

27450

1	.....	1
1.1	.....	1
1.1.1	.....	1
1.1.2	.....	1
1.2	.....	6
1.2.1	.....	6
1.2.2	.....	7
1.3	.....	7
1.4	.....	8
1.4.1	.....	9
1.4.2	.....	10
1.4.3	.....	13
1.4.4"	"	17
1.4.5	.....	20
1.5	.....	20
1.6	.....	21
2	.....	22
2.1	.....	22
2.1.1	.....	22
2.1.2	.....	23
2.1.3	.....	24
2.1.4	.....	24
2.1.5	.....	25
2.2	.....	26
2.2.1	.....	26
2.2.2	.....	26
2.3	.....	26
2.3.1	.....	27
2.3.2	.....	27
2.4	.....	27
2.4.1	.....	27
2.4.2	.....	28
2.4.3	.....	31
2.5	.....	34
2.5.1	.....	34
2.5.2	.....	37
2.5.3	.....	38
2.5.4	.....	41
2.5.5	.....	41
2.5.6	.....	42
2.5.7	.....	43
2.6	.....	43
3	.....	46
3.1	.....	46
3.1.1	.....	46
3.1.2	.....	46
3.1.3	.....	47
3.1.4	.....	48
3.1.5	.....	52
3.1.6	.....	52

	3.1.7	.....	56
	3.2 !	
	3.2.1 1,4- !	
	3.2.2 1,4 !	
	3.2.3	8GL !	
	3.3 !	
	3.4	.....	60
	3.4.1	.....	60
	3.4.2	.....	66
	3.4.3	.....	66
	3.4.4	.....	66
	3.5	.....	66
	3.6	.....	68
	3.6.1	.....	68
	3.6.2	.....	76
	3.6.3	.....	80
	3.6.4	.....	83
	3.6.5	.....	87
	3.6.6	.....	88
4		.....	89
	4.1	.....	89
	4.1.1	.....	89
	4.1.2	.....	91
	4.1.3	.....	92
	4.1.4	.....	92
	4.1.5	.....	93
	4.2	.....	93
	4.2.1	.....	93
	4.2.2	.....	94
	4.2.3	.....	94
	4.2.4	.....	94
	4.2.5	.....	95
	4.2.6	.....	97
	4.3	.....	101
	4.4	.....	102
5		.....	104
	5.1	.....	104
	5.1.1	.....	104
	5.1.2 !	
	5.2 !	
	5.3 !	
	5.3.1 !	
	5.3.2 !	
	5.3.2 !	
	5.4 !	
6		.....	106
	6.1	.....	106
	6.2	.....	106
	6.2.1	.....	106
	6.2.1.1	.....	106
	6.2.1.2	.....	107

6.2.2	111
6.2.3	136
6.2.4	137
6.3	139
6.4	140
6.4.1	140
6.4.2	143
6.4.3	145
6.4.4	148
6.4.5	155
6.4.6	155
6.4.7	155
6.4.8	155
6.4.9	156
6.4.10	156
6.5	162
6.5.1	163
6.5.3	168
6.5.4	168
6.6	169
6.6.1	169
6.6.2	170
6.7	170
6.7.1	170
6.7.2	171
6.7.3	171
6.7.4	172
7	179
7.1	179
7.1.1	179
7.1.2	184
7.2	184
7.2.1 P	184
7.2.2 E	186
7.2.3	187
7.3	188
7.4	188
7.4.1	189
7.4.2	189
7.4.3	191
7.4.4	191
7.5	191
7.5.1	191
7.5.2	193
7.6	193
7.6.1	193
7.6.2	193
7.6.3	216
7.7	226
7.7.1	226
7.7.2	226

8	.....	229
8.1	.....	229
8.2	.....	229
8.2.1	.....	229
8.2.2	.....	245
8.2.3	.....	247
8.2.4	.....	254
8.2.5	.....	259
8.2.6	.....	260
8.3" "	.....	262
9	.....	265
9.1	.....	265
9.2	.....	266
9.3	.....	266
10	.....	267
10.1	.....	267
10.1.1	.....	267
10.1.2	.....	267
10.1.3	.....	268
10.1.4	.....	270
10.1.5	.....	270
10.2	.....	271
10.2.1	.....	271
10.2.2	.....	327
10.3	.....	327
10.4	.....	328
11	.....	329
11.1	.....	329
11.1.1	.....	329
11.1.2	.....	329
11.1.3	.....	330
11.1.4	.....	331
11.1.5	.....	331
11.1.6	.....	333
11.1.7	.....	336
11.1.8	.....	336
11.1.9	.....	336
11.1.10	.....	336
11.2	.....	337
1	.....	338
2	.....	339
3	.....	341
4 ( )	.....	347
5 ( )	.....	354
6	.....	360
7	.....	366
8	.....	378

1

1.1

1.1.1

2019 7 4

2000

5 / 3 /

8700t/a

500 /

N O- -N- 1500 / TIBP 1000 / 2-

-4- 2- 300 / 13 300 / 35 300 / 36

500 / B56 1000 / B60 500 / 8GL 500 /

10GFF 1500 / 1 4 800 / 1 4

5 2020 6

27450

2021 3 31

[2021]10

2021 4 2022 9

1000t/a

B60

5 500 /

N O- -N- 1500 / TIBP

1500 / 1 4 800 / 1 4 500

/ 8GL

1.1.2

<

> [2020]688

1.1-1

1.1-1

1			C2645	C2631	C2645	C2631			
2	30%				1500t/a 1,4-	800t/a 1,4-			
3			1000t/a 2-	-4- 2-					
4	10%		300t/a	13 300t/a					
			35 300t/a	36 1500t/a 1,4-					
			800t/a 1,4-						
			500t/a	B56 500t/a					
			8GL 500t/a	10GFF	8GL 500t/a	10GFF	B56 500t/a		
5									
6		(
)							
	10%								
7									

	10%					
8	6 () 10%		<p>3 VOCs 1# 2# 3# 3 15m P1 P2 P3 3 1 2# VOCs 15m P2</p>	<p>1,4 1 + 1,4 1 1 VOCs 1 25m DA005</p>		<p>3 VOCs 3 15m</p>
			<p>2 1 3# VOCs 15m P3</p>	<p>1 + 1 1 25m VOCs DA006</p>		<p>1 VOCs</p>
		2#	<p>4 VOCs 15m P3</p>	<p>2# 1 + 2# 1 VOCs 1 15m DA004</p>	<p>1 +</p>	<p>4 4</p>
			<p>5m VOCs 3# 15m P3</p>	<p>+ VOCs 1 15m DA007</p>	<p>1 +</p>	<p>+ 3</p>

9		300m ³ /d + +BAF+RO	1 + +MBR +	5040m ³ " + "	pH	
10	() 10%	3#	3	VOCs 1# 2# 3 15m	2 +2 1 VOCs 25m 2 15m VOCs 2#	1 +1 2# 4 2 2 +2 1
11						

27450

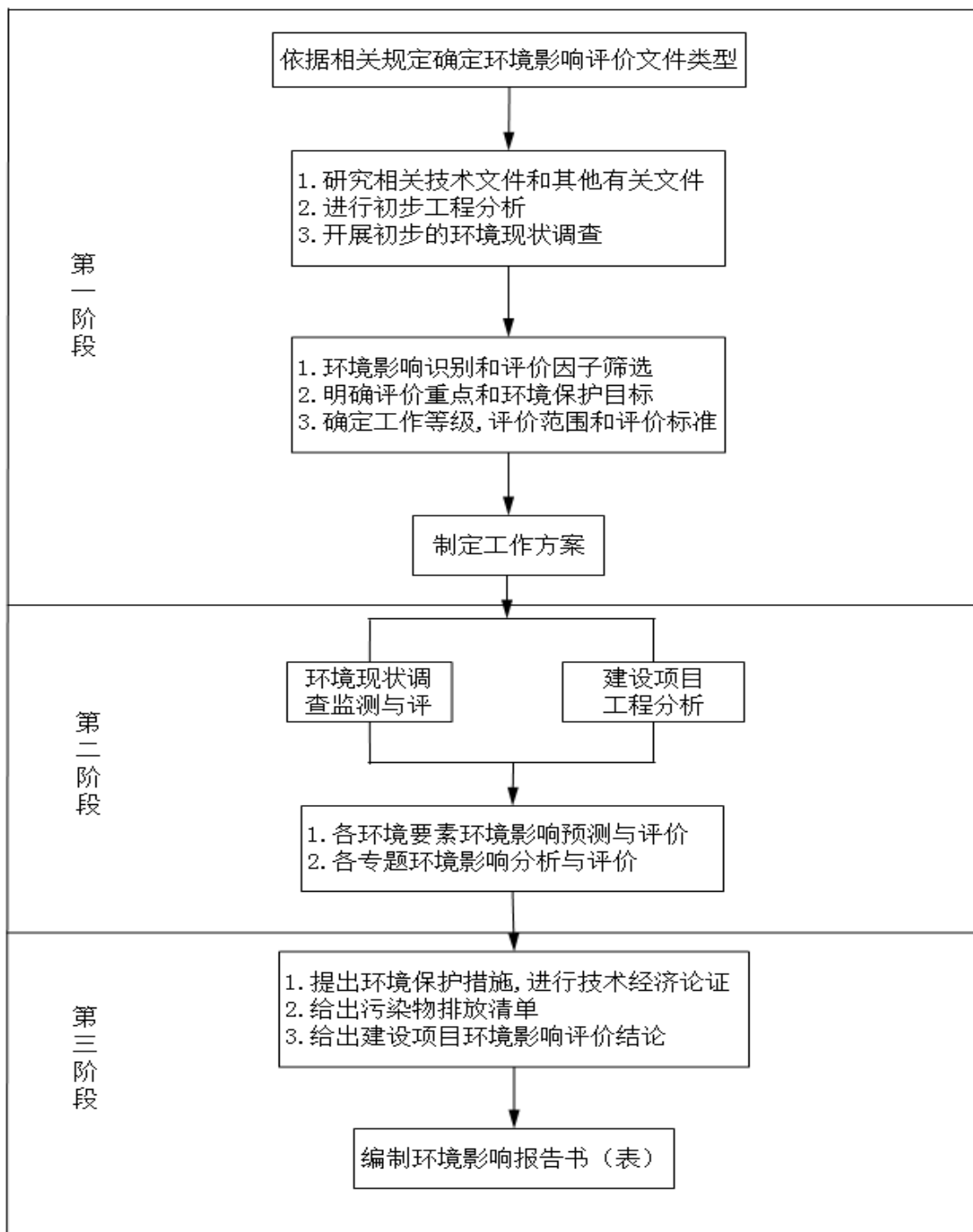
12	(
13)			

1.1-1				2#		4
VOCs	+4	2	25m	2	15m	2#
2	VOCs	+2				
	1			"		
						"
		2022	9			
	2#					
					27450	
						"
"						
	27450					
1.2						
1.2.1						
	1500t/a 1,4-		800t/a 1,4-		500t/a	8GL
	C2645					

1.2.2

1.3

1.3-1



1.3-1

1.4

HJ2.1-2016 3.3

1.4.1

1,4-

1,4-

47#

8GL

8GL

2024

"

4

VOCs

"

1,4-

1,4-

8GL

3

VOCs

2024

2023

7

"

"

1.4.2

(2019 11 28
2019 12 24)

1.4-1

	pH	
	PH	

" "

" " "

"

" "

" "

" " "

" "

"

" "

[2018]37

1.4-2

	<p>2020 65 / 1 1</p> <p>2018 10</p> <p>1</p>		
	<p>10</p> <p>35</p> <p>10</p>	1 15t/h	
	<p>45 2020 VOCs</p>		

[2019]269 2019 5 30

1.4-3

1	“ ” “ ” ()	“ ”	
2	1 () ()		
3	2018 11) () PVC () () () ()	() () () () () ()	
4	()	pH	
5			

	" "		
6	2019 6		
7	(VOCs)	pH	
8	()		
9		2023 11 1 152922-2023-6M	

1.4.3

1.4-4

1.4-4

1.4-4

	<p>“ “ “ “ “ “</p> <p>“ “</p> <p>“ “</p>	S212	3.7
	<p>18km</p> <p>2.1 6 m³/d</p>	28734.55m ³ /a	
	<p>1</p> <p>A²/O</p> <p>10000m³</p> <p>GB8978-1996</p>	PH	
	<p>2³220t/h</p> <p>1km</p> <p>16 kVA</p>	<p>2³160MW</p> <p>+1³25MW</p> <p>32 kVA</p> <p>490t/h 960t/h</p>	1
		15t/h	

	2500m ²	15t/h	1
	50m ² 200 400m	3 50 100m	
1.4-5			
1.4-5			
		PH	
	2×160MW	1	15t/h
		1	
		152922-2022-1M	

1.4-1 1.4-2



1.4-1



1.4-2

1.4.4"

"

" "

2023

44

66.09%

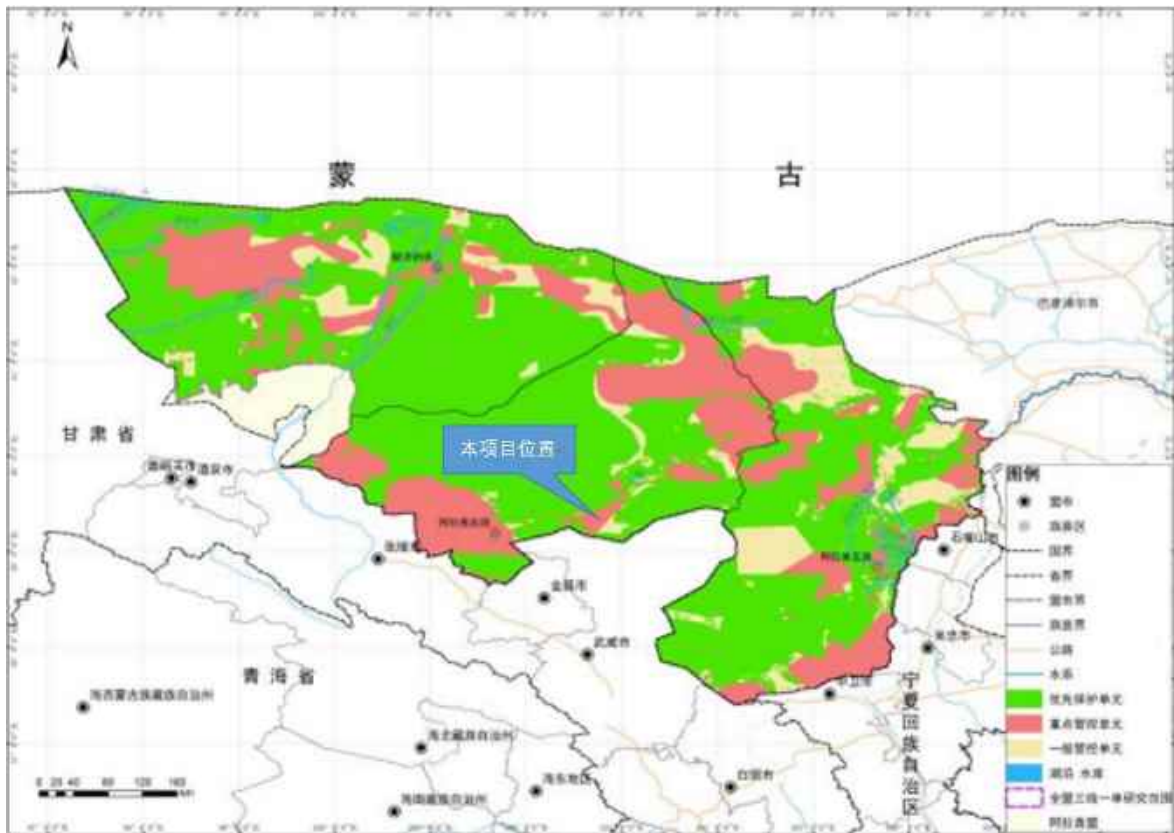
49

24.09%

4

9.81%

1.4-3



1.4-3

		2023	6	5	2022		
NO ₂	PM _{2.5}	PM ₁₀		CO	O ₃ 8h	SO ₂	
							HJ2.2-2018
6.4.1.1	TVOC				TSP		
							GB/T14848-2017
—			GB36600-2018		1		
							VOCs
							pH
							1 15t/h
							43200t/a
28734.55m ³ /a			2030			2337.8	m ³ /a

0.12%

2023 12

2023

"

"

ZH15292220007

1.4-6

1.4-6

1.		
2.		
3.		
1.		pH
2.		1 15t/h
3.	VOCs	

1.		152922-2022-1M	
2.			
1.	" "		
2.	" "	1 15t/h	
3.			

" "

1.4.5

2012

2012

1.5

1.6

2

2.1

2.1.1

2015 1 1

2018 10 26

2018 1 1

2020 9 1

2022 6 5

2019 1 1

2018 12 29

682 2017 10 1

16 2021 1 1

591 2011 12 1

[2012]77

4 2019 1 1

[2017]84

2017 11 15

48 2018 1 10

2017 81 17

2017 12 27

2013 31 VOCs

2013 5 24

2016 75 VOCs

2016 12 12

[2015]104 VOCs

2017 1 17

			2017	43				
2017	10	1						
			2021	16				
				2021	5	1		
(21)				[2020]	711			
			2021	4	1			
(22)			2021	3	2020			
			2021	1	25			
(23)					2020	52		
			2020		2020	12	25	
(24)				[2020]	73		2020	
12	23							
(25)				[2020]	688			
			2020	12	13			
(26)					2020	7	2	
(27)					2020	6	30	
(28)				7		2024	2024	
2	1							
(29)				[2019]	18		2019	
1	8							
2.1.2								
					2018	12	6	
[2015]	18	2015	1	26				
				[2018]	11	2018	3	29
[2018]	52	2018	12	24				

[2018]88 2018 12 12

[2019]269 2019 5 30

[2021]262 2021

3 19

(2019 11 28
2019 12 24)
2021 1 1
" "

[2020]24

2023 2023 12

2.1.3

" " 2021 9

" " 2022 2

2018-2020 2018 3 5

2014-2030

[2014]20

2.1.4

- (HJ 2.1-2016)
- (HJ 2.2-2018)
- (HJ 610-2016)
- (HJ 2.3-2018)
- (HJ 2.4-2021)

—

(HJ 964-2018)

(HJ 169-2018)

GB18218-2018

GB50160-2008

HJ2025-2012

GB50483-2009

GB/T50934-2013

2020 7

HJ 2026-2013

2020 6 30

HJ 819-2017

HJ942-2018

HJ

1116-2020

HJ 1200-2021

2.1.5

2021 11 15

2020 10 15

27450

27450

27450

()

2022

9

27450

2022 9 3

2.2

2.2.1

2.2.2

2.3

2.3.1

2.3.2

2.3-1

2.3-1

1		SO ₂ VOCs	NO ₂	CO	O ₃	PM ₁₀	PM _{2.5}	TSP 12	NO _x	NO _x	TSP	VOCs SO ₂	SO ₂ NO _x VOCs
2		pH								COD		/	
3		34 Leq A								Leq A		/	
4		/										/	
5		-1,2- 1,1,1,2- 1,1,1- 1,2,3- 1,2- [b]	1,1- 1,1,2,2- 1,1,2- 1,2,3- 1,4- 2- [k] [1,2,3-cd]			1,1- -1,2- 1,2- 1,1,2,2- 1,1,2- [a] [a]			1,2- [a] [a,h] 45			/	
6		/								CO		/	
		/								COD		/	

2.4

2.4.1

2.4.2

					SO ₂	NO ₂	CO
O ₃	PM _{2.5}	PM ₁₀	TSP				
	TVOC						-
	HJ 2.2-2018		D				2.4-1

2.4-1

		$\mu\text{g}/\text{m}^3$	
SO ₂		60	GB3095-2012
	24	150	
	1	500	
NO ₂		40	
	24	80	
	1	200	
CO	24	4000	
	1	10000	
O ₃	8	160	
	1	200	
PM ₁₀		70	
	24	150	
PM _{2.5}		35	
	24	75	
TSP		200	
	24	300	
TVOC	8	600	D HJ 2.2-2018
	24	15	
	1	50	
	24	100	
	1	300	
	1	200	

GB3096-2008

3

2.4-2

2.4-2

	GB3096-2008	3	dB A	65
				55

GB/T 14848-2017

2.4-3

2.4-3

mg/L pH

pH	-	6.5 8.5		mg/L	0.1
(CaCO ₃)	mg/L	450		mg/L	0.001
	mg/L	1000		mg/L	0.01
	mg/L	250		mg/L	0.005
	mg/L	250		mg/L	0.05
	mg/L	0.002		mg/L	0.01
N	mg/L	20	N	mg/L	1.0
N	mg/L	0.5		mg/L	200
	mg/L	1.0		mg/L	/
	/L	3.0		mg/L	/
	mg/L	0.05		mg/L	/
	mg/L	0.3		mg/L	/
	mg/L	0.02		mg/L	/
	mg/L	3.0		μg/L	700

GB50137-2011

GB36600-2018

2.4-4

mg/kg

		CAS		
1		7440-38-2	60	140
2		7440-43-9	65	172
3		18540-29-9	5.7	78

4		7440-50-8	18000	36000
5		7439-92-1	800	2500
6		7439-97-6	38	82
7		7440-02-0	900	2000
8		56-23-5	2.8	36
9		67-66-3	0.9	10
10		74-87-3	37	120
11	1,1-	75-34-3	9	100
12	1,2-	107-06-2	5	21
13	1,1-	75-35-4	66	200
714	-1,2-	156-59-2	596	2000
15	-1,2-	156-60-5	54	163
16		75-09-2	616	2000
17	1,2-	78-87-5	5	47
18	1,1,1,2-	630-20-6	10	100
19	1,1,2,2-	79-34-5	6.8	50
20		127-18-4	53	183
21	1,1,1-	71-55-6	840	840
22	1,1,2-	79-00-5	2.8	15
23		79-01-6	2.8	20
24	1,2,3-	96-18-4	0.5	5
25		75-01-4	0.43	4.3
26		71-43-2	4	40
27		108-90-7	270	1000
28	1,2-	95-50-1	560	560
29	1,4-	106-46-7	20	200
30		100-41-4	28	280
31		100-42-5	1290	1290
32		108-88-3	1200	1200
33	+	108-38-3,106-42-3	570	570
34		95-47-6	640	640
35		98-95-3	76	760
36		62-53-3	260	663
37	2-	95-57-8	2256	4500
38	[a]	56-55-3	15	151
39	[a]	50-32-8	1.5	15
40	[b]	205-99-2	15	151

41	[k]	207-08-9	151	1500
42		218-01-9	1293	12900
43	[a,h]	53-70-3	1.5	15
44	[1,2,3-cd]	193-39-5	15	151
45		91-20-3	70	700

2.4.3

	VOCs		GB37822-2019
A	A.1	VOCs	
	DB12/524-2020		
		SO ₂ NO _x	
GB16297-1996	2		GB 14554-93
	VOCs		
DB12/524-2020	1	TRVOC	
			GB16297-1996
2			GB 14554-93
1		VOCs	
GB37822-2019	A	A.1	VOCs
		DB12/524-2020	

2.4-5

		SO ₂	550mg/m ³	9.65kg/h	25m	HCl SO ₂ NO _x
		NO _x	240mg/m ³	2.85kg/h		GB16297-1996 2
		HCl	100mg/m ³	0.915kg/h		
		TRVOC	60mg/m ³	1.5kg/h		
		TRVOC	60mg/m ³	9.2kg/h	25m		GB14554-93 TRVOC
		NO _x	240mg/m ³	2.85kg/h		
		HCl	100mg/m ³	0.915kg/h		
		TRVOC	60mg/m ³	9.2kg/h	15m	DB12/524-2020 1
	2#	HCl	100mg/m ³	0.26kg/h		

		TRVOC	60mg/m ³	1.8kg/h		
			1.0			GB16297-1996 2
			1.2mg/m ³			
			0.2mg/m ³			
			1.5mg/m ³			GB14554-93 1
		NMHC	2.0			DB12/524-2020
			10 30	1h			37822-2019 A.1 GB A
					GB 37822—2019 11.1	" VOCs
GB16297 DB12/524-2020			"			2.0mg/m ³

GB/T19923-2005

GB8978-1996

pH

2023 14

2.4-6

6

2.4-7

2.4-6		mg/L	pH
1	CODcr	15000	
2	BOD ₅	3000	
3	SS	500	
4		50	
5		100	
6		10	
7	TDS	20000	

2.4-7		mg/L	pH
1	pH	6	9
2	CODcr	100000	
3	TDS	250000	
4	SS	20000	
5		1500	

600

GB 12523-2011

2.4-8

GB 12348-2008

3

2.4-9

2.4-8

2.4-8		
		70
		55

2.4-9			
	GB12348-2008	3	dB A
			65
			55

GB18597-2001

2013

GB18597-2023

HJ2025-2012

2.5

2.5.1

1

HJ2.2-2018

AERSCREEN

2.5-1

2.5-1

/	/	/
/		41.5
/		-20
	/m	90
	/m	/
	/°	/

P_i i 10%

$D_{10\%}$ P_i

$$P_i = C_i / C_{0i} \times 100\%$$

P_i i %

C_i i 1h $\mu\text{g}/\text{m}^3$

C_{0i} $\mu\text{g}/\text{m}^3$

2.5-2

2.5-2

		P_{\max} 10%

27450

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

2.5-3 2.5-4

2.5-3

			/m	/m	/m	/(m/s)	/	/h		/(kg/h)				
	E	N								TVOC	HCl	SO ₂	NO _x	NH ₃
DA004	102.720194	39.301347	1244	15	0.5	1.77	25	7200		0.053	0.139	/	/	/
DA005	102.722007	39.301422	1247	25	0.5	1.77	25	7200		0.033	0.062	0.007	0.347	0.0032
DA006	102.722812	39.303117	1245	25	0.5	1.06	25	7200		0.03	0.005	/	0.015	/

2.5-4

	/m		/m	/m	/m	/°	/m	/h		/ kg/h				
	X	Y								HCl	NH ₃		VOCs	TSP
	102.720699	39.301518	1245	12	10	0	12	7200		0.0001	0.0065	0.0027	/	/
	102.722812	39.303117	1247	82.2	12	0	5	7200		/	/	/	0.0032	0.046

2.5-5

			C _i ug/m ³	C _{0i} ug/m ³	Pmax %	D _{10%} m
DA004	HCl		6.8284	50	13.66	1550
	TVOC		2.626307	1200	0.22	0
DA005	SO ₂		0.22408	500	0.04	0
	NO _x		11.08849	200	4.44	0
	HCl		1.963588	50	3.93	0
	NH ₃		0.102684	200	0.05	0
DA006	TVOC		1.059182	1200	0.09	0
	NO _x		0.48597	200	0.19	0
	HCl		0.16199	50	0.32	0
	TVOC		0.970775	450	0.08	0
	HCl		0.12005	50	0.24	0
	NH ₃		7.816205	200	3.91	0
			3.238759	300	1.08	0
	TSP		104.12	900	11.57	50
	TVOC		10.4943	1200	0.87	0

2# DA004 HCl

13.66%

2

HJ2.2-2018 5.4

10% D_{10%} 1550m 2# DA004 HCl

5km 5km× 5km

2.6-1

2.5.2

- HJ 2.3-2018

2.5-6

2.5-6

		Q/ m ³ /d	W/
		Q 20000	W 600000
A		Q 200	W 6000

B		/
---	--	---

pH

- HJ 2.3-2018

B

2.5.3

1

HJ610-2016 A

"L 85

"

2.5-7

2.5-7

"	"

(HJ610-2016) A

2.5-8

2.5-8

2

n_e 0.1

3.35m/d

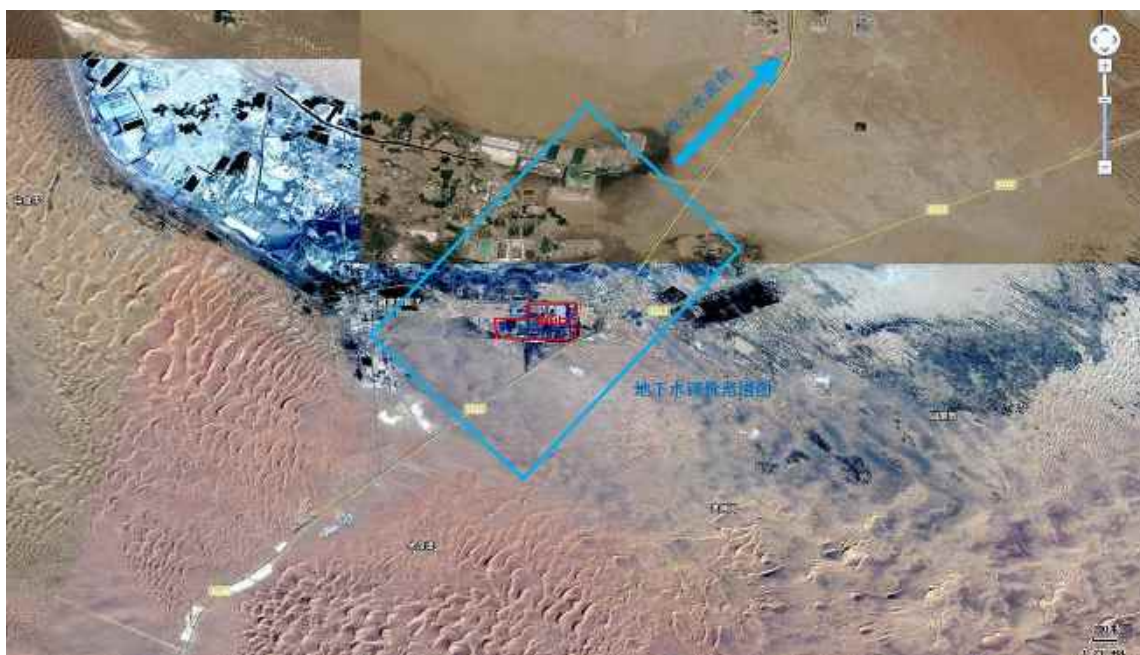
I 0.0015

HJ610-2016

$$L = \frac{K \times I \times T}{n_e}$$

L — m
 K — m/d
 I
 T — 5000d
 n_e
 $L = 502.5\text{m}$

2.5km 1km 1km
 2.5-1 7km²



2.5-1

2.5.4

1

HJ2.4-2021

2.5-9

2.5-9

	GB3096	3	4 3dB A
	3		2.5km

2

200m

2.5.5

1

-

HJ964-2018

2.5-10

2.5-11

2.5-10

2.5-11

									-
								-	-

" - "

-

HJ964-2018

A

"

-

"

259581m²

" "

" "

2

(HJ964-2018) 5

0.2km

2.5.6

1

HJ169-2018

2.5-12

2.5-13

2.5-12

	IV IV+	III	II	I

2.5-13

	E3	P3	II
	/	/	/
	E3	P3	II

2.5-12 2.5-13

2

3km

2.6-1

pH

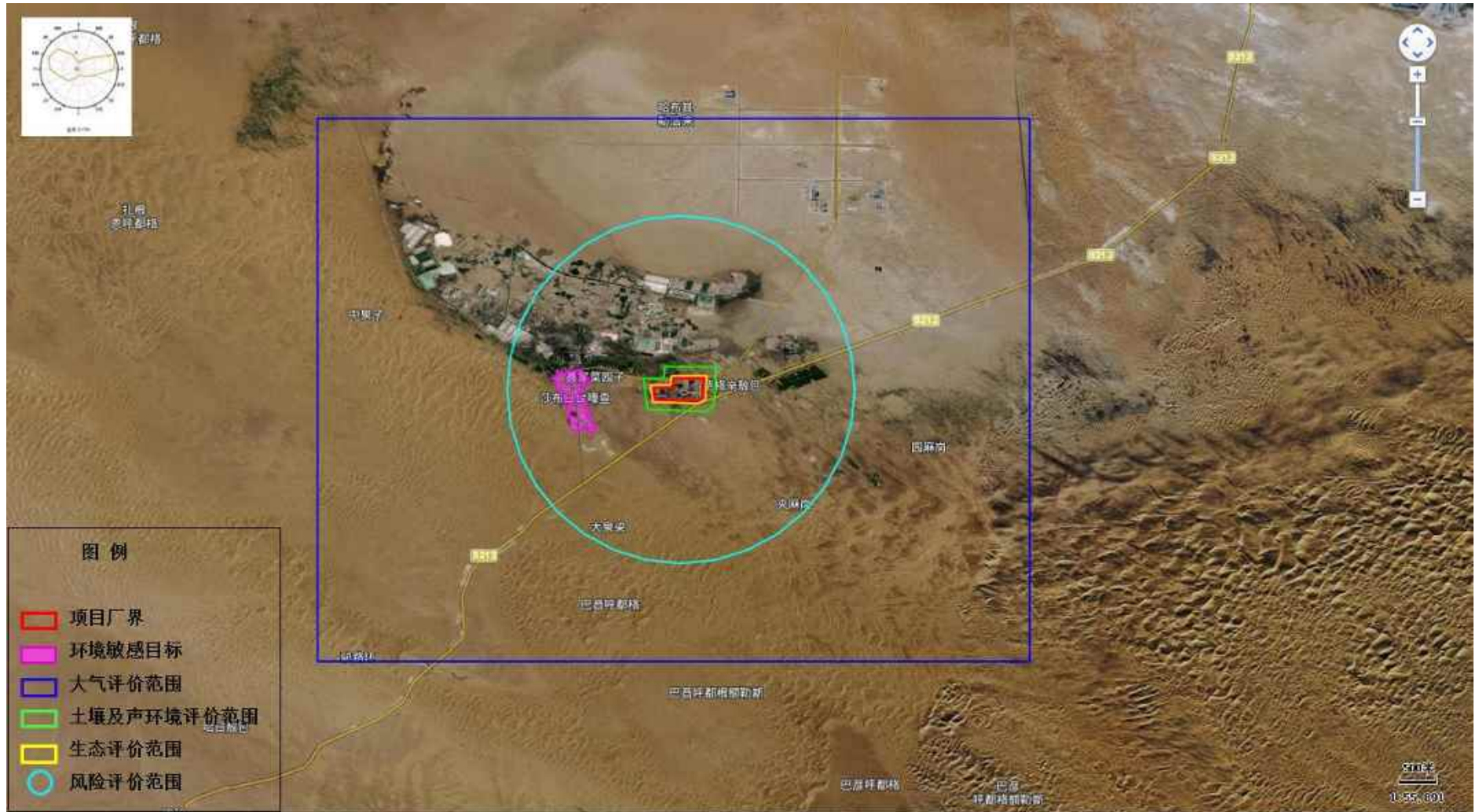
3km

2.6-1

2.6-1

2.6-1

		/m						
		X	Y					/m
		102°42'2.15"	39°18'4.32"		1000		W	1.5
		102°42'2.15"	39°18'4.32"		1000		W	1.5
	200m					3	---	---
	7km ²						---	---
	0.2km						---	---



2.6-1

3

3.1

3.1.1

27450

3000

222

7.4%

39°18'8.77"

102°43'9.28"

62

300

7200

3.1.2

1500 / 1 4

800 / 1 4

500 / 8GL

3.1-1

3.1-1

		t/a				
1	1,4-	1500	96%			-
2	1,4-	800	96%			-
3	8GL	500	90%-93%			-

1		6060	93% 97%		-	1,4-
---	--	------	---------	--	---	------

3.1-2

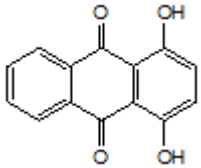
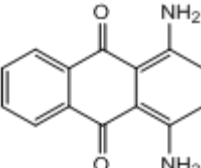
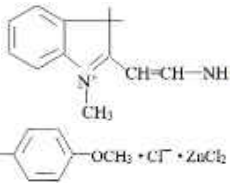
3.1-2

	t/a		h/	(/a)	(h)
1,4-	1500	6	24	1800	7200
1,4-	800	3	12	1800	7200

	6060	1	12	1800	7200
8GL	500	3	10	1080	3600

3.1.3

3.1-3

	CAS				
1,4-	81-64-1	$C_{14}H_8O_4$			
1,4-	128-95-0	$C_{14}H_{12}N_2O_2$			47#
8GL	12217-50-4	$C_{20}H_{23}$ $N_2OCl \cdot ZnCl_2$			8GL
	7487-88-9	$MgSO_4$	-		.

