			6.06912	21031519	10.1	16.16912	3000	0.54	
	17			51.2111	21011109	10.1	61.3111	3000	2.04	
	18			69.27115	21010209	10.1	79.37115	3000	2.65	
	1			1.51474	21063021	13	14.51474	200	7.26	
	2			1.68771	21072620	13	14.68771	200	7.34	
	3			1.79442	21072520	13	14.79442	200	7.4	
	4			1.7703	21083020	13	14.7703	200	7.39	
	5			1.62699	21080205	13	14.62699	200	7.31	
	6			1.73411	21072423	13	14.73411	200	7.37	
	7			1.34546	21101323	13	14.34546	200	7.17	
	8			1.17579	21090504	13	14.17579	200	7.09	
	9			1.32145	21090101	13	14.32145	200	7.16	
	10			1.37673	21092119	13	14.37673	200	7.19	
	11			1.38342	21073119	13	14.38342	200	7.19	
	12			1.40437	21100124	13	14.40437	200	7.2	
	13			1.30557	21081822	13	14.30557	200	7.15	
	14			1.37258	21100119	13	14.37258	200	7.19	
	15			1.2855	21070623	13	14.2855	200	7.14	

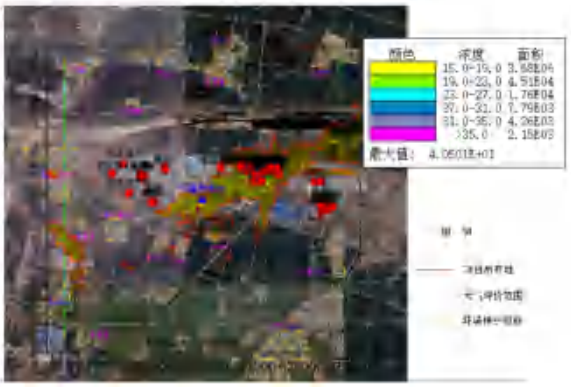
	16			1.61683	21080224	13	14.61683	200	7.31	
	17			2.13246	21061605	13	15.13246	200	7.57	
	18			27.50098	21112121	13	40.50098	200	20.25	
	1			0.08217	21091324	5	5.08217	10	50.82	
	2			0.07924	21091807	5	5.07924	10	50.79	
	3			0.07476	21092903	5	5.07476	10	50.75	
	4			0.07738	21072406	5	5.07738	10	50.77	
	5			0.07122	21091123	5	5.07122	10	50.71	
	6			0.12024	21092906	5	5.12024	10	51.2	
	7			0.06187	21050319	5	5.06187	10	50.62	
	8			0.05177	21071503	5	5.05177	10	50.52	
	9			0.07237	21100918	5	5.07237	10	50.72	
	10			0.07594	21070701	5	5.07594	10	50.76	
	11			0.07764	21081824	5	5.07764	10	50.78	
	12			0.07825	21053022	5	5.07825	10	50.78	
	13			0.07899	21090824	5	5.07899	10	50.79	
	14			0.08225	21052203	5	5.08225	10	50.82	
	15			0.07002	21062922	5	5.07002	10	50.7	
	16			0.07273	21052319	5	5.07273	10	50.73	
	17			0.12687	21100522	5	5.12687	10	51.27	
	18			0.45034	21081707	5	5.45034	10	54.5	
DMF	1			0.05318	21041708	10	10.05318	30	33.51	
	2			0.07738	21021009	10	10.07738	30	33.59	
	3			0.06258	21021409	10	10.06258	30	33.54	
	4			0.05498	21102308	10	10.05498	30	33.52	
	5			0.051	21012110	10	10.051	30	33.5	
	6			0.05216	21121509	10	10.05216	30	33.51	
	7			0.04348	21021409	10	10.04348	30	33.48	
	8			0.02639	21010617	10	10.02639	30	33.42	
	9			0.02971	21110817	10	10.02971	30	33.43	

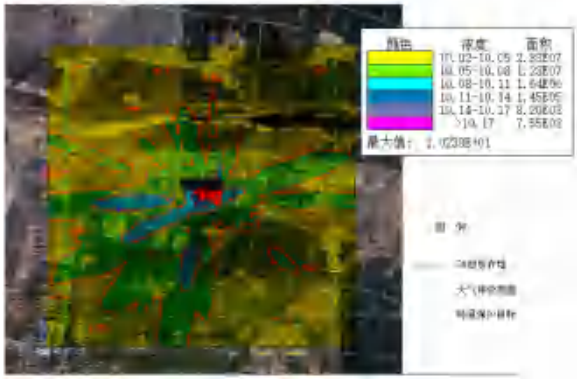
	10			0.02614	21092104	10	10.02614	30	33.42	
	11			0.02807	21071001	10	10.02807	30	33.43	
	12			0.04208	21062119	10	10.04208	30	33.47	
	13			0.04326	21062019	10	10.04326	30	33.48	
	14			0.03847	21053019	10	10.03847	30	33.46	
	15			0.03471	21092618	10	10.03471	30	33.45	
	16			0.03809	21081907	10	10.03809	30	33.46	
	17			0.10933	21061309	10	10.10933	30	33.7	
	18			0.2375	21061710	10	10.2375	30	34.12	





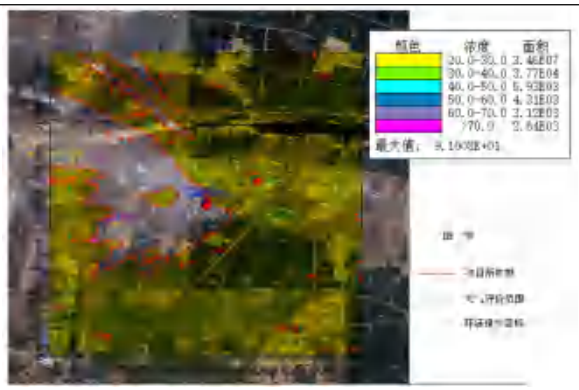




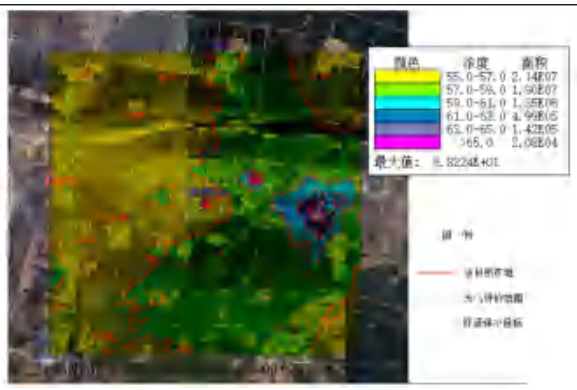


DMF

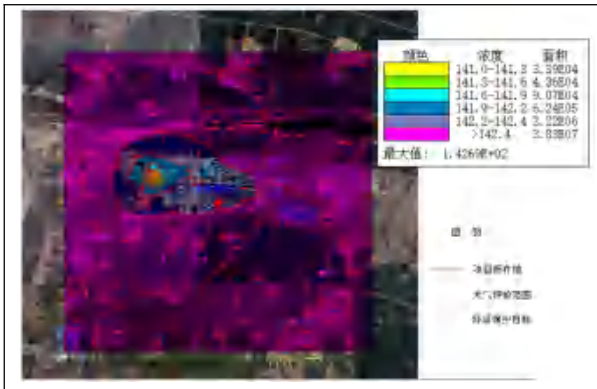
6.1-10 μg/m^3



SO_2 98%

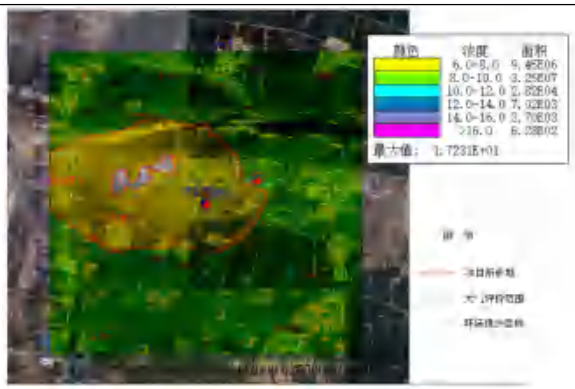


NOx 98%

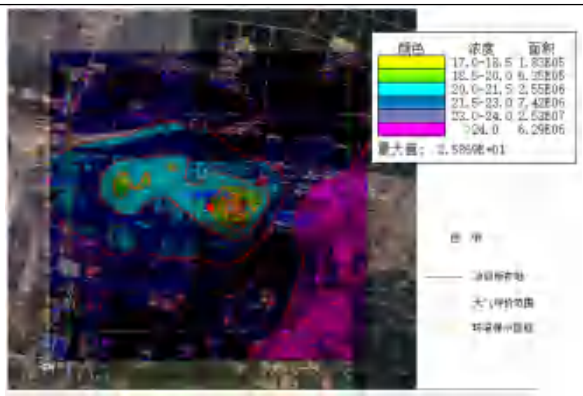


PM_{10} 95%

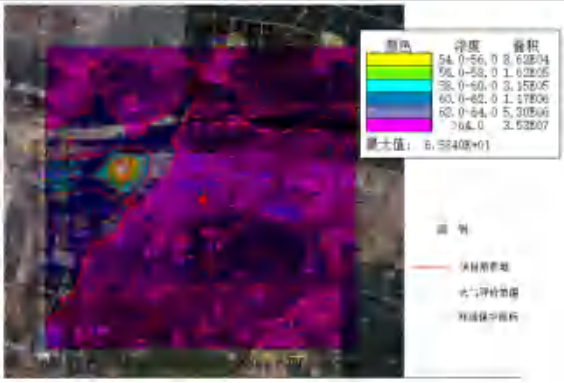
6.1-11 μg/m^3



SO_2



NOx



PM_{10}

6.1-12 μg/m^3

6.1.5.3

6.1-29

6.1-27

				/μg/m³		/μg/m³	/%	
SO_2	1			0.02769	21041708	500	0.01	
	2			0.04119	21021009	500	0.01	
	3			0.0321	21021409	500	0.01	
	4			0.02626	21102308	500	0.01	
	5			0.02434	21012110	500	0	
	6			0.024	21121509	500	0	
	7			0.02127	21021409	500	0	
	8			0.01266	21010617	500	0	
	9			0.01378	21061807	500	0	
	10			0.01279	21092104	500	0	
	11			0.01475	21071001	500	0	
	12			0.02183	21062119	500	0	
	13			0.02191	21062019	500	0	
	14			0.01977	21053019	500	0	
	15			0.01723	21092618	500	0	
	16			0.0191	21081907	500	0	
	17			0.05944	21061309	500	0.01	
	18			0.12924	21061710	500	0.03	
PM_{10}	1			0.00231	21041708	450	0	
	2			0.00343	21021009	450	0	
	3			0.00268	21021409	450	0	
	4			0.00219	21102308	450	0	
	5			0.00203	21012110	450	0	
	6			0.002	21121509	450	0	
	7			0.00177	21021409	450	0	
	8			0.00106	21010617	450	0	
	9			0.00115	21061807	450	0	
	10			0.00107	21092104	450	0	
	11			0.00123	21071001	450	0	
	12			0.00182	21062119	450	0	
	13			0.00183	21062019	450	0	
	14			0.00165	21053019	450	0	
	15			0.00144	21092618	450	0	
	16			0.00159	21081907	450	0	
	17			0.00495	21061309	450	0	
	18			0.01077	21061710	450	0	
$PM_{2.5}$	1			0.00115	21041708	225	0	
	2			0.00172	21021009	225	0	

	3			0.00134	21021409	225	0	
	4			0.00109	21102308	225	0	
	5			0.00101	21012110	225	0	
	6			0.001	21121509	225	0	
	7			0.00089	21021409	225	0	
	8			0.00053	21010617	225	0	
	9			0.00057	21061807	225	0	
	10			0.00053	21092104	225	0	
	11			0.00061	21071001	225	0	
	12			0.00091	21062119	225	0	
	13			0.00091	21062019	225	0	
	14			0.00082	21053019	225	0	
	15			0.00072	21092618	225	0	
	16			0.0008	21081907	225	0	
	17			0.00248	21061309	225	0	
	18			0.00538	21061710	225	0	
NOx	1			1.69358	21041708	250	0.68	
	2			2.51923	21021009	250	1.01	
	3			1.96367	21021409	250	0.79	
	4			1.60606	21102308	250	0.64	
	5			1.48889	21012110	250	0.6	
	6			1.46821	21121509	250	0.59	
	7			1.3013	21021409	250	0.52	
	8			0.77445	21010617	250	0.31	
	9			0.843	21061807	250	0.34	
	10			0.78222	21092104	250	0.31	
	11			0.90248	21071001	250	0.36	
	12			1.33554	21062119	250	0.53	
	13			1.34006	21062019	250	0.54	
	14			1.20945	21053019	250	0.48	
	15			1.05366	21092618	250	0.42	
	16			1.16819	21081907	250	0.47	
	17			3.63578	21061309	250	1.45	
	18			7.90488	21061710	250	3.16	
	1			13.83747	21041708	3000	0.46	
	2			20.55526	21021009	3000	0.69	
	3			16.05945	21021409	3000	0.54	
	4			13.19725	21102308	3000	0.44	
	5			12.23499	21012110	3000	0.41	
	6			12.09566	21121509	3000	0.4	
	7			10.67545	21021409	3000	0.36	
	8			6.36179	21010617	3000	0.21	
	9			6.91138	21061807	3000	0.23	
	10			6.41716	21092104	3000	0.21	
	11			7.36947	21071001	3000	0.25	
	12			10.91456	21062119	3000	0.36	
	13			10.96843	21062019	3000	0.37	

	14			9.8901	21053019	3000	0.33	
	15			8.63581	21092618	3000	0.29	
	16			9.56795	21081907	3000	0.32	
	17			29.62709	21061309	3000	0.99	
	18			64.41156	21061710	3000	2.15	
	1			22.69033	21042620	2000	1.13	
	2			19.17825	21021009	2000	0.96	
	3			17.88451	21111618	2000	0.89	
	4			15.68302	21101301	2000	0.78	
	5			15.1422	21080823	2000	0.76	
	6			12.08348	21121509	2000	0.6	
	7			11.20233	21021409	2000	0.56	
	8			8.01445	21052403	2000	0.4	
	9			6.89498	21111302	2000	0.34	
	10			6.97015	21120401	2000	0.35	
	11			6.78623	21071001	2000	0.34	
	12			10.19908	21062119	2000	0.51	
	13			10.38968	21062019	2000	0.52	
	14			13.68874	21120607	2000	0.68	
	15			12.24286	21112601	2000	0.61	
	16			8.68441	21081907	2000	0.43	
	17			32.35379	21121510	2000	1.62	
	18			60.11208	21061710	2000	3.01	
	1			12.8198	21010209	200	6.41	
	2			10.02728	21012206	200	5.01	
	3			12.28376	21111618	200	6.14	
	4			10.61565	21080303	200	5.31	
	5			11.45545	21080823	200	5.73	
	6			16.56146	21062803	200	8.28	
	7			7.97589	21111618	200	3.99	
	8			8.99584	21090101	200	4.5	
	9			5.97666	21042307	200	2.99	
	10			7.49328	21070802	200	3.75	
	11			9.7339	21062201	200	4.87	
	12			8.48666	21061503	200	4.24	
	13			8.89698	21073122	200	4.45	
	14			10.50214	21081823	200	5.25	
	15			8.57782	21081822	200	4.29	
	16			9.39046	21083103	200	4.7	
	17			63.46476	21070807	200	31.73	
	18			73.74236	21010209	200	36.87	
DMF	1			0.85612	21041708	30	2.85	
	2			1.27178	21021009	30	4.24	
	3			0.99358	21021409	30	3.31	
	4			0.81644	21102308	30	2.72	
	5			0.75691	21012110	30	2.52	

	6			0.74826	21121509	30	2.49	
	7			0.66045	21021409	30	2.2	
	8			0.39357	21010617	30	1.31	
	9			0.42758	21061807	30	1.43	
	10			0.397	21092104	30	1.32	
	11			0.45595	21071001	30	1.52	
	12			0.67528	21062119	30	2.25	
	13			0.6786	21062019	30	2.26	
	14			0.61189	21053019	30	2.04	
	15			0.53427	21092618	30	1.78	
	16			0.59195	21081907	30	1.97	
	17			1.83311	21061309	30	6.11	
	18			3.98532	21061710	30	13.28	

P5

6.1.6

1

6 6.1-28

6.1-28

0		
1		
2		
3		
4		
5		

6.1-29

6.1

	ppm V/V	mg/m³	g/m
NH_3	.5	041	0 h
	00041	0.00057	1h
	33		.0 1h
	160	555.102	0.45 1h

6.1-30

6.1-30

	μg/m³	%	μg/m³	%	mg/m³
NH_3	73.7416	36.87	73.74236	36.87	1.041
	1.11944	11.19	/	/	0.00057
	3.87569	0.13	64.41156	2.15	43.102
	69.27115	2.31	/	/	555.102

2

6.1.8

1 SO_2 NOx PM_{10} DMF 100% 30%

2 SO_2 NOx PM_{10} DMF

3 $PM_{2.5}$ 9.2738E-06μg/m^3 $PM_{2.5}$ 5.4701E-02μg/m^3 $PM_{2.5}$ -99.98% -20% $PM_{2.5}$

4

5 AERMOD

6.1.9

6.1-31

6.1-32

6.1-31

			(mg/m^3)	(kg/h)	t/a
1	P5		0.488	0.010	0.078
2			0.206	0.004	0.033
3			17.925	0.359	2.868
4		DMF	1.106	0.022	0.177
5			51.187	1.023	8.19
6		SO_2	0.03	0.0006	0.005
7		NOx	36.706	0.734	5.873
8		PM_{10}	0.038	0.001	0.006
					0.078
					0.033
					2.868
	DMF				0.177
					8.19
	SO_2				0.005
	NOx				5.873
					0.006
1	P6		30.619	0.643	5.146
2			6.095	0.128	1.026
3			6.095	0.128	1.026
4	P7		3.456	0.031	0.249
5			0.667	0.006	0.048
6			5.537	0.05	0.399
					1.255
					5.194
					1.425
					5.272
					0.033
					2.868
	DMF				0.177
					1.255
					9.663
	SO_2				0.005
	NOx				5.873
					0.006

6.1-32

					/ **mg/m^3**	**t/a**
					1.5	0.267

				GB14554-93		
				DB32/3151-2016	0.14	0.052
					4	0.081
					0.14	0.046
					4	0.074
				GB14554-93	1.5	0.004
					0.06	0.001
				DB32/3151-2016	4.0	0.001
				GB14554-93	1.5	0.006
					0.06	0.002
				DB32/3151-2016	4.0	0.014
						0.277
						0.098
						0.003
						0.17

6.1-33

		t/a
1		5.549
2		0.033
3		2.868
4	DMF	

		2022						
		□		☑		☑		
		□				☑		
		☑ ☑ ☑		□		☑		☑
		AERMOD ☑	ADMS □	AUSTAL2000 □	EDMS/AEDT □	CALPUFF □	□	☐
		≥50km □		5 50km □			= 5 km☑	
		(SO_2 NOx VOCs)				$PM_{2.5}$□ $PM_{2.5}$☑		
		C ≤100%☑				C 100% □		
			C ≤10%□			C 10% □		
			C ≤30%☑			C 30% □		
	1h	0.5 h		C ≤100% ☑		C 100%☑		
		C □				C ☑		
		k≤-20% ☑				k -20% □		
		SO_2 NOx				☑ ☑	□	
		SO_2 NOx				2	□	
		☑				□		
		/						
		SO_2 0.005 t/a		NOx 5.873 t/a		0.006 t/a	VOCs: 9.663 t/a	
“□” “√” “ ”								

6.2

B

1

88.43t/d

GB 8978-1996

4

COD 24

GB3838-2002 IV

2

8700t/d 2.5 t/d

157.16t/d 64.57%

IV

IV

IV

GB8979-1996 COD

GB18918-2002 A

GB18918-2002 2 3

25000t/d COD

BOD5 SS TN 273.25t/a 91.25t/a 456.25t/a 91.25t/a

45.625t/a

6.2-1

6.2-2 6.2-3

6.2-1

1		COD SS			TW001			DW001	☑ □	☑ □ □ □ □
					TW002		A/O			

6.2-2

			/ t/a						/(mg/L)
DW001	118°35′44″	34°09′84″	52333			8:00~18:00		COD	500
								SS	400
									20
									0.3
									3
									50
									70
									8000

6.2-3

			/ mg/L	/ kg/d	/ t/a
1	DW001	COD	294.81	46.284	15.428
2		SS	162.78	25.557	8.519
3			34.06	5.346	1.782
4			43.8	6.876	2.292
5			2.14	0.336	0.112
6			0.1	0.015	0.005
7			2.39	0.375	0.125
8			0.27	0.042	0.014
9			672.62	105.6	35.2
		COD			15.428
		SS			8.519
					1.782
					2.292
					0.112
					0.005
					0.125
					0.014
					35.2

6.2-4

6.2-4

		√	
		□ □ □ □ □ □ □ √	
		□ √ □	□ □ □
		□ □ √ pH □ □ □ □	□ □ □ □ □
		□ □ A□ B√	□ □ A□
		√ √ √ □ □	√ √ □ □ □ □ □
		□ □ √ □ √ □ □ □	□ √ □
		□ 40% √ 40% □	
		□ □ □ □ □ □ □ □	□ □ □
		□ □ □ □ √ □ □ □	pH COD BOD_5 DO SS NH_3-N TP
		2 km / km^2	
		pH COD BOD_5 DO SS NH_3-N TP	
		I □ II □ III □ IV □√ V □ □ □ □ □	
		√ □ √ □ □ √ √ □	
		√ □ √ □ □ □ √ □ □ □ □ □	√ □
		/ km / km^2	
		/	
		□ □ □ □ □ □ □ □ □	
		□ □ □ □ □ □ □	
		□ □ □ √	
		□ □	

		□ □ □ √ □ □ □ □ □

	mg/L	t/a
COD	294.81	15.428
SS	162.78	8.519
	34.06	1.782
	43.8	2.292
	2.14	0.112
	0.1	0.005
	2.39	0.125
	0.27	0.014
	672.62	35.2

				mg/L	t/a

		m3/s m m^3/s m m3/s m
		√ □ □ □ □ □
		□ □ □ √ √ □
		pH COD SS
		COD2.617t/a NH_3-N0.262t/a 52333t/a SS0.523t/a 0.005t/a 0.785t/a 0.052t/a 0.008t/a 0.157t/a
		√ □

6.3

6.3.1

4.4.4-1

6.3.2

63Hz 8KHz 8

$L_p(r)$ 1

$$L_p(r) = L_w + D_c - A$$ 1

$$A = A_{div} + A_{atm} + A_{gr} + A_{bar} + A_{misc}$$

L_w— dB

D_c— dB D_c=0dB

A— dB

A_{div}— dB

A_{atm}— dB

A_{gr}— dB

A_{bar}— dB

A_{misc}— dB

Lp(r0)

Lp(r) 2

$$L_p(r) = L_p(r_0) - A$$ 2

A $L_A(r)$ 8 3

$$L_A(r) = 10\lg\{\sum_{i=1}^{8} 10^{[0.1L_{pi}(r)-\Delta L_i]}\}$$ 3

$L_{pi}(r)$— r i dB

ΔL_i—i A dB

A

A 4 5

$$L_A(r) = L_{Aw} - D_c - A$$ 4

$$L_A(r) = L_A(r_0) - A$$ 5

A A 500Hz

L_{p1} L_{p2}

6

$$L_{p2} = L_{p1} - (TL + 6)$$ 6

TL dB

7

$$L_{p1} = L_w + 10\lg(\frac{Q}{4\pi r^2} + \frac{4}{R})$$ 7

Q— Q=1

Q=2 Q=4

Q=8

R— $R = S\alpha/(1-\alpha)$ S m^2 α

r— m

8 i

$$L_{P1i}(T) = 10\lg(\sum_{j=1}^{N} 10^{0.1L_{P1ij}})$$ 8

$L_{P1i}(T)$— N i dB

L_{P1ij}— j i dB

N—

9

$$L_{P2i}(T) = L_{P1i}(T) - (TL_i + 6)$$ 9

$L_{P2i}(T)$— N i dB

TL_i— i dB

10

S

$$L_W = L_{P2}(T) + 10\lg s$$ 10

A

i A L_{Ai} T

t_i j A L_{Aj} T

t_j L_{eqg}

$$L_{eqg} = 10\lg[\frac{1}{T}(\sum_{i=1}^{N} t_i 10^{0.1L_{Ai}} + \sum_{j=1}^{M} t_j 10^{0.1L_{Aj}})] \quad 11$$

t_j— T j s

t_i— T i s

T— s

N—

M—

$$L_{eq} = 10\lg(10^{0.1L_{eqg}} + 10^{0.1L_{dqb}}) \quad 12$$

Leqg— dB(A)

Leqb— dB(A)

6.3.3

HJ2.4-2021

6.3-1

GB12348-2008 3

6.3-1 **:dB A**

N1	/	/	58	47	65	55	40.6	40.6	58.1	47.9	0.1	0.9		
N2	/	/	58	47	65	55	43.5	43.5	58.2	48.6	0.2	1.6		
N3	/	/	57.6	48	65	55	42.2	42.2	57.7	49.0	0.1	1.0		
N4	/	/	58	46	65	55	43.6	42.2	58.2	48.0	0.2	2.0		

= +

6.3-2

6.3-2

		□ ☐ ☑
		200m☑ 200m 200m□
		A ☑ A □ □
		☑ □ □
		0 ☐ 1 □ 2 □ 3 ☑ 4a □ 4b □
		☑ □ □ ☐
		☑ □ □
		100%
		□ ☑ □
		☑ □
		200m☑ 200m 200m□
		A ☑ A □ □
		☑ □
		□ □
		☑ □ □ □ □
		☑
		√ □
“□” “√” “ ”		

6.4

6.4.1

HJ610-2016

1

3000Nm3/h

K-2016-150 2016 3

4

1 ,

0.70 1.50m 1.16m -1.84 -0.98m -1.46m

0.70 1.50m 1.16m

2

1.10 2.00m 1.55m -3.40 -2.68m

-3.01m :2.40 3.10m 2.71m

3 ,

3.60 4.60m

3.96m -7.41 -6.56m -6.97m 6.30 7.10m

6.67m

4

2 3

2.40~2.45m

2.48~2.68m

3.50m

0.80m 0.50m

3000Nm^3/h

K-2016-150 2016 3

17.3m

3.8m

6.4.1-1 6.4.1-1

钻 孔 柱 状 图

工程名称	宿迁新亚科技有限公司3000Nm3/h一氧化碳技改项目					工程编号	K-2016-150
孔 号	1	坐标	X=-276.667m	钻孔直径	130mm	稳定水位深度	2.58m
孔口标高	-0.26m		Y=6.962m	初见水位深度	2.42m	测量日期	

地质时代	层号	层底标高(m)	层底深度(m)	分层厚度(m)	柱状图 1:100	岩性描述	标贯中点深度(m)	标贯实测击数	附注
	①	-1.06	0.80	0.80		杂填土:杂色,以粘性土为主,含建筑垃圾和植物根系等。			
	②	-2.76	2.50	1.70		粘土:褐黄色,可塑,含铁锰结核,切面光滑,高干强度,高韧性。			
	③	-6.56	6.30	3.80		含砂姜粘土:黄褐色,棕黄色,局部夹灰白色,硬塑,切面光滑,高干强度,高韧性,含砂姜较多,局部为砂姜团。			
	④	-20.25	20.00	13.70		粘土:褐黄色,棕黄色,硬塑,含铁锰结核,切面光滑,高干强度,高韧性。	10.15 14.15 18.15	14.0 15.0 17.0	

宿迁市建设工程施工图审查中心
房屋建筑工程施工图审查专用章
审查专用章号 3213162 21
有效期至二〇一七年十二月三十一日
江苏省住房和城乡建设厅监制

制图: 校核: 工程负责: 审核:

6.4.1-1

6.4.1-1

1		0.7~1.2	2.48~2.68
2		1.6~1.9	
3		3.7~4.1	
4		8.6~13.7	

①

6.4.1-2

6.4.1-2

		Es(MPa)
	0.794	6.87
	0.741	11.69
-1	0.765	7.50
	0.572	12.11
	0.729	11.55

e *n* 0.417

0.21

②

6.4.1-3

6.4.1-3

		cm/s	cm/s	cm/s	cm/s	
		-	6.580E-06	-		7.63E-06
		5.27E-07 8.02E-07	6.58E-07	7.16E-07 9.12E-07		8.04E-07
		3.68E-07 6.11E-07	4.96E-07	4.85E-07 7.24E-07		6.29E-07
-1		3.16E-06 6.01E-06	4.72E-06	4.92E-06 7.47E-06		6.22E-06
		5.96E-03 1.11E-02	8.06E-03	8.16E-03 2.34E-02		1.17E-02

6.4.1-4

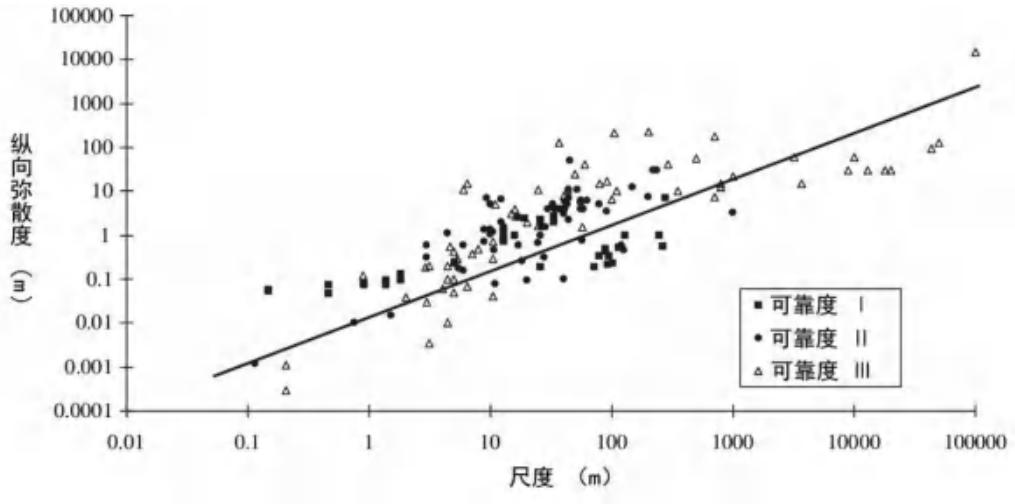
6.4.1-4

	m/d	‰
	1.04	1.5

D. S. Makuch 2005

6.4.1-2

15m 1.5m



6.4.1-2

6.4.1-5

mm		m	
0.4-0.7	1.55	1.09	3.96
0.5-1.5	1.85	1.1	5.78
1-2	1.6	1.1	8.8
2-3	1.3	1.09	13.0
5-7	1.3	1.09	16.7
0.5-2	2	1.08	3.11
0.2-5	5	1.08	8.3
0.1-10	10	1.07	16.3
0.05-20	20	1.07	70.7

U K×I n D_L $a_L \times U^m$ D_T $a_T \times U^m$

U— m/d K— m/d I— n—

m— D_L— m^2/d D_T— m^2/d a_L—

a_T—

6.4.1-6

6.4.1-6

	U m/d	D_L m^2/d
	0.0074	0.078

2

$$L=\alpha \times K \times I \times T/n_e$$

L- m

α- α≥1 2

K- m/d

I-

T- 5000d

n_e –

α 2 K 1.04 m/d I 0.0015 T 5000d n_e 0.21

L 74.29m

HJ610-2016

6.4.1-7

6.4.1-7

	km^2	
	≥20	
	6-20	
	≤6	

$10km^2$

6.4.2

COD SS

COD SS

IV

6.4-9

6.4-9

	COD	SS			
C_{ij} mg/L	530	355	16	1.6	2.5
C_{si} mg/L	30	60	0.2	0.5	0.03
S_{ij}	17.67	5.92	80.00	3.20	83.3

COD COD

COD

COD

4.4.1-4

16mg/L 2.5mg/L COD 530mg/L

COD 40%~50%

265mg/L

580t/d

100d

15370kg 928kg 145kg

6.4.3

6.4.4

100 1000 10 20

$$\begin{cases} \dfrac{\partial C}{\partial t} = D_L \dfrac{\partial^2 C}{\partial x^2} - u \dfrac{\partial C}{\partial x} \\ C(x,0) = 0 & x \geq 0 \\ C(0,t) = C_0 & t \geq 0 \\ C(\infty,t) = 0 & t \geq 0 \end{cases}$$

$$\frac{C}{C_0} = \frac{1}{2} erfc\left(\frac{x - ut}{2\sqrt{D_L t}}\right) + \frac{1}{2} e^{\frac{ux}{D_L}} erfc\left(\frac{x + ut}{2\sqrt{D_L t}}\right)$$

x

$$\frac{C}{C_0} = \frac{1}{2} erfc\left(\frac{x - ut}{2\sqrt{D_L t}}\right)$$

C x t

C_0

C/C_0 t

x

u

D_L

e*rfc* $$erfc(x) = \frac{2}{\sqrt{\pi}} \int_x^{\infty} \exp(-y^2) dy$$

- HJ610-2016

——

$$C(x,y,t) = \frac{m_M / M}{4\pi n \sqrt{D_L D_T t}} e^{-\left[\frac{(x-ut)^2}{4D_L t} + \frac{y^2}{4D_T t}\right]}$$

x y—

t— d

C x y t —t x y g/L

M— m 39.42

m_M— M kg

u— m/d 0.0074

n— 0.21

D_L— m^2/d 0.078

D_T— y m^2/d 0.0078

π—

6.4.5

(GB/T14848-2017)III 3.0mg/l 0.5mg/l 0.03mg/L III

6.4-10 6.4-11

6.4-10

m	mg/L				
	100d	1000d	5a	10a	20a
1	800.0070	913.4598	925.6989	934.4629	938.6264
5	312.7855	842.1386	913.8978	966.4760	991.8857
10	39.7427	725.6533	890.9469	1021.0077	1087.2453
15	1.6958	587.3351	854.7208	1091.2948	1222.3430
20	0.0229	441.8768	801.1645	1174.6735	1406.1010
25	0.0001	306.0485	728.2789	1265.8832	1647.6887
30	0.0000	193.5084	637.4929	1357.2686	1955.9566
35	0.0000	110.9122	534.0168	1439.4698	2338.7192
45	0.0000	26.5666	322.0461	1537.3584	3348.6898
50	0.0000	11.0150	230.1595	1536.9805	3978.4837
51	0.0000	9.1114	213.7035	1532.2980	4114.0441
52	0.0000	7.5022	197.9536	1526.0408	4252.6735
53	0.0000	6.1489	182.9270	1518.2054	4394.2988

54	0.0000	5.0164	168.6351	1508.7947	4538.8383
55	0.0000	4.0735	155.0844	1497.8182	4686.2016
56	0.0000	3.2925	142.2763	1485.2920	4836.2894
57	0.0000	2.6488	130.2074	1471.2388	4988.9935
58	0.0000	2.1210	118.8701	1455.6874	5144.1969
59	0.0000	1.6904	108.2525	1438.6730	5301.7738
65	0.0000	0.3923	58.5995	1308.5369	6288.9122
75	0.0000	0.0235	17.1981	1015.2265	8010.0008
85	0.0000	0.0009	3.8969	695.7011	9629.0910
95	0.0000	0.0000	0.6792	419.7337	10892.3543
100	0.0000	0.0000	0.2568	310.6162	11317.1044
110	0.0000	0.0000	0.0301	154.2693	11650.1633
150	0.0000	0.0000	0.0000	2.5091	6860.5584
210	0.0000	0.0000	0.0000	0.0001	430.2607
250	0.0000	0.0000	0.0000	0.0000	17.8816
310	0.0000	0.0000	0.0000	0.0000	0.0201
350	0.0000	0.0000	0.0000	0.0000	0.0001
410	0.0000	0.0000	0.0000	0.0000	0.0000
450	0.0000	0.0000	0.0000	0.0000	0.0000
500	0.0000	0.0000	0.0000	0.0000	0.0000

6.4-11

m	mg/L				
	100d	1000d	5a	10a	20a
1	13250.1157	15129.1787	15331.8884	15477.0420	15545.9999
5	5180.5092	13947.9204	15136.4316	16007.2580	16428.1073
10	658.2390	12018.6336	14756.3080	16910.4407	18007.4999
15	28.0861	9727.7372	14156.3133	18074.5703	20245.0557
20	0.3799	7318.5852	13269.2872	19455.5296	23288.5472
25	0.0016	5068.9290	12062.1196	20966.1907	27289.8447
30	0.0000	3204.9824	10558.4769	22479.7620	32395.5319
35	0.0000	1836.9827	8844.6531	23841.2182	38735.0366
45	0.0000	440.0092	5333.8879	25462.4981	55462.6756
50	0.0000	182.4356	3812.0174	25456.2397	65893.6356
51	0.0000	150.9074	3539.4644	25378.6850	68138.8551
52	0.0000	124.2558	3278.6073	25275.0512	70434.9048
53	0.0000	101.8404	3029.7281	25145.2772	72780.5743
54	0.0000	83.0833	2793.0191	24989.4118	75174.5100
55	0.0000	67.4670	2568.5859	24807.6133	77615.2141
56	0.0000	54.5314	2356.4513	24600.1488	80101.0425
57	0.0000	43.8706	2156.5605	24367.3924	82630.2046

58	0.0000	35.1291	1968.7857	24109.8230	85200.7619
59	0.0000	27.9976	1792.9328	23828.0214	87810.6285
65	0.0000	6.4977	970.5545	21672.6416	104160.1083
75	0.0000	0.3887	284.8434	16814.6886	132665.6382
85	0.0000	0.0143	64.5422	11522.5496	159481.8190
95	0.0000	0.0003	11.2492	6951.8390	180404.6182
100	0.0000	0.0000	4.2529	5144.5816	187439.5418
110	0.0000	0.0000	0.4979	2555.0861	192955.8298
150	0.0000	0.0000	0.0000	41.5565	113627.9986
210	0.0000	0.0000	0.0000	0.0016	7126.1925
250	0.0000	0.0000	0.0000	0.0000	296.1635
310	0.0000	0.0000	0.0000	0.0000	0.3333
350	0.0000	0.0000	0.0000	0.0000	0.0009
410	0.0000	0.0000	0.0000	0.0000	0.0000
450	0.0000	0.0000	0.0000	0.0000	0.0000
500	0.0000	0.0000	0.0000	0.0000	0.0000

6.4-12

m	mg/L				
	100d	1000d	5a	10a	20a
1	2.1552	2.4608	2.4938	2.5174	2.5286
5	0.8426	2.2687	2.4620	2.6037	2.6721
10	0.1071	1.9549	2.4002	2.7506	2.9290
15	0.0046	1.5823	2.3026	2.9399	3.2929
20	0.0001	1.1904	2.1583	3.1645	3.7880
25	0.0000	0.8245	1.9620	3.4102	4.4388
30	0.0000	0.5213	1.7174	3.6564	5.2693
35	0.0000	0.2988	1.4386	3.8779	6.3004
45	0.0000	0.0716	0.8676	4.1416	9.0213
50	0.0000	0.0297	0.6200	4.1406	10.7179
51	0.0000	0.0245	0.5757	4.1280	11.0831
52	0.0000	0.0202	0.5333	4.1111	11.4566
53	0.0000	0.0166	0.4928	4.0900	11.8381
54	0.0000	0.0135	0.4543	4.0646	12.2275
55	0.0000	0.0110	0.4178	4.0351	12.6245
56	0.0000	0.0089	0.3833	4.0013	13.0288
57	0.0000	0.0071	0.3508	3.9635	13.4402
58	0.0000	0.0057	0.3202	3.9216	13.8583
59	0.0000	0.0046	0.2916	3.8757	14.2828
65	0.0000	0.0011	0.1579	3.5252	16.9421
75	0.0000	0.0001	0.0463	2.7350	21.5787
85	0.0000	0.0000	0.0105	1.8742	25.9404
95	0.0000	0.0000	0.0018	1.1307	29.3436
100	0.0000	0.0000	0.0007	0.8368	30.4879

110	0.0000	0.0000	0.0001	0.4156	31.3851
150	0.0000	0.0000	0.0000	0.0068	18.4821
210	0.0000	0.0000	0.0000	0.0000	1.1591
250	0.0000	0.0000	0.0000	0.0000	0.0482
310	0.0000	0.0000	0.0000	0.0000	0.0001
350	0.0000	0.0000	0.0000	0.0000	0.0000
410	0.0000	0.0000	0.0000	0.0000	0.0000
450	0.0000	0.0000	0.0000	0.0000	0.0000
500	0.0000	0.0000	0.0000	0.0000	0.0000

a

100 14.7 1000

57.1 10 150 20 270 100

18.9 1000 70.8 10 178 20

299 100 12.3 1000 49.9

10 137.8 20 255

20

b

I

6.5

6.5.1

4.4.3-1

6.5.2

6.5.2.1

HJ 2025-2012

1

GB18597-2023

7

2

300m^2 5.0m

600 706t/a

70.6

3

6.5.2.2

6.5.2.3

6.1

6.1.1

1

2

6.6-1

6.6-2

6.6-1

		√	√
	√	√	√
	-	-	-

6.6-2

				pH	
			CODCr BOD		

			pH	

6.1.1.1

200m

6.1.1.2

6.6-3

6.6-3

	CAS	mg/kg
	75-34-3	5

6.1.1.3

6.1.2

6.1.2.1

1

E

HJ2.2

$$\Delta S = n(I_s - L_s - R_s)/(\rho_b \times A \times D)$$

ΔS— g/kg

mmol/kg

Is— g

mmol

Ls— g

mmol

Rs— g

mmol

ρb— kg/m^3

A— m^2

D— 0.2m

n— a

$$S = S_b + \Delta S$$

Sb— g/kg

S— g/kg

pH

$$pH = pH_b \pm S/BC_{pH}$$

pH_b—— pH

BC_{pH}—— mmol/ kg.pH

pH—— pH

2

6.6-4

6.6-4

1	I_S	g		3.29×10^{2}	1
		mmol		7500000	1000kg
2	L_S	g	0		
3	R_S	g	0		
4	ρb	kg/m^3	1230		5.4-17
5	A	m^2	353000		200m
6	D	m	0.2		
7	Sb	mg/kg		1.2×10^{-3}	
		mmol/ kg·pH	15		

Is

28.5818μg/m^3 ×

× ×0.1 $I_S=3.29\times10^{8}$μg/a D=0.2m n 10 20 30

6.6-5

	Δ*S* mg/kg			
	5	10	20	30
	0.0019	0.0038	0.0076	0.0114
	S mg/kg			
	0.0031	0.0050	0.0088	0.0126

0.001mg/kg

1.2×10^{-3}mg/kg

30 0.0114mg/kg

1.2×10^{-3}mg/kg GB 36600-2018 0.0126mg/kg 5mg/kg

6.6-6

6.6-6

		0.1	8.637mmol/kg pH=0.542	8.27	8.812	6-9

6.1.2.2

GB/T50934-2013

1.0×10^{-7}cm/s

6.1.3

30

0.0126mg/kg

6.6-7

6.6-7

		☑ □ □
		☑ □ □
		3.3 hm^2
		☑ ☑ ☑ □
		I ☑ II □ III □ IV □
		□ □ ☑
		□ ☑ □
		a □ b □ c □ d □
		/
		2 4 0.2m
		5 0 0.5m 1.0m 2.0m 6m
		pH
		pH
		GB 15618□ GB 36600☑ D.1□ D.2□
		GB36600-2018 1
		E☑ F□
		200
		a ☑ b □ c □ a □ b □
		☑ □ □
		1 pH 1 1
		pH
		5 10 30 ( )(GB36600-2018) 1