3.1-4

1	1,4-	190.0 193.0 96% 1.5% 0.5% 1.0%	
2	1,4-	96% 1%	
3	8GL	100 - 0.5% 8% 90 pH 2-5 4 95% 0.3 4 3 3 4 3 3 GB19601-2013 GB20814-2014 OEKO-Tex Standard 100	

3.1-4

	pH		6.6
	(MgSO4·7H0)	%	99.3
	(C1)	%	0.05
		%	0.00026
		%	0.05
		%	48.4
			HG/T 2680-2017

3.1.4

3.1-5

3.1-5

											/	/
1		1,4- 3m ³	1500t/a 2920m ² 6 15m ³	1,4- 5m ³	1,4- 3 1,4- 1	800t/a 1,4- 3	1 3	2 4	3363m ²			
		3	3.7m ³	3	1	1		1	6.3m ³			
2		2 1000L	2211m ² 2 2000L 14	1665m ² 5 3000L 11	8GL 4	500t/a 5000L	5000L	9000L	1			
3	2#	1 5000L 1	1080m ² 4 5000L 30m ³ 2 128m ³	960m ² 2 10m ³ 100m ³ 1	14 4	10m ² 30m ³ 1	3 1	5000L 100m ³ 3	1			
											/	/
1				1	15t/h							
2									28734.55m ³ /a			
3									pH			
4			10KV		3MW							

5		12.7m³/h 684m³	21m³/h		
6	/	3 20 564m² 400m³/h	2 40 -20	1 20	
7		1	500m³		
8		1	1260m³	10cm	
9		2	HD/90		
10		1053m²	/ /		
			/	/	/
1		2 2	3# 4# 700m²		
2		1# 1 35m³ 35m³ 2# 1 30m³ 98% 1 50m³ 1 50m³	60% 3 1 35m³ 48% 1 35m³ 98% 1 35m³ 1 30m³ 40% 1 30m³ 32% 1 30m³ 1 30m³ 98%	50m³ 1 35m³ 32% 1 35m³ 105% 0.5m 1 30m³ 2 40m³ 1 50m³ 0.5m	1# 2# 1# 2#
			/	/	/
1			/	/	/
1.1		1,4 1,4	1 1	+ 1	VOCs

		1	25m	DA005						
1.2		1	+	1	25m	DA006	1	VOCs		
1.3	2#	1	+	1	15m	DA004	2#	1	VOCs	
2								pH		
3		1		378m ²					GB 18597—2023	
4										
5		DCS		1			1260m ³			
			10cm							
				1#	2#		0.5m		/	/

3.1.5

259581m²

S212

1

3.1.6

3.1-6

3.1-6

					t/t	t/a		t		
1	1 4		99%		0.636	954		30	1#	
			99%		0.32	486		20	1#	
			105%		3.21	4860		55.7	2#	
			99%		0.9	900		30	1#	
			20%		0.12	180		37.13	2#	
			98%		0.148	900		1	4#	
			99%		0.416	2520		5		
2	1 4- 1 4		92%		1.11	900		50	2#	
			18%		7.9	6400		37.13	2#	

		()	99%		0.82	657		5	1#	
3	8GL	1,3,3- -2-	90%		0.471	235.44		30	4#	
		DMF	99%		0.184	91.8		1	4#	
			99%		0.378	189		10	3#	
			30%		0.994	496.8		42.28	1#	
			98%		0.203	101.63		4	4#	
			30%		0.262	131.22		32.46	1#	
			95%		0.29	145.04		8	#	
			99%		0.321	160.7		0.25	4#	
						0.03	15.12		10	

GB5085.6-2007

8GL

	3.1-7	"	"	t/a	
1		900	4.5	0	0.9
2		160.7	2.5	3.22	0

2#

1

+

1

VOCs

1

15m

DA004

8GL

1

+

1

VOCs

1

25m

DA006

pH

GB18597-2001

 10^{10} cm/s

"

3.1-8

3.1-8

1		m ³ /a	28734.55	
2		KWh/a	14500	
3		t/a	43200	1 15t/h

3.1-9

3.1-9

CAS			
C ₈ H ₄ O ₃ 148.12 85-44-9		20	LD ₅₀ 4020mg/kg()
H ₃ BO ₃ 61.83 10043-35-3			-
H ₂ SO ₄ ·xSO ₃ 98+x(80.06) 8014-95-7			-
C ₆ H ₅ ClO 128.56 106-48-9			-

NH ₄ OH 35.05 1336-21-6	=1 0.91	20()	LD ₅₀ 350mg/kg ()
C ₂ H ₄ Cl 98.96 107-06-2			LD ₅₀ 680mg/kg() 2800mg/kg() LC ₅₀ 4050mg/m ³ 432 min()
MgO 40.30 1309-48-4		-	-
Na ₂ O ₄ S ₂ 174.11 7775-14-6		250	-
1,3,3- -2- C ₁₂ H ₁₅ N 173.2542 118-12-7			-
DMF C ₃ H ₇ NO 73.09 68-12-2		7	LD ₅₀ 4000mg/kg 4720mg/kg LC ₅₀ 9400mg/m ³ 2
POCl ₃ 153.33 10025-87-3		20	LD ₅₀ :380mg/kg ; LC ₅₀ :32ppm/4H

NaOH 40.0 1310-73-2			
C ₇ H ₉ NO 123.16 104-94-9			LD ₅₀ : 1320mg/kg LD ₅₀ :1410mg/kg
HCl 36.5 7647-01-0	0.1mol/L pH=1		
ZnCl ₂ 136.30 7646-85-7			LD ₅₀ :350mg/kg LD ₅₀ :329mg/kg
C ₇ H ₈ 92.14 108-88-3	-94.9 110.6 0.87 =1	7()	LD ₅₀ 5000mg/kg() LC ₅₀ 12124mg/kg() 71.4g/m ³ 3g/m ³ ×1-8 0.2-0.3g/m ³ ×8
Na ₂ SO ₄ 142.06 7757-82-6			LD ₅₀ 5989mg/kg()

3.1.7

29183.75t/a

20323.75t/a

8860t/a

3.1-11

		%	t/a		
1		99%	954		
2		99%	486		
3		105%	4860		
4		99%	900		
5		20%	6580		
6		98%	900		
7		99%	2520		
8	1 4	92%	900		
9	()	99%	657		
10	1,3,3- -2-	90%	235.44		
11	DMF	99%	91.8		
12		99%	189		
13		30%	496.8		
14		98%	101.63		
15		30%	131.22		
16		95%	145.04		
17		99%	160.7		
18			15.12		
			20323.75		
1		/	2800	/	/
2		/	6060	/	/
			8860	/	/
29183.75t/a					

3.4

3.4.1

3.4.1.1

28734.55m³/a

3.4.1.2

62

80L/ ·d

4.8m³/d1440m³/a

3.4-1

		m ³ /a	m ³ /d		
1,4-					
1		12600	42		300d
2		7200	24		300d
3		1800	6		300d
4		522	1.74		300d
		22122	73.74	-	-
1,4					
1		1998	6.66		300d
		1998	6.66	-	-
8GL					
1		332.64	1.109		300d
2		540	1.8		300d
3		415.8	1.386		300d

$$Q_e = K_{ZF} \cdot \Delta t \cdot Q$$

$$Q_w = \frac{P_w \cdot Q}{100}$$

$$Q_b = \frac{Q_e}{N - 1} - Q_w$$

$$Q_m = Q_e + Q_b + Q_w$$

Qe——

K_{ZF}—— 0.015 10

Q_w——

P_w—— 0.1

Q_b——

N—— 6

Q_m——

3.4m³/h 0.51m³/h 0.013m³/h
 0.115m³/h 0.638m³/h 7200h/a
 4593.6m³/a

3.4-2

3.4-2

	3.4-2		
	m ³ /a	m ³ /d	
1	26763.95	89.213	
2	120	0.4	
3	0.6	0.002	
4	360	1.2	
5	50	0.17	
6	4593.6	15.312	
7	1440	4.8	
	33328.15	111.097	-
	33328.15m ³ /a	28734.55m ³ /a	4593.6m ³ /a

3.4.1.3

3.4-3

			m ³ /a	m ³ /d
1,4-		W1-1	142.2	0.47
		W1-2	1923.3	6.41
1,4-		W2-1	4003.74	13.35
8GL		W3-1	327.62	1.09
		W3-2	39.47	0.13
		W3-3	1597.32	5.32
		W3-4	1124.91	3.75
		W3-5	471.52	1.57
			9630.08	32.09

32.09m³/d 9630.08m³/a

0.4m³/d 120m³/a

0.4m³/d

120m³/a

2

1

0.12m³

0.002m³/d 0.6m³/a

90%

1.08m³/d 324m³/a

0.17m³/d 50m³/a

20%

0.136m³/d 40m³/a

2.76m³/d 828m³/a

0.8

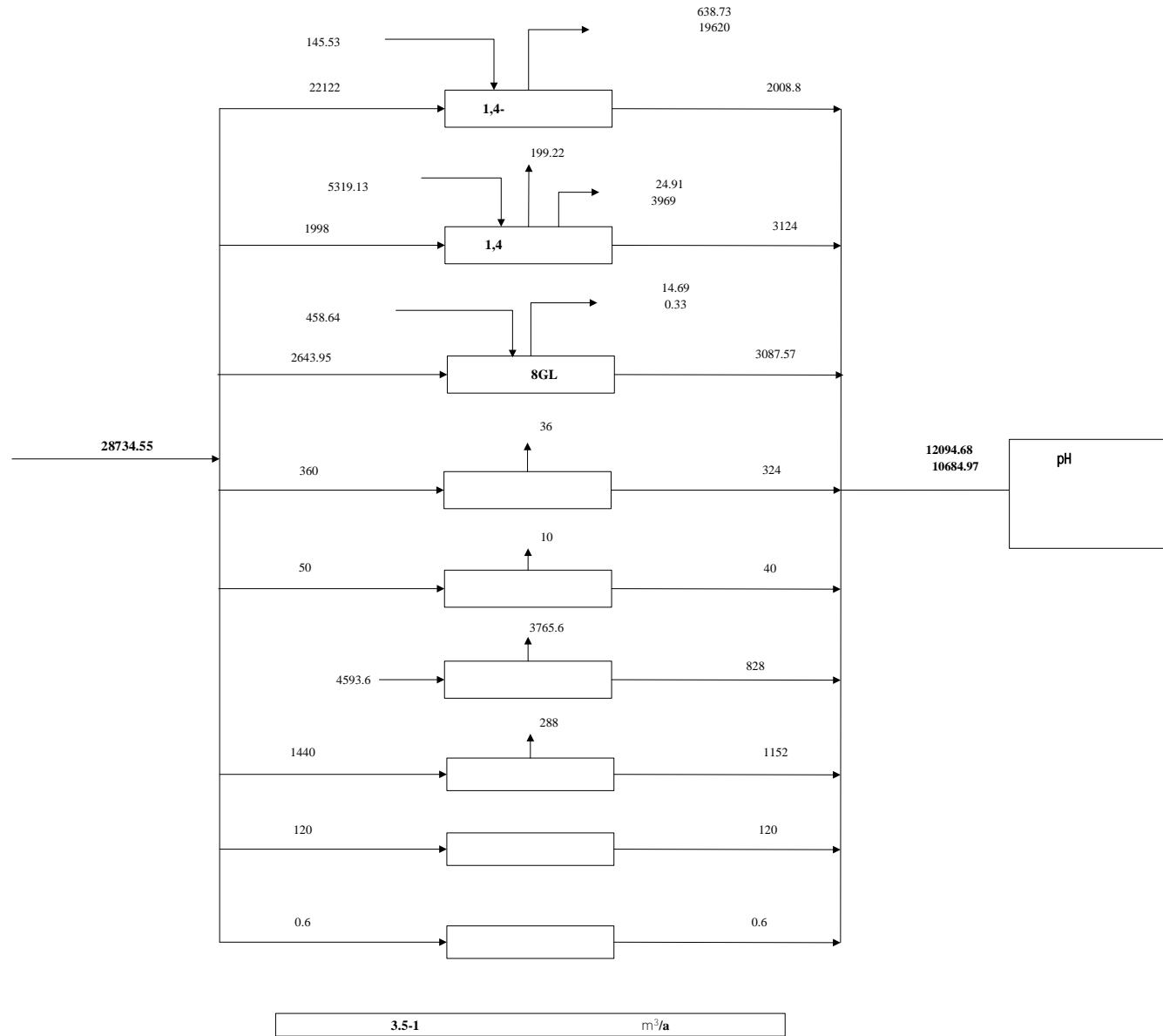
3.84m³/d 1152m³/a

3.4-4

3.4-4

			m ³ /a	m ³ /d
	1,4-	W1-1	142.2	0.47
		W1-2	1923.3	6.41
	1,4-	W2-1	4003.74	13.35
	8GL	W3-1	327.62	1.09
		W3-2	39.47	0.13
		W3-3	1597.32	5.32
		W3-4	1124.91	3.75
		W3-5	471.52	1.57
		W4-1	120	0.4
		W5-1	0.6	0.002
		W6-1	324	1.08
		W6-2	40	0.136
		W6-3	828	2.76
		W7-1	1152	3.84
			12094.68	40.308

3.4-1



3.4.2

1 15t/h
 15t/h 5460
 1000t/a 200t/a2- -4- -3- 1500t/a
 2023 12 12 2023 7 22

43200t/a 3.4-5

3.4-5

		t/h	t/a
1		2.5	18000
2		3	21600
3		0.5	3600
		6	43200

3.4.3

10KV 1

3.4.4

1 12.7m³/h
 21m³/h 6 684m³
 1
 0.56MPa
 0.25MPa

0.56MPa G 0.25MPa G 28 38 10

3.5

1

2

2

3# 4#

3# 4#

700m²

N,O- -N-

(TIBP)

4#

2337t/a

2099t/a

10

70t

300kg

234

0.5m²

58.5m²

238t/a

10

8t

25kg

320

0.34m²

5

21.76m²

3# 4#

1400m²

80.26m²

1319.74m²

1576.94t/a

246.67t/a

10

43.8m²

22.4m²

66.2m²

3

$$V = V_1 + V_2 - V_3_{\max} + V_4 + V_5$$

V ₁	50m ³	2#	18%
V ₂			180m ³
V ₃	0m ³		
V ₄	0m ³		
V ₅			

GB50747-2012

$$Q = \frac{V}{t}$$

$$V = \frac{F \times h}{1000}$$

Q—	t/h	
V—	m ³	
h—	15mm 30mm	
F—	m ²	
t—		h 48h 96h
	8000m ²	h 15mm t 60h

120m³

$$V = 350m^3$$

1260m³

220m³

3.6

3.6.1

3.6.1.1

1,4-

1,4-

1,4

G1-1

	VOCs	1		+		+
1,4					G2-1	
1						
	1		VOCs	1	25m	DA005
		8GL				
G3-1		DMF				G3-2
	DMF					G3-3
	1		+			1
VOCs	1	25m			DA006	
2#						
1,4-						
					G _{F1}	
1		+				2#
VOCs	1	15m			DA004	1
						3.6-1

3.6-1

				kg/h	t/a			kg/h	t/a	h					
G1-1	1,4-			31.113	224.01	1	+	+	0.031	0.224	7200	1			
				0.673	4.842				0.0007	0.005					
		VOCs		0.465	3.35				0.163	1.173			VOCs	1	25m
G2-1	1,4-			160	1152	1		98%	0.16	1.152	7200	DA005			
G3-1	8GL			0.239	0.86	1	+	DMF	0.084	0.301	3600	1			
		DMF		0.094	0.34				0.033	0.119					
G3-2				0.456	1.64				0+65	95%+0			0.159	0.574	
			DMF		0.069								0.25	0.024	0.088
				0.094	0.34								0	0	
G3-3				0.256	0.92								0.013	0.046		DA006
2#															
GF1				0.625	4.5	1	+	65%	0.219	1.575	7200	1			
				0.125	0.9				0.044	0.315			VOCs	1	15m
												DA004			

VOCs

S N Cl

SO₂ NO_x HCl

VOCs

80%

VOCs S N Cl

3.6-2

3.6-2

VOCs S N Cl

					t/a		S N Cl					
							t/a	S t/a	Cl t/a	N t/a		
G1-1	1,4-				224.01	1	+	0.224	-	0.219	-	1
					4.842			0.005	0.0016	-	-	
				VOCs	3.35			98%+95%+0	VOCs	1.173	-		0.324	-
G2-1	1,4-				1152	1	98%	1.152	-	-	0.95	25m DA005
G3-1	8GL				0.86	1	+	0.301	-	-	-	1
				DMF	0.34			0.119	-	-	0.023	
G3-2					1.64			0.574	-	-	-	
				DMF	0.25			0.088	-	-	0.017	
					0.34			-	-	-	-	
G3-3					0.92			0.046	-	0.045	-	25m DA006
GF1	2#				4.5	1	+	1.575	-	1.13	-	1
					0.9			65%	0.315	-	0.087	

			SO ₂	NO _x	HCl	
GB1627-1996	2					GB
14554-93			VOCs			
DB12/524-2020	1		TRVOC			
3.6.1.2						

VOCs 0.023t/a

DMF

0.5‰ "

1# 2#

" " " "

" "

a. "

$$L_w = 4.188 \times 10^{-7} \times M \times P \times K_N \times K_C$$

L_w — kg/m^3

M —

P — Pa

K_N — K /

$K \leq 36$ $K_N=1$ $36 < K \leq 220$ $K_N=11.467 \times K^{-0.7026}$ $K > 220$ $K_N=0.26$

K_C — K_C 0.65 1.0

K_C 1.0

b.

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

L_B — kg/a

D — m

H — m

T —

F_p — 1~1.5

C — 0~9m

$C=1-0.0123 \times (D-9)^2$ 9m $C=1$

K_C — K_C 0.65 1.0

K_C 1.0

3.6-4

3.6-4

	M	P Pa	K_N	K_C	$L_w \text{ kg/m}^3$	m^3/a	kg/a	
	$1 \times 35\text{m}^3$ 55.7t	98	66.66	0.358	1.0	0.00098	2442.21	2.39
18%	$1 \times 50\text{m}^3$ 36.4t	17	1590	0.372	1.0	0.0042	7230.77	30.37
32%	$1 \times 35\text{m}^3$	36.5	30.66	1.0	1.0	0.00047	113.12	0.05

	32.5								
--	------	--	--	--	--	--	--	--	--

3.6-5

3.6-5

		M	P/Pa	D/m	H/m	T/	F _p	K _c	C	kg/a
	1×35m ³	98	66.66	1.8	3	15	1.5	1	1	16.75
18%	1×50m ³	17	1590	2.6	10	15	1.5	1	1	16.71
32%	1×35m ³	36.5	30.66	1.8	3	15	1.5	1	1	0.7

3.6-6

3.6-6

	kg/a	kg/a	kg/a
	16.75	2.39	19.14
	16.71	30.37	47.08
	0.7	0.05	0.75

a.

GB37822-2019

"

GB16297

80% "

1#

1

+

+1

VOCs

1

15m

DA007

2#

2#

1

+

+1

VOCs

1

15m

DA004

90%

b.

+

0.5‰

90%

954t/a

486t/a

900t/a

2520t/a 1 4

900t/a

657t/a

6417t/a

101.63t/a

145.04t/a

15.12t/a

261.79t/a

3.6-7

		t/a	t/a
1		3.21	0.321
2		0.13	0.013

3.6-8

3.6-8

		t/a
		0.019
		0.047
		0.00075
		0.334
	VOCs	0.023

3.6.2

9630.08m³/a

32.09m³/d

120m³/a 0.4m³/d

1 0.12m³ 0.6m³/a 0.002m³/d 2

324m³/a 1.08m³/d 90%

0.136m³/d 20% 40m³/a

828m³/a 2.76m³/d

0.8 1152m³/a 3.84m³/d

pH

3.6-9

3.6-9

					(t/a)						mg/L	t/a
			m ³ /a	m ³ /d								
1,4-		W1-1	142.2	0.47	133.2 9.0					COD	63291.1	9.0
		W1-2	1923.3	6.41	1,4-	2.50	1-	-4-	-9	5,10	5-	-9,9-
					0.31	2-	-4-	0.05	4.10	1.35		
					1875.60		0.02	3.42	35.95			
1,4-		W2-1	4003.74	13.35	1,4-	62.82	1-	-4-	-	-9,10,-		
					2.95	1,4-	29.95	8.10	736.69			
							39.24	3123.99				
8GL		W3-1	327.62	1.09	1.3.3-	-2-		4.23	DMF	0.58		
						24.51	3.13	295.16				
			W3-2	39.47	0.13	0.09	DMF	2.25	37.141	COD	91968.6	3.63
		W3-3	1597.32	5.32	25.06		83.7	125.39				
					1.73	123.41	2.16	1235.77				
		W3-4	1124.91	3.75	14.04		20.95	1.41				
					20.61	8GL	18.68	0.42	1048.79			
		W3-5	471.52	1.57	8GL	0.41	0.22	0.054	COD	1726.33	0.814	
						0.13	470.71		38.17	0.018		
			9630.08	32.09	/					/	/	/

		W4-1	120	0.4	7.23	0.13	1.36		61333	7.36
		W5-1	0.6	0.002	0.22	0.004	0.005	COD	8333	0.01
			120.6	0.402	/			/	/	/
		W6-1	324	1.08	COD SS			COD	500	0.162
								SS	100	0.032
		W6-2	40	0.136	COD			COD	400	0.016
								COD	30	0.025
		W6-3	828	2.76	COD SS			SS	40	0.033
									4000	3.312
		W7-1	1152	3.84	COD BOD SS			COD	250	0.288
								BOD	200	0.23
									25	0.029
								SS	150	0.173
									1000	1.152
			2344	7.816	/			/	/	/
			12094.68	40.308	/			/	/	/

3.6.3

1,4-

1,4-

8GL

3.6-10

t/a

	S _{F1}		110.16	1- -4- 2-	-9,9- -4-	HW49/900-041-49
			110.16			

2#

1

0.4t

/1t

3.6-11

	t/a	t/a	t
	2.18	5.45	1
	2.01	5.025	1
2#	3.51	8.775	1
	/	19.25	/

19.25t/a

2021

HW49

900-039-49

VOCs

900-405-06 772-005-18

261-053-29 265-002-29 384-003-29 387-001-29

GB34330-2017 “6.1

a

"

1.5t/a

HW49

900-041-49

62

300d

0.5kg/ •d

9.3t/a

3.6-12				t/a						
			1- -4- -9,9- -9,9- 2- -4- 1		HW49/900-041-49	110.16		15d	5.51	
					HW49/900-039-49	19.25		15d	1.0	
					HW49/900-041-49	1.5		15d	0.08	
						130.91	/	/	/	/
			/	/	9.3		/	/		

3.6.4

3.6-13

3.6-13

			/dB A	
1		IS65-50-125	90	7200h
2		30m ³	90	
3		3000m ³ /h	90-95	
4		3000m ³ /h	90-95	

3.6-14

			/dB A		m			/m			/dB A	/m
					X	Y	Z					
1		V =3m ³	80		200.8	-141.5	1.2	9.7	69.8	7200h	43.8	1
2		V =15m ³	80		200.8	-141.5	1.2	9.7	69.8		43.8	1
3		V =5m ³	80		200.8	-141.5	1.2	9.7	69.8		43.8	1
4		V =5m ³	80		200.8	-141.5	1.2	9.7	69.8		43.8	1
5		V =6.3m ³	80		200.8	-141.5	1.2	9.7	69.8		43.8	1
6		15	80		200.8	-141.5	1.2	9.7	69.8		43.8	1
7		Q=12.5m ³ ,H=50m	90		200.8	-141.5	1.2	9.7	69.8		43.8	1
8		Q=6.3m ³ ,H=50m	90		200.8	-141.5	1.2	9.7	69.8		43.8	1
9		Q=12.5m ³ ,H=50m	90		200.8	-141.5	1.2	9.7	69.8		43.8	1
10		Q=6.3m ³ ,H=50m	90		200.8	-141.5	1.2	9.7	69.8		43.8	1
11		Q=6.3m ³ ,H=50m	90		200.8	-141.5	1.2	9.7	69.8		43.8	1
12		16m ²	80		200.8	-141.5	1.2	9.7	69.8		43.8	1
13		6640×1820	90		200.8	-141.5	1.2	9.7	69.8		43.8	1

14		6640×1820	90		200.8	-141.5	1.2	9.7	69.8		43.8	1
15		-	85		200.8	-141.5	1.2	9.7	69.8		43.8	1
16		V =6.3m ³	80		200.8	-141.5	1.2	9.7	69.8		43.8	1
17		V =3.7m ³	80		200.8	-141.5	1.2	9.7	69.8		43.8	1
18		Q=25m ³ ,H=20m	90		200.8	-141.5	1.2	9.7	69.8		43.8	1
19		Q=25m ³ ,H=20m	90		200.8	-141.5	1.2	9.7	69.8		43.8	1
20		-	85		200.8	-141.5	1.2	9.7	69.8		43.8	1
1		1000L	80		281.4	52.6	1.2	16.4	68.5		42.5	1
2		2000L	80		281.4	52.6	1.2	16.4	68.5		42.5	1
3		3000L	80		281.4	52.6	1.2	16.4	68.5		42.5	1
4		5000L	80		281.4	52.6	1.2	16.4	68.5		42.5	1
5		9000L	80		281.4	52.6	1.2	16.4	68.5		42.5	1
6		15m ³	80		281.4	52.6	1.2	16.4	68.5	3600	42.5	1
7		205m ³	80		281.4	52.6	1.2	16.4	68.5		42.5	1
8		1005m ²	90		281.4	52.6	1.2	16.4	68.5		42.5	1
9		7.5KW	90		281.4	52.6	1.2	16.4	68.5		42.5	1
10		5.5KW	90		281.4	52.6	1.2	16.4	68.5		42.5	1
1		5000L	80		46.7	-137.1	1.2	8.6	70.6		44.6	1
2		5000L	80		46.7	-137.1	1.2	8.6	70.6		44.6	1
3		10m ²	80		46.7	-137.1	1.2	8.6	70.6		44.6	1
4	2#	8m ³	80		46.7	-137.1	1.2	8.6	70.6		44.6	1
5		12m ³	80		46.7	-137.1	1.2	8.6	70.6	7200	44.6	1
6		25KW	85		46.7	-137.1	1.2	8.6	70.6		44.6	1
7		10m ³	85		46.7	-137.1	1.2	8.6	70.6		44.6	1
8		4KW	85		46.7	-137.1	1.2	8.6	70.6		44.6	1
9		5.5KW	90		46.7	-137.1	1.2	8.6	70.6		44.6	1

27450

10			7.5KW	90		46.7	-137.1	1.2	8.6	70.6		44.6	1
11			5.5KW	90		46.7	-137.1	1.2	8.6	70.6		44.6	1
12			1.2m	90		46.7	-137.1	1.2	8.6	70.6		44.6	1
13			100m ³	90		46.7	-137.1	1.2	8.6	70.6		44.6	1

3.6.5

3.6-15

3.6-15

			%		kg/h	/h	/
2#	+		50%		0.248	30	1-2
DA004		VOCs	0	50%	0.375	30	1-2
DA005	+	SO ₂	50%	50%	0.11	30	1-2
		NO _x			108.23	30	1-2
					3.98	30	1-2
					40	30	1-2
		VOCs	0		0.233	30	1-2
DA006	+	NO _x	50%	50%	0.026	30	1-2
					0.064	30	1-2
		VOCs	0		0.215	30	1-2

3.6.6

SO₂ NO_x VOCs

3.6-16

t/a

	SO ₂	NO _x	VOCs
	0.051	2.601	0.852
	0.051	2.601	0.852

4

4.1

4.1.1

E97°10 106°52 N37°24 42°47

733.7km

831km

598km

26.9×10⁴km²

22%

E100°03 104°34 N38°42 42°05

45.3km

7.3×10⁴km²

"

"

"

"

109km

101°52

103°33

39°08

40°18

39°18'8.77"