6.2

6.2.1

6.2.1.1

1

HJ 169-2018 SLAB

2

1

5km

2

3

15min

3

6.7-1

6.7-1

		/(°)	118.354039	
		/(°)	34.105510	
	/(m/s)		1.5	2.2
	/℃		25	27.2
	/%		50	70.5
			F	D
	/m		0.1	
	/m		90	

4

1 2

6.7-2

	1 **mg/m³**	**2** **mg/m³**	**kg/s**	
	770	110		3.256
				3.256

5

1

6.7-3

6.7-4

6.7-3

	m	mg/m³	1 mg/m³	1 m	2 mg/m³	2 m
	10	9.98E+03	770	950	110	3920
	110	8.47E+03				
	210	4.19E+03				
	310	2.71E+03				
	410	1.98E+03				
	510	1.56E+03				
	1010	7.21E+02				
	1510	4.42E+02				
	2010	3.03E+02				
	2510	2.21E+02				
	3010	1.68E+02				
	3510	1.32E+02				
	4010	1.06E+02				
	4510	8.69E+01				
	5010	7.25E+01				

6.7-4

		(mg/m³)					|
		5min	10min	15min	20min	25min	min
		0.00E+00	4.14E+02	4.22E+02	1.20E+02	2.98E+01	4.22E+02|15
		0.00E+00	3.56E+00	5.78E+01	4.80E+01	1.93E+01	5.78E+01|15
		0.00E+00	4.60E-09	1.21E-04	4.43E-03	1.56E-02	2.25E-02|30
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|30
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|30
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|30
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|30
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|30
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|30

6.7-1

1

770mg/m^3 950m 2 270mg/m^3

3920m

2

1 2

1 2

15min 15min 2

30min

2

6.7-5

6.7-6

6.7-5

	m	mg/m³	1 mg/m³	1 m	2 mg/m³	2 m
	10	17117	770	380	110	1410
	110	4236.7				
	210	1821.9				
	310	1050.6				
	410	702.02				
	510	510.5				
	1010	184.64				
	1510	99.066				
	2010	62.783				
	2510	43.717				
	3010	32.288				
	3510	24.872				
	4010	19.762				
	4510	16.08				
	5010	13.319				

6.7-6

		(mg/m³)					|
		5min	10min	15min	20min	25min	min
		2.26E+00	1.08E+02	8.47E-01	0.00E+00	0.00E+00	1.08E+02|10
		0.00E+00	1.08E+01	1.40E+00	0.00E+00	0.00E+00	1.08E+01|10
		0.00E+00	1.86E-05	2.55E-04	0.00E+00	0.00E+00	2.55E-04|15
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|15
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|15
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|15
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|15
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|15
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|15

6.7-2

1

770mg/m^3 380m 2 270mg/m^3

1410m

1

2

2 10min

20min 2 15min

15min

6.2.1.2

1

HJ 169-2018 AFTOX

2

1

5km

2

3

15min

3

6.7-7

6.7-7

		/(°)	118.353867	
		/(°)	34.105510	
	/(m/s)		1.5	2.2
	/℃		25	27.2
	/%		50	70.5
			F	D
	/m		0.1	
	/m		90	

4

1 2

6.7-8

	1 **mg/m³**	**2** **mg/m³**	**kg/s**	
	1200	810		0.08278
				0.1

5

1

6.7-9

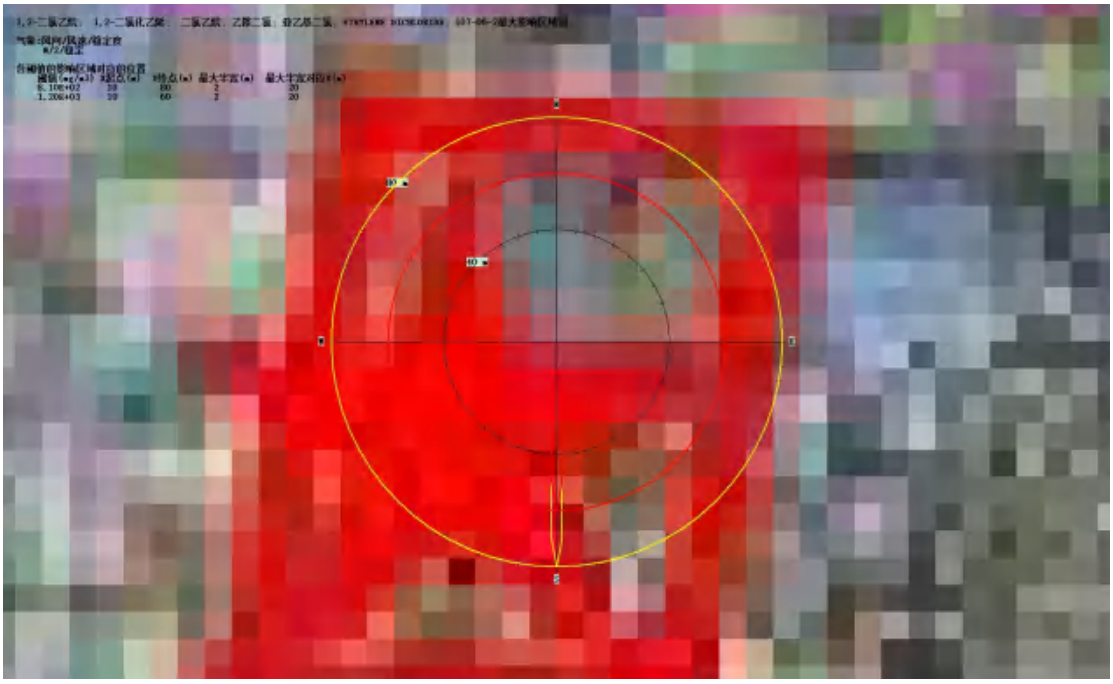
6.7-10

6.7-9

	m	mg/m³	1 mg/m³	1 m	2 mg/m³	2 m
	10	1.92E+04	1200	60	810	80
	110	6.21E+02				
	210	2.60E+02				
	310	1.45E+02				
	410	9.36E+01				
	510	6.60E+01				
	1010	2.16E+01				
	1510	1.13E+01				
	2010	7.70E+00				
	2510	5.73E+00				
	3010	4.50E+00				
	3510	3.66E+00				
	4010	3.07E+00				
	4510	2.62E+00				
	5010	2.28E+00				

6.7-10

		(mg/m^3)					|
		5min	10min	15min	20min	25min	min
		0.00E+00	4.89E-08	4.89E-08	4.89E-08	0.00E+00	4.89E-08|10
		0.00E+00	2.39E-24	2.39E-24	2.39E-24	0.00E+00	2.39E-24|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10



6.7-3

1

1200mg/m^3 60m 2 810mg/m^3

80m

2 1

2

6.7-11

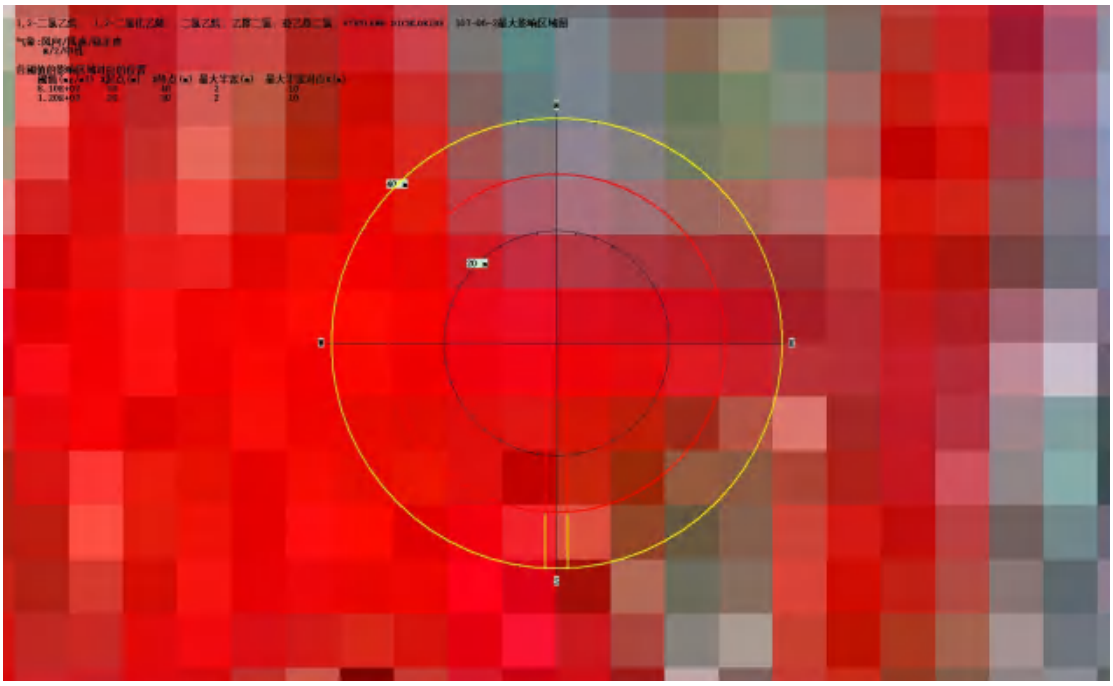
6.7-12

6.7-11

	m	mg/m^3	1 mg/m^3	1 m	2 mg/m^3	2 m
	10	9.04E+03	1200	30	810	40
	110	2.74E+02				
	210	9.81E+01				
	310	5.11E+01				
	410	3.18E+01				
	510	2.19E+01				
	1010	6.71E+00				
	1510	3.60E+00				
	2010	2.36E+00				
	2510	1.70E+00				
	3010	1.30E+00				
	3510	1.03E+00				
	4010	8.49E-01				
	4510	7.12E-01				
	5010	6.08E-01				

6.7-12

		(mg/m^3)					|
		5min	10min	15min	20min	25min	min
		0.00E+00	5.11E-02	5.11E-02	5.11E-02	0.00E+00	5.11E-02|10
		0.00E+00	2.46E-06	2.46E-06	2.46E-06	1.08E-08	2.46E-06|10
		0.00E+00	6.25E-30	6.25E-30	6.18E-30	0.00E+00	6.25E-30|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10



6.7-4

1

1200mg/m^3 30m 2 810mg/m^3

40m

2 1

6.2.1.3

1

HJ 169-2018 SLAB

2

1

5km

2

3

15min

3

6.7-13

6.7-13

		/(°)	118.353867	
		/(°)	34.105510	
	/(m/s)		1.5	2.2
	/℃		25	27.2
	/%		50	70.5
			F	D
	/m		0.1	
	/m		90	

4

1 2

6.7-14

	1 mg/m³	2 mg/m³	kg/s	
	49	24		0.55746
				0.56998

5

1

6.7-15

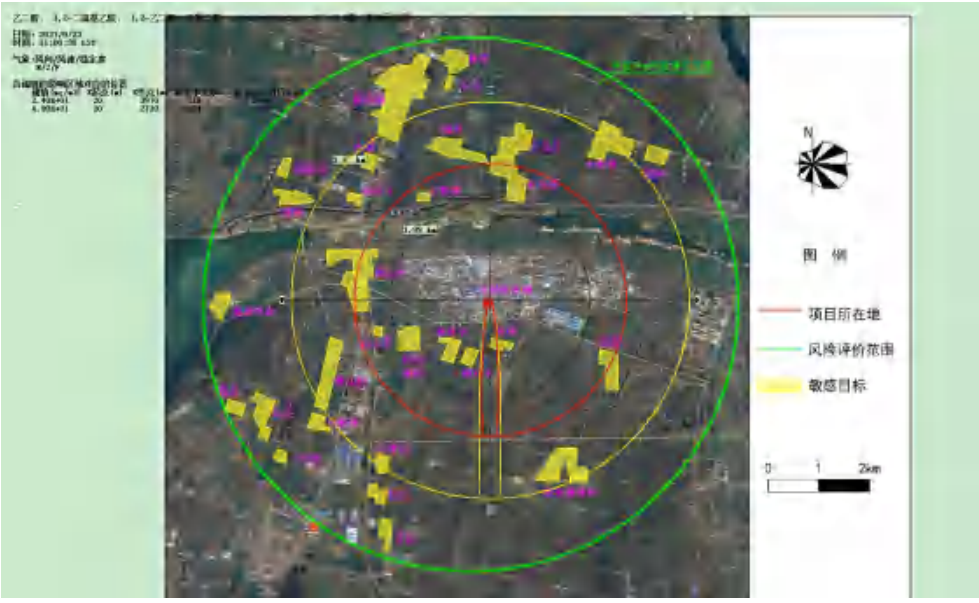
6.7-16

6.7-15

	m	mg/m³	1 mg/m³	1 m	2 mg/m³	2 m
	10	1.07E+01	49	2720	24	3970
	110	2.51E+03				
	210	1.81E+03				
	310	1.29E+03				
	410	9.73E+02				
	510	8.35E+02				
	1010	2.73E+02				
	1510	1.41E+02				
	2010	8.55E+01				
	2510	5.73E+01				
	3010	4.09E+01				
	3510	3.04E+01				
	4010	2.36E+01				
	4510	1.86E+01				
	5010	1.52E+01				

6.7-16

		(mg/m³)					|
		5min	10min	15min	20min	25min	min
		0.00E+00	0.00E+00	3.35E+00	1.65E+01	1.09E+01	1.65E+01|20
		0.00E+00	0.00E+00	0.00E+00	3.71E-05	3.46E-05	3.71E-05|20
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|20
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.18E-02|20
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|20
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|20
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|20
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|20
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|20



6.7-5

1

49mg/m^3 2720m 2 24mg/m^3

3970m

2

1 2

1 2 20min

10min 2

20min

2

6.7-17

6.7-18

6.7-17

	m	mg/m³	1 mg/m³	1 m	2 mg/m³	2 m
	10	8.45E+03	49	930	24	1310
	110	1.94E+03				
	210	7.00E+02				
	310	3.57E+02				
	410	2.18E+02				
	510	1.48E+02				
	1010	4.17E+01				
	1510	1.83E+01				
	2010	1.06E+01				
	2510	7.00E+00				
	3010	4.99E+00				
	3510	3.74E+00				
	4010	2.92E+00				
	4510	2.36E+00				
	5010	1.94E+00				

6.7-18

		(mg/m³)					|
		5min	10min	15min	20min	25min	min
		0.00E+00	2.82E+00	2.82E+00	2.82E+00	5.48E-01	2.82E+00|10
		0.00E+00	0.00E+00	4.13E-04	3.90E-04	9.84E-05	4.13E-04|15
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|15
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|15
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|15
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|15
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|15
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|15
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|15

6.7-6

49mg/m^3 930m 2 24mg/m^3

1310m

1 2

2

2 1 2

10min 20min

2 15min

6.2.1.4 /

1

HJ

169-2018 AFTOX CO

NO_2

2

1

5km

2

3

15min

3

6.7-19

6.7-19

	/ /	/(°)	118.353867	
		/(°)	34.105510	
	/(m/s)		1.5	2.2
	/℃		25	27.2
	/%		50	70.5
			F	D
	/m		0.1	
	/m		90	

4

1 2

6.7-20

	1 **mg/m³**	**2** **mg/m³**	**kg/s**	
CO	380	95		0.028
				0.026
NO_2	38	23		0.284
				0.256

5

1

6.7-21

6.7-22 6.7-23 6.7-24

6.7-21

	m	mg/m³	1 mg/m³	1 m	2 mg/m³	2 m
CO	10	1.69E-05	380	170	95	540
	110	5.15E+02				
	210	3.18E+02				
	310	2.06E+02				
	410	1.42E+02				
	510	1.05E+02				
	1010	3.65E+01				
	1510	1.94E+01				
	2010	1.33E+01				
	2510	9.93E+00				
	3010	7.81E+00				
	3510	6.38E+00				
	4010	5.34E+00				

	m	mg/m³	1 mg/m³	1 m	2 mg/m³	2 m
	4510	4.57E+00				
	5010	3.98E+00				

6.7-22

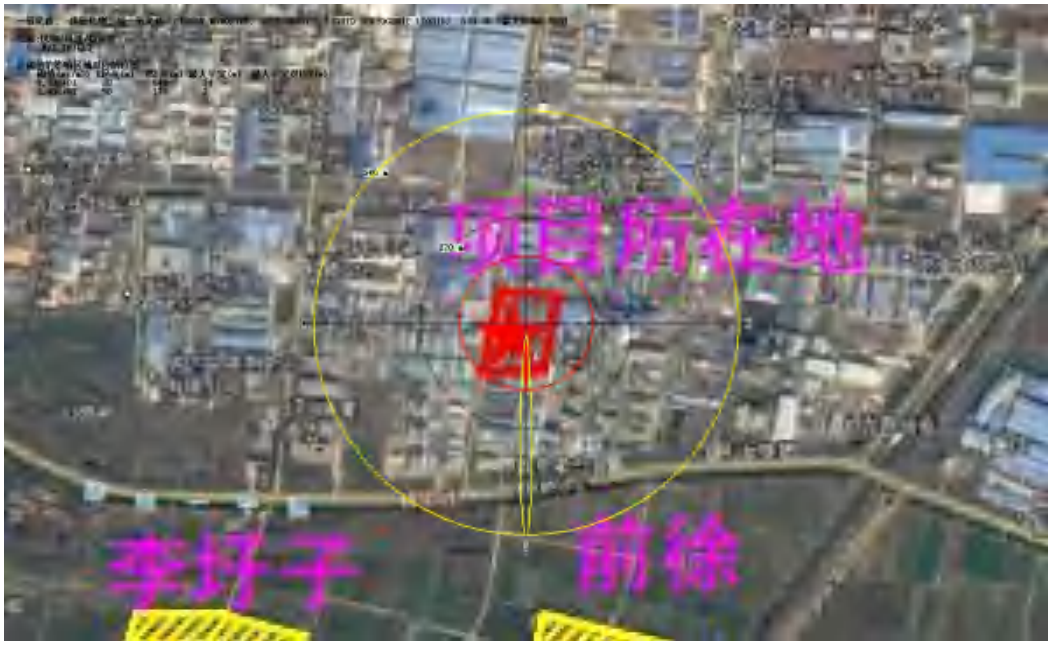
	m	mg/m³	1 mg/m³	1 m	2 mg/m³	2 m
NO_2	10	7.58E-06	38	1270	23	1820
	110	6.08E+02				
	210	4.22E+02				
	310	2.86E+02				
	410	2.04E+02				
	510	1.52E+02				
	1010	5.49E+01				
	1510	2.94E+01				
	2010	2.03E+01				
	2510	1.52E+01				
	3010	1.20E+01				
	3510	9.82E+00				
	4010	8.24E+00				
	4510	7.06E+00				
	5010	6.15E+00				

6.7-23

		(mg/m³)					|
		5min	10min	15min	20min	25min	min
CO		0.00E+00	8.15E-08	8.15E-08	8.15E-08	0.00E+00	8.15E-08|10
		0.00E+00	4.06E-24	4.06E-24	4.06E-24	9.37E-25	4.06E-24|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.18E-02|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10

6.7-24

		(mg/m³)					|
		5min	10min	15min	20min	25min	min
NOx		0.00E+00	1.68E-10	1.68E-10	1.68E-10	1.68E-10	1.68E-10|10
		0.00E+00	6.92E-18	6.92E-18	6.92E-18	6.92E-18	6.92E-18|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10



6.7-7 CO

6.7-8 NO2

CO 1

380mg/m^3 170m 2 80mg/m^3

540m

CO 2

1

NO_2 1 38mg/m^3 1270m

2 23mg/m^3 1820m

1 2

2 2

1 2

10min 20min

2 10min 20min

2

6.7-25

6.7-26 6.7-27 6.7-28

6.7-25

	m	mg/m³	1 mg/m³	1 m	2 mg/m³	2 m
CO	10	1.40E-05	380	130	95	470
	110	4.27E+02				
	210	2.63E+02				
	310	1.70E+02				
	410	1.18E+02				
	510	8.66E+01				
	1010	3.03E+01				
	1510	1.60E+01				
	2010	1.10E+01				
	2510	8.23E+00				
	3010	6.47E+00				
	3510	5.28E+00				
	4010	4.43E+00				
	4510	3.79E+00				
	5010	3.29E+00				