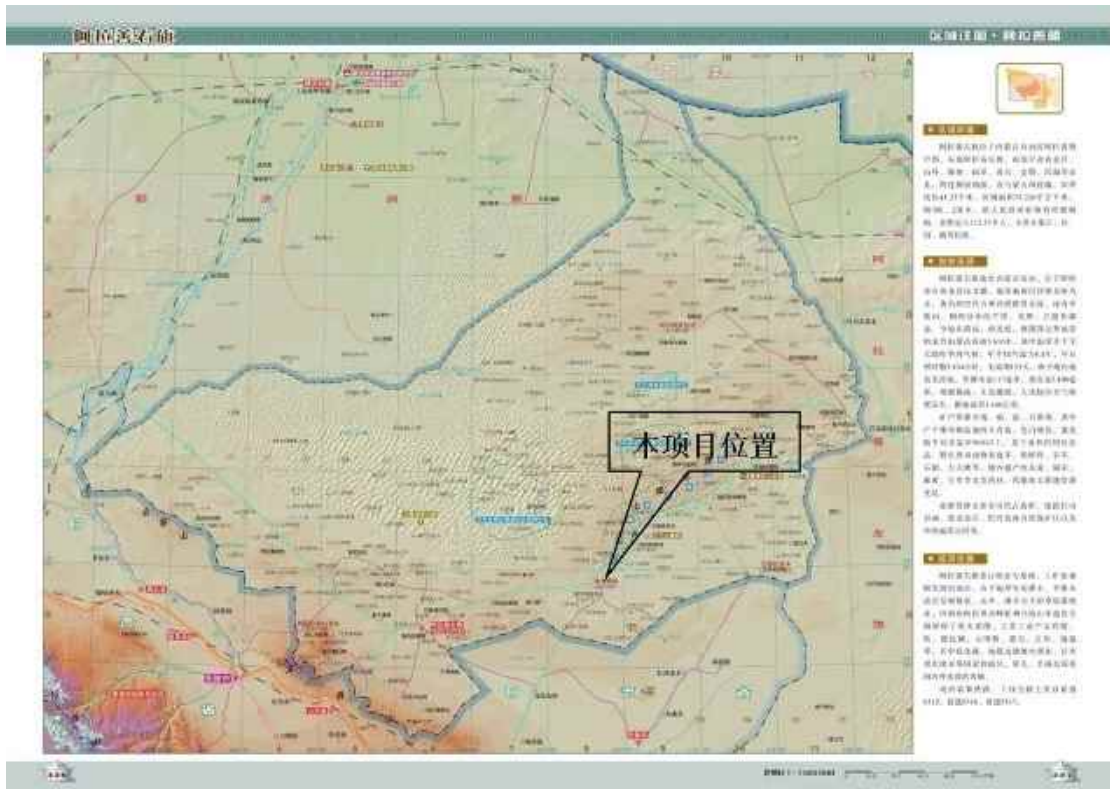
102°43'9.28"

4.1-1

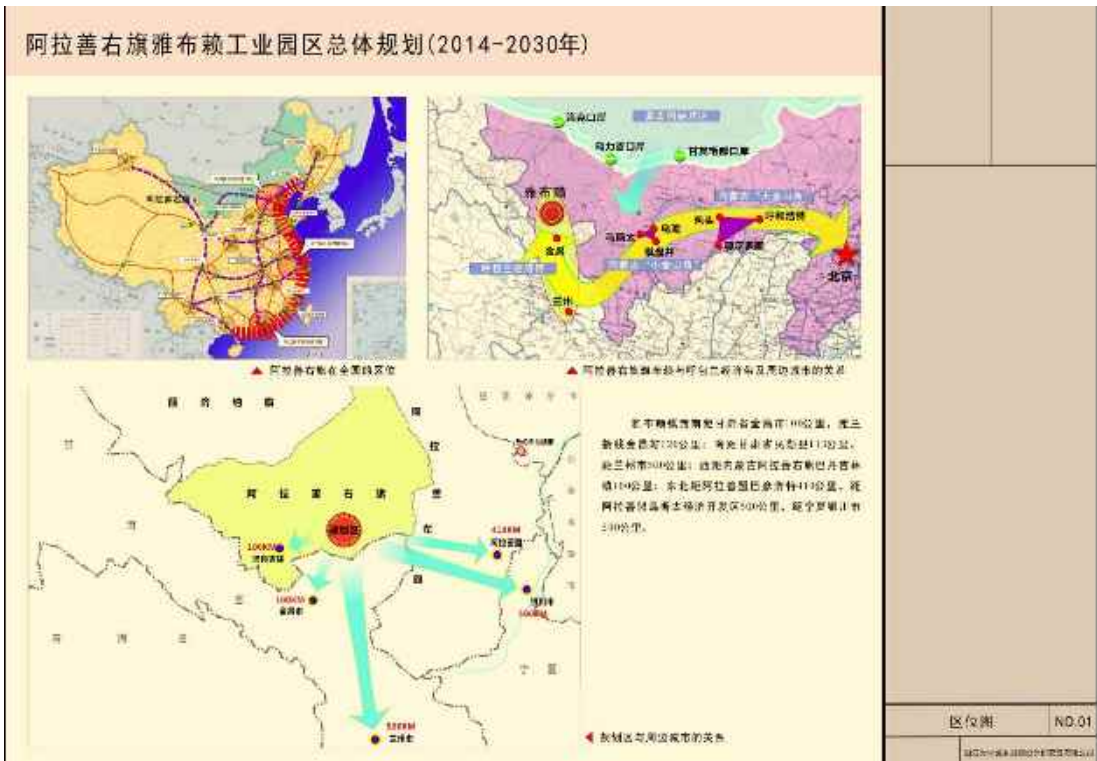
4.1-2

4.1-3

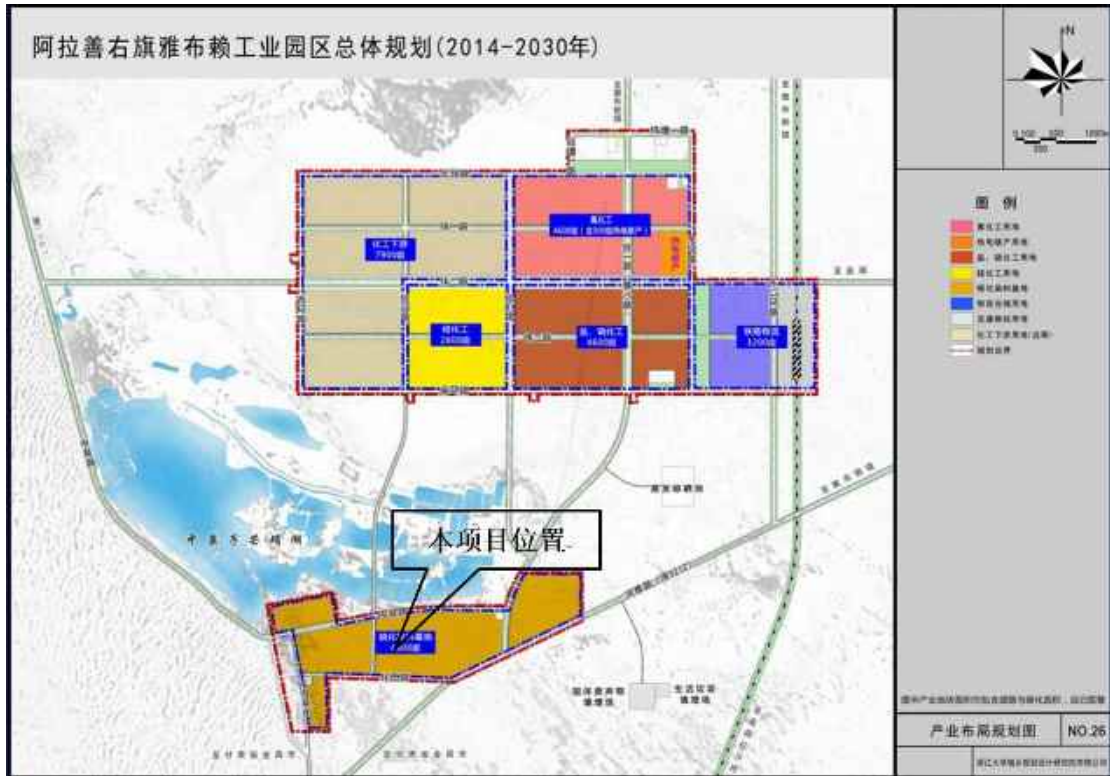
4.1-4



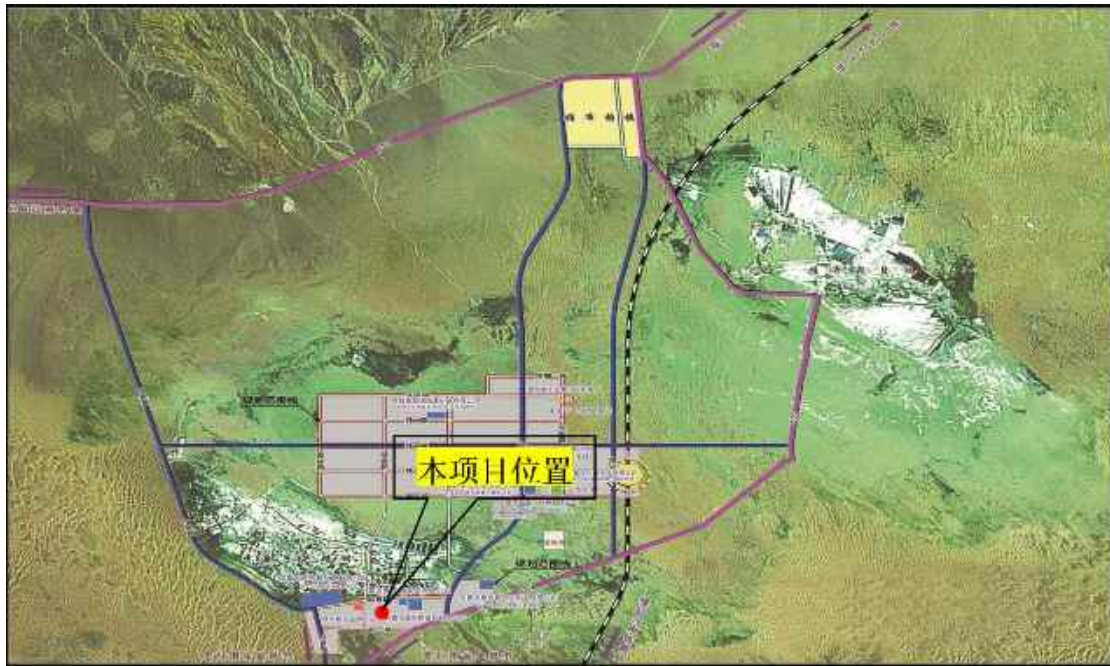
4.1-1



4.1-2



4.1-3



4.1-4

4.1.2

900~1400m

1200~1400m

46.6%

6.5%

33.4%

13.5%

1585m

4.1.3

6 7 8 9

176mm

80

8.4

-20.0

41.5

308.4mm

3524.8mm

4.0m/s

1.47m

34%

150

3103.6h

10.0

1

-9.2

7

25.8

211d

86.9mm

2853.6mm

3209.7h

11.9d

4.1.4

4.1.5

3.9

2.3

1.6

1.01 /

1.4875 /

2.49 /

50~120m

60m³/h

4.2

2006

2010

" "

2013

2014-2030

2014 7 8

[2014]20

4.2.1

- - -

4.2.2

2020

400

10

6

10

5:1

20:1

1.5

2020

0.5

2030

1.5

4.2.3

2014 2030

2014 2020

2021 2030

4.2.4

10km

212

()

B

2030

50.12

2.45%

()

M

2030

1315.12

64.42%

1.

1

2

3

4

5

2.

"

"

"

"

2 1

()

W

2030

90.90

4.45%

()

U

2030

16.56

0.81%

()

S

"

"

2030

300.43

14.72%

()

G

2030

258.27

12.65%

4.2.6

27.0km

N39°28′—39°30′ E102°55′—102°58′

—
3112.23 m³/a

2020

700m³/d

2030

2100m³/d

2020 338.7 m³/a 1.03 m³/d 330
2030 2337.8 m³/a 7.08 m³/d

18.0km

N39°28′—39°30′ E102°55′—102°58′

		2010	2015		2016	2020		2021
2025	1053m ³ /h	842	m ³ /a	1608m ³ /h	1286	m ³ /a		3036m ³ /h
2429	m ³ /a							

27km

12000m³

2.1

6 m³/d

DN400 DN900

=0.3Mpa

DN150 DN200

=0.3MPa

=0.3MPa

120m

DN150

1

10000m³

A²/O

40.2km

16.6km

23.6km

490t/h 960t/h

220KV

12

220KV

2×18 kVA

220KV

220KV

12

220KV

1

3

36

110kV

110/10kV

3000m³

1

1km

64 m³

10

4

298t/d

10 m²

2014 11 25

[2014]53

10%

S317

--

"

"

"

"

4.3

4.4

1

4.4-1

4.4-1

		t/a								
		SO ₂			HCl		NH ₃		VOCs	
1	1000	/	/	/	/	/	/	/	/	0.383
2	1000 1000 1- 100 RK 300 100 T BCN	0.487	3.756	0.0005	0.513	/	0.012	/	2.088	
3	5460 1000t/a -3- 1500t/a 200t/a2- -4-	0.02	4.26	0.26	0.706	0.392	/	0.02	8.073	

2

29183.75t/a

649 /

2021 6

4.4-2

4.4-2

		g/	.	t/a
--	--	----	---	-----

27450

			NOx	VOCs		NOx	VOCs
1		1521	190791	3025	0.761	95.396	1.513
2		1436	162928	3337	0.718	81.464	1.669
					1.479	176.86	3.182

5

5.1

5.1.1

HJ2.2-2018

2023 6 5 2022

5.1-1

5.1-1

		$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	%	
PM ₁₀		40	70	57.14	
PM _{2.5}		23	35	65.7	
SO ₂		8	60	13.33	
NO ₂		10	40	25	
CO		0.6mg/m ³	4mg/m ³	15	
O ₃	8h	146	160	91.25	

SO₂ NO₂

CO

PM_{2.5} PM₁₀O₃ 8h

HJ2.2-2018 6.4.1.1

6

6.1

6.2

6.2.1

6.2.1.1

38.624° 103.09°

1367.5

52681

20

2022

6.2-1

6.2-1

		/m		/km			/m	
X	Y							
52681	38.624	103.09	70		1367.5	2022		

WRF

189×159

27km×27km

-

USGS

NCEP

23

3000m

21

GMT

0

12

8

20

6.2-2

6.2-2

		/m	/km			3000m
X	Y					

38.624	103.09	70	2022		WRF	21
--------	--------	----	------	--	-----	----

6.2.1.2

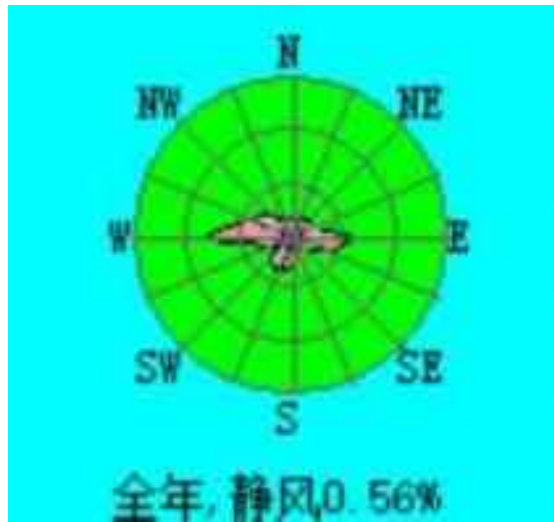
20

6.2-3

6.2-1

6.2-3

1	m/s	4.0
2		NW
3	()	8.4
4	()	41.5
5	()	-20.0
6	%	42.48
7	(mm)	308.4
8	%	3.62



6.2-1

2003-2022

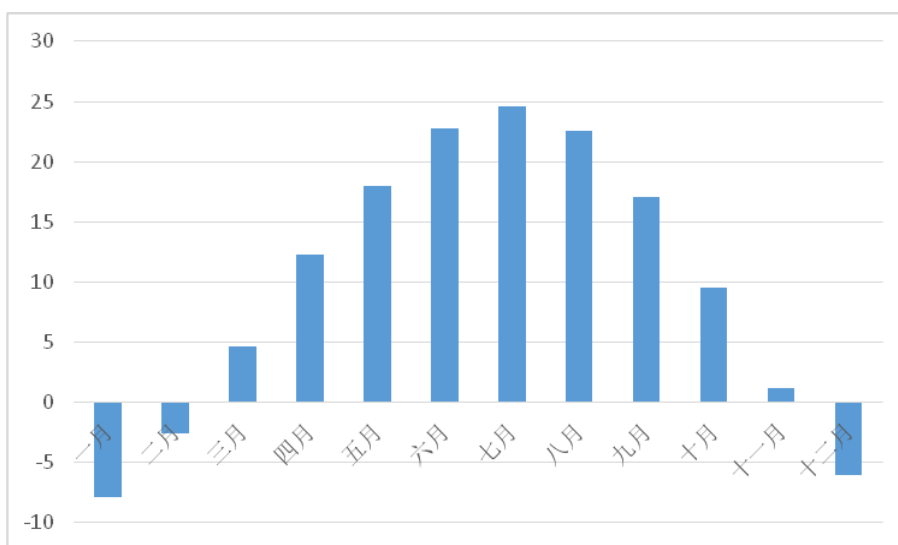
2022

6.2-4

6.2-2

6.2-4

	1	2	3	4	5	6	7	8	9	10	11	12
()	-7.9	-2.64	4.68	12.22	17.96	22.79	24.57	22.58	17.04	9.51	1.21	-6.04



6.2-2

6.2-5

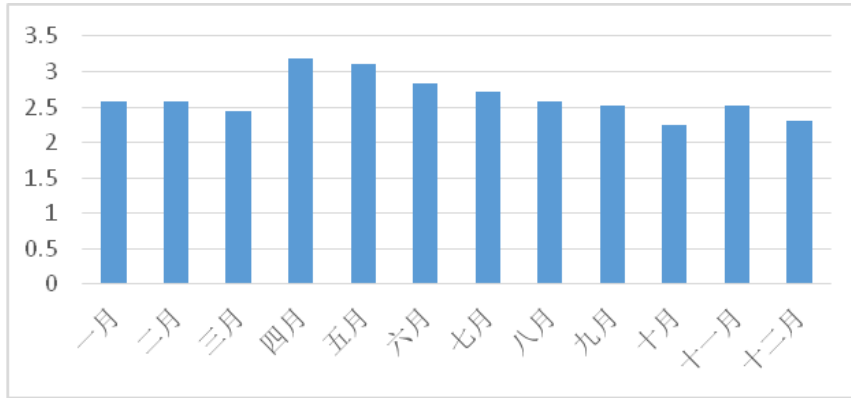
6.2-3

6.2-6

6.2-4

6.2-5

	1	2	3	4	5	6	7	8	9	10	11	12
(m/s)	2.58	2.57	2.45	3.18	3.1	2.83	2.71	2.58	2.52	2.25	2.51	2.31

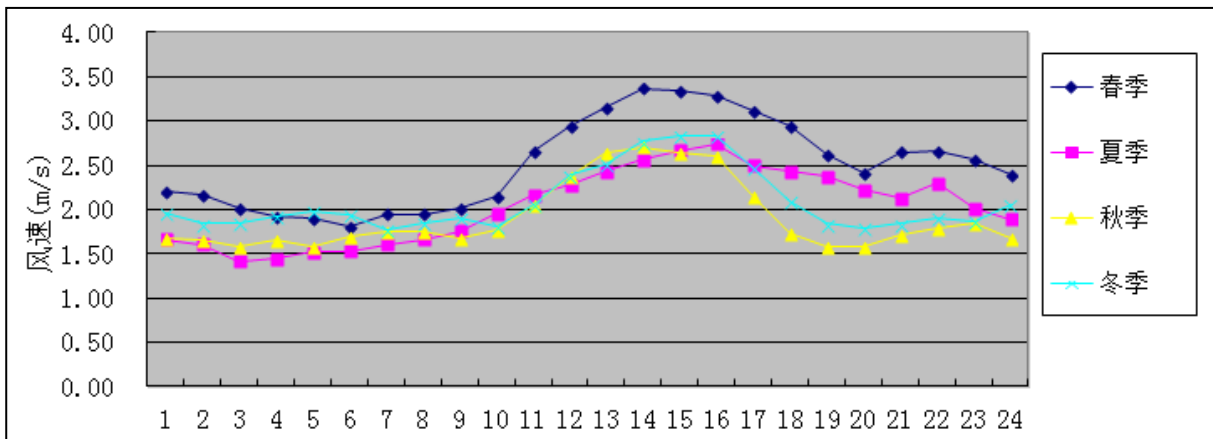


6.2-3

6.2-6

m/s

(h) (m/s)	m/s											
	1	2	3	4	5	6	7	8	9	10	11	12
	2.21	2.17	2.02	1.92	1.91	1.81	1.95	1.95	2.01	2.15	2.66	2.94
	1.66	1.61	1.42	1.45	1.52	1.53	1.61	1.66	1.76	1.96	2.17	2.28
	1.67	1.65	1.59	1.65	1.59	1.70	1.75	1.76	1.67	1.78	2.06	2.38
	1.97	1.84	1.85	1.92	1.98	1.95	1.77	1.85	1.91	1.81	2.06	2.39
(h) (m/s)	m/s											
	13	14	15	16	17	18	19	20	21	22	23	24
	3.16	3.37	3.34	3.28	3.11	2.95	2.63	2.42	2.65	2.66	2.57	2.39
	2.43	2.56	2.67	2.74	2.50	2.43	2.37	2.22	2.13	2.30	2.01	1.89
	2.64	2.71	2.65	2.61	2.15	1.74	1.59	1.58	1.72	1.80	1.85	1.68
	2.51	2.77	2.83	2.83	2.48	2.09	1.84	1.79	1.84	1.90	1.87	2.05



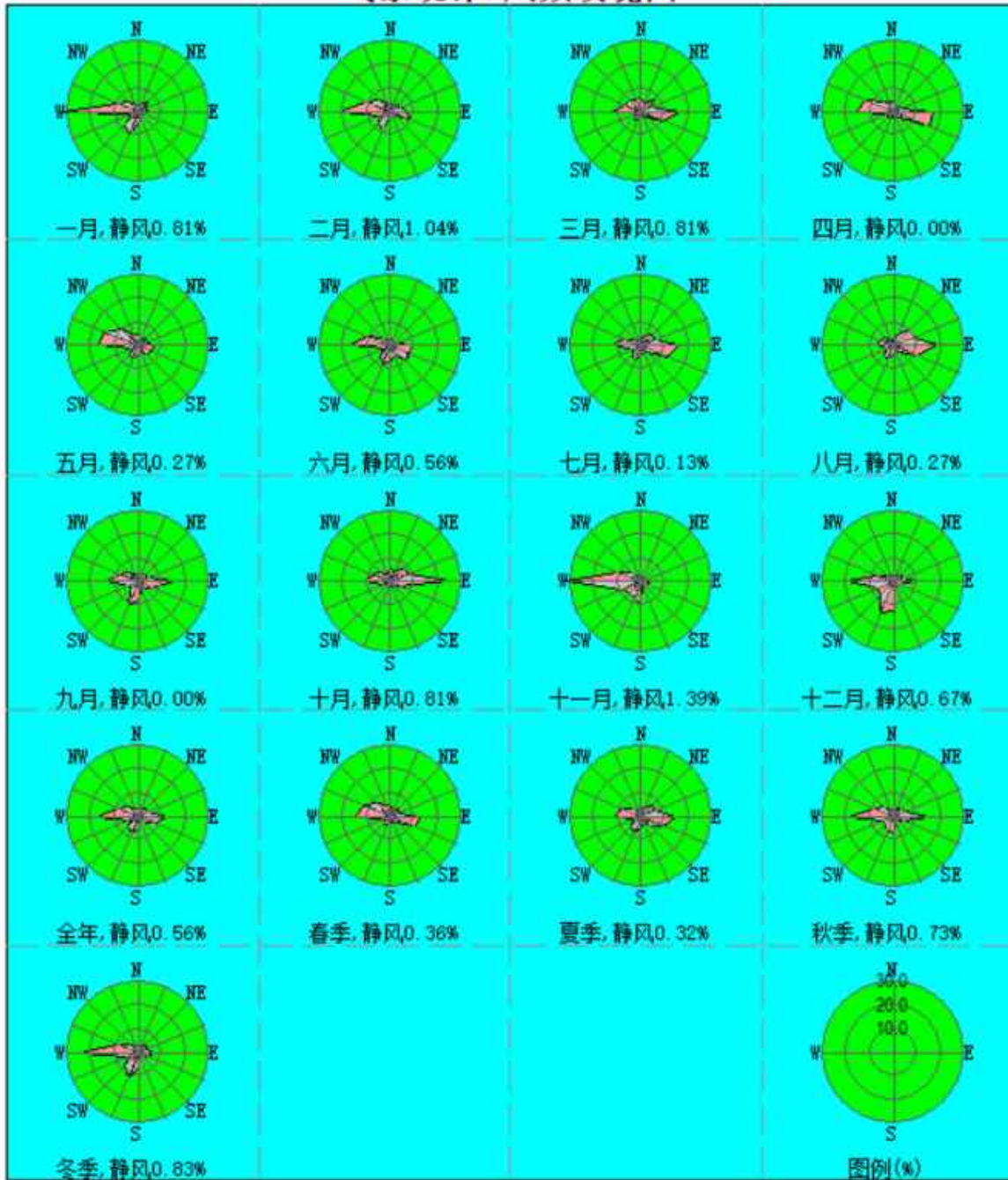
6.2-4

2022

6.2-7

	6.2-7															:%	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
	2.65	3.44	4.82	5.72	9.61	6.44	2.47	1.67	2.29	7.22	8.78	8.67	11.72	10.17	6.33	3.78	0.00
	3.5	3.11	4.95	7.05	11.58	9.05	3.21	1.69	3.26	6.0	5.37	5.68	10.37	10.63	7.05	4.21	0.00
	3.05	3.53	4.9	6.35	12.1	8.2	4.16	1.5	2.53	5.0	5.7	4.7	8.85	10.95	9.6	5.95	0.00
	3.11	3.0	3.89	5.7	10.8	9.7	4.5	2.05	2.61	5.55	5.5	5.75	9.45	12.8	9.1	6.0	0.00
	2.45	2.58	3.21	5.7	9.35	10.8	5.9	2.42	3.2	6.3	5.9	4.95	9.05	11.9	9.7	4.8	0.00
	2.0	3.21	4.42	6.58	10.37	11.11	6.53	3.0	3.95	7.32	6.79	5.58	8.37	10.16	6.21	4.26	0.14
	2.47	3.05	5.8	7.0	10.95	14.15	7.0	3.1	3.79	6.2	5.85	4.45	7.15	9.1	5.5	3.05	0.00
	1.94	3.8	5.7	7.65	16.25	15.9	6.45	2.9	2.6	5.6	4.45	3.6	5.45	7.75	5.15	2.89	0.13
	2.9	3.65	5.3	7.5	15.45	13.3	7.0	3.44	2.68	5.35	5.21	4.37	6.15	6.95	6.0	3.65	0.00
	2.55	3.63	4.8	7.0	11.55	9.4	4.9	2.22	2.47	5.7	7.35	5.65	8.4	9.7	6.75	4.1	0.13
	2.47	2.84	4.05	5.05	7.85	7.11	3.41	1.87	3.0	8.35	8.9	8.3	13.0	11.75	7.85	3.55	0.00
	2.78	2.6	4.8	5.4	8.9	5.65	2.55	1.56	2.83	6.05	7.85	9.0	12.45	11.85	7.35	3.95	0.13
	2.99	2.99	4.03	17.03	23.19	4.30	2.04	2.99	3.26	1.90	1.81	10.33	15.94	3.22	2.13	1.86	0.00
	4.03	2.94	5.66	14.49	19.84	6.61	2.22	2.40	2.67	1.72	2.36	9.33	16.76	3.53	3.22	2.13	0.09
	2.98	2.20	4.53	18.68	16.44	3.34	2.24	3.02	5.68	2.88	3.21	11.49	14.79	3.57	3.07	1.83	0.05
	2.08	2.45	3.47	16.02	19.68	3.89	2.82	3.01	5.69	2.64	3.66	11.71	13.61	4.63	3.56	1.02	0.05
	3.03	2.65	4.43	16.55	19.79	4.54	2.33	2.85	4.32	2.28	2.75	10.71	15.29	3.73	2.99	1.71	0.05

气象统计5风频玫瑰图



6.2-5

2022

6.2.2

AERSCREEN

2022

0.5m/s

72h

20

0.2m/s

35%

3km

CALPUFF

HJ2.2-2018

AERMOD

1

TVOC NH₃

SO₂ NO_x HCl

TSP

6.2-4

6.2-4

		µg/m ³	
TVOC	8	600	HJ 2.2-2018 D
NH ₃	1	200	
HCl	24	15	
	1	50	
	24	100	
	1	300	
NO _x		50	GB3095-2012
	24	100	
	1	250	
SO ₂		60	
	24	150	
	1	500	
TSP		200	
	24	300	

2

1 1-2

30

TVOC NH₃ SO₂ NO_x HCl

3

csi.cgiar.org

SRTM

DEM

90×90m

srtm_57_05.ASC

DEM

o

()

(102.39875,39.5629166666667)

(103.047083333333,39.5629166666667)

(102.39875,39.04541666666667)

(103.04708333333333,39.04541666666667)

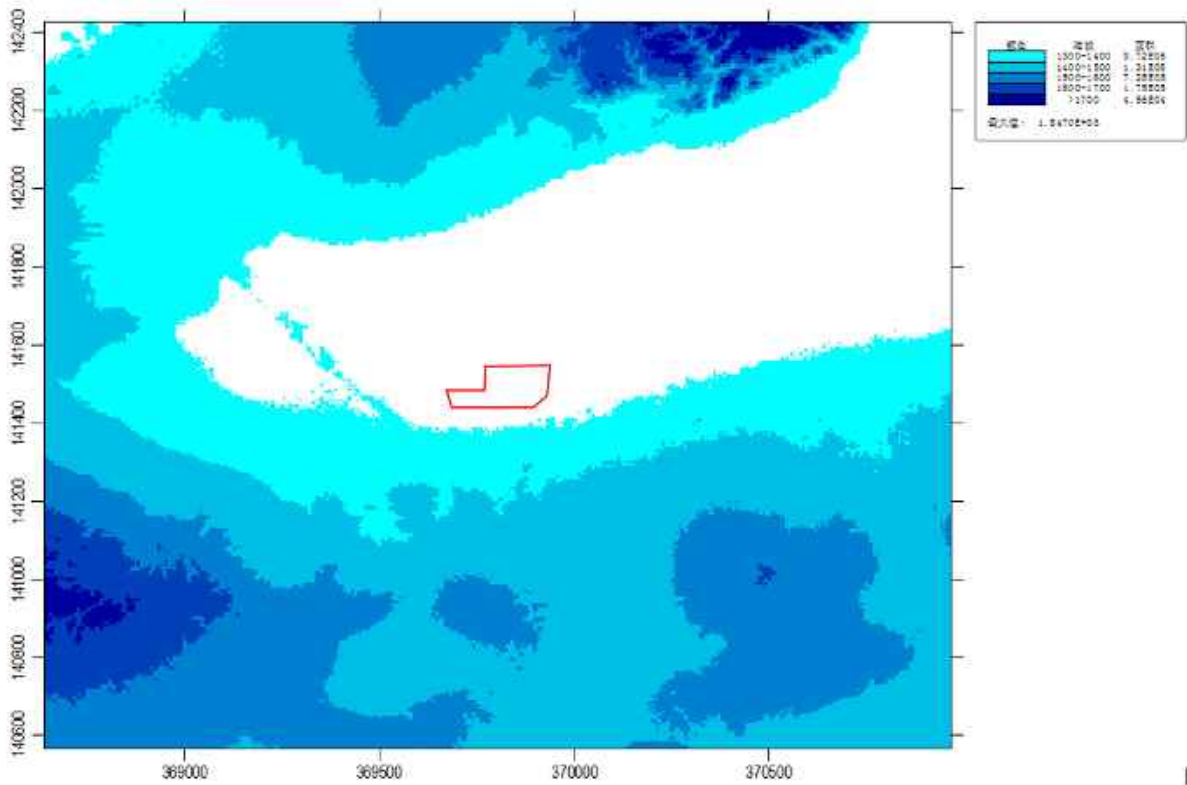
:3 ()

:3 ()

779

622

6.2-6



6.2-6

4

5

AERMOD

0 0 X Y

3000m 100m 3723

1

6.2-5

6.2-5

				BOWEN	
1	0-360	(12,1,2)	0.45	10	0.15
2	0-360	(3,4,5)	0.3	5	0.3
3	0-360	(6,7,8)	0.28	6	0.3
4	0-360	(9,10,11)	0.28	10	0.3

6

6.2-6 6.2-7

6.2-8

6.2-9

6.2-6

			/m	/m	/m	/(m/s)	/	/h	/(kg/h)				
	X	Y							TVOC	HCl	SO ₂	NO _x	NH ₃
DA004	102.720194	39.301347	1244	15	0.5	1.77	20	7200	0.053	0.139	/	/	/
DA005	102.722007	39.301422	1247	25	0.5	1.77	20	7200	0.033	0.062	0.007	0.347	0.0032
DA006	102.722812	39.303117	1245	25	0.5	1.06	20	7200	0.03	0.005	/	0.015	/

6.2-7

	/m		/m	/m	/m	/°	/m	/h	/ kg/h				
	X	Y							HCl	NH ₃		TVOC	TSP
	102.720699	39.301518	1245	12	10	0	12	7200	0.0001	0.0065	0.0027	/	/
	102.722812	39.303117	1247	82.2	12	0	5	7200	/	/	/	0.0032	0.046

6.2-8

		/m	/m	(Nm ³ /h)	/	/(kg/h)					
						HCl	TVOC	NH ₃	SO ₂	NO _x	PM ₁₀
1000	P1	15	0.25	50000	20	/	0.033	/	0.067	0.0007	/
	P3	15	0.25	50000	20	0.77	0.226	0.036	/	0.55	0.001
	P6	25	0.3	50000	20	0.784	0.028	/	0.0002	0.105	0.0005
	P4	15	0.25	50000	20	/	0.003	0.003	/	/	/
5460	P1	15	0.25	50000	20	0.003	0.65	/	/	/	/
	P2	15	0.25	50000	20	0.002	1.105	/	/	/	/
	P3	25	0.3	50000	20	0.228	0.131	/	/	/	/
	P4	15	0.25	50000	20	/	/	/	0.01	1.78	0.06

6.2-9

			/m	/m	/m	/(m/s)	/	/		/(kg/h)				
	X	Y								TVOC	HCl	SO ₂	NO _x	NH ₃
DA004	-362	-271	1244	15	0.5	1.77	20	1-2		0.375	0.248	/	/	/
DA005	-151	-271	1247	25	0.5	1.77	20	1-2		0.233	3.98	0.11	108.23	40
DA006	-80	-157	1245	25	0.5	1.06	20	1-2		0.215	0.064	/	0.026	/

7

HJ2.2-2018

1h

6.2-10

6.2-10

		TVOC NH ₃ SO ₂ NO _x HCl TSP		
+		TVOC NH ₃ SO ₂ NO _x HCl TSP		
		TVOC NH ₃ SO ₂ NO _x HCl	1	

8

HJ2.2-2018 10.1.1

a) 100%

b) 30%

a SO₂ NO_x TSP HCl NH₃ 1h
 0.96% 49.21% 5.85% 86.21% 1.92% 0.53% 100%

b TVOC 8h 8.46% 100%

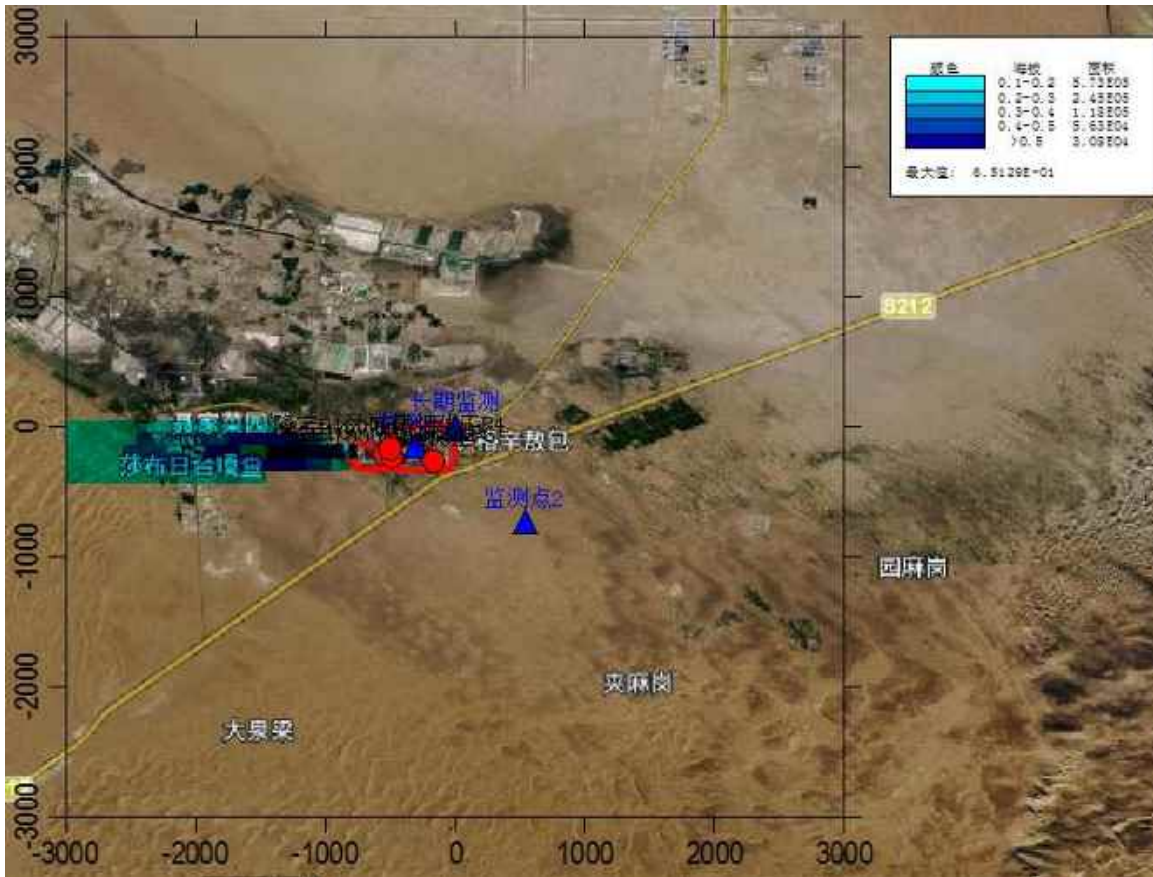
c SO₂ NO_x TSP HCl

0.59% 23.85% 4.16% 74.85% 0.11% 100%

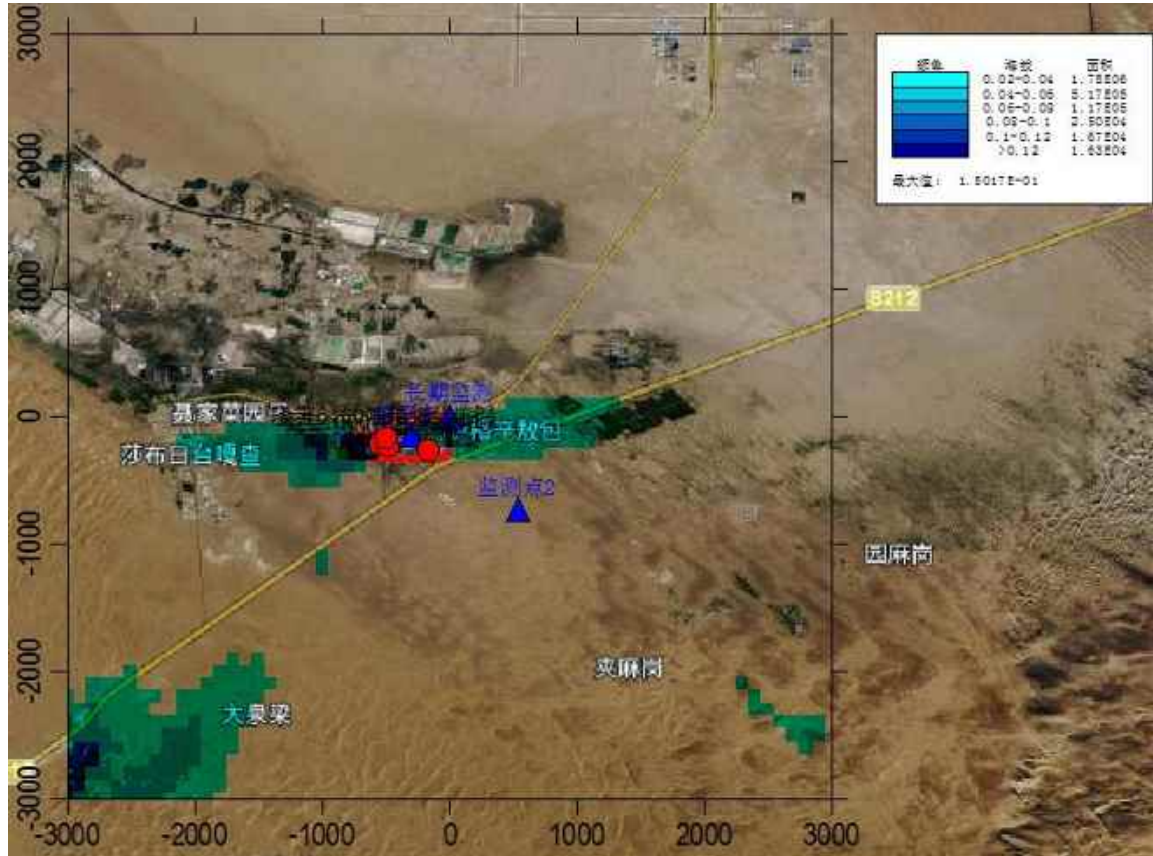
d SO₂ NO_x TSP 0.23% 7.75% 1.48% 30%

6.2-11

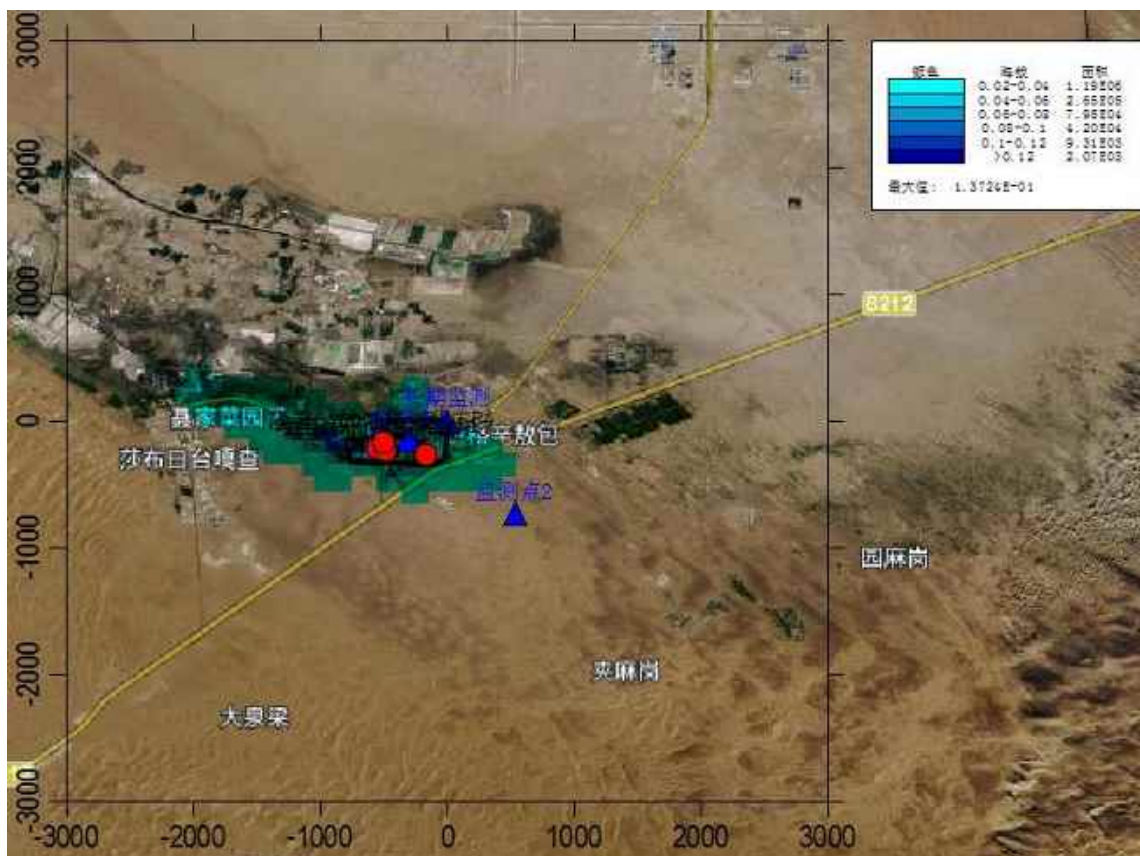
			/μg/m ³			%	(100% 30%)
SO ₂	-600,-300	1	4.79296	22091218	500.0	0.96	
	-700,-200		0.89025	220810	150.0	0.59	
	-700,-200		0.13724		60.0	0.23	
NO _x	-600,-300	1	123.0145	22081519	250.0	49.21	
	-600,-100		23.8491	220620	100.0	23.85	
	-700,-100		3.3844		50.0	6.77	
TSP	-100,-200	1	69.71345	22102124	900.0	7.75	
	-200,-100		13.76947	221220	300.0	4.59	
	200,-200		1.9514		200.0	0.98	
HCl	1800,-3000	1	43.10516	22010304	50.0	86.21	
	-700,-200		11.22806	220417	15.0	74.85	
	-700,-200		1.60275		/	/	/
NH ₃	-400,-300	1	3.83459	22042407	200.0	1.92	
	-300,-300		0.47241	220526	/	/	/
	-300,-300		0.08432		/	/	/
	-400,-300	1	1.58979	22042407	300.0	0.53	
	-400,-300		0.10785	221114	100.0	0.11	
	-300,-300		0.02252		/	/	/
TVOC	-800,-200	1	101.5557	22060606	1200.0	8.46	
	-700,-200		21.91548	220707	/	/	/
	-800,-200		3.2504		/	/	/