6.7-26

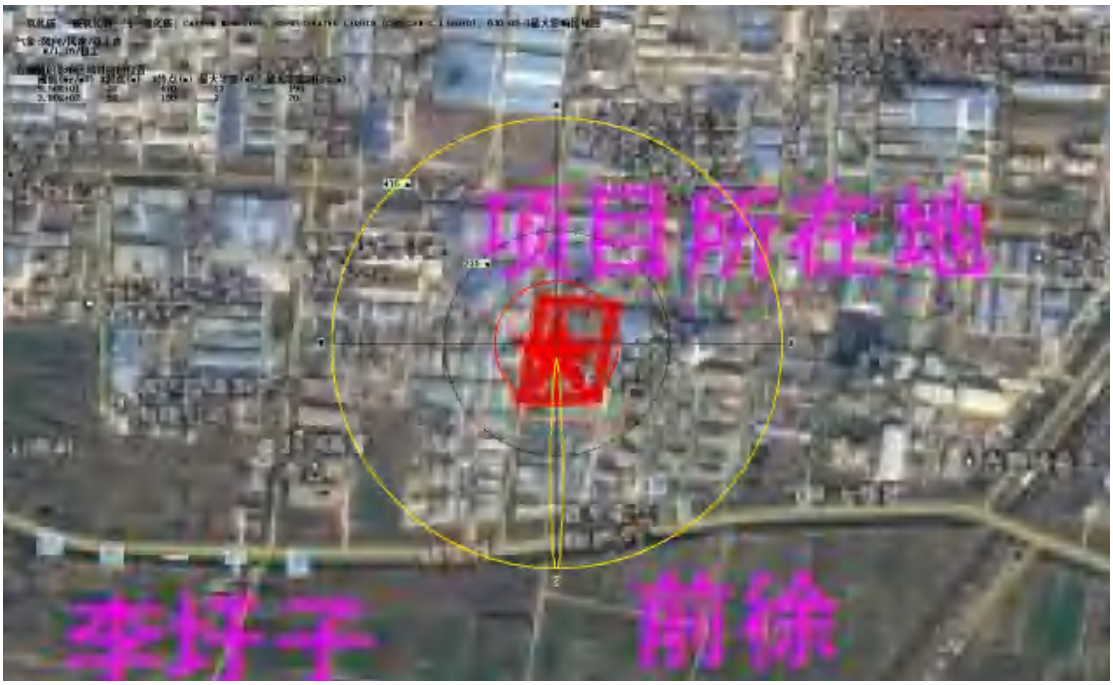
	m	mg/m³	1 mg/m³	1 m	2 mg/m³	2 m
NO_2	10	1.42E+00	38	680	23	910
	110	5.65E+02				
	210	2.51E+02				
	310	1.39E+02				
	410	8.85E+01				
	510	6.17E+01				
	1010	1.93E+01				
	1510	1.04E+01				
	2010	6.83E+00				
	2510	4.92E+00				
	3010	3.76E+00				
	3510	3.00E+00				
	4010	2.46E+00				
	4510	2.06E+00				
	5010	1.76E+00				

6.7-27

		(mg/m^3)					|
		5min	10min	15min	20min	25min	min
CO		0.00E+00	4.42E-12	4.42E-12	4.42E-12	0.00E+00	4.42E-12|10
		0.00E+00	7.33E-20	7.33E-20	7.33E-20	1.16E-20	7.33E-20|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.18E-02|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10

6.7-28

		(mg/m^3)					|
		5min	10min	15min	20min	25min	min
NOx		0.00E+00	1.47E-01	1.47E-01	1.47E-01	0.00E+00	1.47E-01|10
		0.00E+00	7.08E-06	7.08E-06	7.08E-06	1.84E-06	7.08E-06|10
		0.00E+00	1.79E-29	1.79E-29	1.79E-29	0.00E+00	1.79E-29|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10



6.7-9 CO

6.7-10 NO2

CO 1

380mg/m³ 130m 2 80mg/m³

470m

CO 2

1

NO_2 1 38mg/m³ 680m

2 23mg/m³ 910m

2 1

2 2

10min 20min

6.2.1.5 /

1

HJ

169-2018 AFTOX CO

HCl

2

1

5km

2

3

15min

3

6.7-23

6.7-23

	/ /	/(°)	118.353867	
		/(°)	34.105510	
	/(m/s)		1.5	2.2
	/℃		25	27.2
	/%		50	70.5
			F	D
	/m		0.1	
	/m		90	

4

1 2

6.7-24

	1 mg/m³	**2 mg/m³**		**kg/s**
CO	380	95		0.048
				0.041
HCl	150	33		0.426
				0.34
	3	1.2		0.0855
				0.0725

5

1

6.7-25~

6.7-27 6.7-28~ 6.7-30

6.7-25

	m	mg/m³	1 mg/m³	1 m	2 mg/m³	2 m
CO	10	6.34E-06	380	/	95	250
	110	1.93E+02				
	210	1.19E+02				
	310	7.71E+01				
	410	5.34E+01				
	510	3.92E+01				
	1010	1.37E+01				
	1510	7.27E+00				
	2010	4.99E+00				
	2510	3.72E+00				
	3010	2.93E+00				
	3510	2.39E+00				
	4010	2.00E+00				
	4510	1.72E+00				
	5010	1.49E+00				

6.7-26

	m	mg/m³	1 mg/m³	1 m	2 mg/m³	2 m
HCl	10	2.98E-05	150	580	33	1550
	110	9.10E+02				
	210	5.61E+02				
	310	3.63E+02				
	410	2.52E+02				
	510	1.85E+02				
	1010	6.45E+01				
	1510	3.42E+01				
	2010	2.35E+01				
	2510	1.75E+01				
	3010	1.38E+01				
	3510	1.13E+01				
	4010	9.44E+00				
	4510	8.07E+00				
	5010	7.02E+00				

6.7-27

	m	mg/m³	1 mg/m³	1 m	2 mg/m³	2 m
	10	2.71E-06	3	1540	1.2	3100
	110	8.26E+01				
	210	5.09E+01				
	310	3.29E+01				
	410	2.28E+01				
	510	1.67E+01				
	1010	5.85E+00				
	1510	3.10E+00				
	2010	2.13E+00				
	2510	1.59E+00				
	3010	1.25E+00				
	3510	1.02E+00				
	4010	8.56E-01				
	4510	7.32E-01				

	m	mg/m^3	1 mg/m^3	1 m	2 mg/m^3	2 m
	5010	6.37E-01				

6.7-28

		(mg/m^3)					|
		5min	10min	15min	20min	25min	min
CO		0.00E+00	3.06E-08	3.06E-08	3.06E-08	0.00E+00	3.06E-08|10
		0.00E+00	1.52E-24	1.52E-24	1.52E-24	3.51E-25	1.52E-24|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10

6.7-29

		(mg/m^3)					|
		5min	10min	15min	20min	25min	min
HCl		0.00E+00	2.74E-08	2.74E-08	2.74E-08	0.00E+00	2.74E-08|10
		0.00E+00	2.86E-22	2.86E-22	2.86E-22	9.09E-23	2.86E-22|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10

6.7-30

		(mg/m^3)					|
		5min	10min	15min	20min	25min	min
		0.00E+00	4.16E-08	4.16E-08	4.16E-08	0.00E+00	4.16E-08|10
		0.00E+00	1.01E-23	1.01E-23	1.01E-23	5.19E-24	1.01E-23|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10

6.7-11　CO

6.7-12　HCl

6.7-13

CO 1

380mg/m³ 2 95mg/m³ 250m

CO 2

1

HCl 1 150mg/m³ 580m

2 33mg/m³ 1550m

1

2

2

2 10min

20min

1 3mg/m³ 1540m

2 1.5mg/m³ 3100m

2

2 1 2

1 2

10min 20min

2 10min 20min

2

6.7-31~

6.7-33 6.7-34~ 6.7-36

6.7-31

	m	mg/m³	1 mg/m³	1 m	2 mg/m³	2 m
CO	10	2.67E-01	380	/	95	120
	110	1.06E+02				
	210	4.71E+01				
	310	2.61E+01				
	410	1.66E+01				
	510	1.16E+01				
	1010	3.63E+00				
	1510	1.95E+00				
	2010	1.28E+00				
	2510	9.25E-01				
	3010	7.07E-01				
	3510	5.62E-01				
	4010	4.60E-01				
	4510	3.83E-01				
	5010	3.24E-01				

6.7-32

	m	mg/m³	1 mg/m³	1 m	2 mg/m³	2 m
HCl	10	9.11E-01	150	220	33	560
	110	3.63E+02				
	210	1.61E+02				
	310	8.91E+01				
	410	5.68E+01				
	510	3.96E+01				
	1010	1.24E+01				
	1510	6.68E+00				
	2010	4.38E+00				
	2510	3.16E+00				
	3010	2.41E+00				
	3510	1.92E+00				
	4010	1.57E+00				
	4510	1.31E+00				
	5010	1.11E+00				

6.7-33

	m	mg/m³	1 mg/m³	1 m	2 mg/m³	2 m
	10	1.01E-01				
	110	4.01E+01				
	210	1.78E+01				
	310	9.86E+00				
	410	6.29E+00				
	510	4.38E+00				
	1010	1.37E+00				
	1510	7.39E-01	3	630	1.2	1090
	2010	4.85E-01				
	2510	3.50E-01				
	3010	2.67E-01				
	3510	2.13E-01				
	4010	1.74E-01				
	4510	1.45E-01				
	5010	1.23E-01				

6.7-34

		(mg/m³)					|
		5min	10min	15min	20min	25min	min
		0.00E+00	3.02E-03	3.02E-03	3.02E-03	2.55E-04	3.02E-03|10
		0.00E+00	0.00E+00	2.59E-05	2.59E-05	2.46E-05	2.59E-05|15
		0.00E+00	1.91E-26	1.91E-26	1.91E-26	2.76E-27	1.91E-26|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
CO		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10

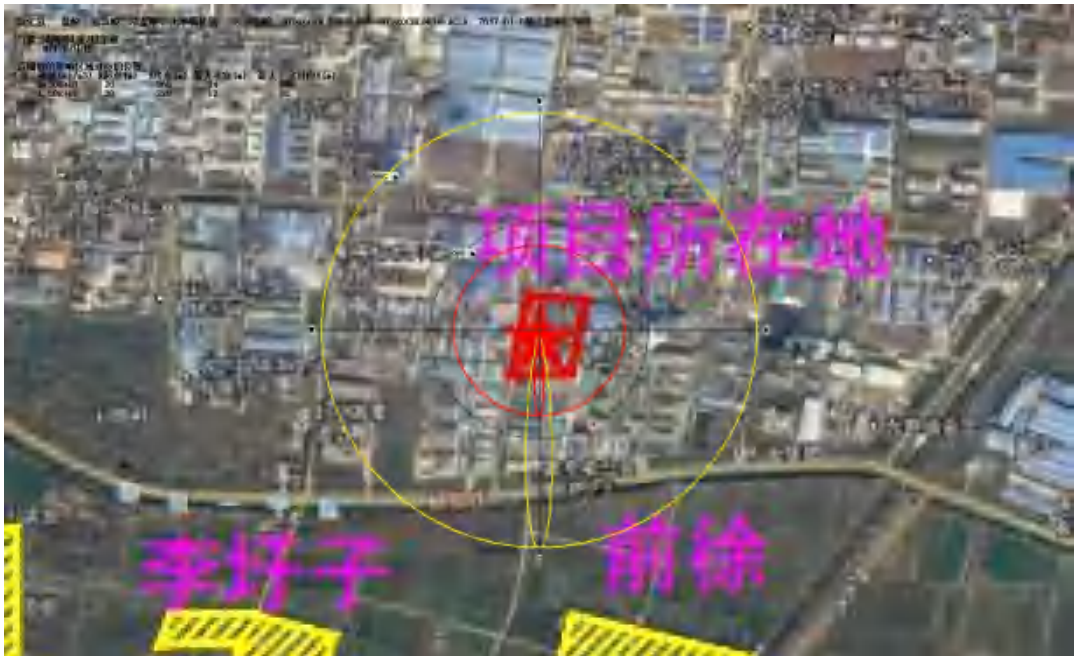
6.7-35

		(mg/m³)					|
		5min	10min	15min	20min	25min	min
		0.00E+00	1.03E-02	1.03E-02	1.03E-02	8.72E-04	1.03E-02|10
		0.00E+00	0.00E+00	8.84E-05	8.84E-05	8.40E-05	8.84E-05|15
		0.00E+00	6.51E-26	6.51E-26	6.51E-26	9.43E-27	6.51E-26|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
HCl		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10

6.7-36

		(mg/m³)					|
		5min	10min	15min	20min	25min	min
		0.00E+00	1.14E-03	1.14E-03	1.14E-03	9.65E-05	1.14E-03|10
		0.00E+00	0.00E+00	9.79E-06	9.79E-06	9.30E-06	9.79E-06|15
		0.00E+00	7.20E-27	7.20E-27	7.20E-27	1.04E-27	7.20E-27|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00|10

6.7-14 CO



6.7-15 HCl

6.7-16

CO 1

380mg/m³ 2 95mg/m³ 120m

CO 2

1

HCl 1 150mg/m³ 220m

2 33mg/m³ 560m

HCl 2 1

1 3mg/m³ 630m

2 1.5mg/m³ 1090m

1

2

2 15min 15min

2 10min

20min

6.2.2

/

/

6.2.3

6.4

2400m^3

6.2.4

/

6.7-37

		2.3.4-1				
			500 m 910		5 km 10503	
			200 m			
				F1 □	F2 ☐	F3 ☑
				S1 □	S2 □	S3 ☑
				G1 □	G2 □	G3 ☑
				D1 □	D2 □	D3 ☑
		Q	*Q* 1 □	1≤*Q* 10 ☐	10≤*Q* 100 □	*Q* 100 ☑
		M	M1 ☑	M2 □	M3 □	M4 □
		P	P1 ☑	P2 ☐	P3 □	P4 □
			E1 ☐	E2 ☑	E3 □	
			E1 □	E2 □	E3 ☑	
			E1 □	E2 □	E3 ☑	
		IV+ □	IV ☑	III ☑	II □	I □
		☑	☑	□	□	
		☑		☑		
		☑		/	☑	
		☑	□	□		
			☑	□	□	
			SLAB ☑	AFTOX☑	□	
			-1 2720 m			
			-2 3970 m			
		_____ _____h				
		_____d				
		_____ _____d				
		1 2 3				
“□”		“___”				

6.3

(1)

(2)

(3)

(4)

6.3.1

(1)

60%

$$Q = 0.123(V/5)(W/6.8)^{0.85}(P/0.5)^{0.75}$$

Q—— Kg/km·

V—— Km/hr

W——

P—— kg/m^2

6.8-1 10 1km

6.8-1 kg/ ·km

P	0.1 kg/m^2	0.2 kg/m^2	0.3 kg/m^2	0.4 kg/m^2	0.5 kg/m^2	1 kg/m^2
5 km/hr	0.051056	0.085865	0.116382	0.144408	0.170715	0.287108
10 km/hr	0.102112	0.171731	0.232764	0.288815	0.341431	0.574216
15 km/hr	0.153167	0.257596	0.349146	0.433223	0.512146	0.861323
25 km/hr	0.255279	0.429326	0.58191	0.722038	0.853577	1.435539

$$Q = 2.1(V_{50} - V_0)^3 e^{-1.023W}$$

Q—— kg/ ·

V_{50}—— 50m m/s

V_0—— m/s

W—— %

V_0

5.6-2

250μm

1.005m/s 250μm

6.8-2

μm	10	20	30	40	50	60	70
m/s	0.003	0.012	0.027	0.048	0.075	0.108	0.147
μm	80	90	100	150	200	250	350
m/s	0.158	0.170	0.182	0.239	0.804	1.005	1.829
μm	450	550	650	750	850	950	1050
m/s	2.211	2.614	3.016	3.418	3.820	4.222	4.624

(2)

3.7m/s CO NO_X

5.4 6 CO NO_x

100m CO NO_X

10.03mg/Nm^3 0.216mg/Nm^3 1.05mg/Nm^3

CO NOx 2.2 2.5

6.3.2

100 80L/ ·d

80% 6.4m^3/d COD_{Cr} SS NH_3-N

TP 400mg/L 350mg/L 35mg/L 3.0mg/L

2.56kg/d 2.24kg/d 0.22kg/d 0.02kg/d

70

6.3.3

6.3.3.1

6.8-3

6.8-3

			m	dB(A)	dB(A)	
		195	3	83.6	103.6	
		190	3	88.8	106.3	
		195	3	80.7	98.3	
		75	3	85.5	105.5	
		D80D	5	92.0	115.7	
		100-	3	88.0	108.0	
		D80-12	4	94.0	115.0	
		101	5	84.0	107.0	
		VB1232	5	84.0	107.5	
		WY	5	75.5	99.0	
		ZL-90	5	85.7	105.7	
		ZL-20	5	83.7	105.7	

		Zl-20AA	15	84.0	114.0	
		NK-20B	8	76.0	102.0	
		2DK	15	71.5	103.0	
			15	73.0	103.0	
		PY160A	3	87.5	105.7	
			3	92.0	105.7	
		20	1	99.0	-	
		16T	15	71.5	103.0	
		3-8	2	73.0	-	
			8	83.0	109.0	
		50mm	2	87.0	101.0	
			15	78.0	112.0	
			1	103.0	111.0	
			15	84.0	119.0	
			3	86.5	104.0	
			1	88.0	96.0	
			1	82.5	90.5	
			1	84.0	90.0	
			15	71.5	103	
			1	103.0	110.0	
			2	90.0	-	-

6.3.3.2

6.8-3

$$L_2 = L_1 - 20\lg r_2 / r_1 (r_2 > r_1)$$

L_1 L_2 r_1 r_2 A dB A

r_1 r_2 m

L

$$\Delta L = L_2 - L_1 = 20\lg r_2 / r_1$$

6.8-4

6.8-4

(m)	1	10	50	100	150	200	250	400	600
ΔL dB A	0	20	34	40	43	46	48	52	57

6.8-3

6.8-5

6.8-5

(m)	10	50	100	150	200	250	400	500	600
dB A	82	68	62	59	56	54	50	47	45

6.8-5 50

50

6.3.4

2kg/m^2

157.3t

0.5kg/d

100 10kg/d

7

7.1

7.1.1

7.1.1.1

1

P1

2

3

7.1.1-1

7.1.1-1

	“ + +MDEA ” P1 25m	
	“ + + ” P2 15m	—
	“ + + ” P3 15m	—
	“ + + ” P4 15m	—

7.1.1.2

G1

“ + + + ”

G1

1 TO 20000m^3/h

G1

25m P5

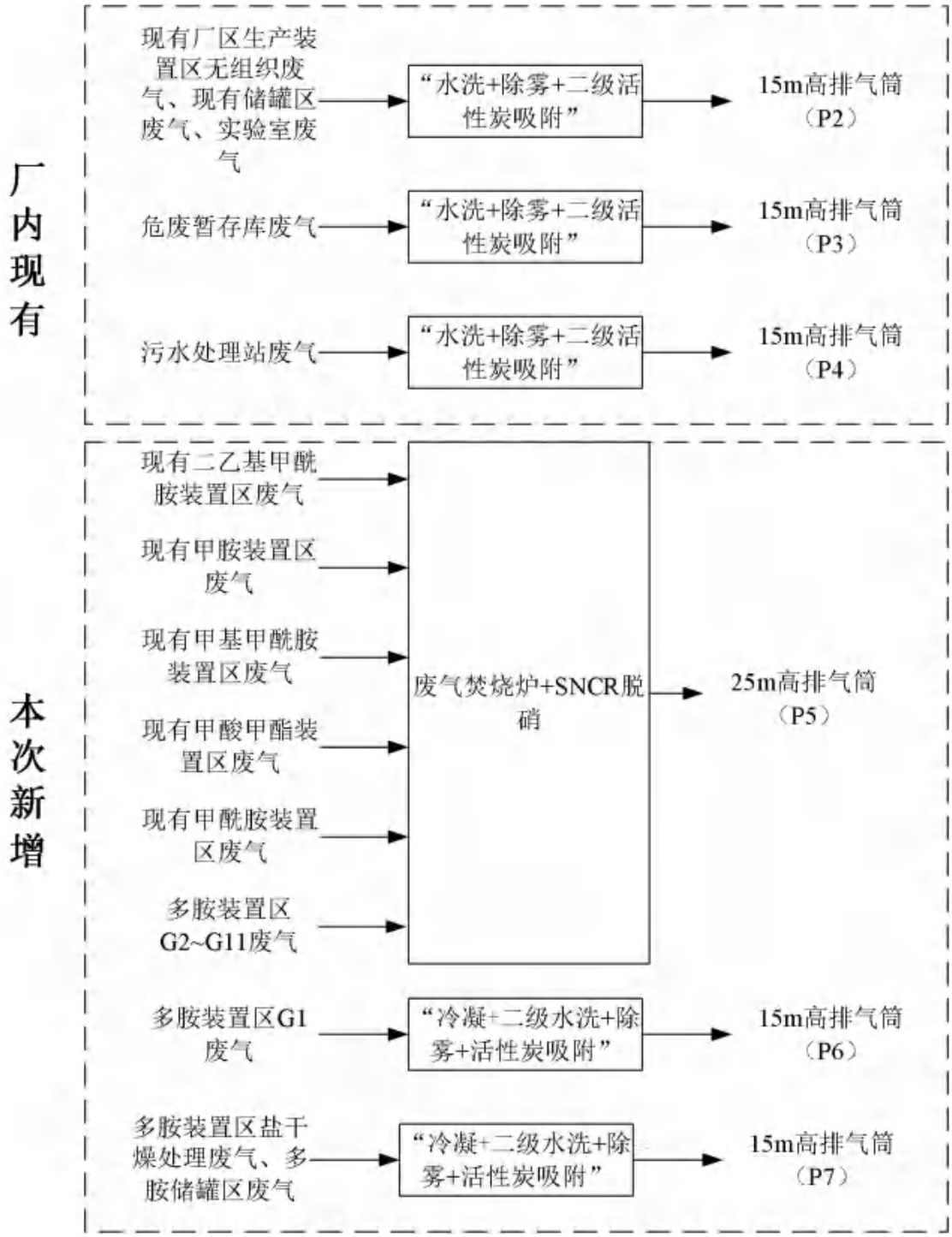
2 “ + + + ” 20000m^3/h

G1 15m P6

3 “ + + + ” 9000m^3/h

15m P7

7.1.1.3


厂内现有
现有厂区生产装置区无组织废气、现有储罐区废气、实验室废气
“水洗+除雾+二级活性炭吸附”
15m高排气筒（P2）
危废暂存库废气
“水洗+除雾+二级活性炭吸附”
15m高排气筒（P3）
污水处理站废气
“水洗+除雾+二级活性炭吸附”
15m高排气筒（P4）
本次新增
现有二乙基甲酰胺装置区废气
现有甲胺装置区废气
现有甲基甲酰胺装置区废气
现有甲酸甲酯装置区废气
现有甲酰胺装置区废气
多胺装置区G2~G11废气
废气焚烧炉+SNCR脱硝
25m高排气筒（P5）
多胺装置区G1废气
“冷凝+二级水洗+除雾+活性炭吸附”
15m高排气筒（P6）
多胺装置区盐干燥处理废气、多胺储罐区废气
“冷凝+二级水洗+除雾+活性炭吸附”
15m高排气筒（P7）