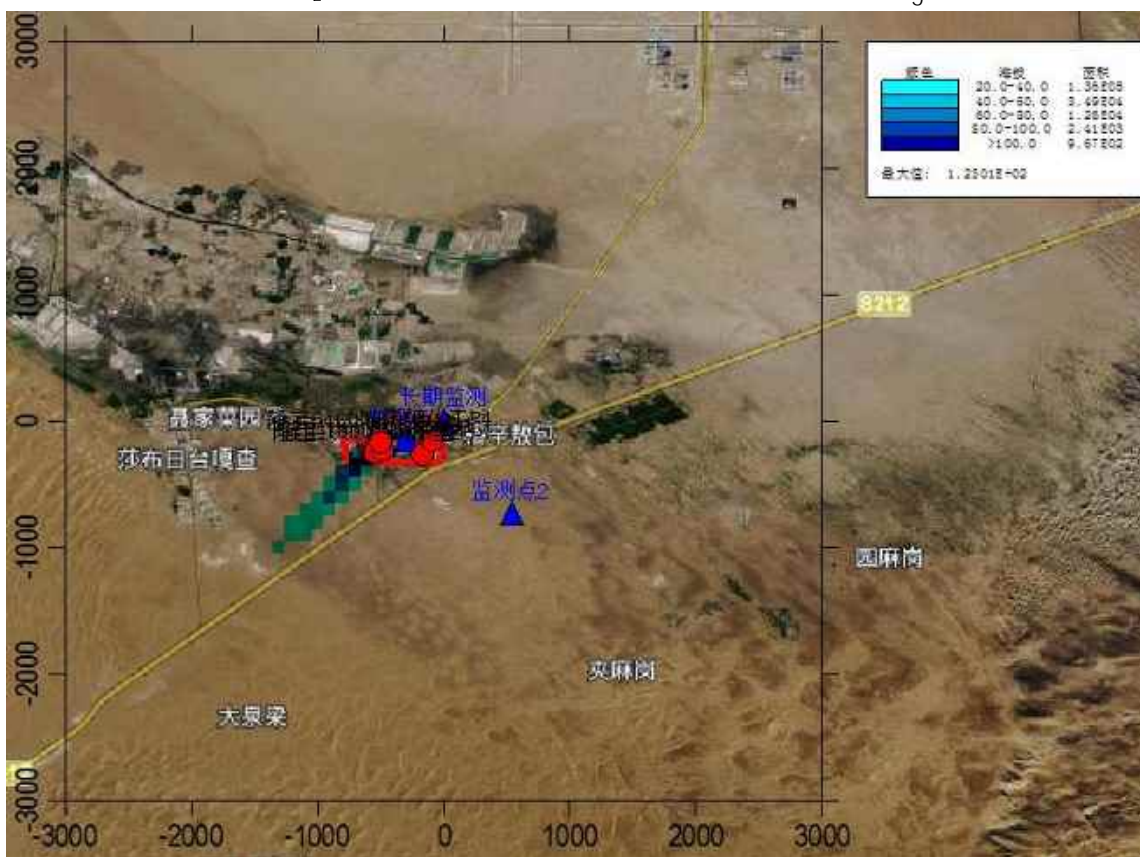
6.2-7 SO₂ 1h ug/m³



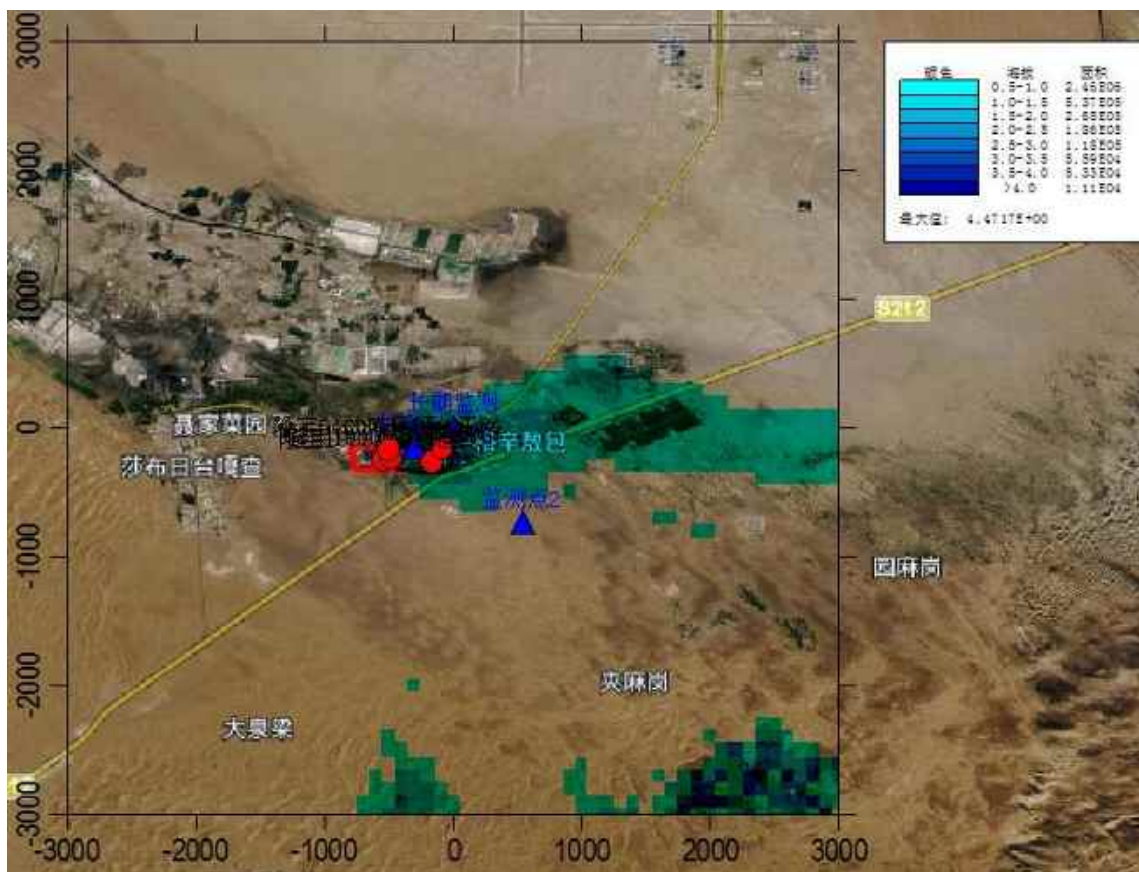
6.2-8 SO₂ ug/m³



6.2-9 SO₂ ug/m³

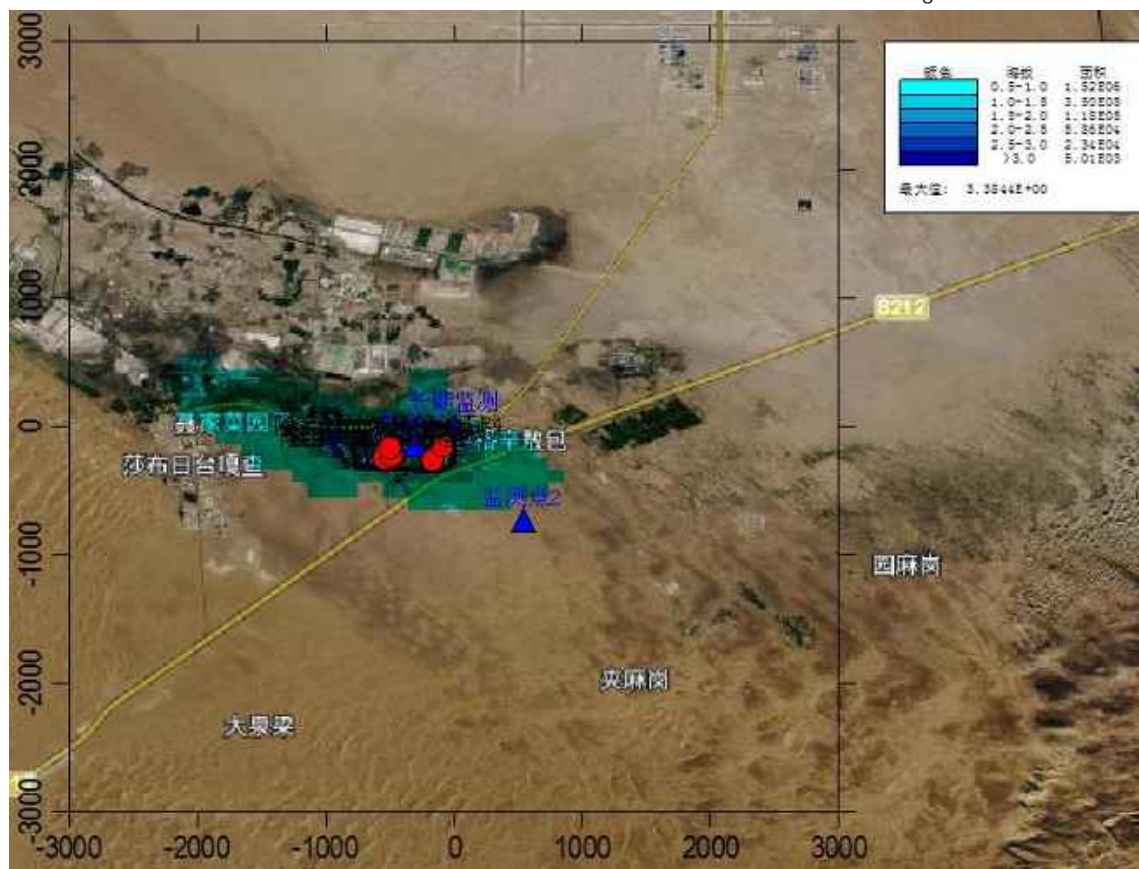


6.2-10 NO_x 1h ug/m³



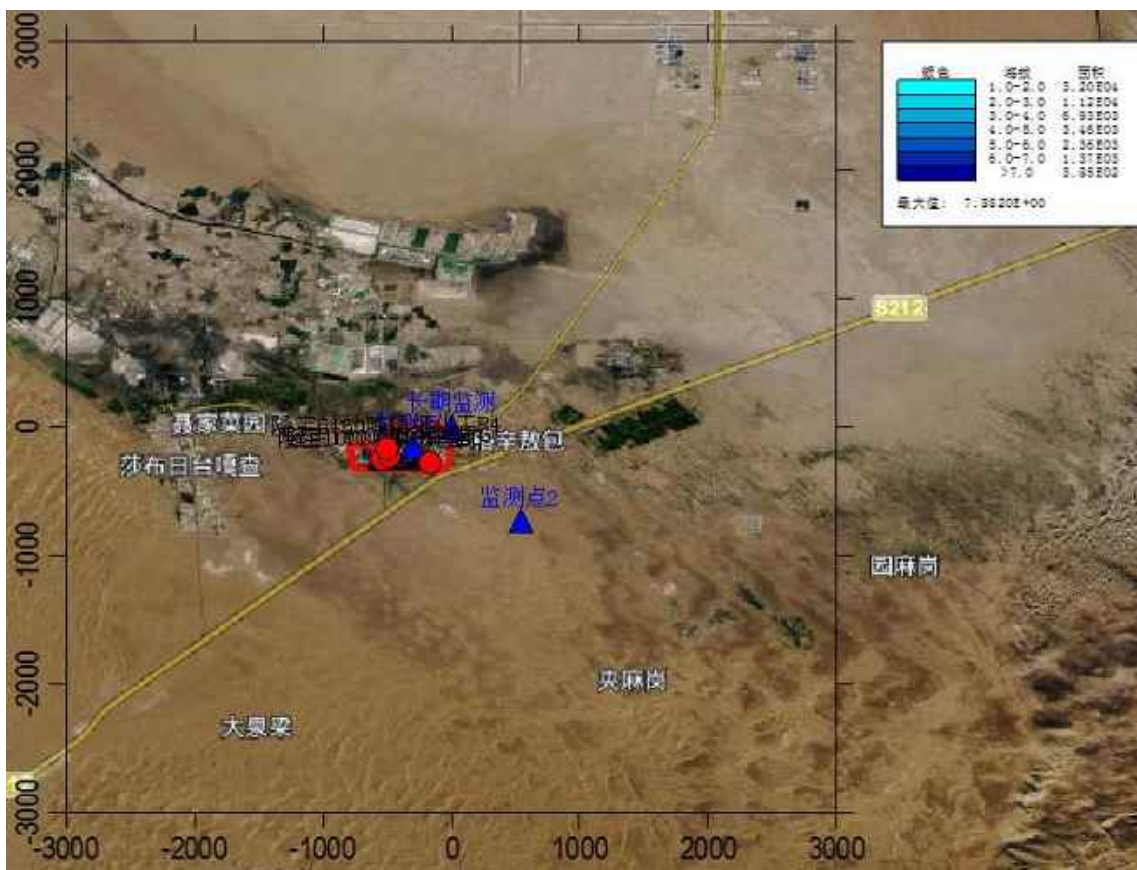
6.2-11 NO_x

ug/m³

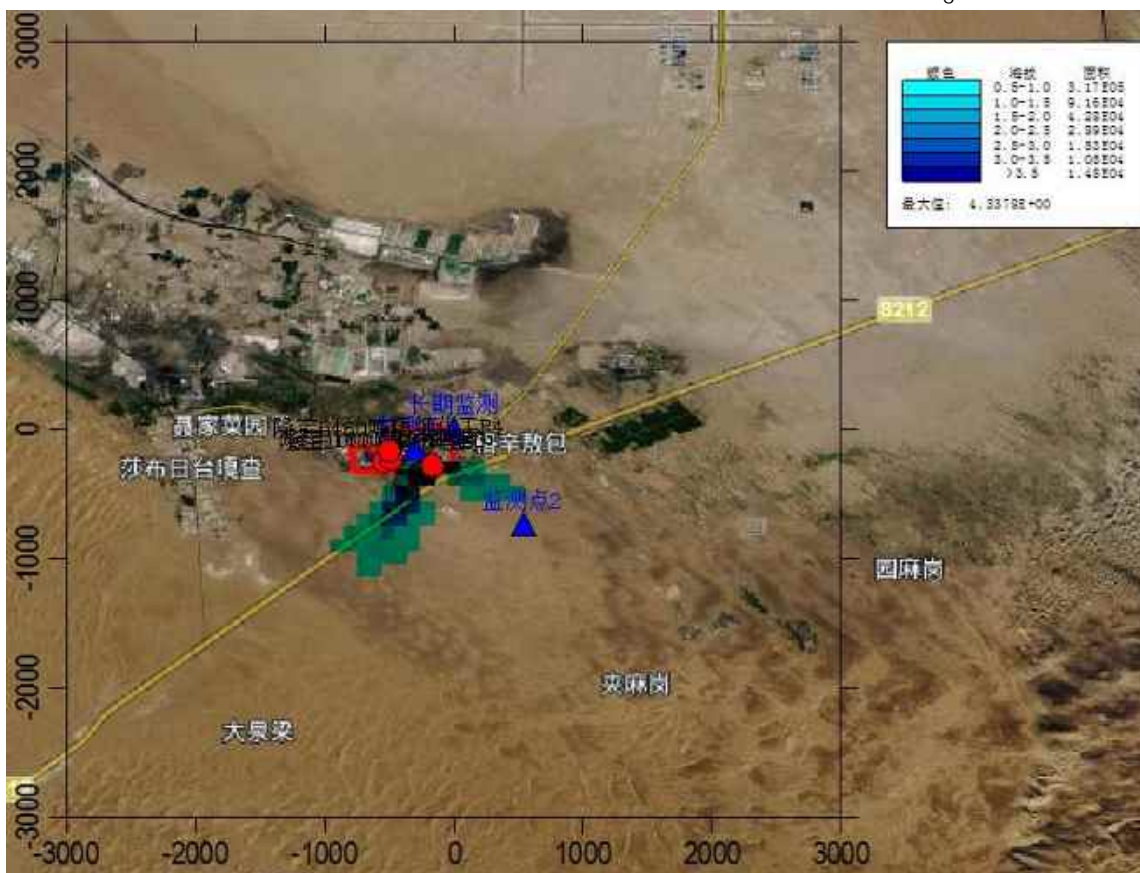


6.2-12 NO_x

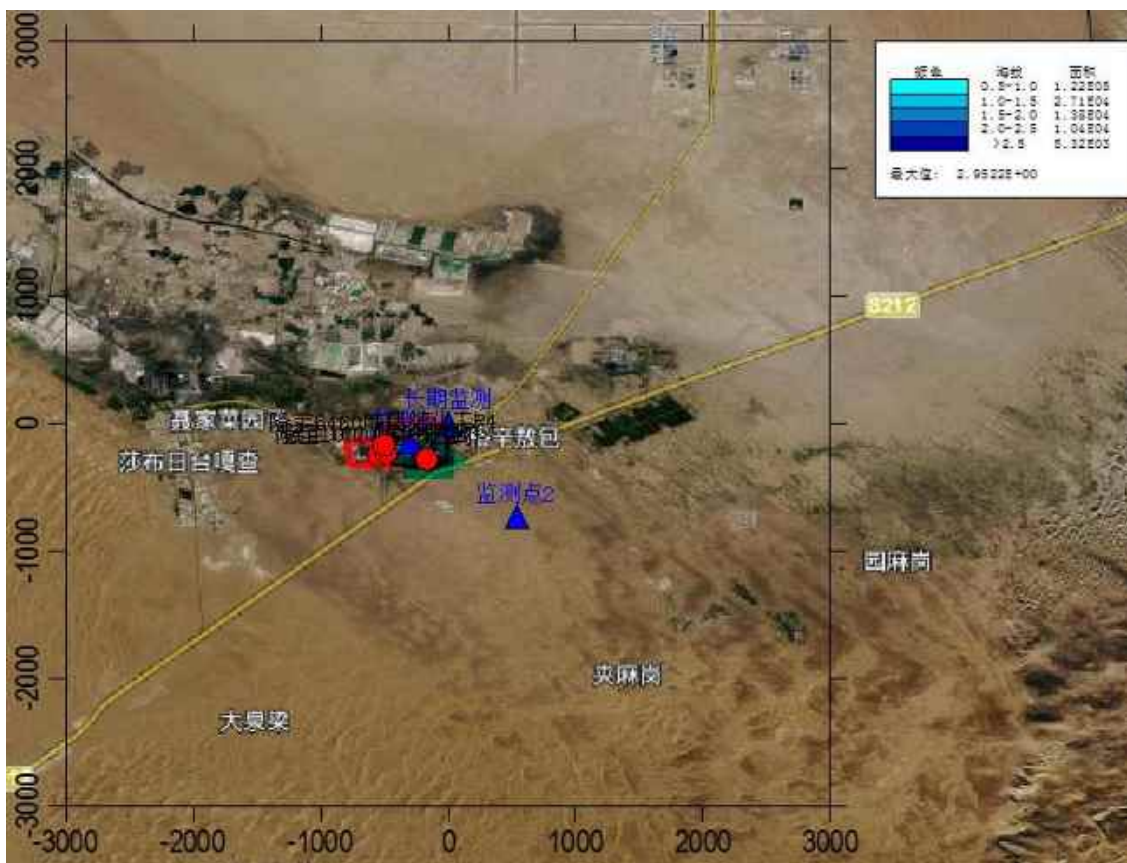
ug/m³



6.2-13 TSP 1h ug/m³

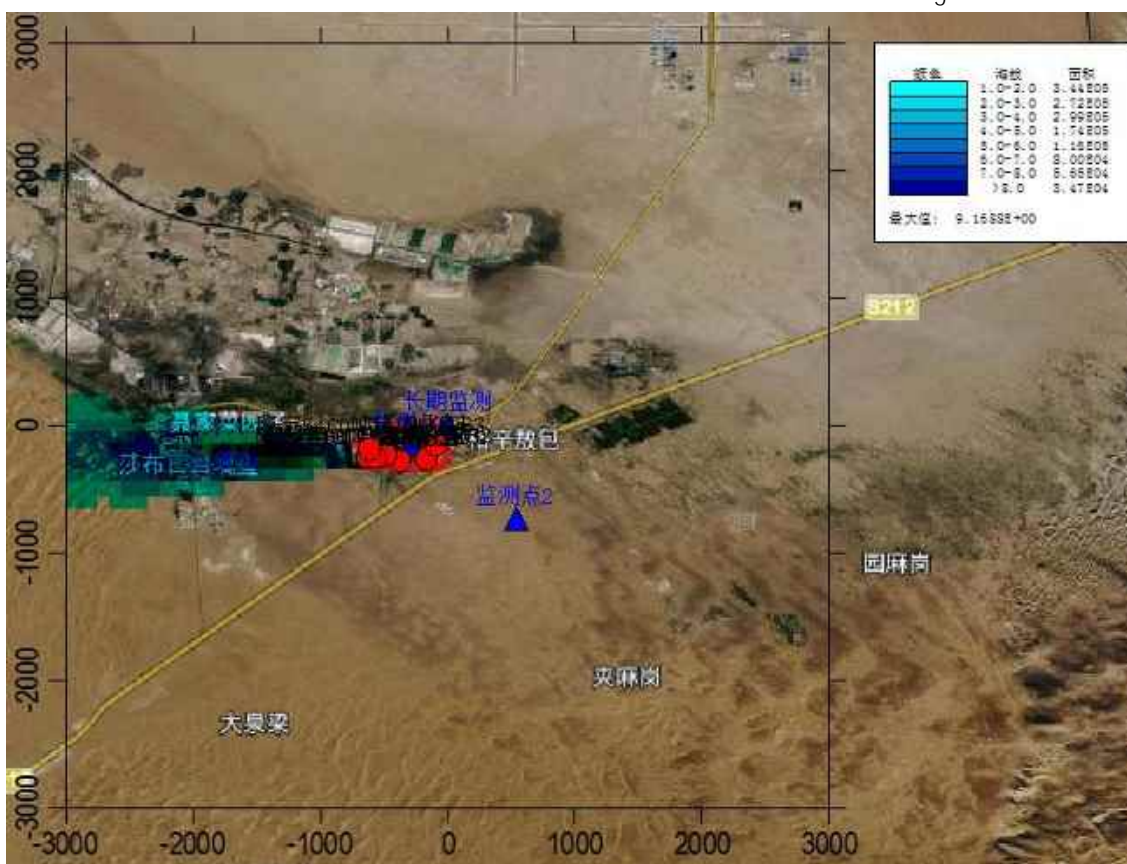


6.2-14 TSP ug/m³



6.2-15 TSP

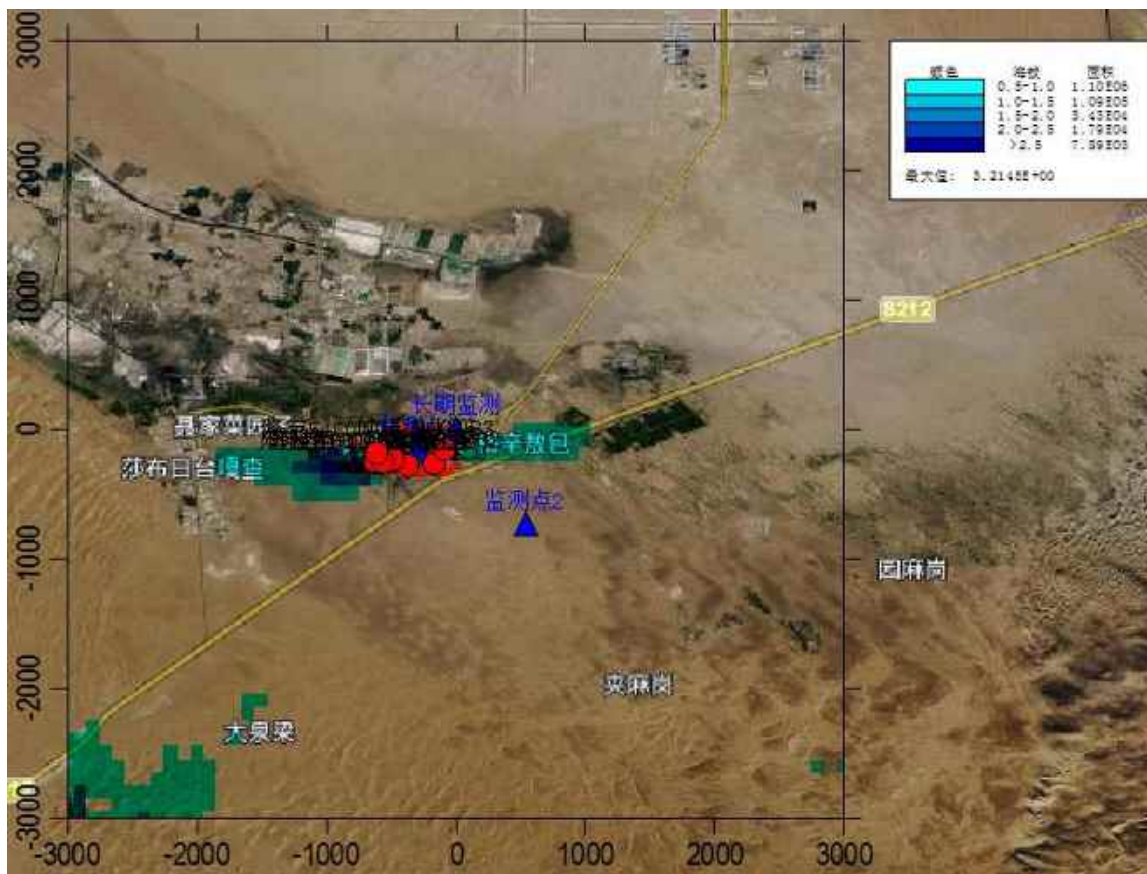
ug/m³



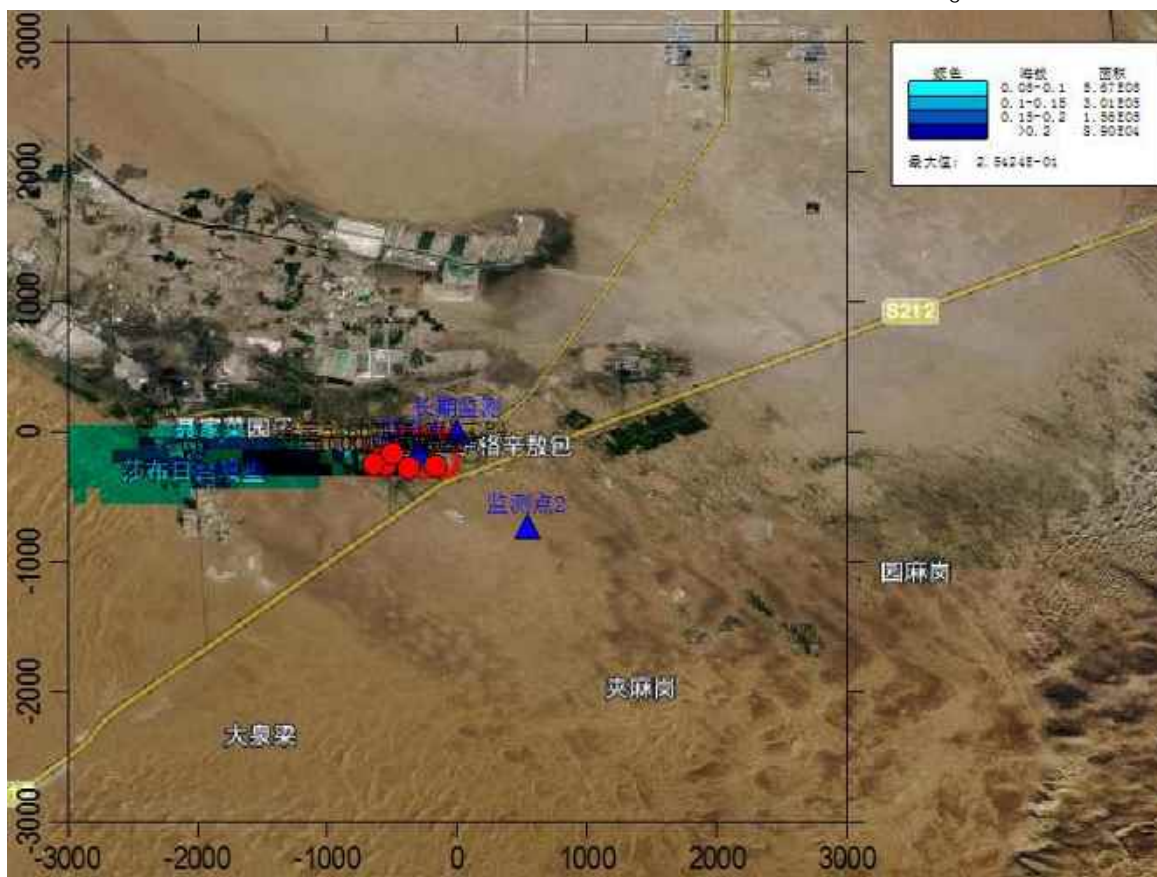
6.2-16 HCl

1h

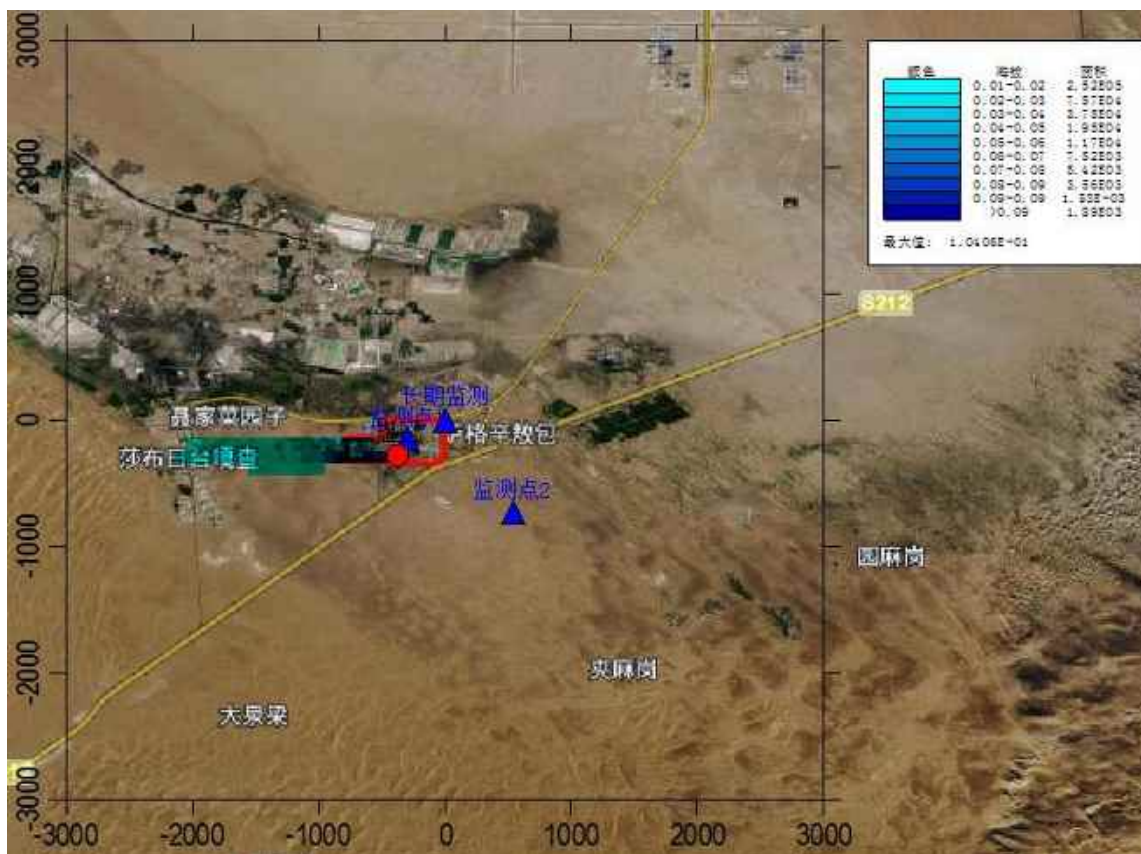
ug/m³



6.2-17 HCl ug/m³



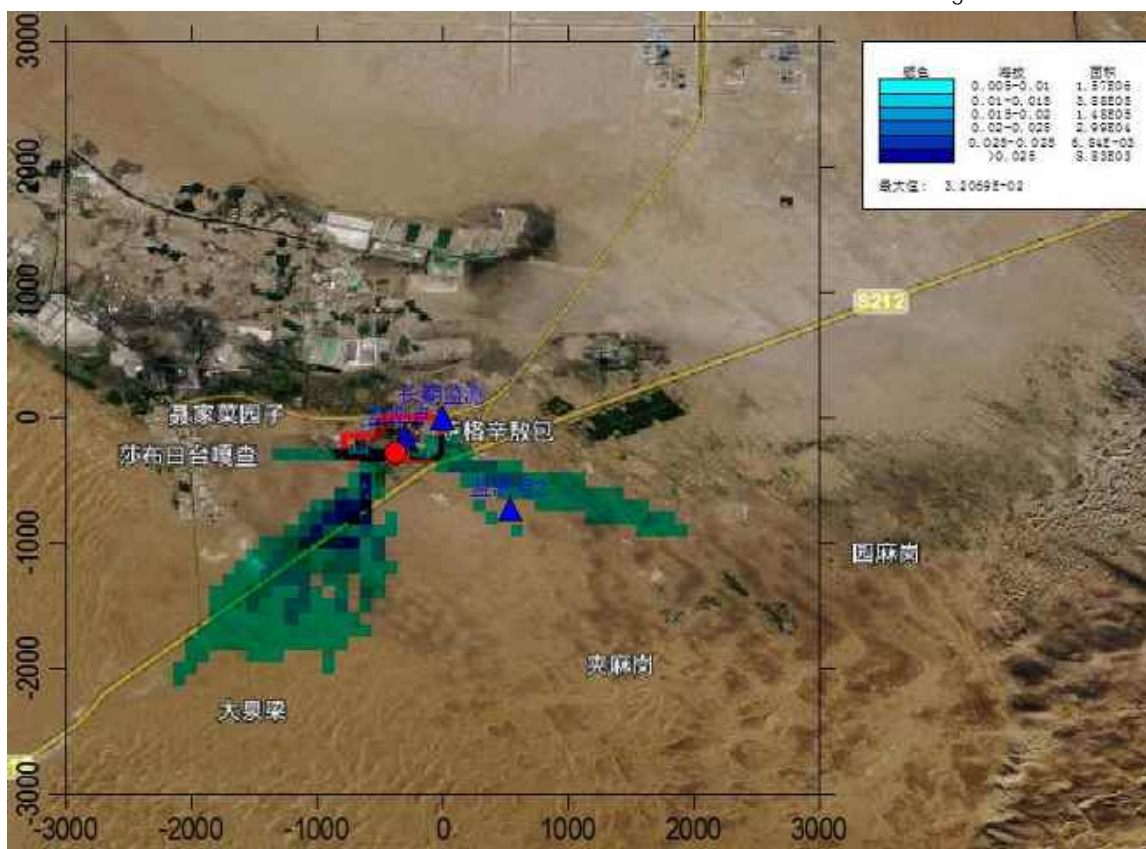
6.2-18 NH₃ 1h ug/m³



6.2-19

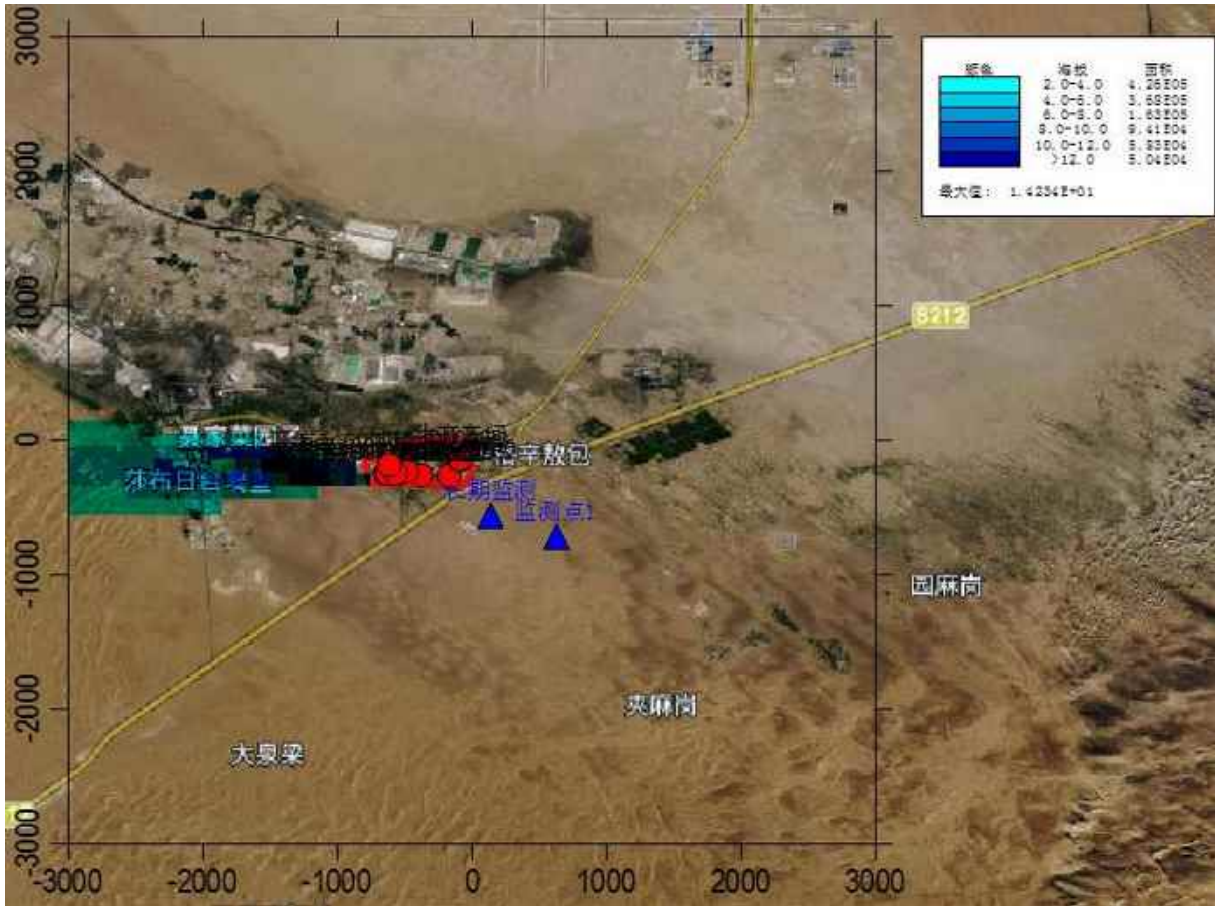
1h

ug/m³



6.2-20

ug/m³



6.2-21 TVOC 8h ug/m³

9

+

a SO₂ NO_x TSP HCl 16.10%

36.47% 68.16% 141.52% 100.11% HCl

b SO₂ NO_x TSP 14.6% 27.15% 79.62%

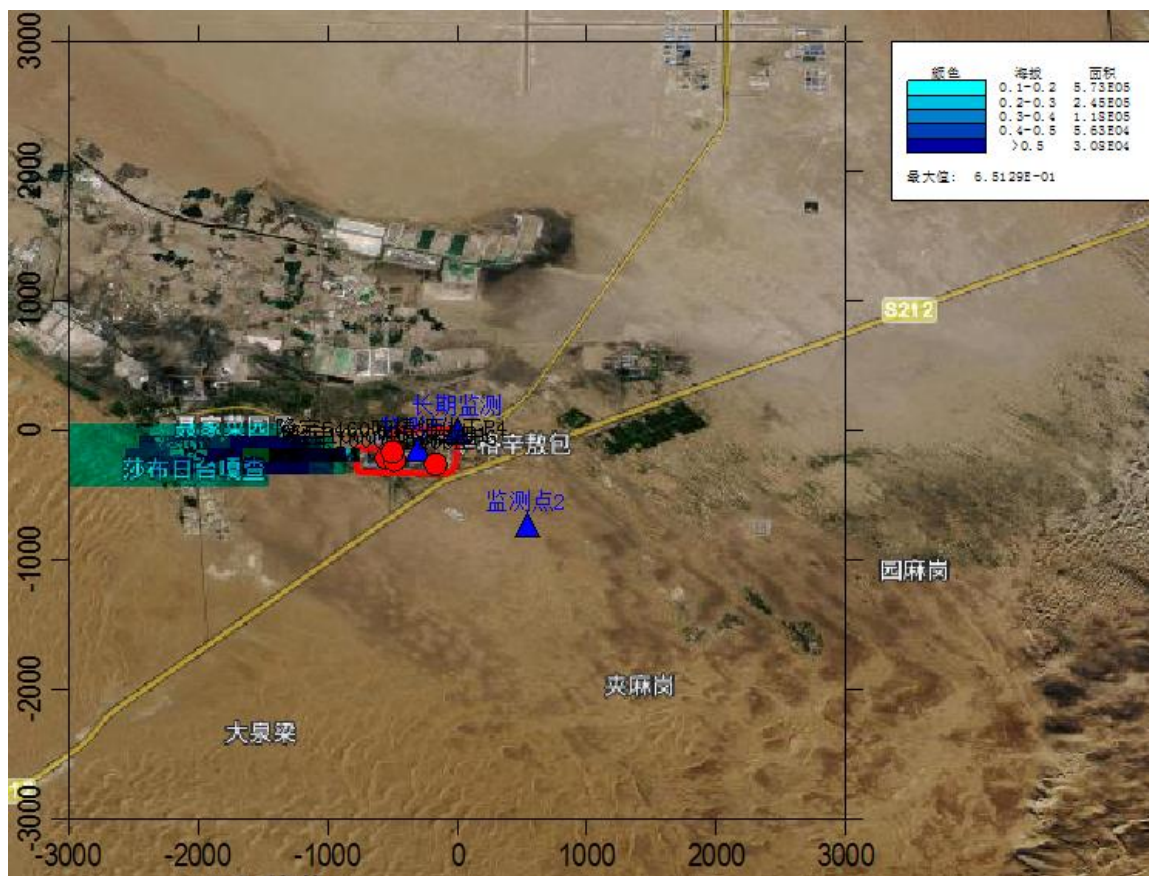
c TVOC 8h 41.34%

d SO₂ NO_x TSP HCl NH₃ 1h 0.96%

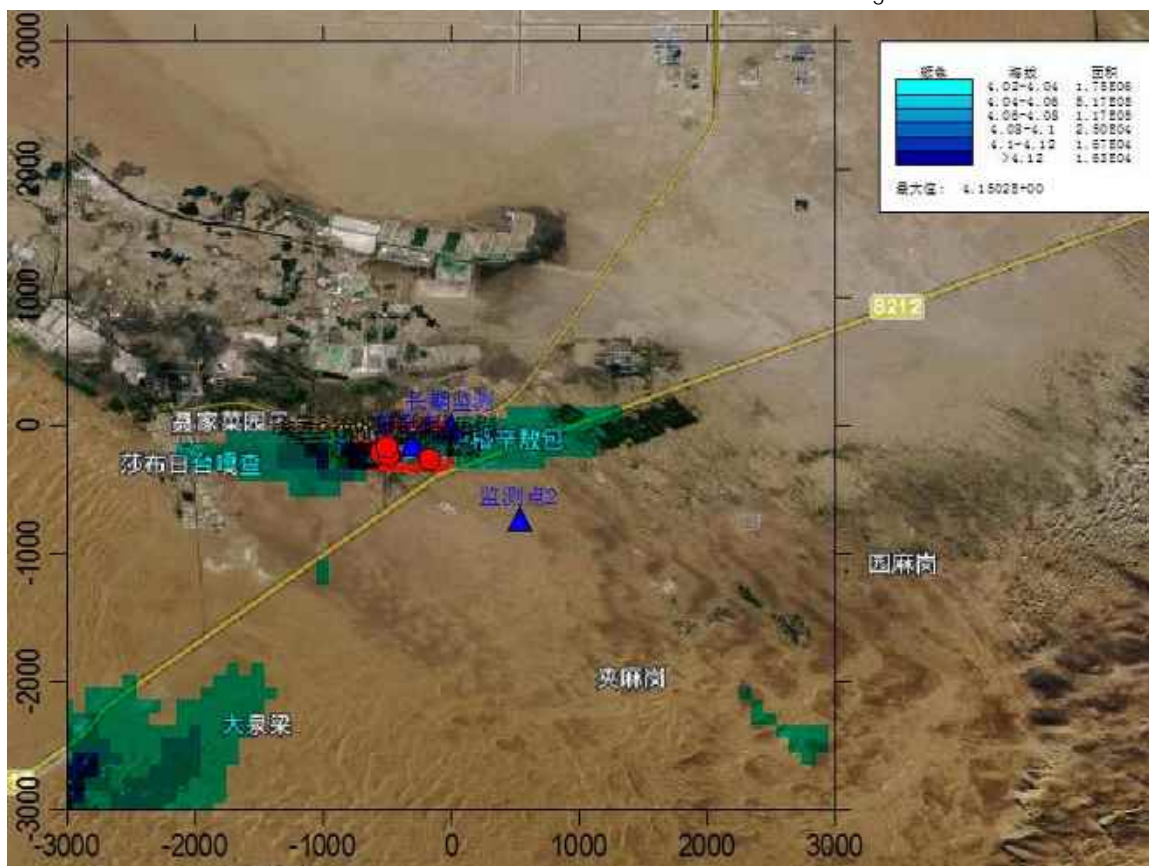
49.21% 27.19% 106.21% 4.42% 33.86% HCl 1h

6.2-12

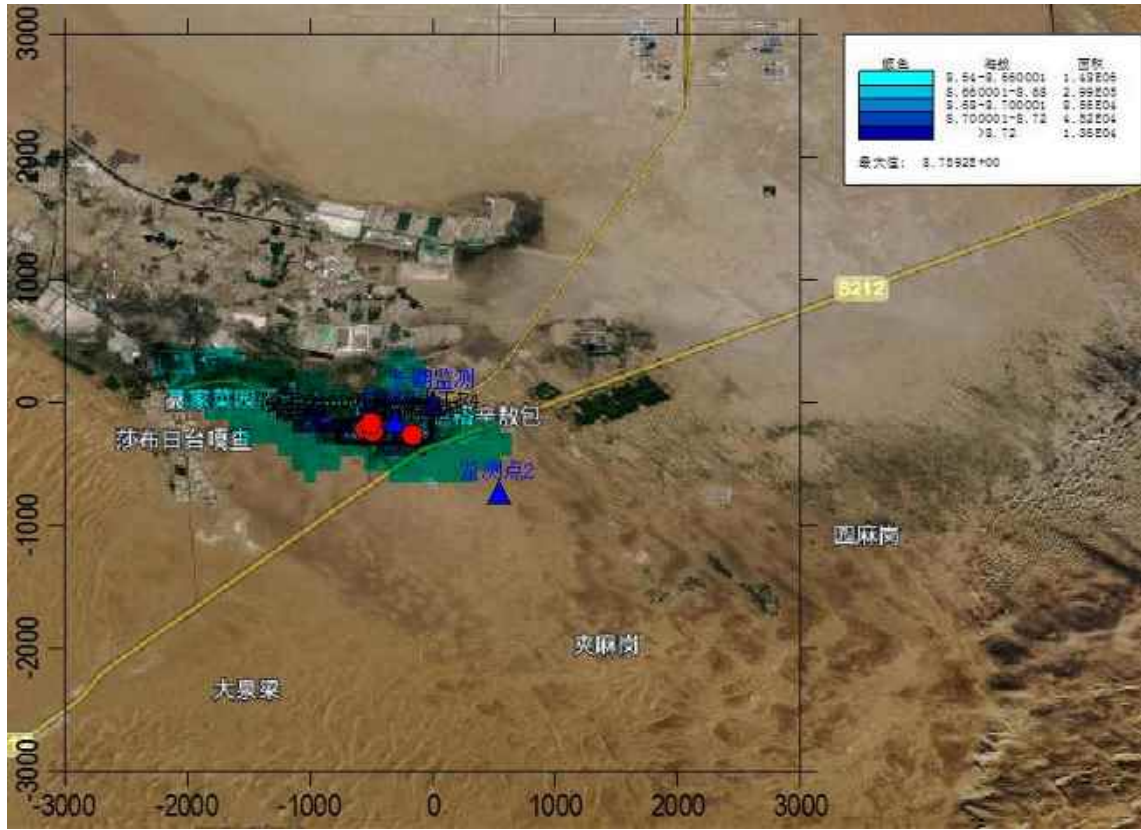
			$\mu\text{g}/\text{m}^3$		$(\mu\text{g}/\text{m}^3)$	$(\mu\text{g}/\text{m}^3)$	$(\mu\text{g}/\text{m}^3)$	%	
SO ₂	-600,-300	1	4.79296	22091218	0.0	4.79296	500.0	0.96	
	-700,-200		0.89025	220810	68.0	68.89025	150.0	45.75	
	-700,-200		0.13724		8.0	8.13724	60.0	13.17	
NO _x	-600,-300	1	123.0145	22081519	0.0	123.0145	250.0	49.21	
	-600,-100		23.8491	220620	37.0	60.8491	100.0	39.31	
	-700,-100		3.3844		12.0	15.3844	50.0	29.97	
TSP	-200,-400	1	69.71345	22102124	139.0	208.71345	900.0	23.19	
	-100,-200		13.76947	221220	139.0	152.76947	300.0	50.92	
	200,-300		1.9514		139.0	140.9514	200.0	70.48	
HCl	1800,-3000	1	43.10516	22010304	36.0	79.10516	50.0	106.21	
	-700,-200		11.22806	220417	36.0	47.22806	15.0	141.52	
	-700,-200		1.60275		36.0	37.60275	/	/	/
NH ₃	-400,-300	1	3.83459	22042407	64.0	67.83459	200.0	33.92	
	-300,-300		0.47241	220526	64.0	64.47241	/	/	/
	-300,-300		0.08432		64.0	64.08432	/	/	/
	-400,-300	1	1.58979	22042407	52.0	53.58979	300.0	17.86	
	-400,-300		0.10785	221114	52.0	52.10785	100.0	52.11	
	-300,-300		0.02252		52.0	52.02252	/	/	/
TVOC	-800,-200	1	101.5557	22060606	280.0	381.5557	1200.0	31.8	
	-700,-200		21.91548	220707	280.0	301.9155	/	/	/
	-800,-200		3.2504		280.0	283.2504	/	/	/



6.2-22 SO₂ 1h ug/m³

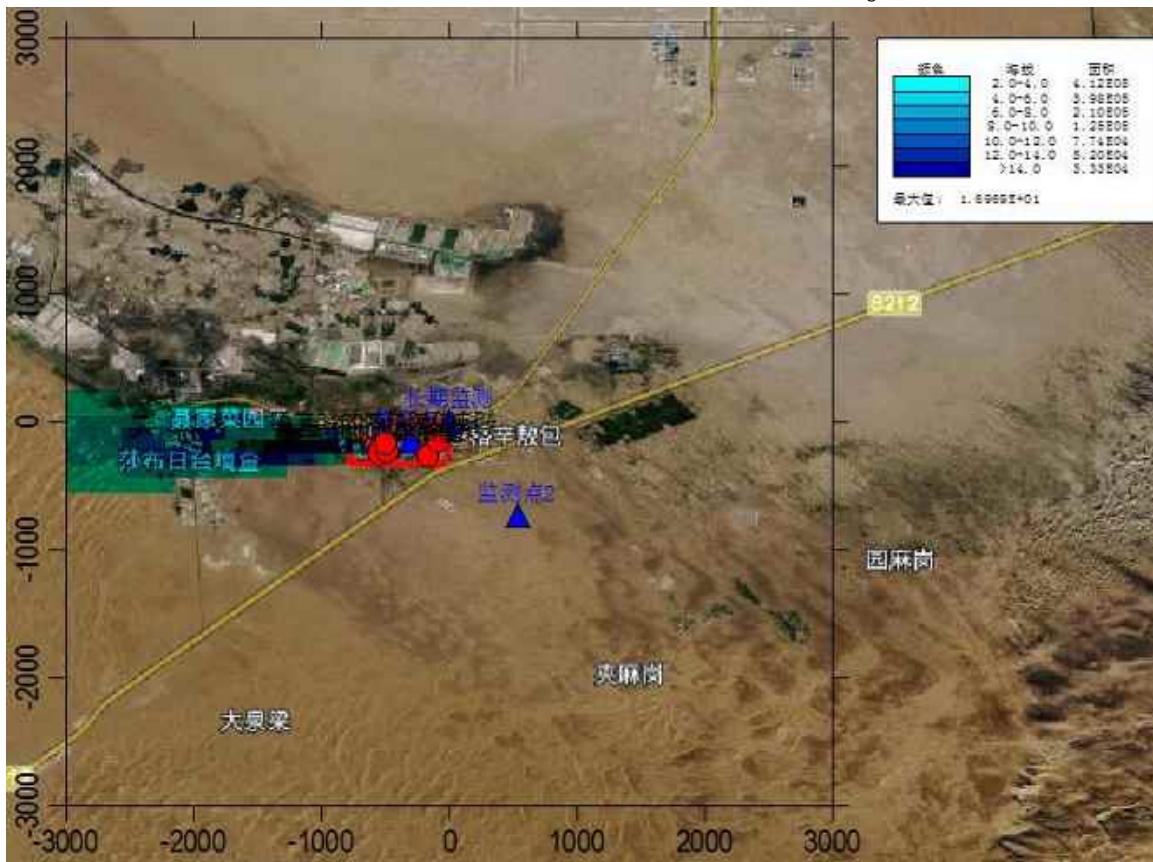


6.2-23 SO₂ ug/m³



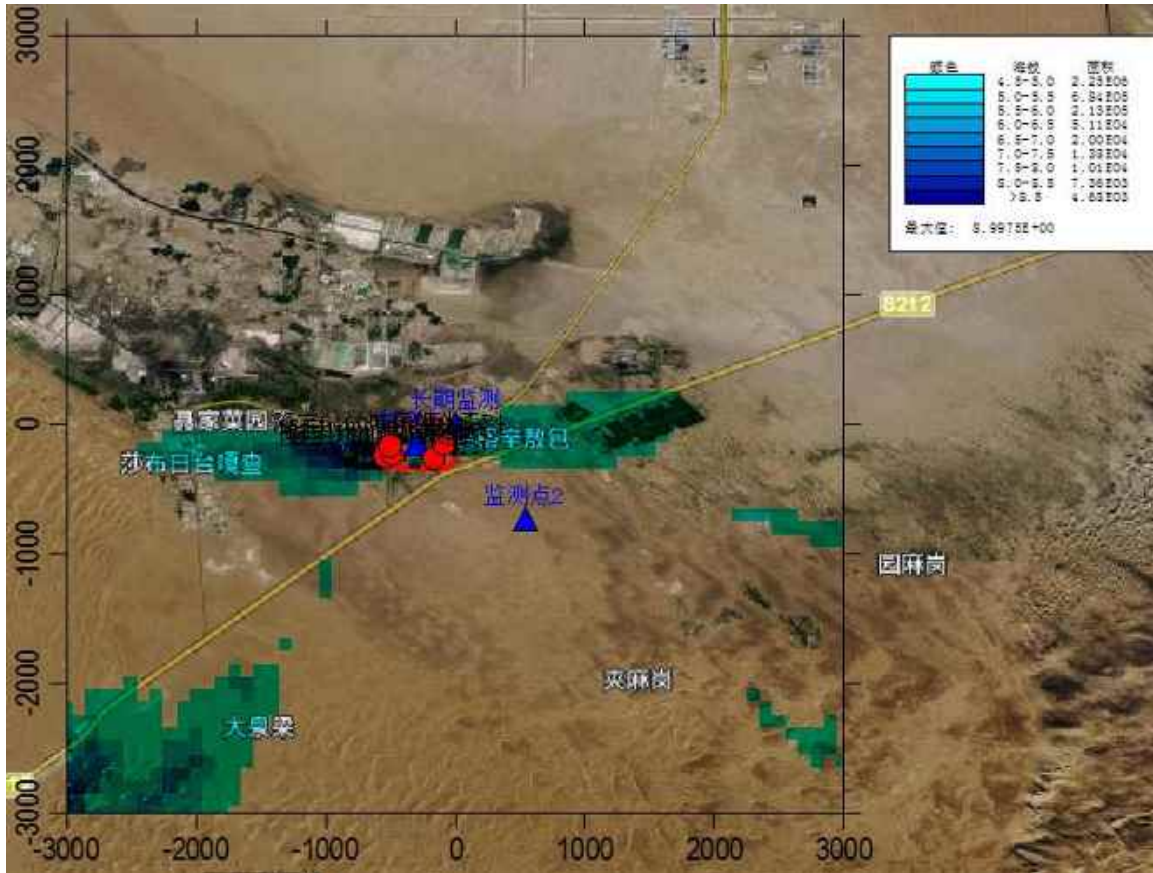
6.2-24 SO₂

ug/m³

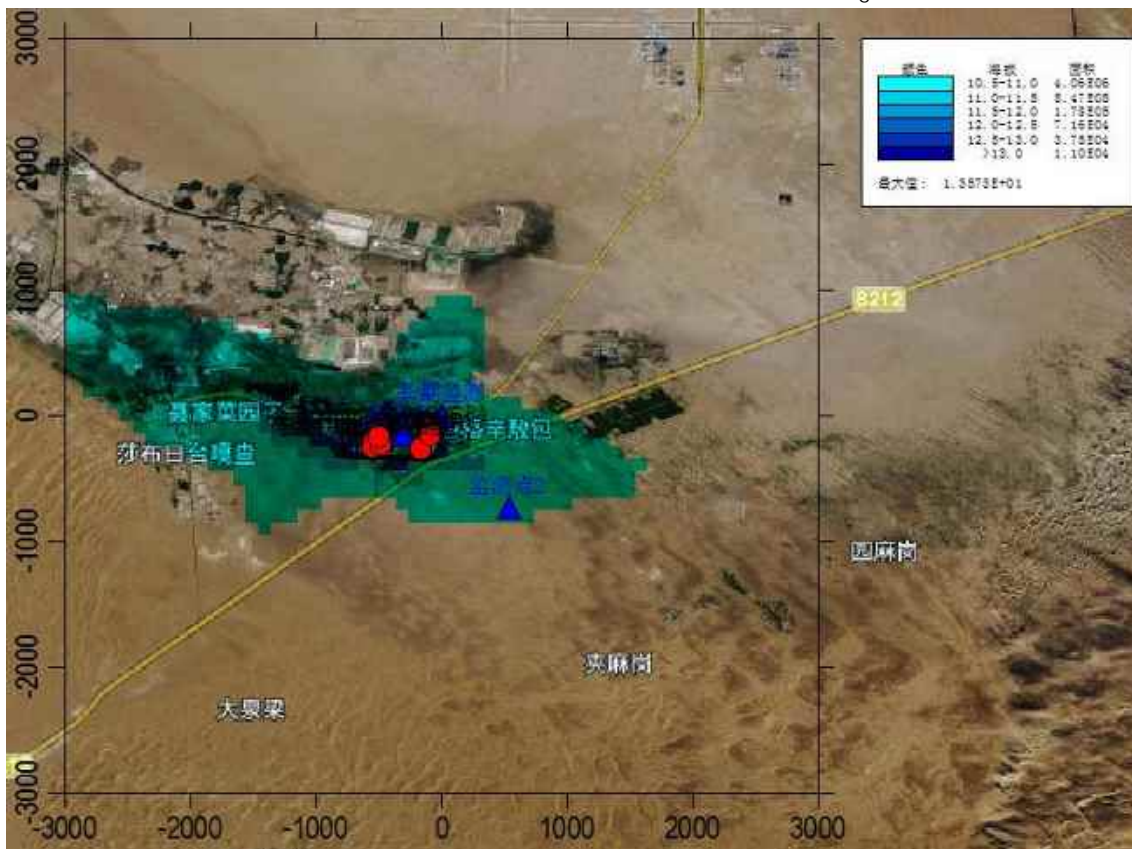


6.2-25 NO_x 1h

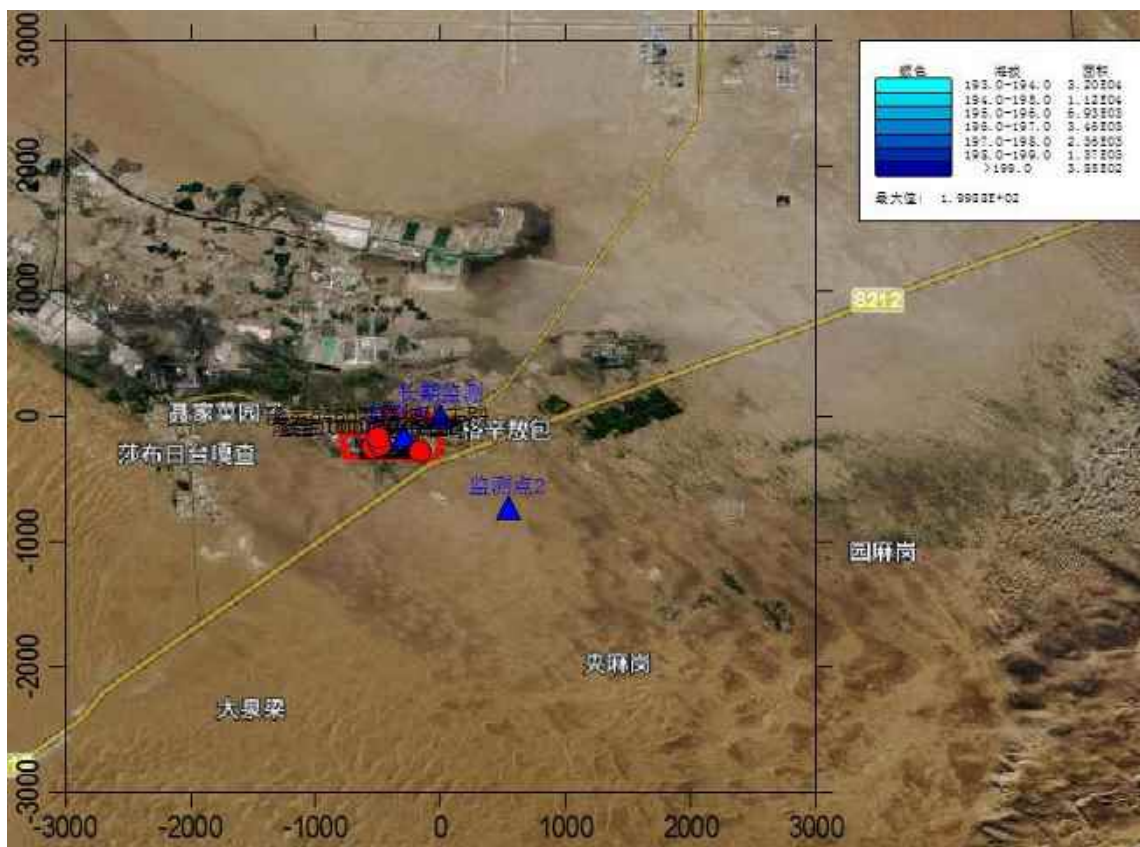
ug/m³



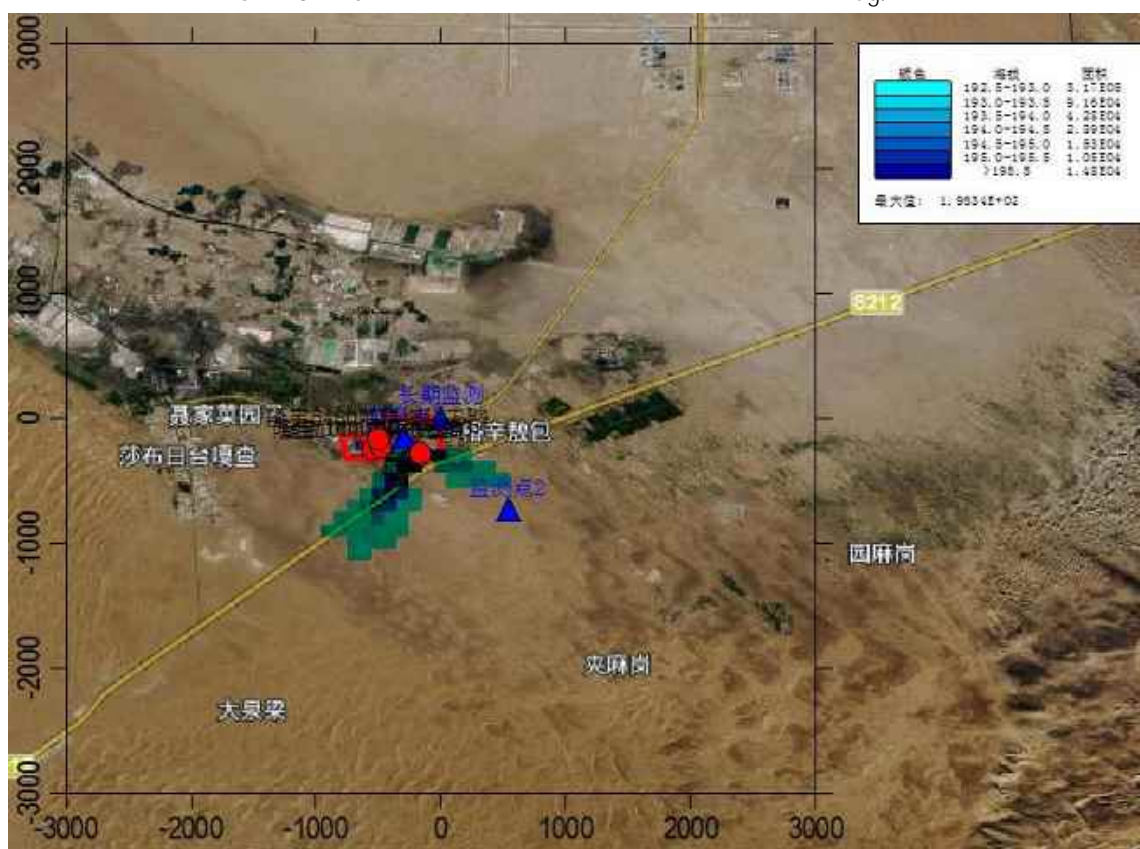
6.2-26 NO_x ug/m³



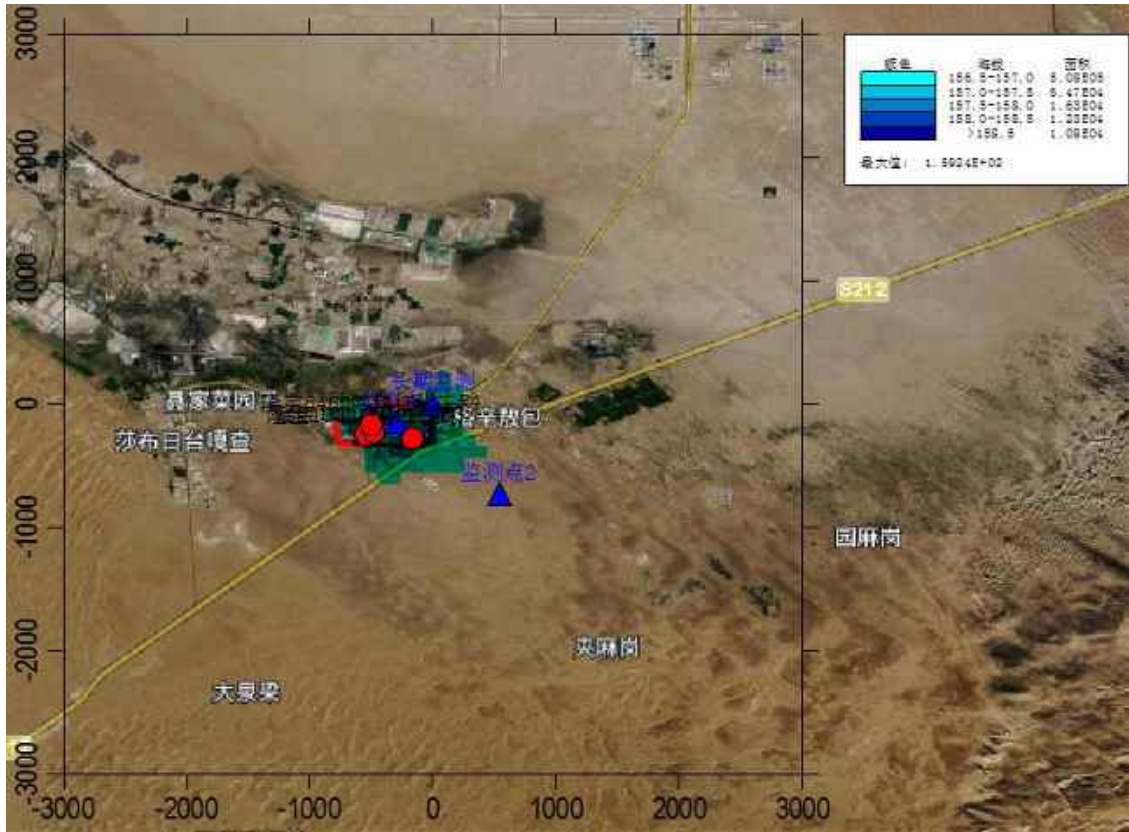
6.2-27 NO_x ug/m³



6.2-28 TSP 1h ug/m³

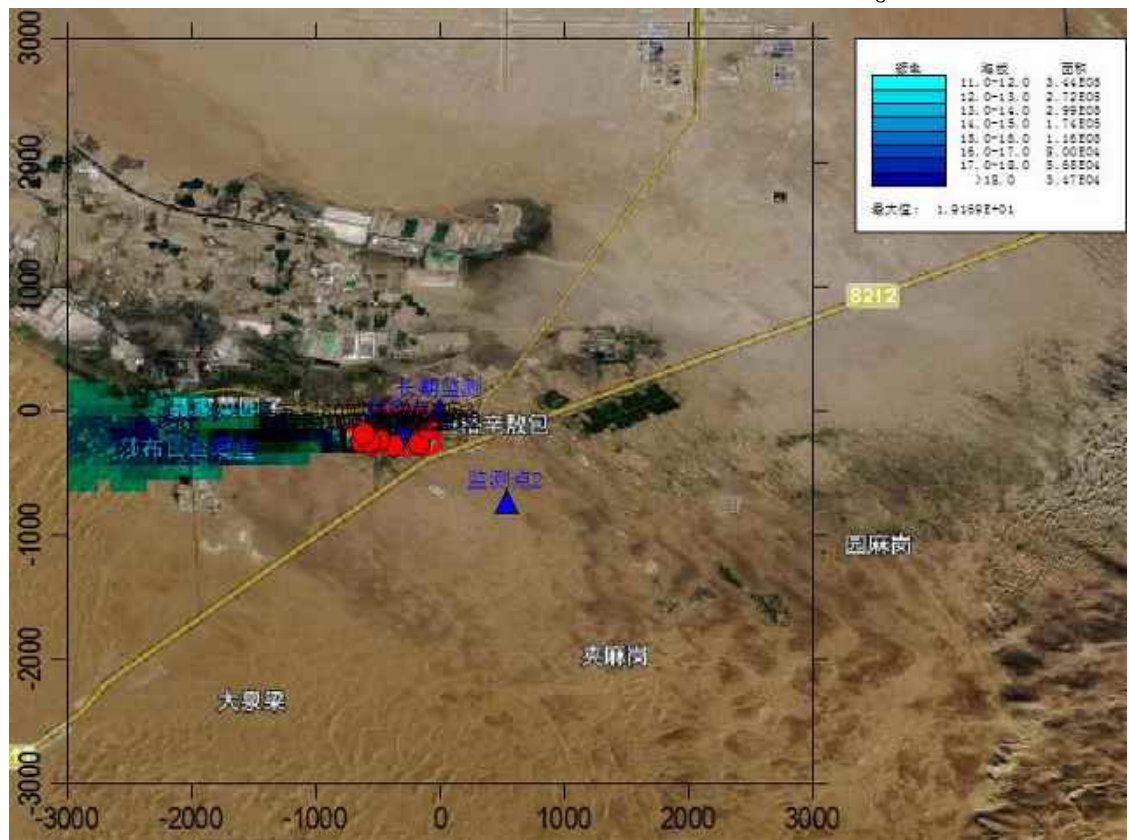


6.2-29 TSP ug/m³



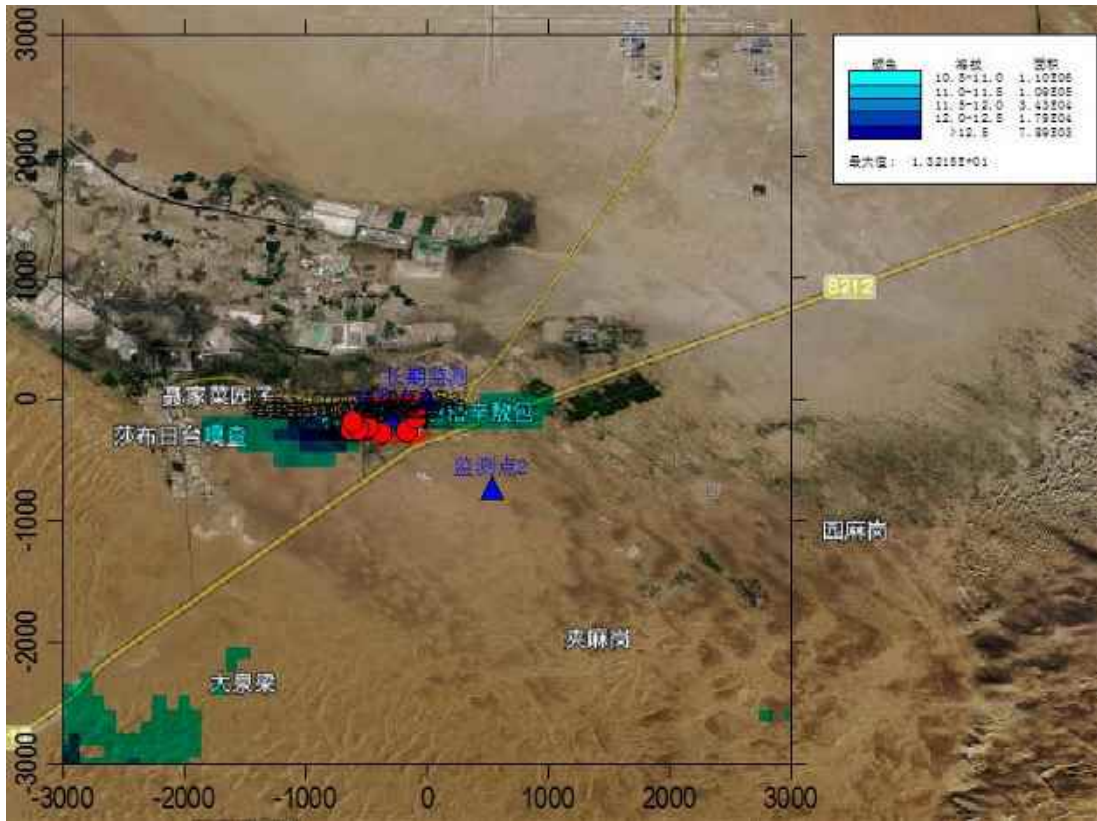
6.2-30 TSP

$\mu\text{g}/\text{m}^3$

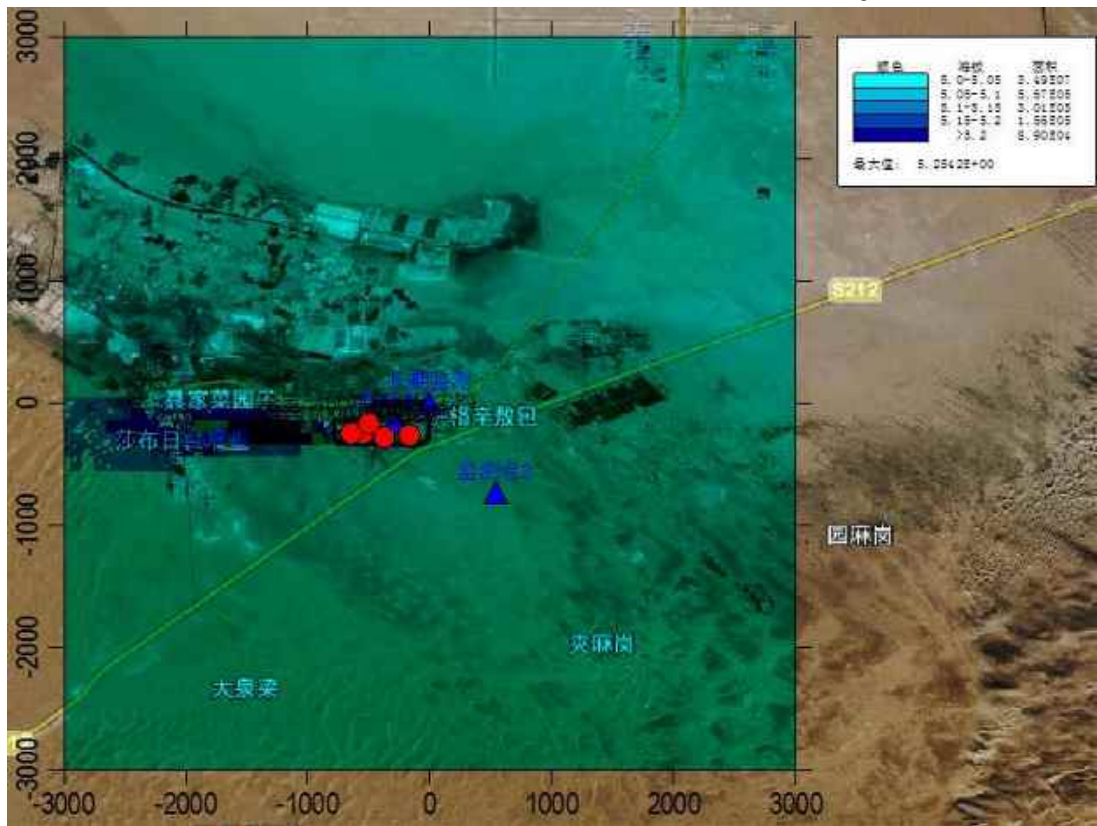


6.2-31 HCl 1h

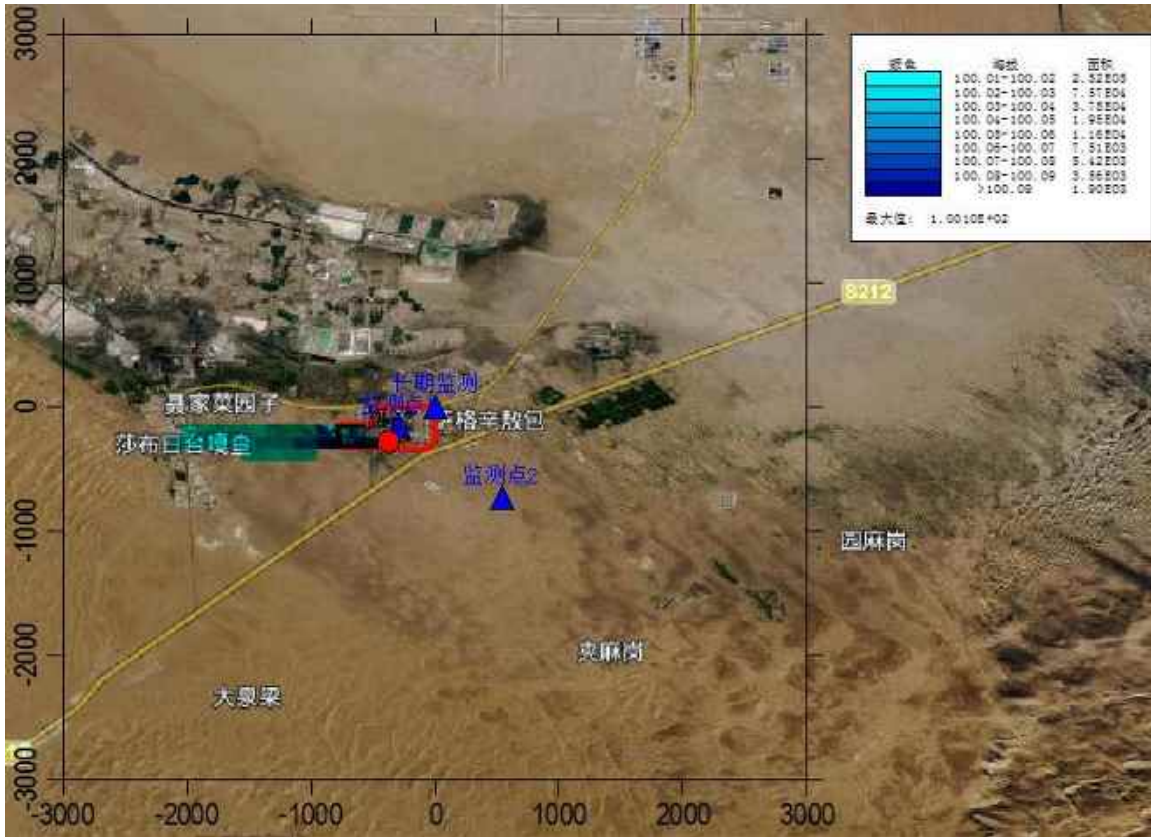
$\mu\text{g}/\text{m}^3$



6.2-32 HCl ug/m³



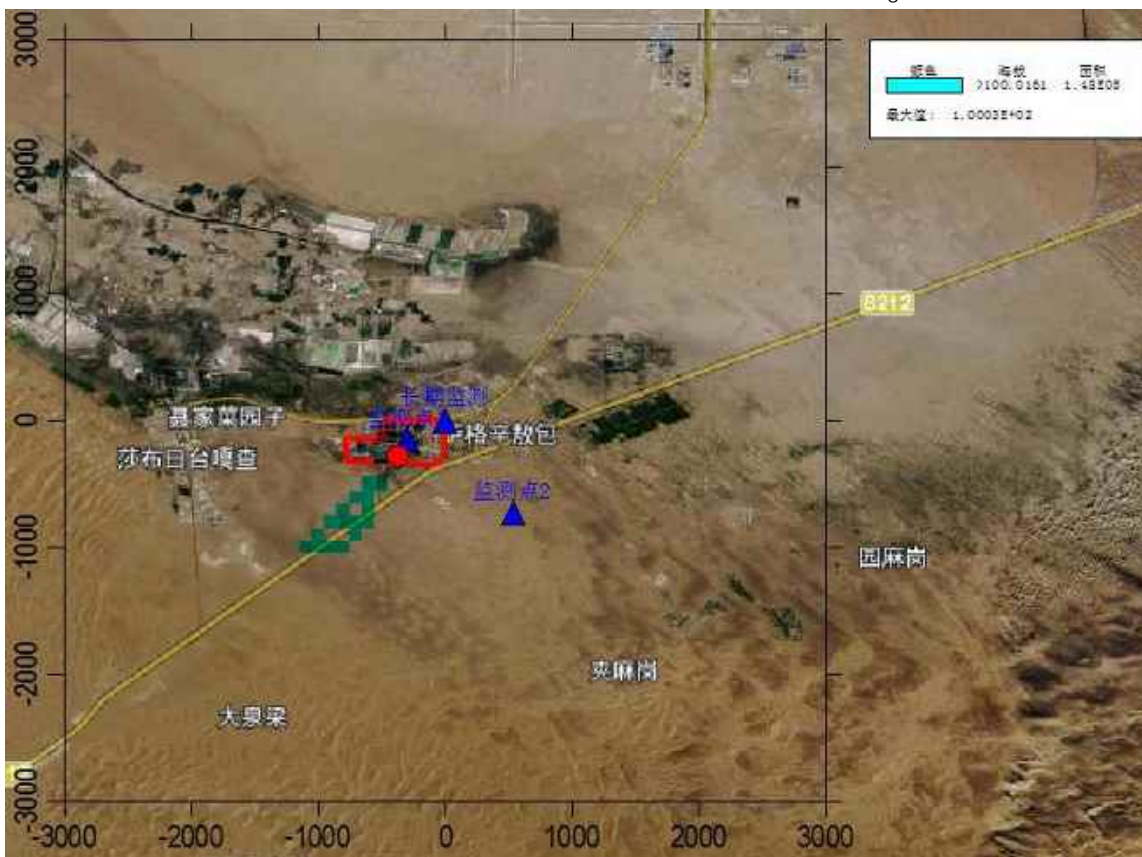
6.2-33 NH₃ 1h ug/m³



6.2-34

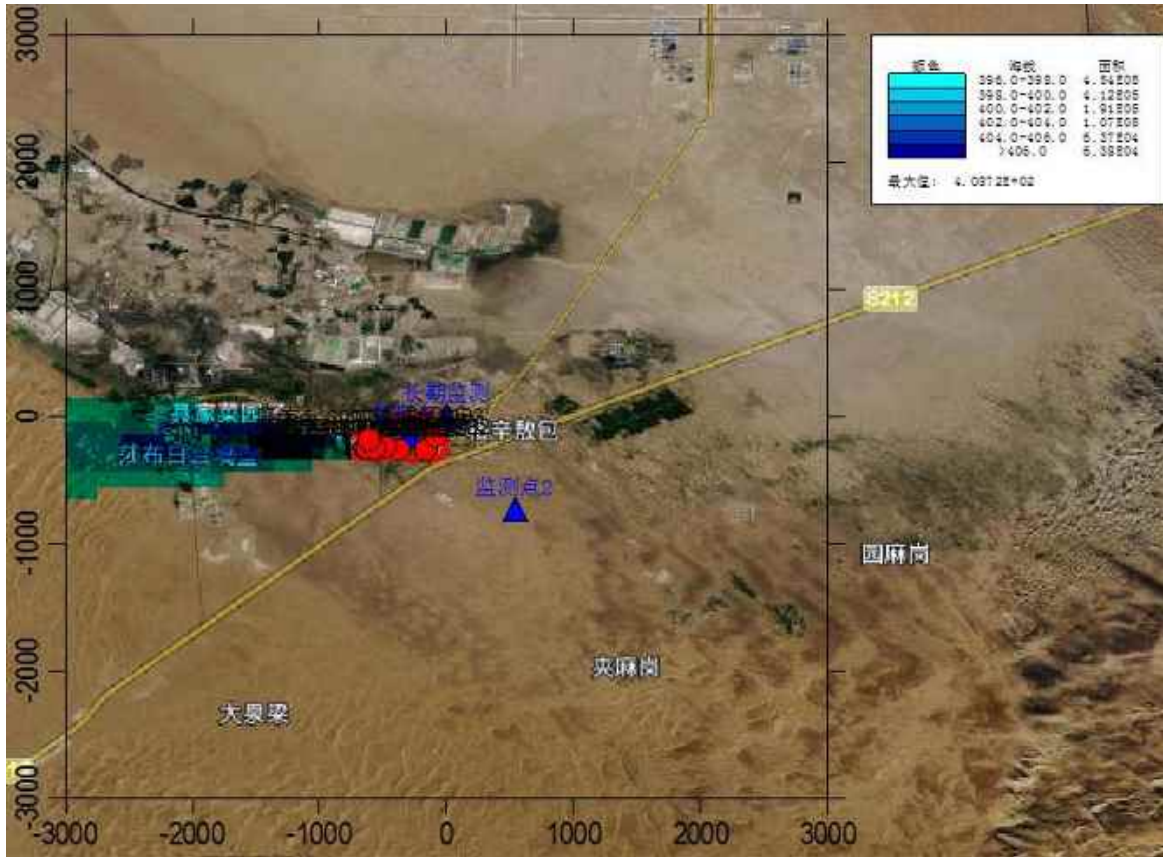
1h

ug/m³



6.2-35

ug/m³



6.2-36 TVOC 8h $\mu\text{g}/\text{m}^3$

10

6.2-13

			$\mu\text{g}/\text{m}^3$			%	
SO ₂	1h	2.92431	22010219	500.0	0.58		
		0.38698	220526	150.0	0.26		
		0.05988		60.0	0.10		
NO _x	1h	9.59682	22010219	250.0	3.84		
		1.16085	220417	100.0	1.16		
		0.19315		50.0	0.39		
HCl	1h	4.24638	22010304	50.0	8.49		
		1.33366	220504	15.0	8.89		
NH ₃	1h	0.0854	22010219	200.0	0.04		
TVOC	8h	2.05511	22123102	1200.0	0.17		