7.1.1-1

7.1.2

7.1.2.1

[2014]3

1

1 “ ” “

2

3 VOCs

4

2

1

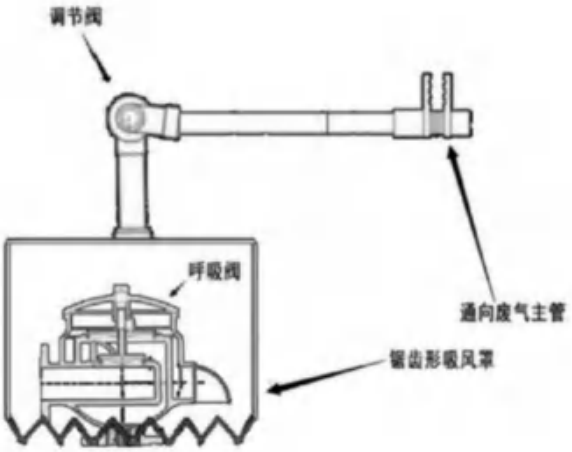
2

3

4

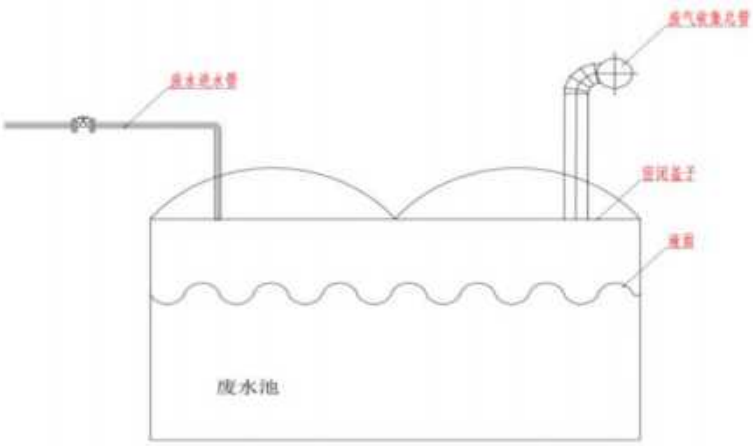
99%

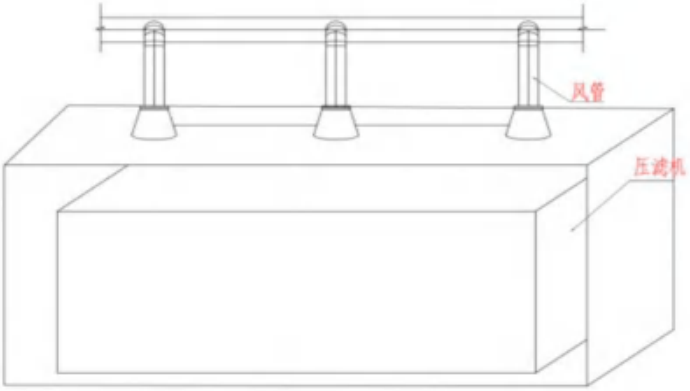
5

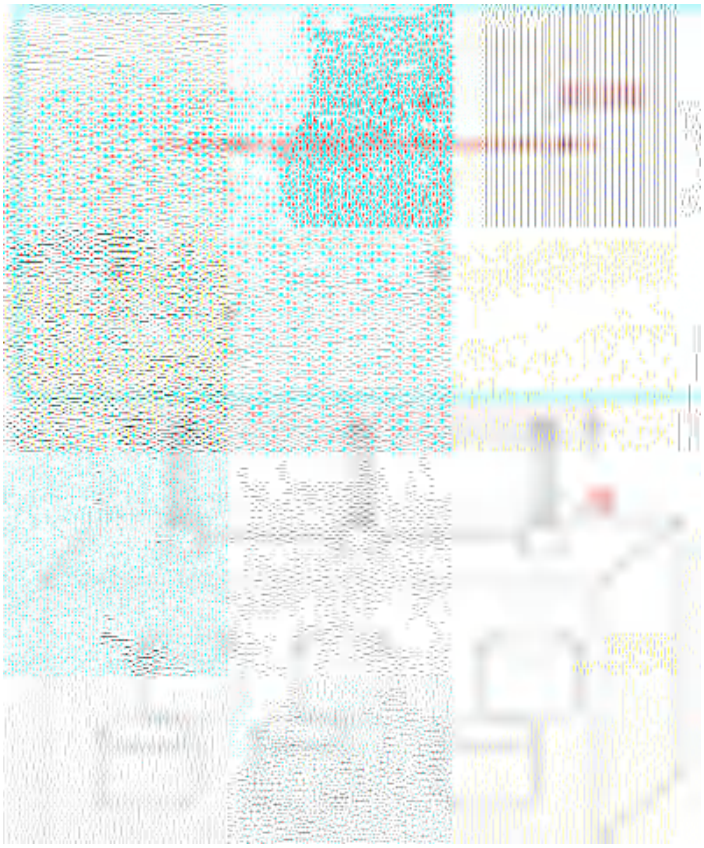


6

“ ”


废水池


风管
压滤机



7.1.2-1

7.1.2-1

P6 15m		G1		
P5 25m		G2		
		G4		
		G3		
		G5		
		G6		
		G8		
		G9		
		G10		
		G11		
		G2-1		
		G3-1		
		G3-2		
		G3-3 G3-4 G3-5		
		G3-6 G3-7		
		G3-8		
		G4-1		
		G4-2		
		G4-3		
		G4-4		
		G5-1		
		G5-2		
		G5-3		
		G5-4	NMF	
		G6-1		
		G6-2		
		G6-3		
		G6-4		
P7 15m				

3

1

7~15

2

$$L=KPHv_x \quad m^3/s$$

P—— m

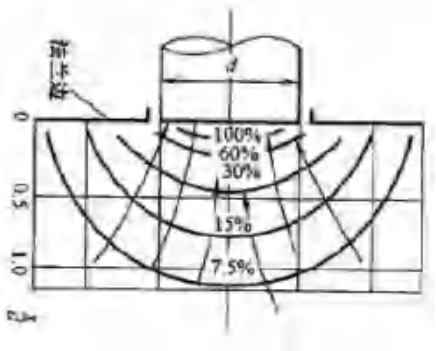
H—— m

v_x—— m/s 6.1-1

K—— 1.0~1.4

3

7.1.2-1



7.1.2-1

$$\frac{v_0}{v_x}=0.79\left[\frac{10x^2}{F}+1\right]$$

v_0—— m/s

x—— m

v_x—— m/s

F—— m^2

7.1.2-2

7.1.2-2

污染物放散情况	最小控制风速 (m/s)	举　例
以轻微的速度放散到相当平静的空气中	0.25～0.5	槽内液体的蒸发，气体或烟从敞口容器中外逸
以较低的初速放散到尚属平静的空气中	0.5～1.0	喷漆室内喷漆；断续地倾倒有尘屑的干物料到容器中；焊接
以相当大的速度放散出来，或是放散到空气运动迅速的区域	1～2.5	在小喷漆室内用高压力喷漆；快速装袋或装桶；往运输器上给料
以高速放散出来，或是放散到空气运动很迅速的区域	2.5～10	磨削；重破碎；滚筒清理

4

2

$$P = \zeta \frac{\rho v^2}{2}$$

$$P = \lambda \frac{l}{d} \times \frac{\rho v^2}{2}$$

$$P = \left(\lambda \frac{l}{d} + \varepsilon\right) \times \frac{\rho v^2}{2}$$

λ——

v——　　m/s

ρ——　　kg/m^3

l——　　m

d——　　m

90%

5

1

TO　　TO

TO　　3m^3/h

“4430 ” 107753 /

- 32m³/h

2

7.1.2-3

7.1.2-3 1#

						/ mm	CMH	CMH
1	R8010 A∽H		ID1600H4375 5m³		8	80	72	576
2	V8248		11m³		1	80	72	72
3	E-8247		BEM		1	80	72	72
4	V8012		5m3		1	80	72	72
5	V8015		32m³		1	80	72	72
6	V8050		20m³		1	80	72	72
7	E-8056		BEM		1	80	72	72
8	V8017		20m³		1	80	72	72
9	R8020		11m³		1	80	72	72
10	E8025		BEM		1	80	72	72
11	E8027		BEM		1	80	72	72
12	V8026		1m³		1	80	72	72
13	T8030		—		1	80	72	72
14	E8036				1	80	72	72
15	T8040		—		1	80	72	72
16	E8046				1	80	72	72
17	V8246		2m³		1	80	72	72
18	E8301		10000mm 6000mm		1	80	72	72
19	E8302		700mm 3000mm		1	80	72	72
20	E8303		600mm 6000mm		1	80	72	72
21	E8304		5m2		1	80	72	72
22	S8301		3000mm 12000mm		1	80	72	72
23	S8302		1800mm 3500mm		1	80	72	72
24	S8303		1600mm 7000mm		1	80	72	72
25	S8304		600mm 1200mm		1	80	72	72
26	S8305		2000mm 3600mm		1	80	72	72
27	S8306		2000mm 3600mm		1	80	72	72
28	S8307		2000mm 3600mm		1	80	72	72
29	S8308		2000mm 3600mm		1	80	72	72
30	V8301		2000mm 2500mm		1	80	72	72
31	V8302		1600mm 2000mm		1	80	72	72

32	V8303		1600mm 2400mm		1	80	72	72
33	V8304		2000mm 2500mm		1	80	72	72
34	V8305		1800mm 2400mm		1	80	72	72
35	X8301		—		1	80	72	72
36	X8302		—		1	50	28	28
37	X8303		—		1	50	28	28
38	X8304		—		1	50	28	28
39	DR8301		—		1	50	28	28
40	T8130		—		1	80	72	72
41	E8133		BEM		1	80	72	72
42	E8137		BEM		1	80	72	72
43	V8135		$3.5m^3$		1	80	72	72
44	V8140		$3m^3$		1	80	72	72
45	V8145		$6m^3$		1	80	72	72
46	V8150		$2.5m^3$		1	80	72	72
47	T8160		—		1	80	72	72
48	E8163		BEM		1	80	72	72
49	E8167		BEM		1	80	72	72
50	V8165		$1m^3$		1	80	72	72
51	T8170		—		1	80	72	72
52	E8173		BKU		1	80	72	72
53	E8177		BKU		1	80	72	72
54	V8175		$1m^3$		1	80	72	72
55	T8180		—		1	80	72	72
56	E8183		BKU		1	80	72	72
57	E8187		BKU		1	80	72	72
58	V8185		$1m^3$		1	80	72	72
59	T8190		—		1	80	72	72
60	E8193		BKU		1	80	72	72
61	E8197		BEM		1	80	72	72
62	V8195		$1m^3$		1	80	72	72
63	V8320		$10m^3$		1	80	72	72
64	P8234A		$2m^3$		1	80	72	72
65	T8220		$1.97m^3$		1	80	72	72
66	E8223		BEM		1	80	72	72
67	E8228				1	80	72	72
68	V8225		$50m^3$		1	80	72	72

7.1.2-4 2#

						/ mm	C MH	CMH
1	2/3R-8010A~H		$12.5m^3$ ID2150 H6400		8	80	72	576
2	2/3V-8012		$12.5m^3$ ID2450 H2700		1	80	72	72
3	2/3V-8015		$80m^3$		1	80	72	72

			ID4000 H6000					
4	2/3V-8050		50m^3 ID3800 H4400		1	80	72	72
5	2/3E-8056		BEM ID1500 H3000		1	80	72	72
6	2/3V-8017		50m^3 ID3800 H4400		1	80	72	72
7	2/3R-8020		28m^3 ID2500 H5700		1	80	72	72
8	2/3E-8025		BEM ID1500 H3000		1	80	72	72
9	2/3E-8027		BEM ID800 H3000		1	80	72	72
10	2/3V-8026		2.5m^3 ID1300 H1900		1	80	72	72
11	2/3T-8030		ID1580 H10120		1	80	72	72
12	2/3E-8036		—		1	50	28	28
13	2/3T-8040		ID1260 10020		1	80	72	72
14	2/3E-8046		—		1	50	28	28
15	2/3V-8246		5m^3 ID1450 H3000		1	80	72	72
16	2/3E-8301		φ=1600mm L=6000mm		1	80	72	72
17	2/3E-8302		φ=1100mm L=3000mm		1	80	72	72
18	2/3E-8303		φ=1000mm L=6000mm		1	80	72	72
19	2/3E-8304		5m2		1	50	28	28
20	2/3S-8301		φ=4750mm H=12000mm		1	80	72	72
21	2/3S-8302		φ=2900mm H=3500mm		1	80	72	72
22	2/3S-8303		φ=2500mm H=7000mm		1	80	72	72
23	2/3S-8304		φ=950mm H=1200mm		1	80	72	72
24	2/3S-8305		φ=2700mm H=4900mm		1	80	72	72
25	2/3S-8306		φ=2700mm H=4900mm		1	80	72	72
26	2/3S-8307		φ=2700mm H=4900mm		1	80	72	72
27	2/3S-8308		φ=2700mm H=4900mm		1	80	72	72
28	2/3V-8301		φ=2700mm H=3400mm		1	80	72	72
29	2/3V-8302		φ=2200mm H=2700mm		1	80	72	72
30	2/3V-8303		φ=2200mm H=3300mm		1	80	72	72
31	2/3V-8304		φ=2700mm H=3400mm		1	80	72	72
32	2/3V-8305		φ=2500mm H=3300mm		1	80	72	72
33	2/3X-8301		—		1	50	28	28
34	2/3X-8302		—		1	50	28	28
35	2/3X-8303		—		1	50	28	28
36	2/3X-8304		—		1	50	28	28
37	2/3T-8130		ID2200 H24485		1	80	72	72

38	2/3E-8133		BEM ID1200 H3000		1	80	72	72
39	2/3E-8137		BJM ID1500 H4500		1	80	72	72
40	2/3V-813 5		8.8m^3 ID2100 H2700		1	80	72	72
41	2/3V-814 0		7.5m^3 ID1900 H2700		1	80	72	72
42	2/3E-8140		BEM ID1000 H3000		1	80	72	72
43	2/3V-814 5		15m^3 ID2200 H3700 70℃ 0.005		1	80	72	72
44	2/3V-815 0		6.5m^3 ID1700 H1900		1	80	72	72
45	2/3T-8160		ID1300 H19185		1	80	72	72
46	2/3E-8163		BEM ID700 H1500		1	80	72	72
47	2/3E-8167		BJM ID1000 H3000		1	80	72	72
48	2/3V-816 5		2.5m^3 ID1300 H2200		1	80	72	72
49	2/3T-8170		ID1300 H10055		1	80	72	72
50	2/3E-8173		BKU ID2200 H4000		1	80	72	72
51	2/3E-8177		BJM ID800 H3000		1	80	72	72
52	2/3V-817 5		2.5m^3 ID1300 H2200		1	80	72	72
53	2/3T-8180		ID1300 H9255		1	80	72	72
54	2/3E-8183		BKU ID2200 H4000 ID1000 H2700		1	80	72	72
55	2/3E-8187		BEM ID650 H2000		1	80	72	72
56	2/3V-818 5		2.5m^3 ID1300 H2200		1	80	72	72
57	2/3T-8190		ID1300 H10655		1	80	72	72
58	2/3E-8193		BKU ID2200 H4000		1	80	72	72
59	2/3E-8197		BEM ID550 H1500		1	80	72	72
60	2/3V-819 5		2.5m^3 ID1300 H2200		1	80	72	72
61	2/3V-832 0		25m^3 ID2500 H4600		1	80	72	72
62	2/3V-824 0		5m^3 ID1100 H1400		1	80	72	72
63	2/3T-8220		5m^3 ID800		1	80	72	72

			H10470					
64	2/3E-8223		BEM ID650 H1500		1	80	72	72
65	2/3E-8228		—		1	50	28	28
66	2/3V-822 5		80m³ ID4000 H6500		1	80	72	72

9000m³/h 9000m³/h

32m³/h 18032m³/h

HJ1093-2020

105% TO

20000m³/h

7.1.2.2

1

20000m³/h TO

1

TO 7.1.2-5

7.1.2-5 TO

	m³/h		kg/h
N- - G2~G11	20000		0.975
			2.475
			1.114
			0.136
			11.948
			0.223
			1.856
		NMF	2.228
		DMF	0.743
			6.836
			3.938
			3.623

HG20706-2013

25% 25%

25% TO

1060m³/h 400000ppm 2.65%

85.68% 12.5% 0.1% 0.02% 1.13% 0.58%

2.7~36% 2.6~13.4% 2.4~10.3% 2.6~17% 3.0~16% 5.4~16%

25% 0.6%

4682m^3/h 3622m^3/h

2

→ → →SNCR → G-G

→ → →

1

800℃

G-G

T

900℃ 2~3 /

2~3 /

2~3 /

NH_3 850 900℃

NOx N_2 H_2O

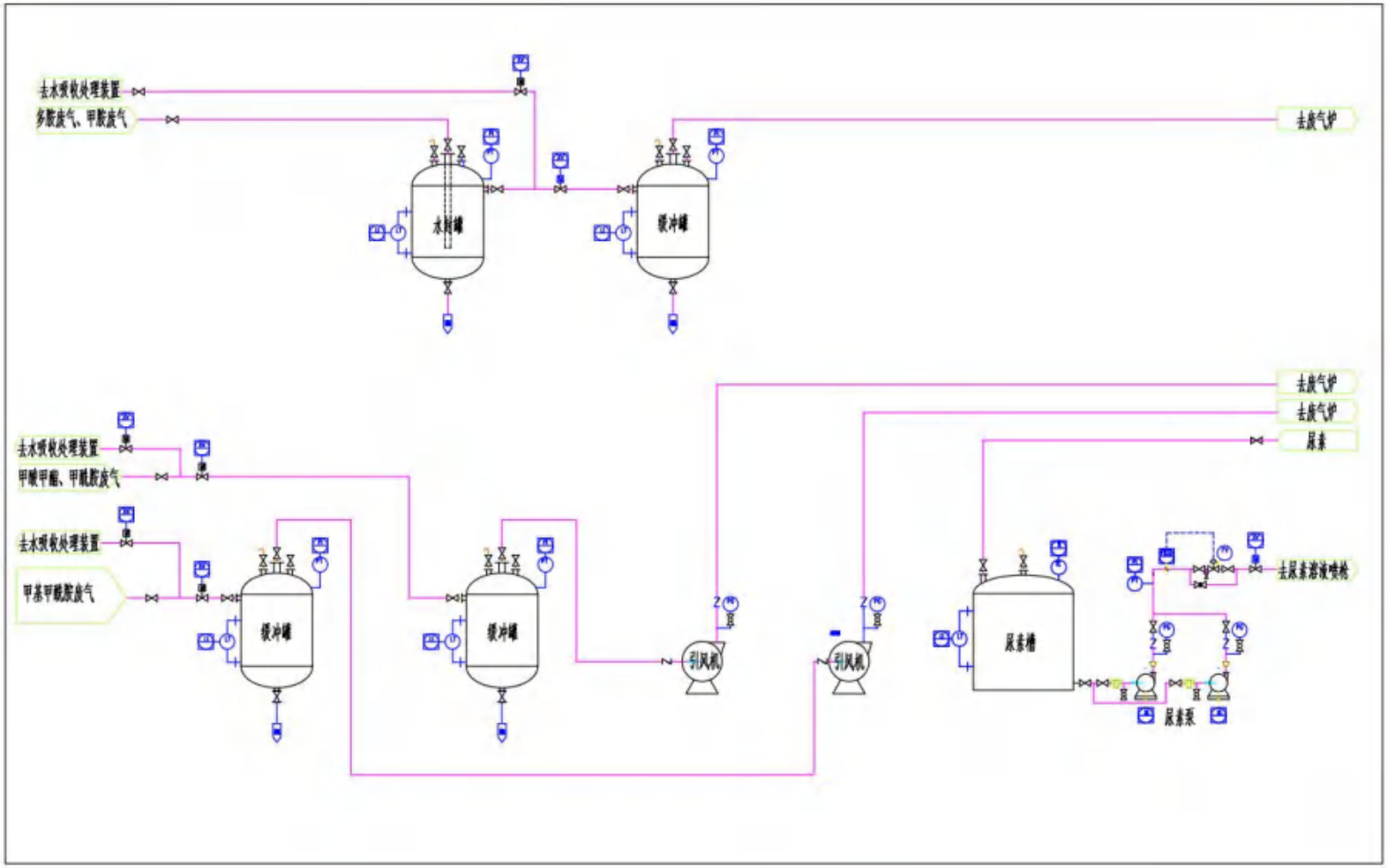
G-G 200℃

200℃ 20℃ 80℃ 150℃

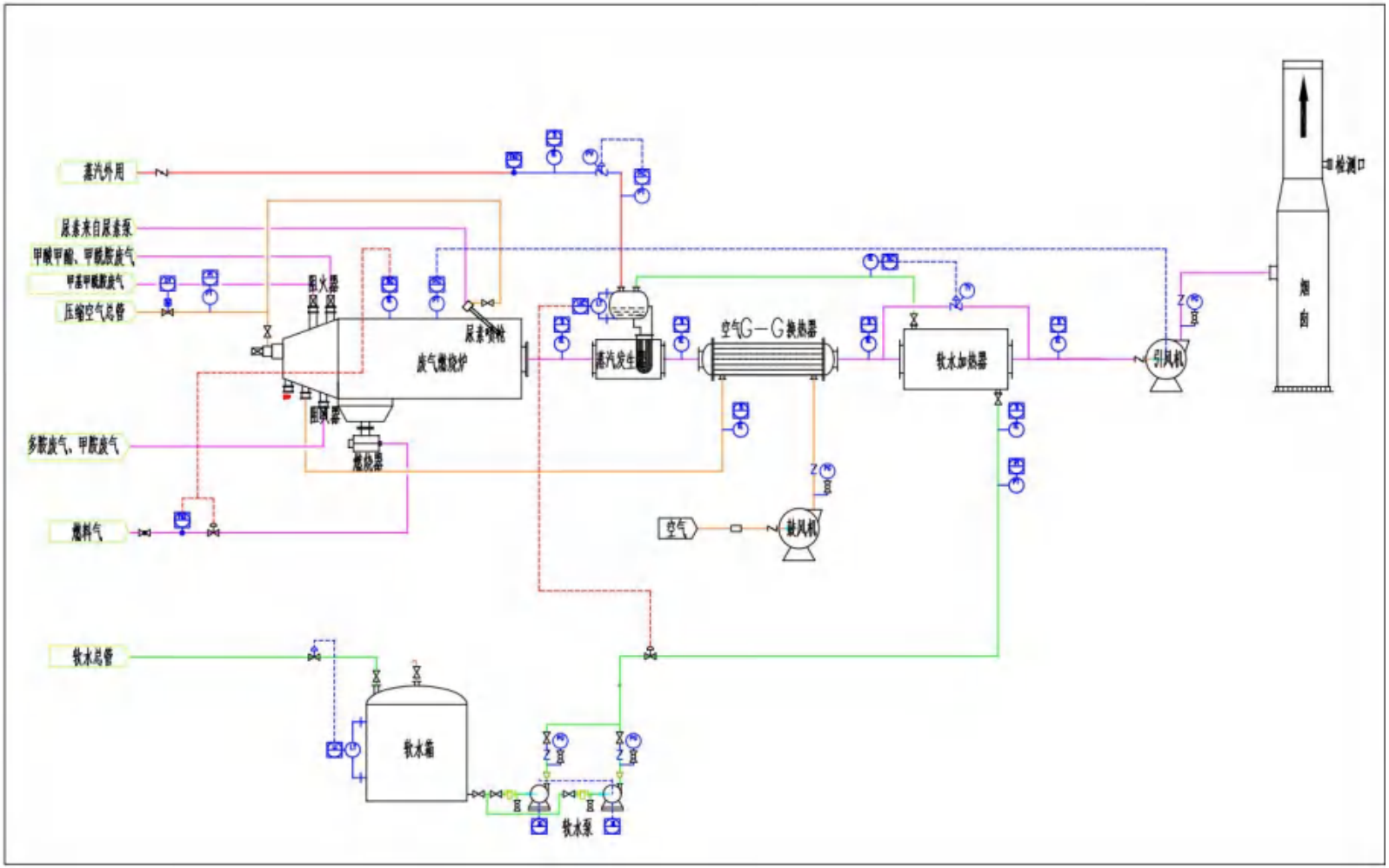
80℃ G-G

80℃

7.1.2-1


去水喷枪处理装置
多胺废气、甲胺废气
水封罐
缓冲罐
去废气炉
去水喷枪处理装置
甲酸甲酯、甲酰胺废气
去水喷枪处理装置
甲基甲酰胺废气
缓冲罐
缓冲罐
引风机
引风机
去废气炉
去废气炉
尿素
尿素槽
去尿素溶液喷枪
尿素泵

7.1.2-1 1


蒸汽外用
尿素来自尿素泵
甲酸甲酯、甲酰胺废气
甲基甲酰胺废气
压缩空气总管
阻火器
尿素喷枪
废气燃烧炉
阻碳器
燃烧器
多胺废气、甲胺废气
燃料气
蒸汽发生
空气G－G换热器
软水加热器
引风机
烟囱
检测口
空气
鼓风机
软水总管
软水箱
软水泵

7.1.2-1 2

3

1

--

1.1

7.1.2-2

7.1.2-2

1		20000Nm^3/h
2		23m^3
3		25×104kcal/m^3·h
4		900℃
5		Q235-B 6mm+300mm (1400℃)

2

, ,

7.1.2-3

7.1.2-3

1		
2		2 10Nm^3/h
3		0.13kW
4		GS10/M

3 G-G

G-G

900Nm^3/h

340℃

200℃

20℃

200℃

Q235-B + SUS304+

400Pa 350Pa

50℃

4

SUS304 3mm, SUS304

900Nm^3/h

200℃

150℃

20℃

80℃

~300kg /h

5

SCR

SNCR

SCR Selective Catalytic Reduction, SCR

Nox

Nox N_2 H_2O

$4NO \quad 4NH_3 \quad O_2 \rightarrow 4N_2 \quad 6H_2O$

$6NO_2 \quad 8NH_3 \rightarrow 7N_2 \quad 12H_2O$

$NH_2 \quad {}_2CO \rightarrow 2NH_2 \quad CO$

$NH_2 \quad NO \rightarrow N_2 \quad H2O$

$CO \quad NO \rightarrow N_2 \quad CO_2$

980℃ 1100℃

NO NOx 800℃

NOx

300 400℃ SCR 80% 90%

SNCR Selective Non-Catalytic Reduction, SNCR

SNCR SCR

SCR

NH_4 $_2CO \rightarrow 2NH_2$ CO

NH_2 $NO \rightarrow N_2$ H2O

CO $NO \rightarrow N_2$ CO_2

980℃

900 1100℃ 1100℃

NO

$4NH_3$ $5O_2 \rightarrow 4NO$ $6H_2O$

NO_x 800℃ NO_x

SNCR

NOx

NO_x NOx

SNCR 30 60

SNCR

SNCR

33%

$5m^3$

30-35℃ 10%

NO_x NO_x

40%

2 “ + + + ”

G1 “ + + +

” 15m P6

“ +

+ + ” 15m P7

1

1

2.3

$5m^2$ K 250Kcal/m2.K.hr φ25*2.5

15%

20℃ -7℃ -25℃

2

-10℃

2

90%

COD COD

500mg/L

4 COD SS

3

2

NH_3

NH_3

pH

pH

3

“ + + + ” 7.1.2-4

7.1.2-5 7.1.2-6

7.1.2-4

1		20m^2	1		
2		40m^2	1		
3		Q=20000 Nm3/h φ800*6500mm +	1		PP
4		2000*1500*2500mm	1		
5		Q=14m3/h 1.5KW	2		FRPP
6		Q=2000 Nm3/h 1.5KW	1		FRP
7		907	1		FRP
8		PLC	1		FRP

7.1.2-5

1		Nm^3/h	20000
2		—	PP
3		s	≥1.5
4		%	≥90
5		—	≥6

7.1.2-6

1		m^3/h	1 20000m^3/h
2		m	2000*6000*1000mm
3			12~40
4		g/L	400~460
5		/	0.75
6		%	≤10
7		℃	>500
8		Pa	700
9		/	
10		g/g	0.3
11		mg/g	950
12		m/s	1.0
13		s	0.12

VOCs

[2022]218

1

2

3

5

4 ≥800mg/g ≥850m²/g

0.9MPa 0.4MPa ≥650mg/g

≥750m²/g

4

7.1.2.3

1 “ + + + ”

1

G1

2

116~117.2℃ 83 84℃

“ + + ” 7.1.2-7

7.1.2-7 “ + + ”

		℃		%			
					+	综合去除效率	
+ +		-33.5		—	95	95	95
		83.5	难溶于水	95	60	98	98
		116		95	85	98.5	95

1

4958

Antoine

$$\lg P = A + \frac{B}{T} + C \times \lg T + D \times T + E \times T^2; \quad P / mmHg; \quad T / K$$

6.1.1-5

7.1.2-8

		A	B	C	D	E
1		33.38	-2610.2	-9.1336	-2.84E-11	3.73E-06
2		94.089	-5291.4	-32.204	1.49E-02	1.89E-13

-7℃ 3℃

$$\lg P_1 = A + \frac{B}{T_1} + C \cdot lgT_1 + D \cdot T_1 + E \cdot T_1^2$$

P_1=0.62Pa P_1=0.02Pa

-25℃ - 15℃

$$\lg P_2 = A + \frac{B}{T_2} + C \cdot lgT_2 + D \cdot T_2 + E \cdot T_2^2$$

P_2=0.231Pa P_2=0.004Pa

0.015MPa 60m³/h

0.231Pa 0.004Pa

$$\frac{V_2}{V_A} = \frac{P_A}{P_2}$$

$Vr_2=V_2+VA$

$Vr_2=60m^3/h$

$VA=55m^3/h$

$P_1Vri= n_1RT$

97% 74%

99.89% 95% 78%

99.83%

95%

2

P2 VOCs( )

“ + + ”

VOCs P2

7.1.2-8

7.1.2-8 P2

	/			m^3/h	mg/m^3	kg/h
2021.01.26	P2 1			9718	33.6	0.327
				9735	43.3	0.422
				9649	50.1	0.483
				9701	42.3	0.410
	P2 2/15m			8810	6.86	6.04×10^{-2}
				8879	5.45	4.84×10^{-2}
				8981	7.43	6.67×10^{-2}
				8890	6.58	5.85×10^{-2}
	-			-	80	7.2
	-	-		-		
	/			m^3/h	mg/m^3	kg/h
2021.01.27	P2 1			9826	39.6	0.389
				9911	45.5	0.451
				9877	35.4	0.350
				9871	40.2	0.397
	P2 2/15m			9118	6.62	6.04×10^{-2}
				9085	8.59	7.80×10^{-2}
				9118	5.39	4.91×10^{-2}
				9107	6.87	6.25×10^{-2}

	-			-	80	7.2
	-	-		-		

VOCs 85% “ + + ” “ + ” + 85%

2

1

G2~G11

TO SNCR

5mg/m³ 110% TO 95% ≥900℃ HJ1093-2020 HJ991-2018 SNCR 30%~50% 40% TO 7.1.2-10 7.1.2-10 “ + +SNCR ”

				%				
		℃			**废气**	**SNCR 脱硝**	**综合去除效率**	
+ 废气 +SNCR		—		—	—	40	40	40
		-33.5		90	95	—	99.5	99
		—		70	95	—	98.5	97
		7		70	95	—	98.5	97
		2.87		50	95	—	97.5	97
		70.5		80	95	—	99	97
		64.8		80	95	—	99	97
		-6.8		70	95	—	98.5	97
	二乙胺	110.6		10	95	—	95.5	97
	NMF	198		80	95	—	99	97
	DMF	152.8		80	95	—	99	97
		116		70	95	—	98.5	97

2

7.1.2-11

7.1.2-11

			( )					(m)
			(m^3/h)	(mg/m^3)	(kg/h)	(mg/m^3)	(kg/h)	
2020.03.20	6		68	462	3.14×10^{-2}	-	-	/
			68	1209	8.22×10^{-2}	-	-	
			68	840	5.71×10^{-2}	-	-	
			68	231	/	-	-	
	7		72	77881	5.61	-	-	/
			72	1607	0.116	-	-	
			72	5.3×10^{5}	38.2	-	-	
			72	412	/	-	-	
2020.03.20	8		50851	5.63	0.286	80	38	30
			50851	12.7	0.646	-	20	
			50851	43	2.19	60	19	
			50851	173	/	1500	-	
ND					0.01mg/m^3			

VOCs

94%

95%

95%

95%

7.1.2.4

1

3

2

10m 25m

GB16297-1996 “ 200

5 ” “ 15m”

3

10~20m/s

4

P5 P6 P7 25m 15m 15m P5 P6 125m P5 P7 116m P6 P7 115m

7.1.3

GB37822-2019

< >

2016 95

GB37822-2019 2019 55

“ ” VOCs

VOCs

VOCs

1 VOCs

GB37822-2019 7.1

7.1.3-1 VOCs

	GB37822-2019	
	VOCs VOCs	1 2
	VOCs	VOCs
	VOCs VOCs VOCs	
	VOCs	1 2

		3
	VOCs VOCs	1 2
	VOCs VOCs	3 4 5
	/ VOCs	1
	VOCs VOCs	2
	VOCs VOCs	1 2 2
	VOCs VOCs VOCs VOCs	

2

VOCs 250m^3

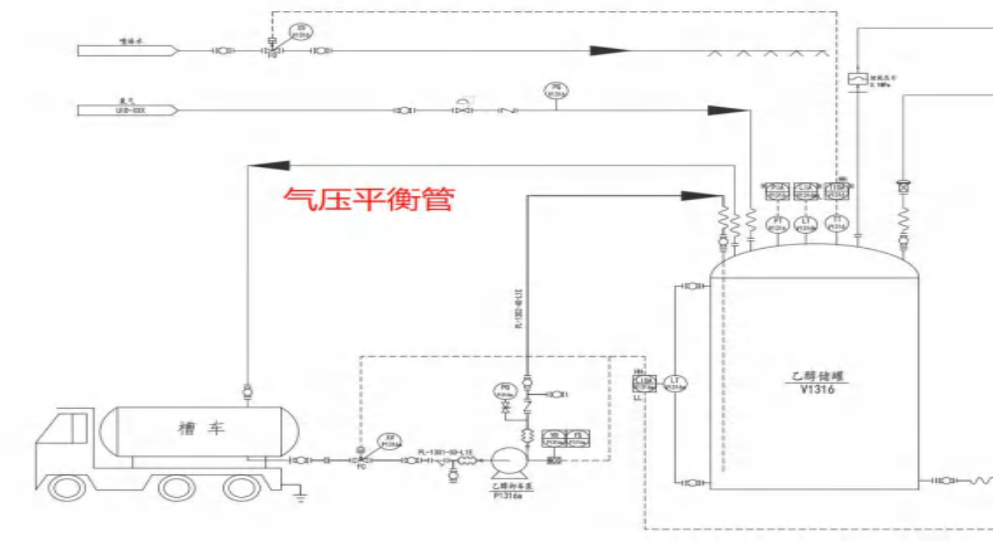
GB37822-2019 5.2

1

80%

2

3



7.1.3-1

4 “ + + ”

P7 90%

5

3 VOCs

VOCs

GB37822-2019 6

1 VOCs

2

3

4

5 ( )

45℃

6

4 VOCs

GB37822-2019

VOCs

1

5

3

2

5

3 VOCs

5 VOCs

1

2

3

6

“ 2000

LDAR ”

“ LDAR LDAR ”

2000

LDAR

7.1.4

1

2

3

4

5

6

7

8

9

7.1.5

1

2

3

4

5

6

7.2

7.2.1

1

1

1

2

20%

7.2.2

7.2.2.1

2020

6m^3/h

1

1

2.5t/h 500mg/L COD 1500mg/L

2 0.54t/h

2.68t/h 600mg/L COD 2000mg/L

7.2.2-1

7.2.2-1

	t/h	COD	
	2.5	1500	500
	2.68	2000	600
	5.18	1759	552

2

30ppm

25BV 1 25 90%

1

25~30BV

2

4%

1BV BV 3BV 1.5BV

6# 1BV

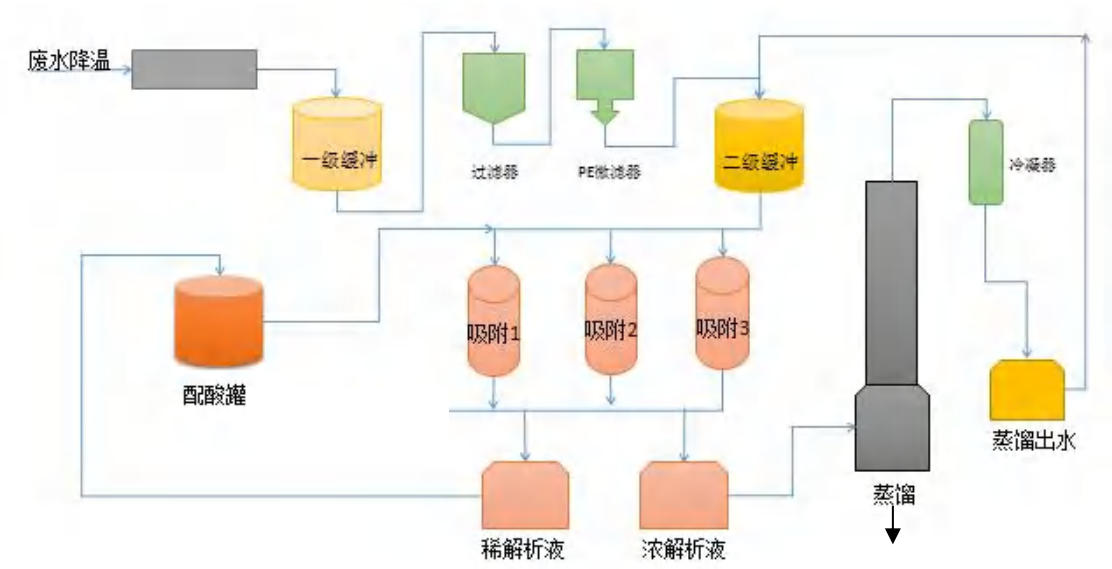
5# 4# 3# 2# 1# pH

S1

1.5BV

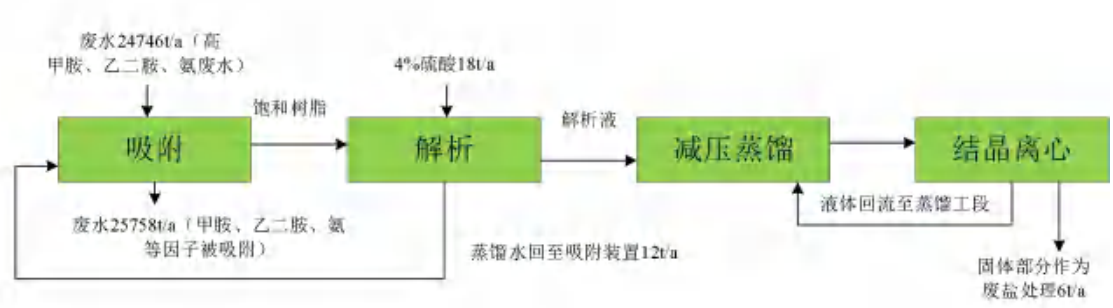
pH

7.2.2-1



7.2.2-1

7.2.2-2



7.2.2-2

3

7.2.2-2

7.2.2-2

1		304	2	8m³/h	
2		304	8	DN50	
3	PE	304	2	304 8m³/h	
4		304	8	DN50	
5		304	2	304 10m³/h H=32M	
6		-	2	4KW	
7		PE	2	30m³ 25	
8		304	1		
9		302	1		
10		304	1	F=15	
11		PE	1	30m³ 25	
12		304	2	304 10m³/h H=32M	
13		-	2	4kw	-
14			3	Φ1400*H5500*10 V=8m³	
15			6		
16		PE	1	30m³ 25	

17		304	1		
18		PE	1	15m³ 16 20m³	
19			2	304 10m³/h H=32M	
20		304	1	L=2500	
21		PE	1	10m³ 25	
22		PE	1	10m³ 25	
23		304	1	L=2500	
24			4	10m³/h 25m	
25			4	4KW	
26		304	6	Φ100	
27		3000L	1		
28		316L	1	F=15	
29		PE	1	10m³ 17	
30			2	10m³/h 25m	
31		-	2	4KW	
32		PP	1	PE	
33		PE	1		
34		PE	6	10m³ 17	
35		PE	7	10m³/h 25m	
36		304	6		
37		-	6	4KW	

4

1 4% 360kg 1 25

6m³/h 4.8kg/h 38.4t/a

2

7.2.1-1 1.4m 5m

6m³ 2 18 m³

0.72-0.80g/ml 15

7.2.2-3

1		
2	0.315-1.25mm % ≥	90
3	%	45-52
4	(g/ml)	0.72-0.80
5	(g/ml)	1.14-1.20
6	g/L	10