6.2-12

11

HJ2.2-2018

500m

50m× 50m

6.2-14

6.2-14 /

		$\mu\text{g}/\text{m}^3$	%		
SO ₂	1	4.79296	0.96	500.0	
		0.89025	0.59	150.0	
NO _x	1	123.0145	49.21	250.0	
		23.8491	23.85	100.0	
TSP	1	52.68423	5.85	900.0	
		12.4809	4.16	300.0	
HCl	1	43.10516	86.21	50.0	
		11.22806	74.85	15.0	
NH ₃	1	3.83459	1.92	200.0	
	1	1.58979	0.53	300.0	
		0.10785	0.11	100.0	
TVOC	1	101.549	8.46	1200.0	

6.2.3

6.2-15 6.2-17

6.2-15

			mg/m^3	kg/h	t/a	
1	2#	DA004		27.8	1.001	
2			VOCs	10.6	0.053	0.378
3	DA005		SO ₂	1.4	0.007	0.051
4			NO _x	69.4	0.347	2.496
5				12.4	0.062	0.448
6				0.64	0.0032	0.023
7			VOCs	6.6	0.033	0.235
8	DA006		NO _x	5.0	0.015	0.105
9				1.667	0.005	0.037
10			VOCs	10.0	0.03	0.216
					1.486	
					VOCs	0.829
					SO ₂	0.051
					NO _x	2.601

		0.023
		1.486
	VOCs	0.829
	SO ₂	0.051
	NO _x	2.601
		0.023

6.2-16

							t/a /	
						mg/m ³ /		
1					1	GB14554-93	1.5	0.047
					2	GB16297-1996	1.2	0.019
							0.2	0.00075
2			VOCs			DB12/524-2020	2.0	0.334
							0.023	

		0.047
		0.019
		0.00075
		0.334
	VOCs	0.023

6.2-17

		t/a
1		1.48675
2	VOCs	0.852
3	SO ₂	0.051
4	NO _x	2.601
5		0.07
6		0.019
7		0.334

6.2.4

a

SO₂ NO_x TSP HCl NH₃ TVOC

100%

b

SO₂ NO_x TSP

30%

c

SO₂ NO_x TSP HCl NH₃

TVOC

HCl

43.10516μg/m³

86.21%

53.10516μg/m³

106.21%

HCl

11.22806μg/m³

74.85%

21.22806μg/m³

141.52%

E

		=50km		5	50km			=5 km
	SO ₂ +NO _x	2000t/a	500 ~ 2000t/a					500 t/a
		(SO ₂ NO _x) (HCl NH ₃ TVOC)					PM _{2.5} PM _{2.5}	
						D		
		2021						
		AERMOD	ADMS	AUSTAL200	EDMS/AED	CALPUF		
				O	T	F		
		50km		5			50km	=5km
		(SO ₂ NO _x TSP HCl NH ₃)				PM _{2.5}		

		TVOC)		PM _{2.5}
		C _{本项目} 100%		C _{本项目} 100%
		C _{本项目} 10%	C _{本项目} 10%	C _{本项目} 10%
		C _{本项目} 30%	C _{本项目} 30%	C _{本项目} 30%
1h	1 h	C _{非正常} 100%	C _{非正常} 100%	C _{非正常} 100%
		C _{叠加}		C _{叠加}
		k -20%		k -20%
		HCl NH ₃ SO ₂ NO _x TSP TVOC		
		HCl NH ₃ SO ₂ NO _x TSP TVOC	2	
		0 m		
		SO ₂ 0.051 t/a NO _x 2.601 t/a	TVOC: 0.829 t/a	
		" "	" " " "	

6.3

pH

$$V=1260m^3$$

6.4

6.4.1

-

—

20

25km

250m

NE

AnZ

(J)

(K)

Q₁₋₂

(Q₃)

(Q₄)

6.4-1

6.4-1

6.4-1				
				m
			Q ₄ ^{eoI}	1-5
			Q ₄ ^{al+pl}	2-5
			Q ₄ ^I	2-15
			Q ₃ ^{pl}	30-40
			Q ₃ ^I	32-70
			Q ₂ ^{pl}	3-60
			Q ₂ ^I	30-50
			Q ₁ ^{pl}	30-100
			Q ₁ ^I	30-70
				N ₂	>100
		K ₁	432-1564	
		J ₃	1906	
		AnZ	1778	

1

AnZ

1778m

2

Mz

1

J₃

(J₃)

1906m

2

K₁

432 1564m

3

Kz

1

N₂

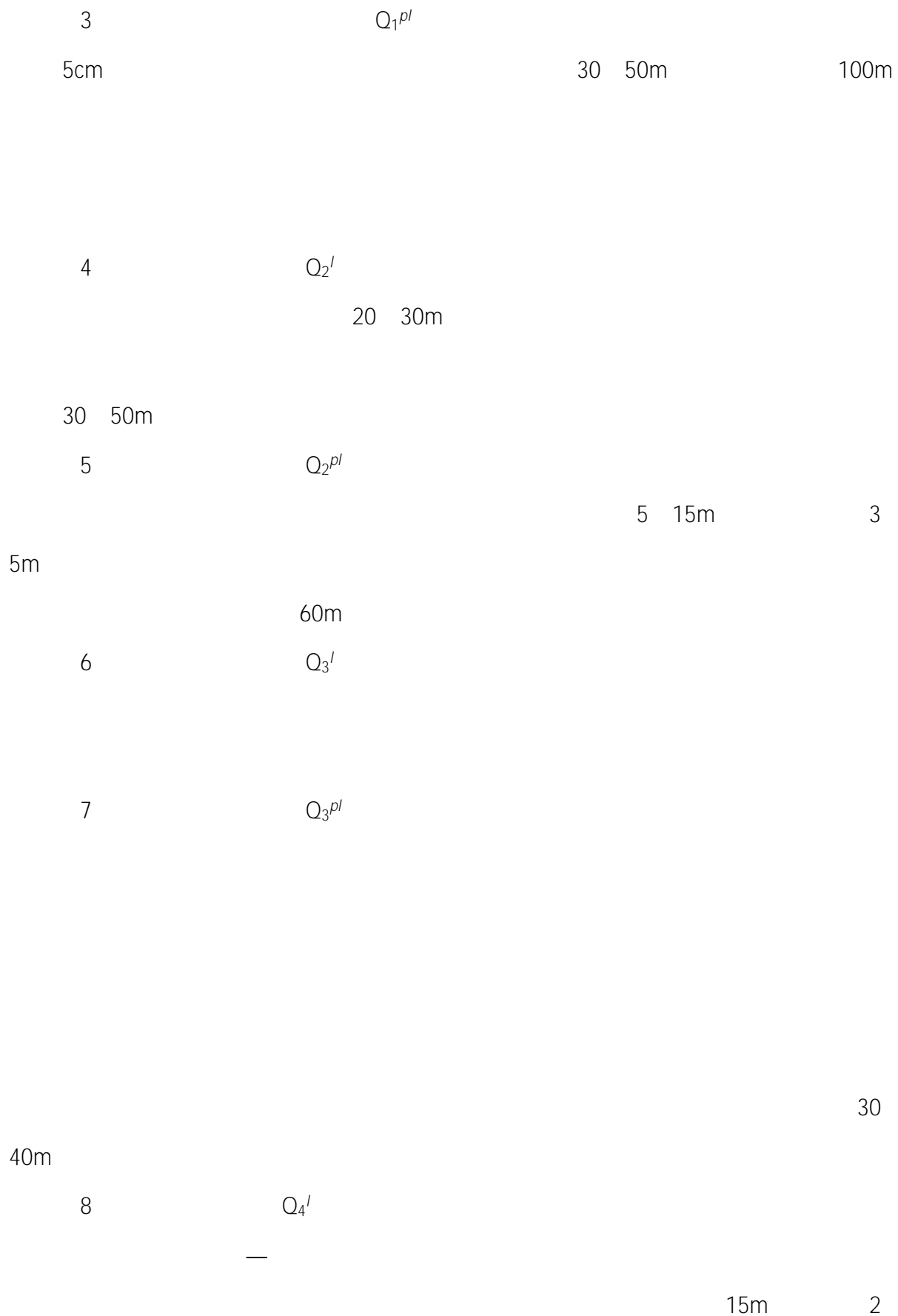
50m

100m

100m

2

Q₁'



3m

9

Q_4^{al+pl}

1 20mm

2 5m

10

Q_4^{eol}

1 5m

6.4.2

1

2

3

NEE

1

NEE

150 300m

10 80m

30 150m

1000

3000m³/d

1 3g/L

2

100m³/d

3 5g/L

3 15

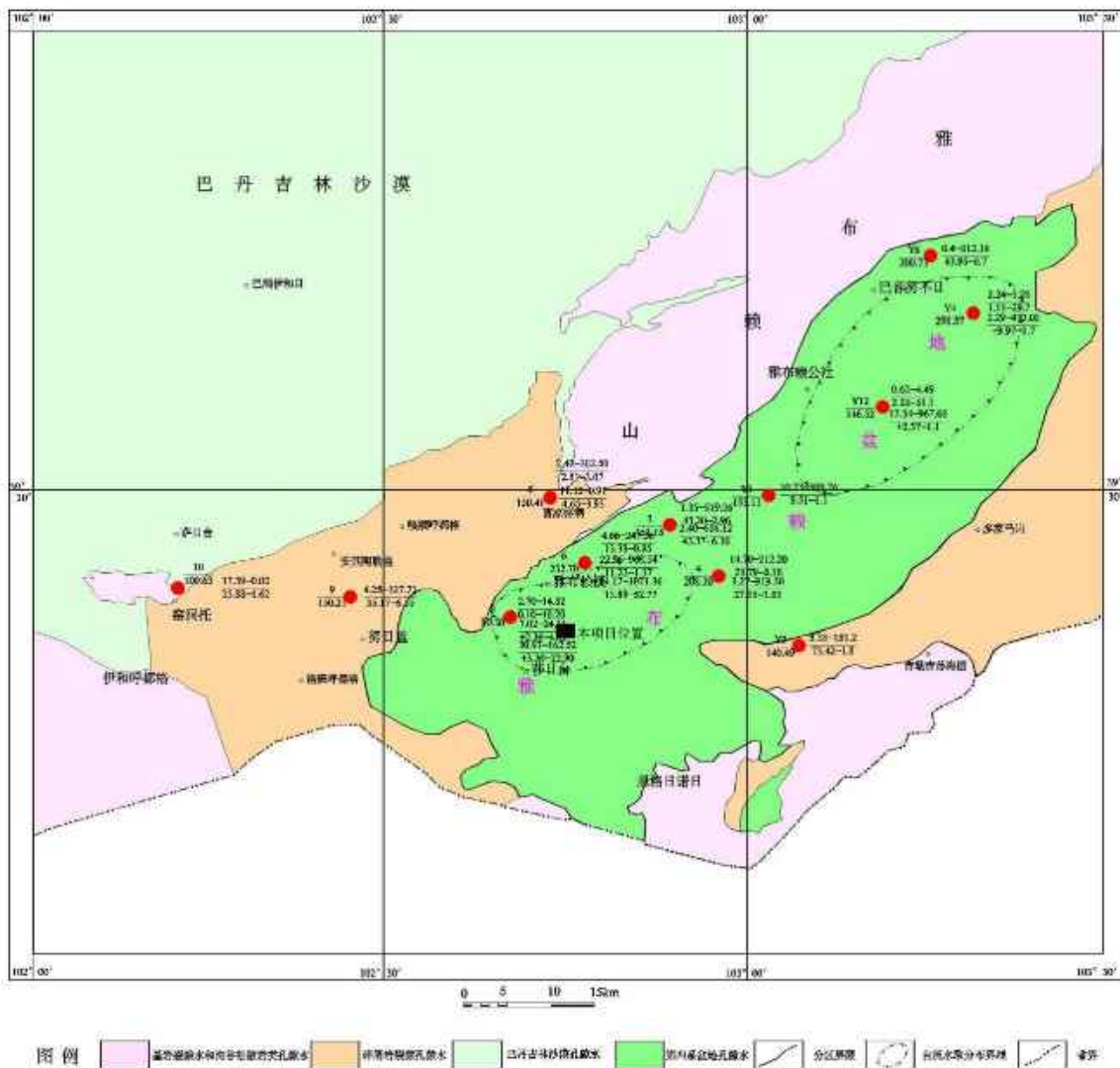
1

10m

10 82m

100

3000m³/d



6.4-1

6.4.3

1

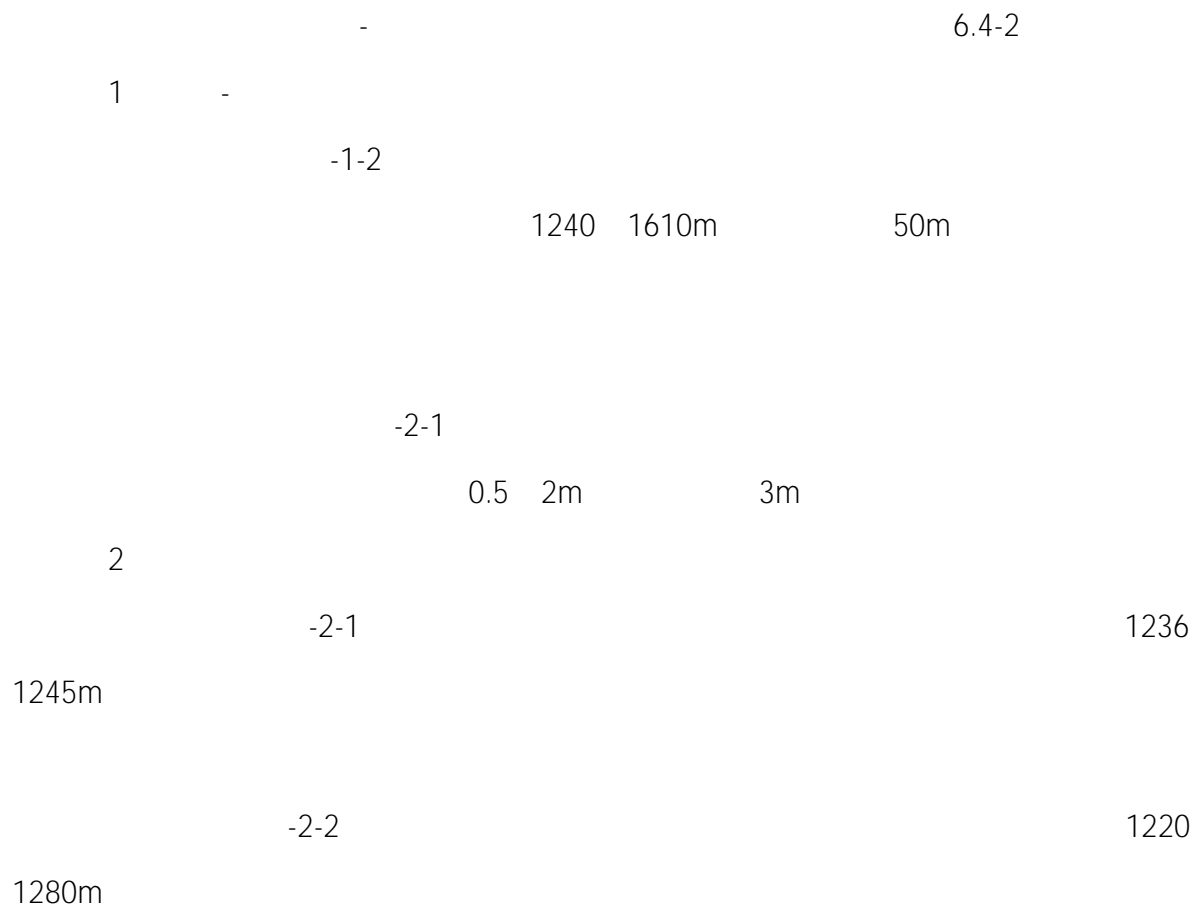
1304m

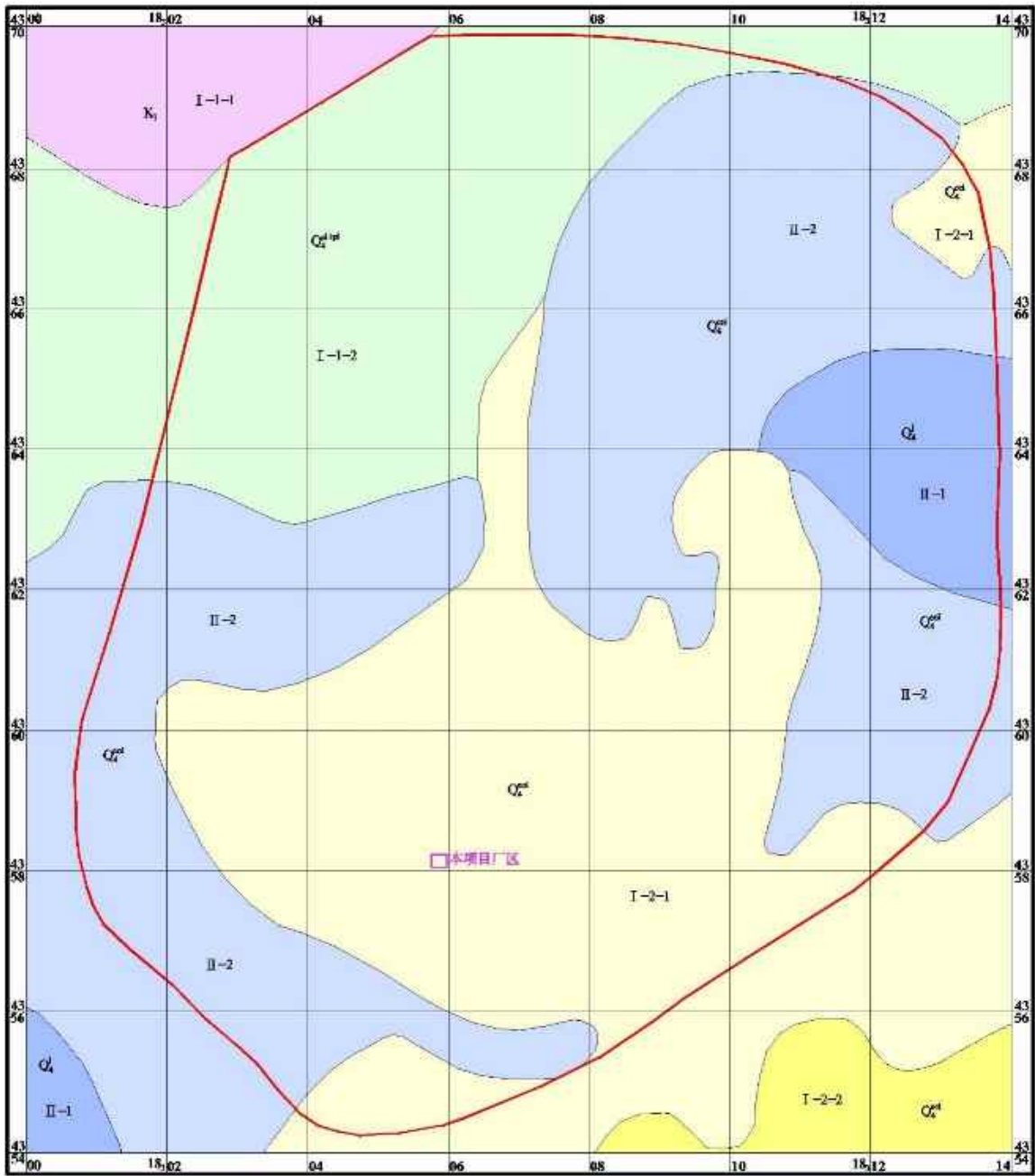
1230m

74m

1240m

2





地貌类型说明表

成因类型	侵蚀-重力堆积类型				堆积类型	
形态类型	剥蚀丘陵	剥蚀准平原	固定半固定沙丘	流动半流动沙丘	湖盆滩地	覆沙滩地
图例及代号	I-1-1	I-1-2	I-2-1	I-2-2	II-1	II-2



6.4-2

6.4.4

1

-

2

3

1

5m

2 10g/L

4-6m

Cl·SO₄-Na

10m³/d

50g/L

10mg/L

1000m³/d

	80m		100-150m		
	17.31		59.57m		
	10		5m	1080.10	2276.14m ³ /d
	3.14	13.04 g/L		1.70	3.70mg/L
Cl·SO ₄ -Na					
			500	1000m ³ /d	
				16.38	32.28m
	66.72	129.28m		593.56	796.45m ³ /d
4.51	22.31g/L		1.55	2.70mg/L	Cl·SO ₄ —Na
			100	500 m ³ /d	
				25m	10 40m
					100 500m ³ /d
	3g/L	F-		Cl·SO ₄ —Na	
			100m ³ /d		
				5m	3m
					10 20m ³ /d
	2.00	18.20g/L		Cl·SO ₄ —Na	Cl—Na
					AK7 AK8
AK9	6	7	8		
	0.47~3.35m/d				
					6 7 AK9
	0.47~1.29m/d				
				0.10	0.15
0.20		0.25			

0.10

6.4-2

	m	m ³ /d	m	m	m/d
AK9	9.37	13.9	2.85	0.1	0.47
8	4.75	14.52	2.7	0.1	1.23
7	3.45	6.48	1.1	0.1	1.23
AK7	66.72	1368.74	11.53	0.1	2.48
AK8	159.60	1452.17	3.19	0.1	3.35
6	45.25	247.36	4.66	0.1	1.29

2

3

8 2 20m 17 87m 5 35m 3 27m

1 5m

1000 m³/d

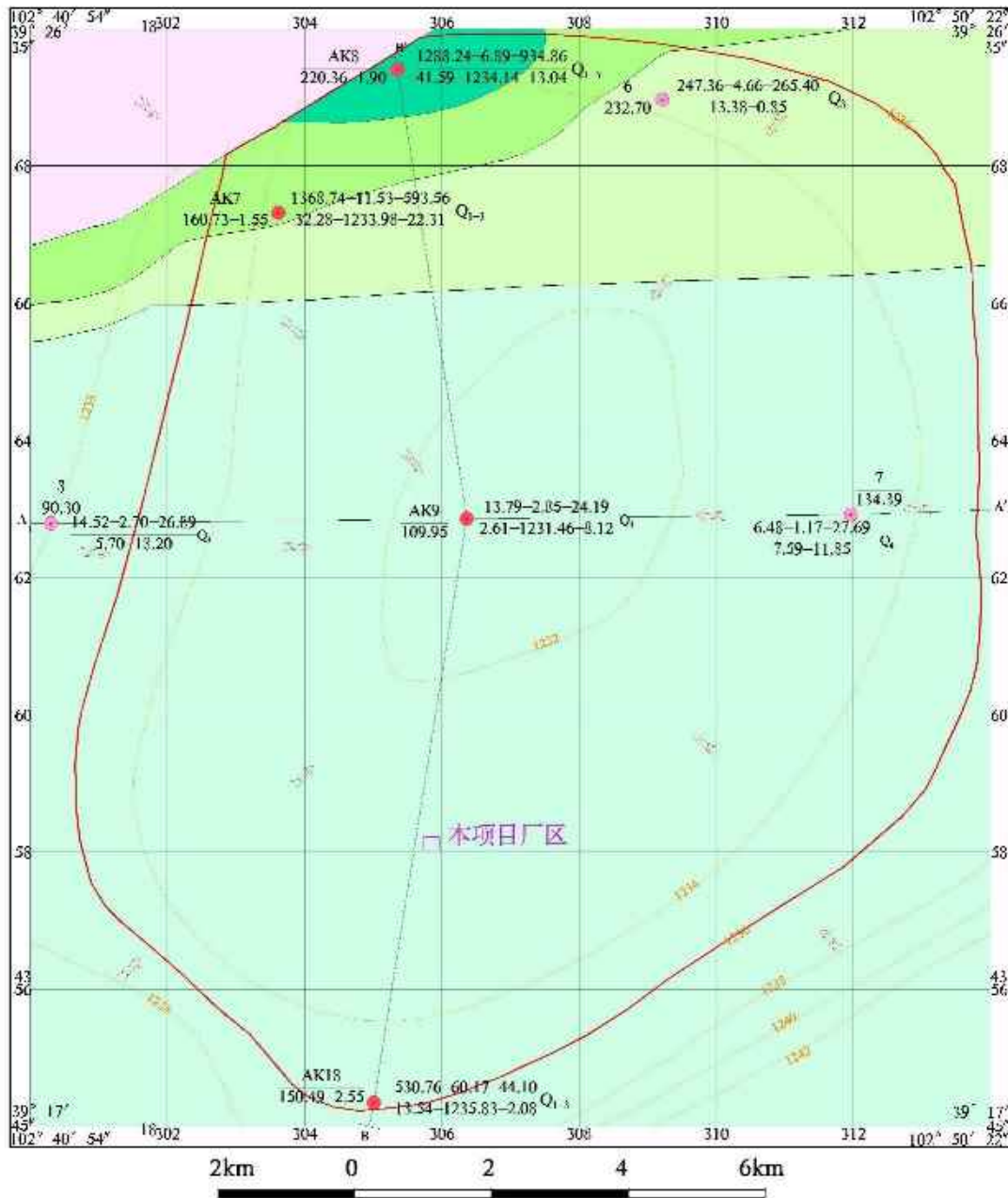
100 1000m³/d

6.4-3

6.4-4

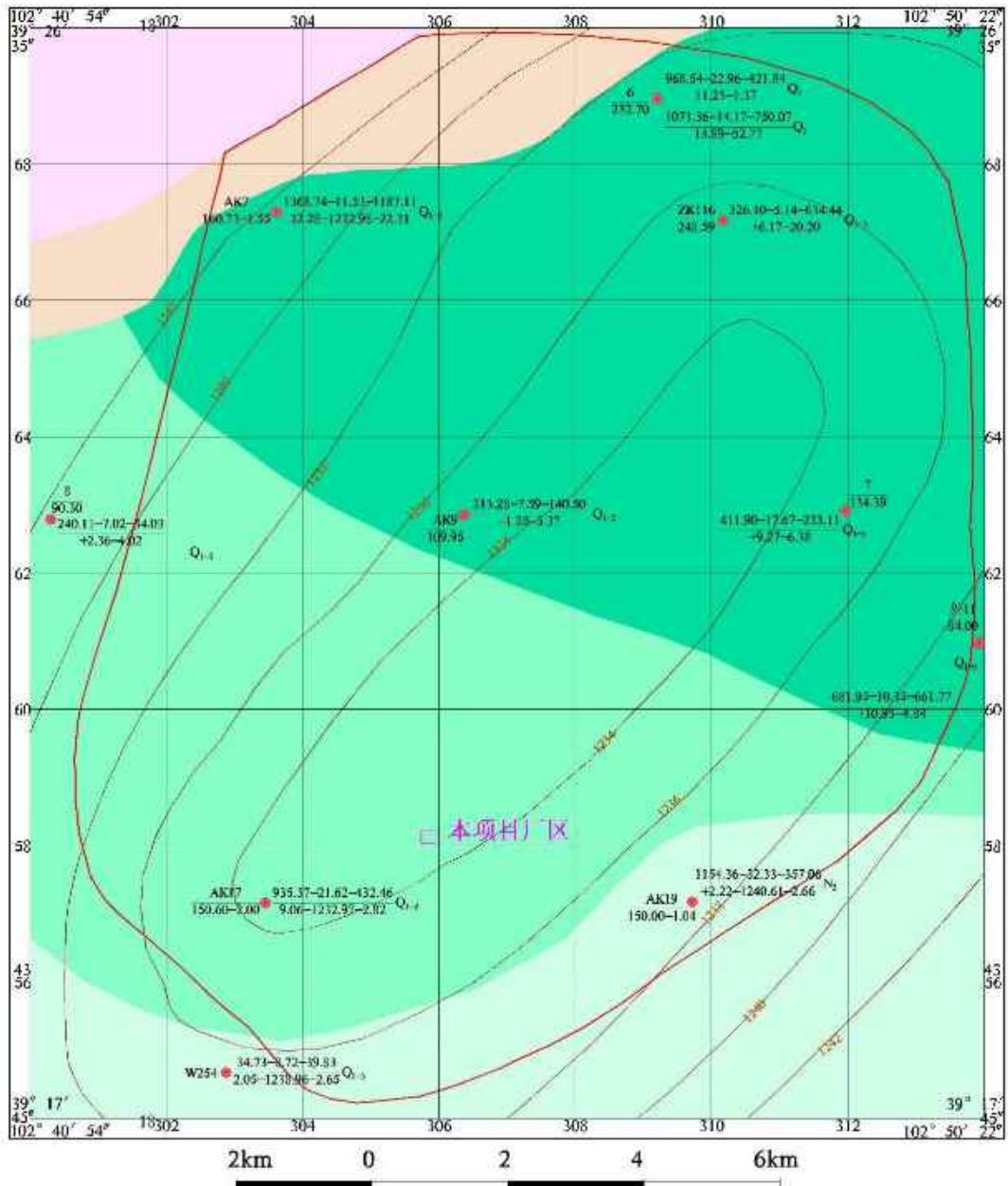
6.4-5

6.4-6



- 一、地下水类型及富水性
- (一) 松散岩类孔隙水
 按计算水量、径、按管径10cm口径和降深
- > 1000m³/d 水量丰富区
 - 500-1000m³/d 水量较丰富区
 - 100-500m³/d 水量较贫乏区
 - < 100m³/d 水量贫乏区
- (二) 碎屑岩类裂隙孔隙水
 按计算水量、径、按管径10cm口径
- < 10m³/d 水量极贫乏区
- 二、控制性水点
- | | | |
|-------|------------------|----------------|
| 8 | 14.52-2.70-26.89 | Q ₁ |
| 90.30 | 5.70-18.20 | Q ₁ |
-
- | | | |
|-------------|--------------------|----------------|
| AK18 | 530.76-60.17-44.10 | Q ₁ |
| 150.49-2.55 | 13.54-1235.83-2.08 | Q ₁ |
- 三、界线及其它
- 项目厂区边界
 - 地下水调查评价区边界
 - 水文地质界线
 - 地下水流向
 - 剖面线及编号
 - 地下水等水位线