5

2022 2

70% 7.2.2-4

7.2.2-4 2022 2

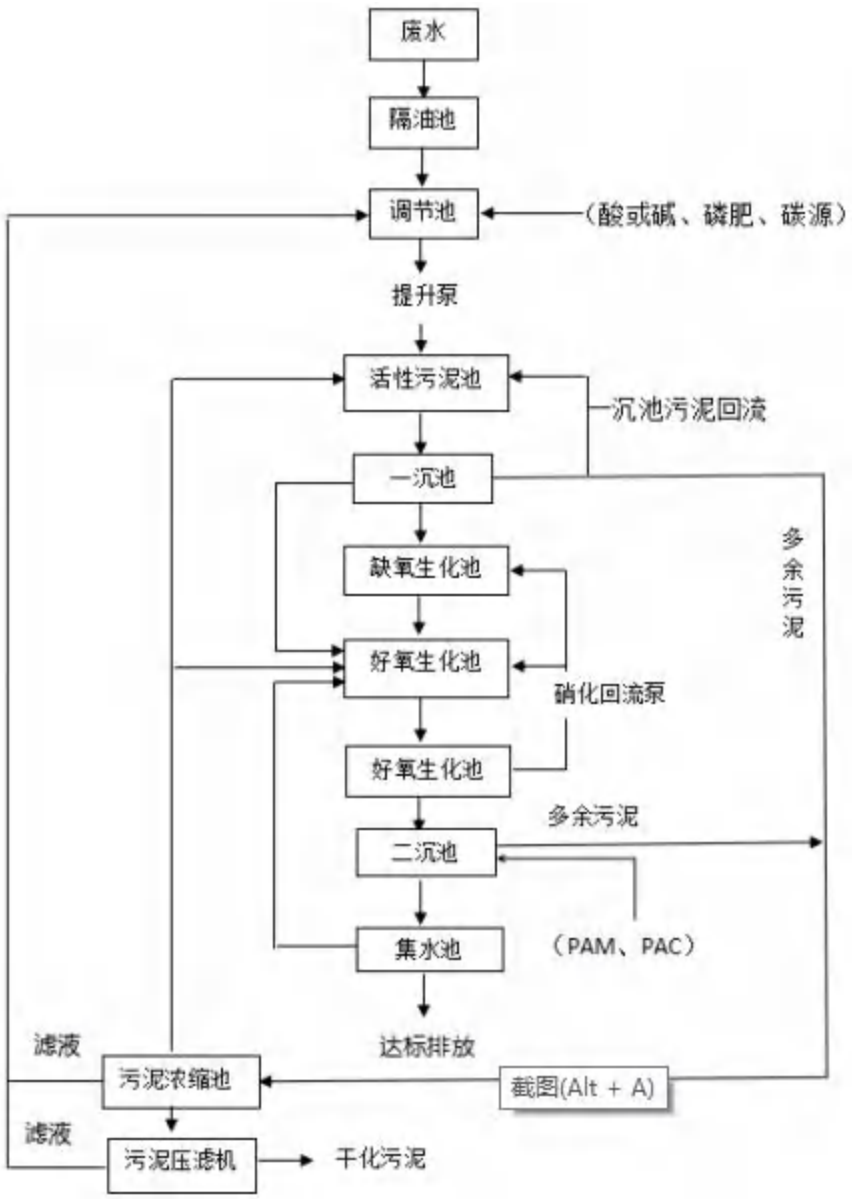
	mg/L	mg/L	%		mg/L	mg/L	%
2.1	103	33.6	67.38	2.15	100.8	33.6	66.67
	96	30.8	67.92		112	36.4	67.50
	106.3	44.8	57.86		126	42	66.67
	112	42	62.50		123	36.4	70.41
	106.3	36.4	65.76		126	42	66.67
	98	33.6	65.71		112	33.6	70.00
2.2	81.2	28	65.52	2.16	151.2	44.8	70.37
	84	30.8	63.33		168	53.2	68.33
	75.6	25.2	66.67		151.5	50.4	66.73
	78.4	22.4	71.43		168	56	66.67
	81.2	25.5	68.60		149	47.6	68.05
	70	16.8	76.00		133	44.8	66.32
2.3	75.6	22.4	70.37	2.17	128	53.2	58.44
	78.4	21	73.21		134	56	58.21
	81.2	25.2	68.97		146	52.3	64.18
	78.4	25.2	67.86		148.4	56	62.26
	92.4	28	69.70		142.8	58.8	58.82
	109	33.6	69.17		112	42	62.50
2.4	/	/	0	2.18	70	16.8	76.00
	/	/	0		72.8	19.6	73.08
	/	/	0		86.8	17.6	79.72
	128	44.8	65.00		75.6	16.8	77.78
	100.8	42	58.33		84	18.6	77.86
	137.2	47.6	65.31		95.2	22.4	76.47
2.5	137.2	47.6	65.31	2.19	154	47.6	69.09
	140	30	78.57		167	53.2	68.14
	142.8	53.2	62.75		126	36.4	71.11
	160.8	56	65.17		112	36.4	67.50
	132	47.6	63.94		148	42	71.62
	128	42	67.19		167	47.6	71.50
2.6	92.4	25.6	72.29	2.20	167	50.4	69.82
	98	28	71.43		132	42	68.18
	84	16.8	80.00		120	39.2	67.33
	86.8	19.6	77.42		126	42	66.67
	98	22.4	77.14		134.4	44.8	66.67
	84	21	75.00		148	47.6	67.84
2.7	90	25.2	72.00	2.21	145	36.4	74.90
	84	22.4	73.33		197.6	47.6	75.91
	86.8	25.2	70.97		175.2	50.2	71.35
	81.2	19.6	75.86		148	44.8	69.73
	84	19.6	76.67		167	47.6	71.50
	90	25.2	72.00		170	53.2	68.71
2.8	86.8	28	67.74	2.22	109.2	36.4	66.67
	100.8	30	70.24		112	42	62.50
	112	42	62.50		92.4	25.2	72.73
	89.6	25.2	71.88		109	36.4	66.61
	98	30.8	68.57		124	39.2	68.39
	106.3	36.4	65.76		112	33.6	70.00
2.9	81.2	15.4	81.03	2.23	98	33.6	65.71
	84	16.8	80.00		92.4	28	69.70
	86.8	17.6	79.72		86.8	25.2	70.97

	84	16.8	80.00		86.8	28	67.74
	89.8	18.6	79.29		81.2	22.4	72.41
	95.2	25.2	73.53		72.8	16.8	76.92
2.10	86.8	17.6	79.72	2.24	98	22.4	77.14
	84	21	75.00		92	19.6	78.70
	96	19.6	79.58		86.8	16.8	80.65
	92.4	22.4	75.76		72.8	19.6	73.08
	98	25.2	74.29		67.2	14	79.17
	100.8	28	72.22		64.4	14	78.26
2.11	100.8	28	72.22	2.25	67.2	11.2	83.33
	98	22.4	77.14		70	8.4	88.00
	86.8	19.6	77.42		67.2	11.2	83.33
	86.8	18.6	78.57		70	11.2	84.00
	92.4	25.2	72.73		67.2	8.4	87.50
	98	28	71.43		64.4	5.6	91.30
2.12	112	39.2	65.00	2.26	70	11.2	84.00
	100.8	30.8	69.44		67.2	8.4	87.50
	84	21	75.00		70	8.4	88.00
	86.8	22.4	74.19		61.6	5.6	90.91
	98	25.2	74.29		67.2	8.4	87.50
	100.8	28	72.22		75.6	11.2	85.19
2.13	142	70	50.70	2.27	72.8	22.4	69.23
	138.3	64.4	53.43		70	16.8	76.00
	127.3	53.2	58.21		72.8	19.6	73.08
	132	64.4	51.21		70	16.8	76.00
	124	58.8	52.58		64.4	19.6	69.57
	112	53.2	52.50		61.6	19.6	68.18
2.14	170.8	64.4	62.30	2.28	67.2	16.8	75.00
	117.6	44.8	61.90		70	19.6	72.00
	98	28	71.43		75.6	19.6	74.07
	112	38	66.07		75.6	22.4	70.37
	123	33.6	72.68		86.8	28	67.74
	98	30.8	68.57		98	30.8	68.57

7.2.2.2

1

800t/d 7.2.2-3



7.2.2-3

1

PH 8.5 2 5

2

2.0kgCOD/m^3·d

COD

3

4 NO_3^- NO_2^-

N_2

DO 0.5mg/L

5

0.8kgCOD/m^3·d

6

7 PAC PAM

8

2

7.2.2-4

7.2.2-4 mg/L

(m3/d)	(m3/a)			COD	SS	NH_3-N	TN			
85.82	25746	t/a	/	2000	1200	600	900	/	30	/
85.86	25758			2000	1200	600	900	/	30	/
				40%	40%	70%	70%	/	40%	/
				1200	720	180	270	/	18	/
85.86	25758		/	1200	720	180	270	/	18	/
78.98	23695		/	257.44	209.01	1.435	2.152	0.81	0.05	11.81
164.84	49453		/	748.32	475.16	94.44	141.67	0.39	9.4	5.66
164.84	49453		/	748.32	451.41	94.44	141.67	0.39	9.4	5.38
164.84	49453	+		748.32	451.41	94.44	141.67	0.39	9.4	5.38
				40%	45%	40%	45%	30%	30%	20%
				448.99	248.27	56.67	77.92	0.27	6.58	4.3
164.84	49453			448.99	248.27	56.67	77.92	0.27	6.58	4.3
				10%	0%	0%	0%	40%	45%	30%
				404.09	248.27	56.67	77.92	0.16	3.62	3.01
164.84	49453	+		404.09	248.27	56.67	77.92	0.16	3.62	3.01
				40%	40%	40%	45%	30%	30%	25%
				282.86	148.96	34.00	42.85	0.11	2.53	2.26
8.65	2880		/	500	400	35.00	60.00	/	/	/
157.16	52333		/	294.81	162.78	34.06	43.80	0.10	2.39	2.14
/	/		/	500	400	50	70	0.3	/	20

2023 1 13

7.2.2-5

7.2.2-5 **mg/L**

pH		8.5	8.6	8.5	8.5
		8.1	8	8.1	8.1
		1760	1680	1710	1760
		165	159	170	162
%		90.63	90.54	90.06	90.80
		48	57	54	50
		16	14	16	17
%		66.67	75.44	70.37	66.00
		91.6	81.9	82.9	88.7
		28.3	27	27.4	26.3
%		69.10	67.03	66.95	70.35
		0.99	1.02	0.98	1.01
		0.26	0.25	0.26	0.24
%		73.74	75.49	73.47	76.24
		220	208	230	218
		60.2	62.1	63	61.4
%		72.64	70.14	72.61	71.83
		1210	1220	1080	1040
		39.5	38.1	38.7	41
%		96.74	96.88	96.42	96.06
		1.22	0.83	1.18	1.07
		0.42	0.5	0.26	0.31
%		65.57	39.76	77.97	71.03

7.2.2-4 7.2.2-6

7.2.2-6

	COD	SS	NH_3-N	TN			
	80.6%	67.0%	64.0%	69.8%	70.6%	73.1%	58.0%
	90.0%	69.6%	68.0%	75.0%	72.0%	—	64.0%

3

2011 4

7.2.3

7.2.3.1

2005 4 20 2007 6 22 2007 7 2007 12 1 t/a A^2/O 2008 1.5 / UASB-A/O PACT - 2008 9 28 2012 2012 3 30 HP 2012031 2012 12 10 201206 2013 6 28 25000 / 2013 7 1 201303021 2014 12 31 [2014]14 GB8979-1996

2019 15 COD GB18918 2002 A

GB8979-1996 COD

GB18918-2002

A 25000m^3 2019 8

23 2019 11 11

2019040 2020 10 2021 2

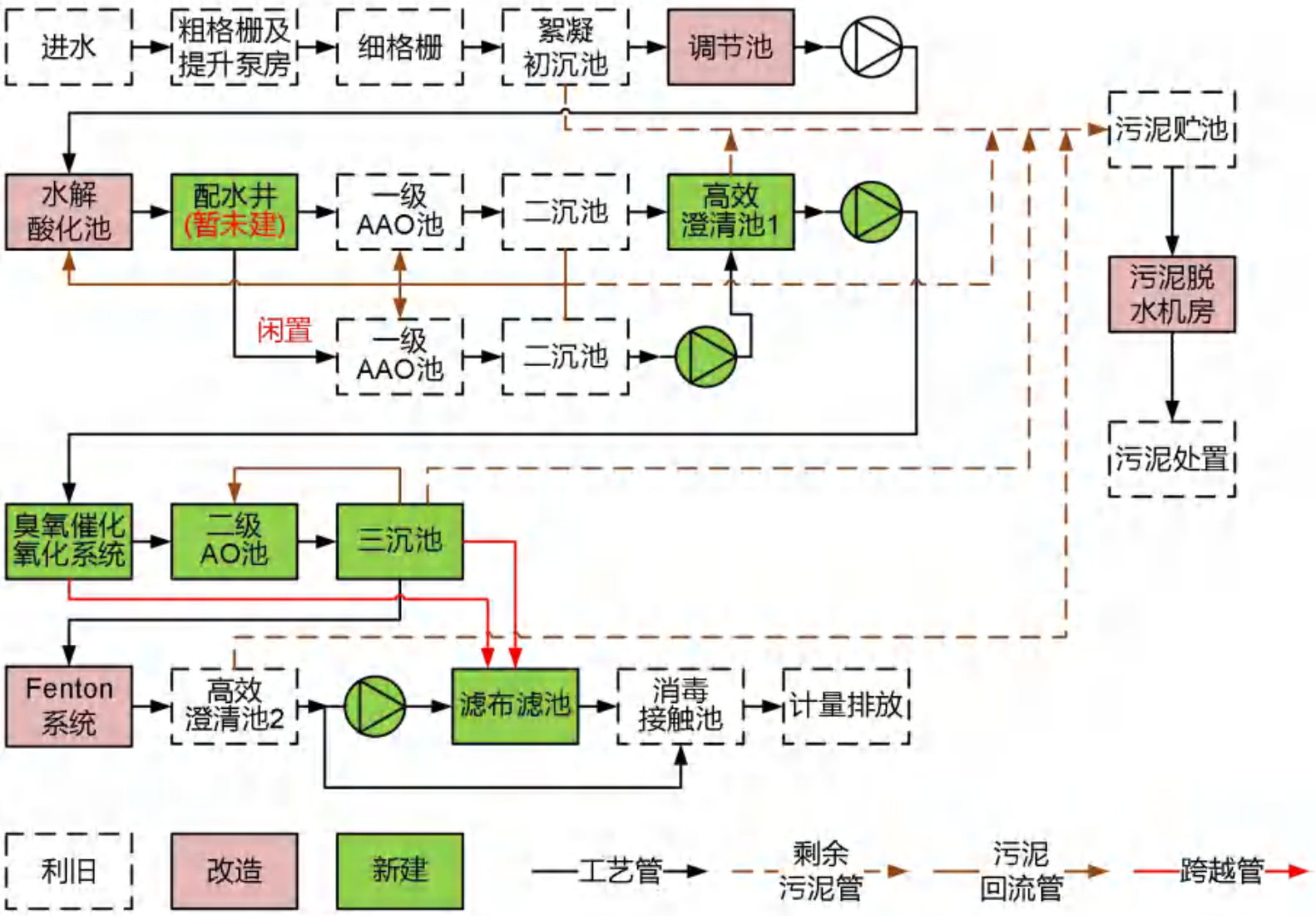
10000m^3/d

15000m^3/d 2021 6

“ +

+ + + + ”

7.2.3-1


进水
粗格栅及提升泵房
细格栅
絮凝初沉池
调节池
污泥贮池
水解酸化池
配水井(暂未建)
一级AAO池
二沉池
高效澄清池1
污泥脱水机房
闲置
一级AAO池
二沉池
污泥处置
臭氧催化氧化系统
二级AO池
三沉池
Fenton系统
高效澄清池2
滤布滤池
消毒接触池
计量排放
利旧
改造
新建
工艺管
剩余污泥管
污泥回流管
跨越管

7.2.3-1

7.2.3-1 7.2.3-2

7.2.3-1

	pH	COD mg/L	mg/L	mg/L	mg/L
2020.1	7.59	45.43	1.306	/	/
2020.2	7.96	41.36	1.35	/	/
2020.3	7.56	42.45	1.38	/	/
2020.4	7.41	41.11	0.80	/	/
2020.5	7.43	45.98	1.52	/	/
2020.6	7.34	44.35	0.99	0.21	/
2020.7	7.15	47.03	0.46	0.21	/
2020.8	6.97	53.68	0.44	0.18	/
2020.9	6.89	47.87	0.51	0.20	/
2020.10	7.24	46.24	0.81	0.17	/
2020.11	7.40	44.45	2.01	0.11	/
2020.12	7.43	39.27	3.03	0.09	/
2021.1	7.57	48.60	2.33	0.22	/
2021.2	7.32	42.61	1.08	0.11	/
2021.3	7.14	45.14	0.58	0.15	/
2021.4	7.35	37.86	0.47	0.07	/
2021.5	7.60	30.29	0.30	0.07	/
	6~9	100	15	0.5	/
2021.6	7.60	30.11	0.59	0.10	/
2021.8	7.98	40.86	0.13	0.06	7.64
2021.9	8.09	40.02	0.14	0.07	7.50
2021.10	8.02	36.38	0.91	0.12	13.64
2021.11	7.79	34.40	0.94	0.04	5.72
2021.12	7.74	37.86	0.37	0.05	4.65
2022.1	7.87	36.98	0.55	0.18	5.75
2022.2	7.94	39.09	0.38	0.14	4.84
	6~9	50	5	0.5	15

7.2.3-2

2022.01.14		pH		7.4	6-9	
			mg/L	9.6	10	
			mg/L	0.07	0.5	
			mg/L	3.90	15	
			mg/L	0.324	0.5	
			mg/L	0.07	3	
			mg/L	ND	0.05	
			mg/L	ND	0.1	
			mg/L	ND	0.01	
			mg/L	ND	0.1	
			mg/L	0.0003	0.1	
			mg/L	ND	0.001	
			MPN/L	210	1000	
			mg/L	45	50	
			mg/L	0.359	5	

7.2.3.2

1

2.5 t/d

0.87 t/d 0.25

t/d 1.38 t/d 154.45t/d

1.11%

2

7.2.3-3

7.2.3-3

	pH	COD	SS						
	6~9	400	252.75	10.83	21.65	1.89	0.189	3	0.165
	6~9	500	400	50	70	20	0.3	—	3

3

7.3

1

2

3

1.5

4

GB12348-2008 3

7.4

7.4.1

7.4.1.1

1

2

26.4t/a

3

94811.04t/a

HW49 900-000-49

[2019]327

7.4.1.2

1

4472m^2

GB18599-2020 II

0.5m

1.0×10^{-7}cm/s

2

300m^2 3.3.4.2

[2019]149

[2019]327

7.4.1-1

7.4.1-1

600 70.6

529.4 94811.04t/a

570

600

7.4.1-1

				t/a	t		/ (t)				
		HW49	900-000-49	107	8.9		300m²/600t	/	30d	70.6t	
		HW13	900-015-13	54.4 /	4.5						
		HW29	900-023-29	0.5	0.0						
		HW08	900-219-08	15	1.3						
		HW50	261-164-50	7	0.6						
		HW49	900-041-49	15 /	1.3						
		HW49	900-000-49	40 /	3.3						
		HW49	900-041-49	115	9.6						
		HW49	900-041-49	4.33	0.4						
		HW49	900-047-49	1	0.1						
		HW49	772-006-49	186	15.5						
		HW49	900-039-49	181.16	15.1						
		HW11	900-013-11	90.84	7.6						
		HW49	900-041-49	30	2.5						

7.4.1.3

GB18597-2023

[2020]401

[2019]327

1

2

3

4

“ ”

5

6

7

8 “ [2019]327 ” “ [2019]149 ”

9 “ [2020]401 ” 3

HJ1276-2022

10

7.4.2

2021

11 30 23

7.4.3

1

122t/a

121t/a

2

26.4t/a

3

94811.04t/a

“ ”

7.5

7.5.1

1

2

3

4

5

6

7.5.2

7.5.2.1

1

2

3 “ ”

4

7.5.2.2

7.5.2-1

			Mb≥6.0m K≤1×10^{-7}cm/s GB18598	
			Mb≥1.5m K≤1×10-7cm/s GB16889	

7.5.2.3

1

GBT 50934-2013

1m

250mm P8

1.0×10^{-12}cm/s

HDPE HDPE

1.5mm 1.0×10^{-12}cm/s

①

“ + +2mm HDPE + +

+ ”

C25 P8

“ + + +1.5mm HDPE

1.0×10^{-12}cm/s +150mm ”

2

HJ610-2016

Mb≥1.5m K≤1×10^{-7}cm/s

GBT50934-2013

3

7.5-1

7.5.2.4

1 1

2 3 1

3 1~2

3.4.4-1

“10.2.1.2 ”

1

1

2

3

2

1 HJ/T164-2004

2

3

4

7.5.2.5

1

2

3

7.6

7.6.1

7.6.1.1

500m

GB50016-2014 2018 GB50160-2008 2018

2013

1

2

3

7.6.1.2

1

2

DCS SIS

(ESD) (SIS) SIS DCS

DCS

3

PLC

4

5

6

7

1.2m 2880m^3

750m^3

8

“ ”

9

10

7.6.1.3

1

(1)

(2)

(3)

(4)

(5)

(6)

(7)

2

(1)

(2)

(3)

(4)

3

(1)

(2)

(3)

(4)

4

(1)

(2)

(3)

(4)

(5)

(6)

7.6.1.4

1

(GB12465-90)

(591)

1

2

3

4

5

2

6

7

8

9

( )

2

1

2 100kg

3

4 ( )

5

7.6.1.5

(1)

(2)

(3)

(4)

(5) 80%

(6)

(7)

(8)

(9)

(10)

(11)

7.6.1.6

1

GB50016 2018

GB51283-2020

GB-50016

2

GB51283-2020

1

2 0.7~1.2MPaG

5

100% 40~60m 1

15m

3

NO_2

HCl

1

2

4

5

6

7

7.6.1.7

1

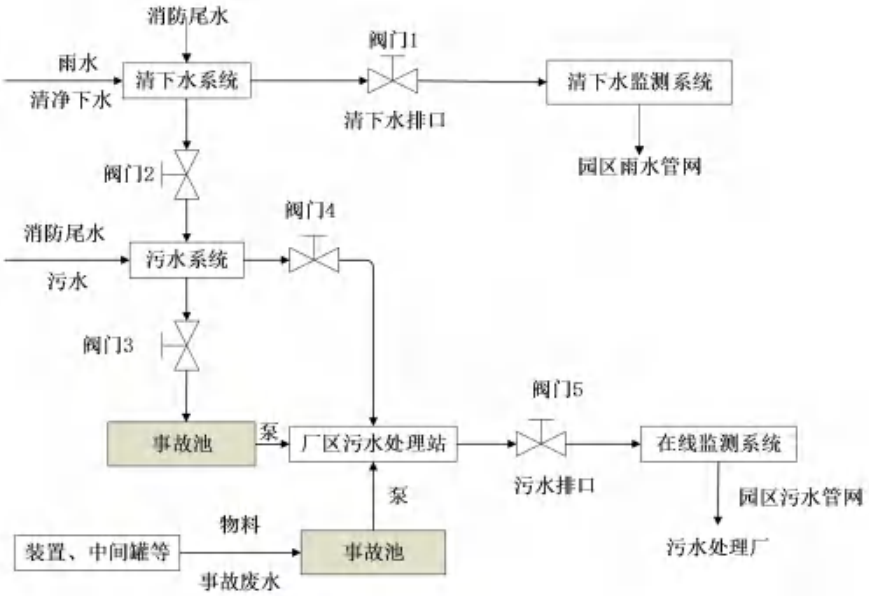
2

4.5.2.1

1756.16m^3 2400m^3

“ ”

3



7.6.1-1

1 4 5 2 3

1 4 5 2 3

7.6.1-2

7.6.1.8

1

HJ610-2016

2

HJ610-2016

1

3

4

7.6.1.9

2020 16

2020 101

2020 38

7.6.1.10

“

”

7.6.1-1

7.6.1-1

1	DCS	
2		
3		
4		
5		
6		
7		
8		

7.6.2

7.6.2.1

/

15m

60m

5

1

2

3

7.6.2.2

1

2

“ - - ”

-

150mm

2018

(GB50160-2008) 1

-

SH/T 3024-2017 B 2400m^3

2 1 1

50m^3/h 40m 1

200m^3/h 75m

-

10000m^3

3 /

CO HCl COD

pH

/

/

/

7.6.2.3

1

/

/

2

7.6.2.4

1

1

( )

7.6.2-1

2

3

7.6.2-2

7.6.3

7.6.3.1

“ ”

(DB32/T

3795-2020) ( )

7.6.3-1

7.6.3-1

1		· · · · ·
2		· · · ·
3		· · · · ·
4		· ·
5		·
6		· · · · · · · · · · · ·
7		
8		· 24h ·24h
9		MSDS

10		
11		
12		
13		
14		. .
15		(a) (b) (c) (d) (e) (f) (g) (a) (b) (c) (d)
16		. . ( ): . ( ): . ( ):
17		
18		

1

2

I II III

3

4

5

“ ”

6

7

8

9

7.6.3.2

1

DCS

DCS PC

I/O

MMS

MMS

PLC

DCS DCS

2

COD

3

4

⑪

⑫

5

6

1

2

3

1

1

4

5

7

1

2

7.6.3.3

2021 2021 12 28

321300-2021-030-M

3

1

1

1

“ ”

2

3

2

1

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3

4

5

24

6

7.6.3.4

1

GPS

2

5

1 2

2

1

3

[2013]139

< >

[2014]25

4

1

2

10000m^3

24

250m

430m

9100m^3 10000m^3

“ ” 100 2

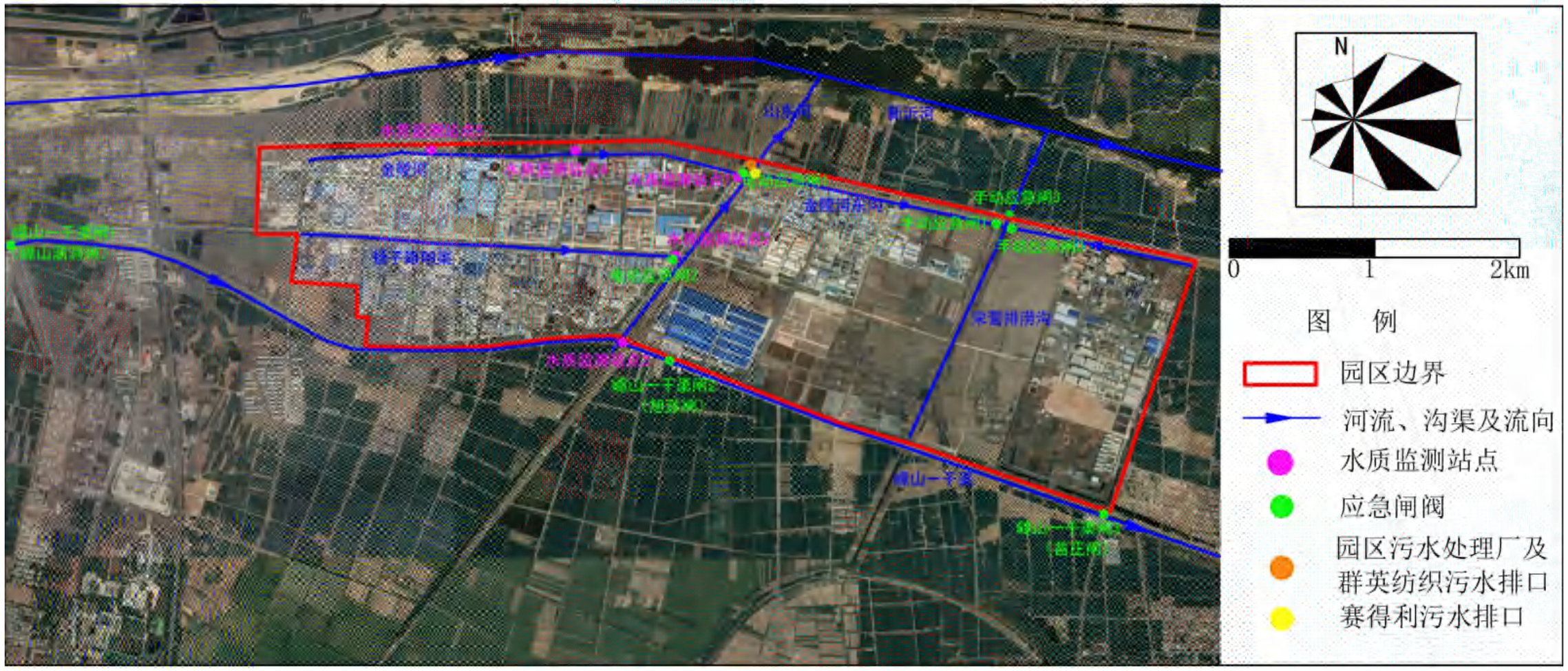
2 380

pH COD 24

3

3

7.6.3-1 7.6.3-2 7.6.3-3


N
0
1
2km
图 例
园区边界
河流、沟渠及流向
水质监测站点
应急闸阀
园区污水处理厂及
群英纺织污水排口
赛得利污水排口

7.6.3-1

提升泵2
事故应急池
提升泵1
Google Earth
N
0
1
2km
图 例
园区边界
回流管网及走向
事故应急池
提升泵

7.6.3-2

7.6.3-3

7.6.4

“ ”

7.6.4-1

7.6.4-1

	1			30		10
	2			10		25
	3			5	/	0
	4			5		5
	1			20	/	5
	2			20	/	0
	3			20		5
	4			5		5
		/	/	120	/	55

7.7

7.7.1

7.7.1.1

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2 I

II

3 (

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7.7.1.2

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7.7.1.4

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GB8978

GB3838

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7.7.1.5

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24

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2 I

II

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7.7.1.6

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4

7.7.2

7.7.2.1

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4

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3

4

2

7.7.2.2

1

(1)

(2)

2

7.7.2.3

1

(GB12523-2011)

(1)

(2)

(3)

(4)

7.7.2.4

1

2

(1)

(2)

7.8

7.8-1 7.8-2

7.7-1 “ ”

			50	
		38.85t/d 6t/h 800t/d “A/O”		
		25m P5	400	
	G1	“ + + + ” 15m P6		
		“ + + + ” 15m P7		
			10	
		300m^2		
		4472m^2	10	
				“
		15%	20	”
	3000m^3 2400m^3 1500m^3)		55	
	GB /T 50934-2013		30	
	2-3			
	1 25m 2 15m COD VOCs LDAR		40	
“ ”	1 2		-	
	-			
			615	

7.7-2 “ ”

		117.02t/d 6t/h 800t/d “A/O”		
		25m P5		
	G1	“ + + + ” 15m P6		
		“ + + + ” 15m P7		
			10	
		300m^2		
		4472m^2		
		15%		“
	2464m^3 2400m^3 1500m^3)			”
	GB /T 50934-2013		25	
	2-3			
	1 25m 2 15m COD VOCs LDAR			
“ ”	-		-	
	-			
			35	

8

8.1

8.1.1

1 2030 2021 23 2021 10 24

2

2021 2021 1464 2021 11 15

3 19 2020 12 31

4

2021 4 2021 1 11

5

2021 45 2021 5 30

6

2021 346 2021 5 30

7 2021 130

8 10 GB/T32151.10

9

10

2021 364 2022 1 4

8.1.2

8.1.3

8.1.3-1

8.1.3-1

1	2021 45	“ ”	“ ”	
		“ ” ( )		
		“ ” “ ” -	1 2 3	
		“ ”		
2		( )		

	[2021]4	“ ” “ ”		
		( )		
3	[2021]4			
		“ ”		
		2030		

[2021]45 [2021] 4

[2021]4

8.2

8.2.1

8.2.1.1

RTO

2.4

Nm³/a

8.2.1.2

1596 kWh/a 456000t/a

8.2.1.3

8.2.2

8.2.2.1

CO_2

CO_2 CO_2

1 CO_2

1

10 GB/T32151.10-2015 5.2.2.1

CO_2 (EF_i)

$$E_{燃料i} = \left[\sum_{i=1}^{n}\left(AD_i \times CC_i \times OF_i \times \frac{44}{12}\right)\right] \times GWP_{CO2} = AE_{燃料燃烧}$$

AD*i*—— *i* t 10^4Nm^3

CC*i*—— *i* tC/t tC/10^4Nm^3

OF*i*—— *i*

GWPco_2—— CO_2 1

44/12——CO_2 C

i——

2

RTO 2.4 Nm^3/a

8.2.2-1

8.2.2-1

			( )
1	ADi	10^4Nm^3	2.4
2	CCi	tC/10^4Nm^3	5.9564
3	OFi	—	99%
4	GWPco_2	—	1.0
5	E_i AE_i	tCO_2	1.39
AE		tCO_2	1.39

(AE) 1.39 tCO_2/a

2 CO_2

1

AE

2021 364

AE =*AE* +*AE*

AE —— tCO_2

AE —— tCO_2

AE =*AD* ×*EF*

AD —— MWh

EF —— tCO_2/MWh 0.6829tCO_2/MWh

AE =*AD* ×*EF*

AD —— GJ

EF —— tCO_2/GJh 0.11tCO_2/GJ

(Mas) (AD)

10

(GB/T32151.10-2015)5.2.5.2

$$AD = M_{ast} \times (E_{nst} - 83.74) \times 10^{-3}$$

AD —— GJ

M_{ast}—— t

E_{nst}—— kg kJ/kg

1.9MPa 230℃ 2797.4kJ/kg

2

8.2.2-2

8.2.2-2

1	M_{ast}	t	6300	6	*AD*	MWh	5825.5
2	E_{nst}	kJ/kg	2797.4	7	*EF*	tCO_2/MWh	0.6829
3	*AD*	GJ	69.14	8	*AE*	tCO_2	10037.4
4	*EF*	tCO_2/GJ	0.11	9	***AE***	tCO_2	**153349.64**
5	*AE*	tCO_2	143312.4				

3 CO_2

CO_2

4 CO_2

CO_2 4541.66t/a CO_2

4316.73t/a CO_2 4316.73t/a

5

8.2.2-3

8.2.2-3

		CO_2
CO_2		1.39
CO_2		0
CO_2		-4316.73
CO_2		10037.244
CO_2		143312.4
CO_2	CO_2	-4315.32
	CO_2	149034.304

8.2.2.2

$AE = AE + AE + AE + AE$

AE — tCO_2

AE — tCO_2

AE — tCO_2

AE — tCO_2

AE — tCO_2

1 CO_2

2

CO_2

4541.66t/a

3

2250 kWh 266000t/a

CO_2 14150.25

CO_2 404140.97

8.2.2-4

8.2.2-4

		CO_2
CO_2		0
CO_2		4541.66
CO_2		0
CO_2		14150.25
CO_2		404140.97
CO_2	CO_2	4541.66
	CO_2	422832.88

8.3

8.3.1

8.3.1.1

132kW

10kV 132kW 380V

0.93

LED

8.3.1.2

8.3.2

1

1

2

2

8.4

8.4.1

2030 CO_2

8.4.2

8.4.2-1

8.4.2-1

RTO		m^3				
		KWh				
		t				
		t				

8.5

[2021]45 [2021]4

[2021]4

149034.304tCO_2/a

CO_2

-4315.32tCO_2/a

9

9.1

102391.61 125 86661.19 19303.68 14477.76 94.77% 324.80% 8 2 94.01% 74.25% 3.07 3.37 ( ) 95457.27 (I=12%) 69128.23 (I=12%) 256.48%

9.2

9.2.1

650 0.64%

9.2.2

1

2

3

4

9.3

1

2

10

10.1

10.1.1

1

2

3

4

5

6

7

8

10.1.2

1

2

3

“ ”

GB18597-2023

4

5

“ ”

6

2019

“2662 ”

7

8

“ ”

24

APP Web

( )

7

8

“ ”

10.1.3

10.1.3.1

1

2

3

4 TSP

5

10.1.3.2

1

2

3

4

5 “ ”

6

7

10.1.3.3

1

2

3

4

5

10.1.4

10.1.4.1

1 1

“ 100 COD30

COD 10 ”

pH COD

2 1

pH COD

3

[2019]81

10.1.4.2

[2019]81

RTO

“ VOCs 1

3 VOCs ”

TO P5

VOCs

P6 VOCs

10.1.4.3

97

122

1

- 15562.1-1995

GB/T16157-1996

2

-

15562.1-1995

3

0.5~1.0m

4

GB

15562.2-1995 HJ1276-2022

[2019]149 1“ ”

10.2

10.2.1

10.2.1.1

1

2

HJ1103-2020 HJ 819-2017

HJ1103-2020

HJ/T55-2000

SO_2

NOx HJ 75-2017

HJ 819-2017

DB32/3151-2016

10.2-1

10.2-1

		pH COD	
		pH COD SS	1 /
		pH COD	
		pH COD	1 /
	P5		
			1 /
			1 /
	P2		1 /
	P3		1 /
	P4		1 /
	G1 P6		1 /
	P7		1 /
	10 10 2~4	PM_{10} SO_2	1 /
		/	1 /
			1 /
	- 1m		1 /
	1		1 /

10.2.1.2

HJ2.2-2018

HJ610-2016

HJ964-2018 HJ 819-2017

10.2-2

10.2-2

	2~4		SO_2 NOx	
			45	
	5			
		1	pH	
		3		
		1		

[2014]114

10.2.2

10.2.2.1

10.2.2.2

10.2.2.3

10.2.2.4

1

2 1 4

1

2

1 /2

1 /4

10.3

10.3.1

1

COD

SS

2

VOCs NOx SO_2

DMF

3

10.3.2

1

$SO_2$0.001t/a NOx4.281t/a 0.001t/a VOCs 7.709t/a 0.888t/a 0.0006t/a 0.033t/a 2.868t/a DMF0.177t/a 0.212t/a

$SO_2$0.004t/a NOx1.592t/a 0.005t/a VOCs1.954t/a 4.392t/a 0.003t/a 1.063t/a

$SO_2$0.005t/a NOx5.873t/a 0.006t/a VOCs10.307t/a 5.3008t/a 0.012t/a 0.035t/a 3.052t/a DMF0.188t/a 1.275t/a

0.006t/a $SO_2$0.005t/a NOx5.873t/a VOCs9.663t/a 5.3008t/a

2

COD0.648t/a NH_3-N0.065t/a 0.195t/a 0.001t/a 12968t/a SS0.13t/a 0.013t/a 0.001t/a 0.019t/a 6.4t/a

COD1.968t/a NH_3-N0.197t/a

0.59t/a 0.004t/a 39365t/a SS0.394t/a 0.039t/a

0.004t/a 0.059t/a 28.8t/a

COD15.139t/a 0.265t/a 0.013t/a

52333t/a SS5.28t/a 0.005t/a 0.125t/a

151.12t/a

3

100%

[2014]38

10.4

10.4-1~ 10.4-4

10.4-1

			Nm^3/h		mg/m^3	kg/h	t/a	h	m	℃	m	mg/m^3	kg/h	
	P5	N- - G2~G11	20000		0.488	0.01	0.078	8000	1	120	25	-	14	DB32/4041-2021
					0.206	0.004	0.033					-	1.5	
					17.925	0.359	2.868					60	13.1	
				DMF	1.106	0.022	0.177					30	2	
					51.187	1.023	8.19					80	26	
				SO_2	0.03	0.0006	0.005					200	—	DB32/3151-2016
				NOx	36.706	0.734	5.873					200	—	
					0.038	0.001	0.006					20	—	GB 14554-93
	P6	G1	21000		30.619	0.643	5.146	8000	0.5	25	15	—	4.9	DB32/3151-2016
					6.095	0.128	1.026					7	2.5	
					6.095	0.128	1.026					80	7.2	
	P7		9000		3.456	0.031	0.249	8000	0.5	25	15	7	2.5	
					0.667	0.006	0.048					/	4.9	
					5.537	0.05	0.399					80	7.2	GB 14554-93
	S1		/		/	0.0334	0.267	8000	/	/	/	1.5	/	DB32/4041-2021
					/	0.0065	0.052		/	/	/	0.14	/	
					/	0.0101	0.081		/	/	/	4.0	/	
	S2		/		/	0.0058	0.046	8000	/	/	/	0.14	/	
					/	0.0093	0.074		/	/	/	4.0	/	
	S3		/		/	0.0005	0.004	8000	/	/	/	1.5	/	DB32/3151-2016
					/	0.0001	0.001		/	/	/	0.06	/	
					/	0.0001	0.001		/	/	/	4.0	/	
			/		/	0.0008	0.006	8000	/	/	/	1.5	/	GB

	S4				/	0.0003	0.002		/	/	/	0.06	/	14554-93
					/	0.0018	0.014		/	/	/	4.0	/	

10.4-2

	(mg/L)	(t/a)			(mg/L)	(t/a)	(mg/L)		(mg/L)	(t/a)	(mg/L)	
	600	52333			—	52333	—		—	52333	—	
COD	500	28.143		COD	294.81	15.428	500		50.0	2.617	50.0	
SS	40	18.984		SS	162.78	8.519	400		10.0	0.523	10.0	
	800	0.908			34.06	1.782	50		5.0	0.262	5.0	
	500	1.815	+		43.8	2.292	70		15	0.785	15	
	30	0.280	+ + + +		2.14	0.112	20		1.0	0.052	1.0	
	8	0.019			0.1	0.005	0.3		0.15	0.008	0.3	
	1000	0.207			2.39	0.125	—		1.500	0.078	—	
	600	0.015			0.27	0.014	3		0.1	0.005	0.5	
	2000	35.2			672.62	35.2	5000		672.62	35.2	—	

10.4-3

/									h
				dB(A)		dB(A)		dB(A)	
				75~80		25		70~75	8000
				80~85		25		70~75	
				80~85		25		70~75	
				80~85		25		70~75	

				75~85		25		70~75	
				80~85		25		70~75	

10.4-4

						t/a		t/a	
1			HW49	900-041-49		115		115	
2			HW49	900-041-49		4.33		4.33	
3			HW49	772-006-49		54		36	
4			HW49	900-000-49		6		6	
5			HW13	900-015-13		14t/		14t/	
6			HW49	900-039-49		30		120	
7			HW49	900-041-49		30		30	
8			/	/		94811.04		94811.04	
9			/	/		26.4	/	26.4	

11

11.1

11.1.1

102391.61

“ 3 1.2 ”

3.3 8000

3 1.2

11.1.2

2019 2021

2020

2020 32

2015

2017 124

[2017]162

11.1.3

[2018]74

[2020]1

11.1.4

1 2

TVOC

TVOC

HJ2.2-2018 D.1

2 5

GB3838-2002 IV

3 4

GB3096-2008 3

4 5

10 D1

GB/T14848-2017 IV

GB/T14848-2017 III

D3 D4

GB/T14848-2017 V D2 D3

D4 D5

GB/T14848-2017

IV GB/T14848-2017

III

V V

5 3 1

2

(GB36600-2018)

6

0~20cm 100cm

11.1.5

1

1

CO

CO

1

20000m^3/h

G1

25m P5 2 “ + +

” 21000m^3/h G1

15m P6 3 “ + + ”

9000m^3/h

15m P7 4

VOCs

97%

2

2

3

4

11.1.6

1

1

SO_2 NOx

PM_{10}

100% 30%

2

P5

3

SO_2 NOx PM_{10}

4 $PM_{2.5}$

9.2738E-06μg/m^3 $PM_{2.5}$

5.4701E-02μg/m^3

$PM_{2.5}$ -99.98% -20% $PM_{2.5}$

5

6

2

155.86m^3/d 0.62%

IV

3

GB12348-2008 3

4

5

11.1.7

1

1

$SO_2$0.001t/a NOx4.281t/a 0.001t/a VOCs 7.709t/a 0.888t/a 0.0006t/a 0.033t/a 2.868t/a DMF0.177t/a 0.212t/a

$SO_2$0.004t/a NOx1.592t/a 0.005t/a VOCs1.954t/a 4.392t/a 0.003t/a 1.063t/a

$SO_2$0.005t/a NOx5.873t/a 0.006t/a VOCs10.307t/a 5.3008t/a 0.012t/a 0.035t/a 3.052t/a DMF0.188t/a 1.275t/a

2

COD0.648t/a NH_3-N0.065t/a 0.195t/a 0.001t/a 12968t/a SS0.13t/a 0.013t/a 0.001t/a 0.019t/a 6.4t/a

COD1.968t/a NH_3-N0.197t/a 0.59t/a 0.004t/a 39365t/a SS0.394t/a 0.039t/a 0.004t/a 0.059t/a 28.8t/a

COD15.139t/a 0.265t/a 0.013t/a 52333t/a SS5.28t/a 0.005t/a 0.125t/a 151.12t/a

3

100%

11.1.8

/

11.1.9

2021 4 9

2021 6 10 ~6 25

2022 11 10 2022 11 11

11.2

“ ”