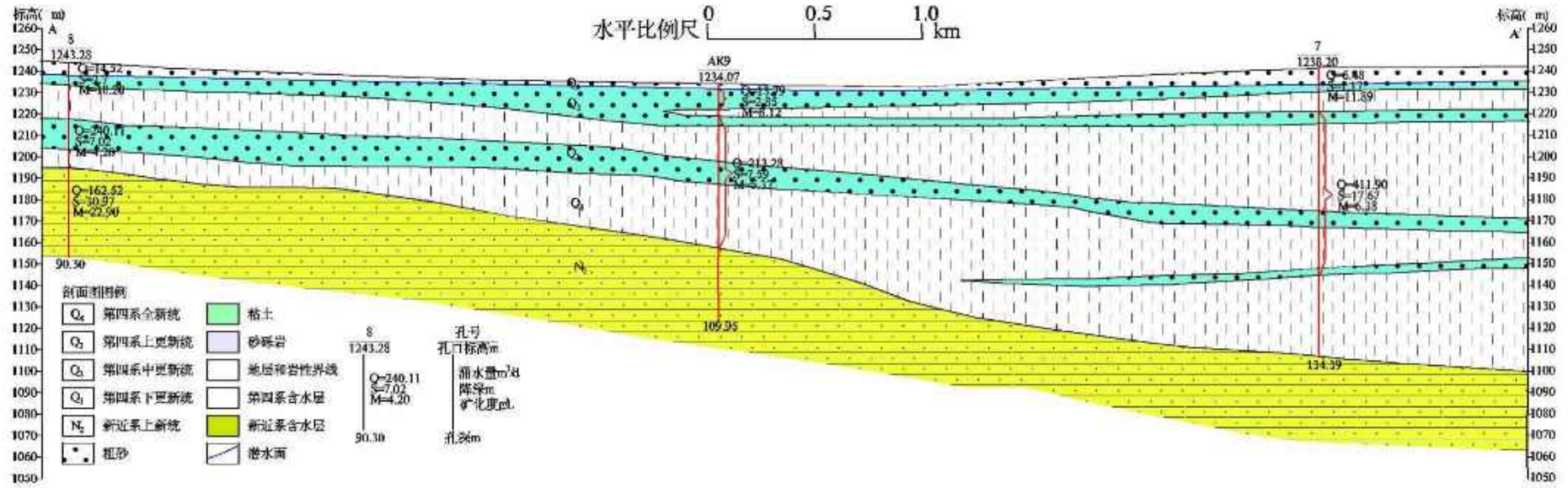
6.4-3



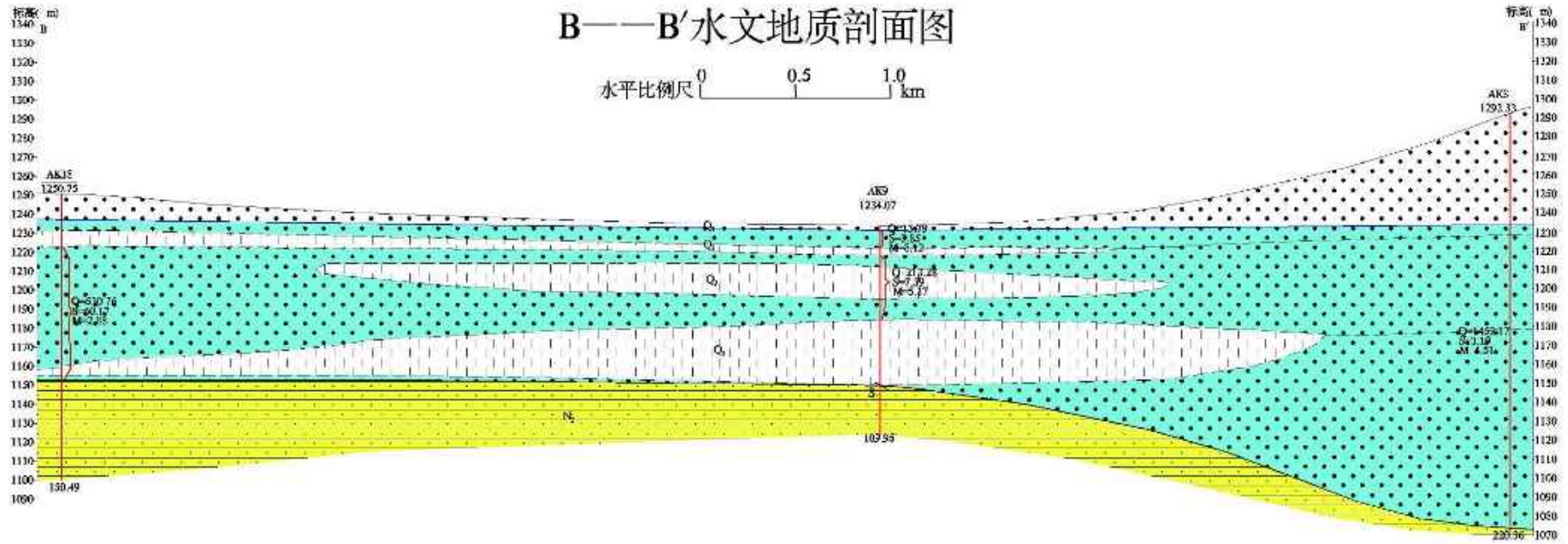
- 一、地下水类型及富水性
- (一) 松散岩类孔隙潜水
- 松散岩类孔隙潜水
- (二) 松散岩类孔隙承压水
- 换算涌水量, 统一换算为10寸口径10m降深
- 500-1000m³/d 水量较丰富区
- 100-500m³/d 水量较丰富区
- < 100m³/d 水量较贫乏区
- (三) 碎屑岩类裂隙孔隙水
- 涌水量统一换算为5m降深10寸口径
- < 10m³/d 水量极贫乏区
- 二、控制性水点
- 8 14.52-2.70-26.89 Q₄
- 90.30 5.70-18.20 Q₄
- 孔号 涌水量m³/d-降深m-换算涌水量m³/d 含水层时代
- 孔深m 水位埋深m-矿化度g/L
- AK18 530.76-60.17-44.10 Q₁₋₃
- 150.49-2.55 13.54-1235.83-2.08 Q₁₋₃
- 孔号 涌水量m³/d-降深m-换算涌水量m³/d 含水层时代
- 孔深m-矿化度g/L 水位埋深m-水位标高m-矿化度g/L
- 三、界线及其它
- 项目区边界
- 地下水调查评价区边界
- 水文地质界线
- 地下水流向
- 剖面线及编号
- 压力水头线

6.4-4

A—A'水文地质剖面图



6.4-5 A—A'



6.4-6 B—B

6.4.5

-

6.4.6

150m

40 m³/a

1096m³/d

5-10

100 150m

6.4.7

0.5m

0.8m

6.4.8

6.4.9

6.4.10

1

"L

85

HJ610-2016

A

"

" "

2

1km

1km

2.5km

1km

7km²

12094.68m³/a 40.308m³/d

GB/T14848-2017

3

8GL

W3-1

1.09m³/d 327.62m³/a

15%

0.164m³/d

9553.75mg/L

1.57kg/d

4

HJ610 2016

GB/T 50934-2013

$$C(x, y, t) = \frac{m_t}{4\pi Mn\sqrt{D_L D_T}} e^{\frac{xu}{2D_L}} \left[2K_0(\beta) - W\left(\frac{u^2 t}{4D_L}, \beta\right) \right]$$

$$\beta = \sqrt{\frac{u^2 x^2}{4D_L^2} + \frac{u^2 y^2}{4D_L D_T}}$$

x y—

T— d

C x y t —t x y g/L

M— m
 m_t— kg/d;
 U— m/d
 n—
 D_L— m²/d
 D_T— y m²/d
 —

3.35m/d

M

5-6m

5m

K

5.79m/d

n

n 0.2

0.2

0.0015

$$u = K \div n = 5.79 \div 0.2 = 0.043 \text{ m/d}$$

x

D_L

D

u

Gelhar L.W "A critical review of data on field-scale dispersion in aquifers"

59

/

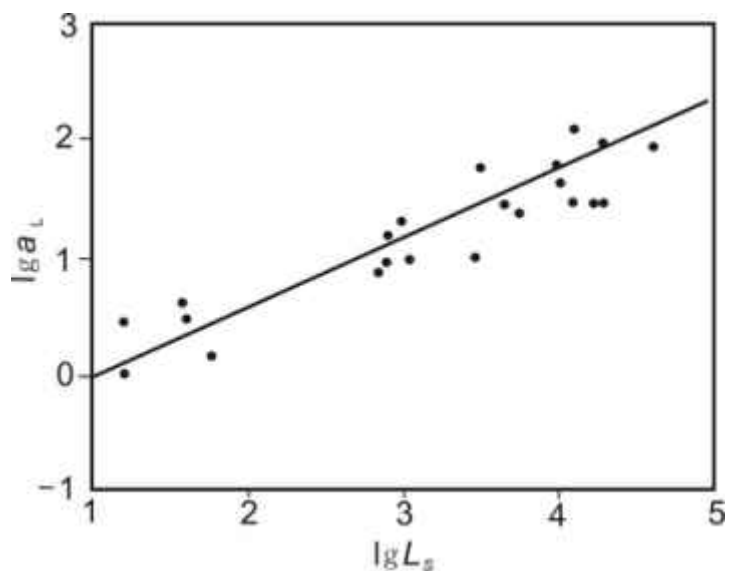
T/ L

0.1

L=20m

T=0.20m

$$D_L = u \times L = 0.043 \text{ m/d} \times 20 \text{ m} = 0.86 \text{ m}^2/\text{d} \quad D_T = 0.1 \times 0.86 \text{ m}^2/\text{d} = 0.086 \text{ m}^2/\text{d}$$



6.4-7

$lga_L - lgl_s$

6.4-3

6.4-3

m/d		(n)	(u)m/d	m	DL m ² /d	DT m ² /d
5.79	0.0015	0.2	0.043	5	0.86	0.086

5

GB/T14848-2017

0.7mg/L

/

-

HJ 639-2012

0.0007mg/L

6

HJ610-2016

100d 1000d 5000d

6.4-4

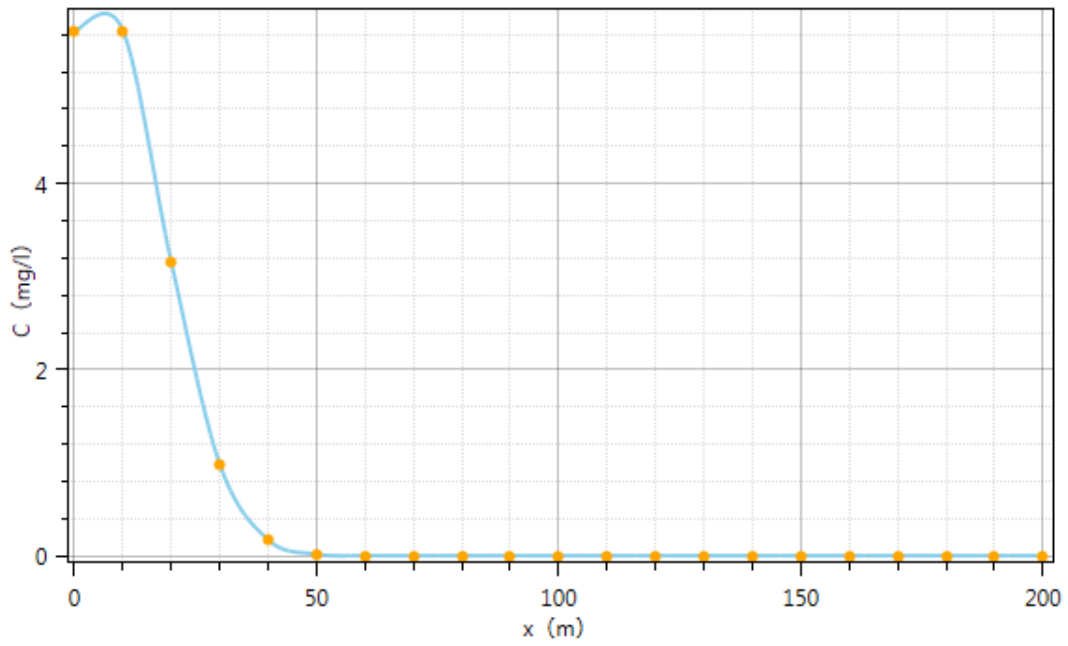
6.4-8

6.4-4

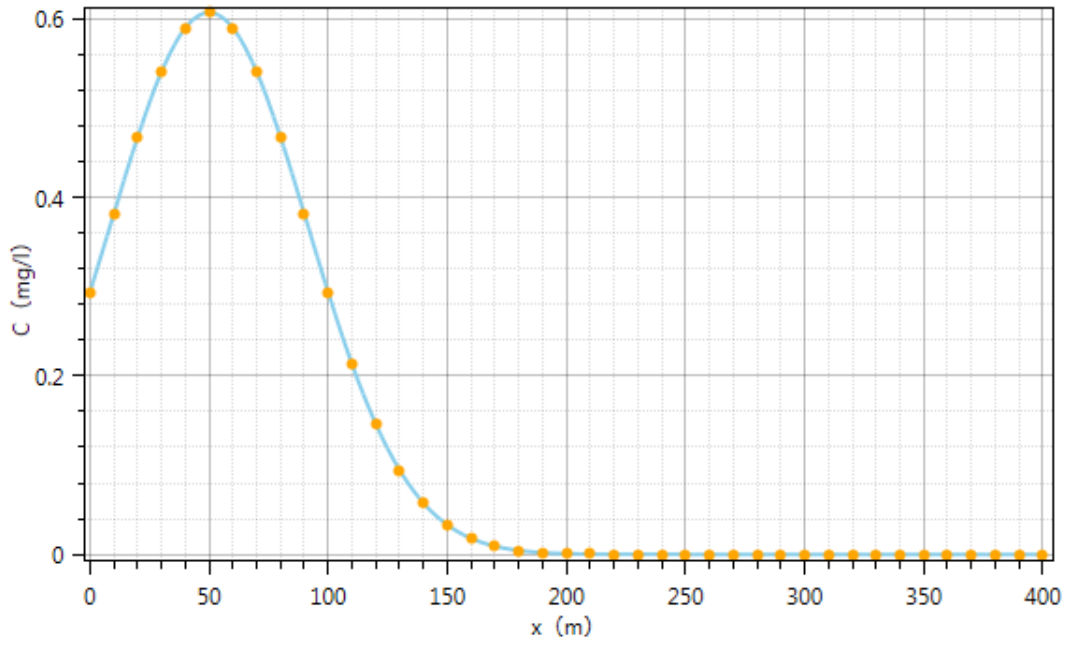
	mg/L	m ²	m
100	6.071	58	64
1000	0.607	190	215
5000	0.121	515	753

100 1000 5000

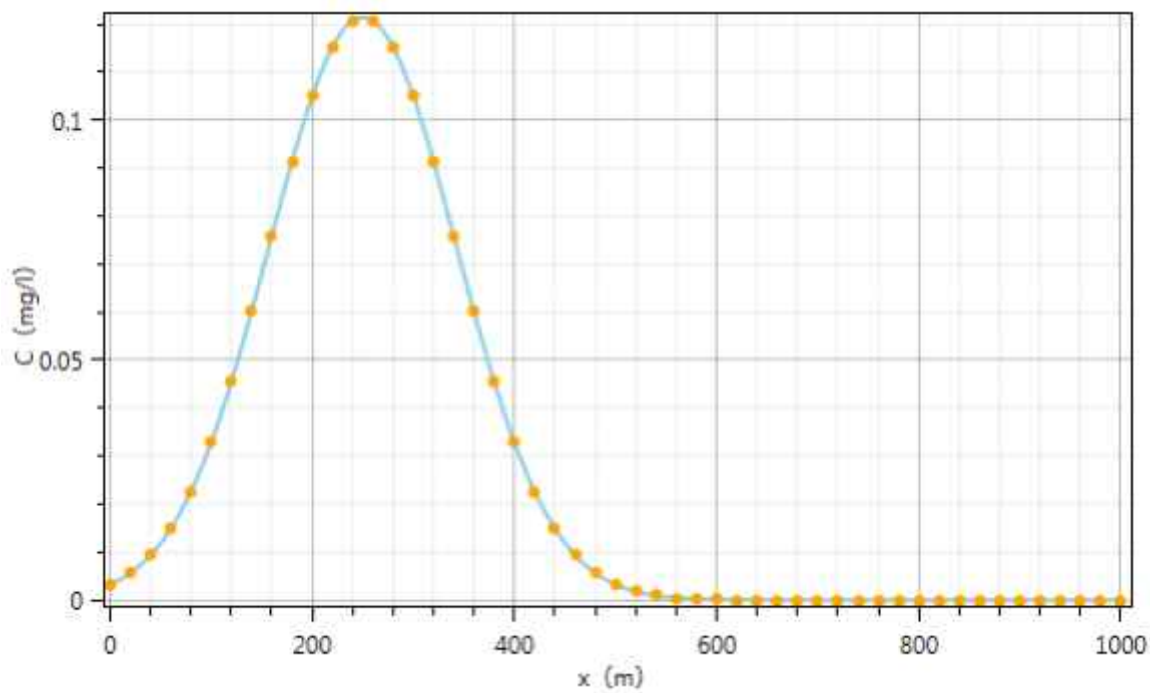
6.4-9 6.4-12



6.4-9 100



6.4-10 1000



6.4-11 5000

100

58m

64m 1000

190m

215m 5000

515m

573m

110m

1000d

GB 18597 GB 18599 GB 50141 GB 50268 GB/T 50934

6.5

HJ 2.4-2021

6.5.1

HJ 2.4-2021



$$L_P(r) = L_W + D_C - (A_{div} + A_{atm} + A_{bar} + A_{gr} + A_{misc})$$

$L_P(r)$	dB	
L_W	A	dB
D_C		LW
	dB	
A_{div}	dB	
A_{atm}	dB	
A_{gr}	dB	
A_{bar}	dB	
A_{misc}	dB	

A

A L_{p1} L_{p2}

$$L_{p2} = L_{p1} - (TL_i)$$

TL— A dB
 L_{p1}— A dB
 L_{p2}— A dB

A

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

L_{p1}— A dB
 L_w— A dB
 Q— Q=1
 Q=2 Q=4 Q=8
 R— R=Sa/ 1- S m²
 r— m

$$L_{p1i}(T) = 10 \lg \left[\sum_{i=1}^N 10^{0.1 L_{p1ij}} \right]$$

L_{p1i}(T)— N i dB
 L_{p1ij}— j i dB
 N—

$$L_{p2i}(T) = L_{p1i}(T) - (TL_i + 6)$$

L_{p2i}(T)— N i dB
 L_{p1i}T— N i dB
 TL_i— i dB

S

$$L_w = L_{p2}(T) + 10 \lg S$$

L_w — dB
 $L_{p2}(T)$ — dB
 S — m^2
 A

i A L_{Ai} T t_i
 j A L_{Aj} T t_j

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

L_{eqg} — dB
 T — s
 N —
 t_i — T i s
 M —
 t_j — T j s

Leq

$$L_{eq} = 10 \lg (10^{0.1L_{eqg}} + 10^{0.1L_{eqb}})$$

L_{eqg} — dB A
 L_{eqb} — dB A

6.5.2

3.6-13

6.5-1

6.5-1

1		m/s	2	/
2		/		
3			20	/
4		%	50	/
5		atm	1	/

6.5-2

			/dB(A)	/m			/m				/dB(A)				/ dB(A)				/dB(A)					
				X	Y	Z																		
1	-		85	200.8	-141.5	1.2	41.8	9.3	27.7	9.7	69.7	69.8	69.7	69.8	7200	26.0	26.0	26.0	26.0	43.7	43.8	43.7	43.8	1
2	-		85	281.4	52.6	1.2	16.9	48.8	16.4	36.7	68.5	68.4	68.5	68.4	3600	26.0	26.0	26.0	26.0	42.5	42.4	42.5	42.4	1
3	-2#		85	46.7	-137.1	1.2	30.3	8.6	25.5	8.9	70.5	70.6	70.5	70.6	7200	26.0	26.0	26.0	26.0	44.5	44.6	44.5	44.6	1

102.719512,39.302619

X

Y

6.5.3

6.5-3

6.5-3

	/m				dB(A)	dB(A)	
	X	Y	Z				
	343.3	41.3	1.2		28.7	60	
	343.3	41.3	1.2		28.7	50	
	204.6	-204.9	1.2		28.7	60	
	204.6	-204.9	1.2		28.7	50	
	-130.5	62.5	1.2		0.2	60	
	-130.5	62.5	1.2		0.2	50	
	246.7	249.4	1.2		4.4	60	
	246.7	249.4	1.2		4.4	50	

(GB12348.2008) 3

200m

6.5.4

6.5-4

6.5-4

			/
		15~25dB(A)	20
		5~10dB(A)	12

6.5-5

6.5-5

		200m		200m		200m	
		A	A				
		0	1	2	3	4a	4b

				100%
		200 m	200m	200m
		A	A	
		" "	" "	

6.6

6.6.1

6.6-1			t/a			
1- -4- -9,9- -9,9- 2- -4- 1			HW49/900-041-49	110.16	15d	5.51
			HW49/900-039-49	19.25	15d	1.0
			HW49/900-041-49	1.5	15d	0.08
				130.91	/	/
		/	/	9.3	/	/

6.6.2

GB18597-2023

6.7

6.7.1

6.7-1

6.7-1

	/			
			VOCs	

6.7.2

" -

"

HJ964-2018 A

259581m²

" " 5 50hm²

200m

6.7.3

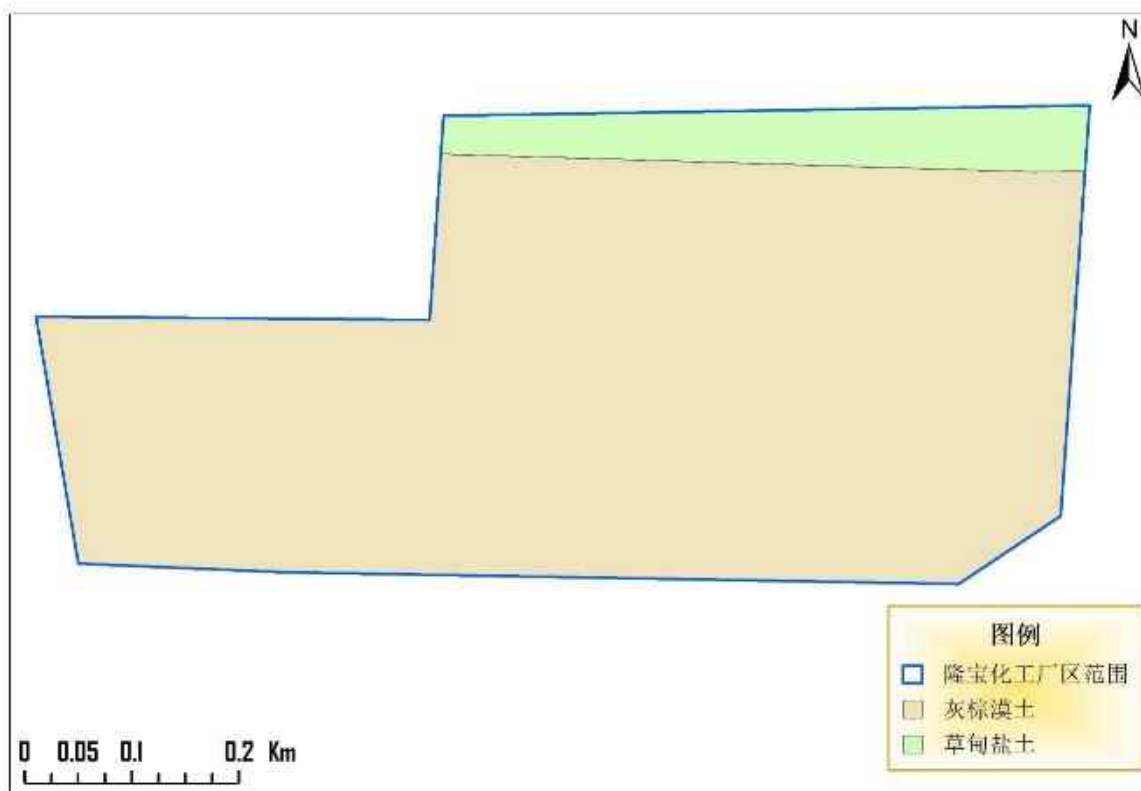
HJ964-2018 " 5 "

0.2km

259581m² 443.2m 404.15m

388589.28m²

6.7-1



6.7-1

6.7.4

6.7.4.1

VOCs

PM₁₀

PM₁₀

6.7.4.2

1

Richards

$$\begin{cases} \frac{\partial \theta}{\partial t} = \frac{\partial}{\partial z} \left(D(\theta) \frac{\partial \theta}{\partial z} \right) + k(\theta) \frac{\partial \theta}{\partial z} \\ \theta(x, 0) = \theta_0 \\ \theta(0, t) = \theta_n \\ \lim_{z \rightarrow \infty} \theta(x, t) = \theta_0 \end{cases}$$

h—	L
z—	L
t—	T
s—	T ⁻¹
O(z)—	
Z—	[L]
qs—	[LT ⁻¹]
hb(t)—	[L]

2

$$\begin{aligned} \frac{\partial(\theta c)}{\partial t} + \frac{\partial(\rho c)}{\partial t} &= \frac{\partial}{\partial z} \left(\theta D \frac{\partial c}{\partial z} \right) - \frac{\partial}{\partial z} (c q) - A s c \\ C(Z, 0) &= c_0(z) & Z \leq z \leq 0 \\ -\theta D \frac{\partial c}{\partial z} + q_z c &= q_s c_s(t) & z = 0 \\ C(Z, t) &= c_s(t) \end{aligned}$$

C— [ML⁻³]

— [ML⁻³]
 s— [MM⁻¹]
 D— [L²T⁻¹]
 q—Z [LT⁻¹]
 A— 1
 C0(z)— [ML⁻³]
 qz— [LT⁻¹]
 qs— [LT⁻¹]
 Cs— [ML⁻³]
 Cb(t)— [ML⁻³]
 3

HYDRUS

HYDRUS US Salinity laboratory 1991

HYDRUS

4

HYDRUS

10m 10m
 10m 2 Oh¹ 0~5m Qp¹ 5~10m

150.3mm

6.7-2

	mg/L	mg/kg	
	266.2	1200	GB36600-2018

HYDRUS

6.7-3

DL

32.4cm

DW 4.32cm²/d

6.7-3

		cm/d
	Qh ¹	31.44
	Qp ¹	712.8

HYDRUS

G

G.1

	259581 m ²				
	200				
	SO ₂	NO _x	TSP	HCl	NH ₃
					TVOC
	a	b	c	d	
					C
		1	2	0-20cm	
		3		0-300cmm	
	GB36600-2018			45	pH
	GB36600-2018	1	45	1,1-	
		1,2-	1,2-		
	GB15618	GB36600	D.1	D.2	
	E		F		
	200m				
	a	b	c	a	b

		2	pH	5	1
1	" "	" "	" "		2

7

HJ169-2018

[2012]77

[2012]98

7.1

7.1.1

B

1,3,3-

-2-

DMF

1 4

1 4-

8GL

7.1-1

7.1-2

7.1-1

		/t			
		30			1#
		20			1#
		117.76			2#
		30			1#
		37.13			2#
		1			4#
		5			
	()	5			1#
	1,3,3- -2-	30			4#
	DMF	1			4#
		10			3#
		42.28			1#
		4			4#

		32.46			1#
		8			#
		0.25			4#
		10			
	1 4	50			
	1 4-	50			
	8GL	50			

7.1-2

				g/cm ³	V%			
	131.2	295	152	1.53	1.7-10.4	LD ₅₀ 4020mg/kg()		20
	169	300	-	1.43	-	-		
	4	146	-	1.99	-	-		
	42	217	121	1.2651	-	-		
	-77.73	-33.3	-	0.91	-	LD ₅₀ 350mg/kg ()		20()
	-96.7	57.3	-10	1.17	5.6-16	LD ₅₀ 680mg/kg() 2800mg/kg() LC ₅₀ 4050mg/m ³ 432 min()		
1 4	198	450	222	1.30 32	-	LD ₅₀ 5000mg/kg()		
	300	-	-	1	-	-		250
1,3,3-	-8	248	215F	0.979	-	-		

-2-								
DMF	-61	152.8	58	0.94	2.2-15.2	LD ₅₀ 4000mg/kg 4720mg/kg LC ₅₀ 9400mg/m ³ 2		7
	2	105.3	-	1.645	-	LD ₅₀ :380mg/kg ; LC ₅₀ :32ppm/4H		20
	318.4	1390	-	2.12	-			
	56	240	122	1.06	-	LD ₅₀ : 1320mg/kg LD ₅₀ :1410mg/kg		
	-114.8	108.6	-	1.2	-	LD ₅₀ 900mg/kg() LC ₅₀ 3124ppm 1 ())		20()
	167	219	732	1.01	-	LD ₅₀ :350mg/kg LD ₅₀ :329mg/kg		
	-94.9	110.6	4	0.87	1.2-7	LD ₅₀ 5000mg/kg 12124mg/kg LC ₅₀ 20003mg/m ³ 8		

27450

	884	1404	-	2.68	-	LD ₅₀ 5989mg/kg()		—
--	-----	------	---	------	---	----------------------------------	--	---

7.1.2

5km

7.1-3

		/m						
		X	Y					/m
		102°42'2.15"	39°18'4.32"		1000		W	1.5
		102°42'2.15"	39°18'4.32"		1000		W	1.5
	200m					3	---	---
	14km ²						---	---
	0.2km					---	---	---

7.2

7.2.1 P

HJ/T169 2018

P

Q

M

7.2.1.1 Q

HJ169-2018

B.1

B.2

GB18218-2018

1

Q

$$Q = \frac{q_1}{Q_1} + \frac{q_2}{Q_2} + \Lambda + \frac{q_n}{Q_n}$$

q₁ q₂ ... q_n——

t

Q₁ Q₂ ... Q_n——

t

Q 1

Q 1

Q

1

1

Q

10

2

10

Q

100

3

Q

100

7.2-1

		q _n t	Q _n t	q _n /Q _n	Q q _n /Q _n
1		117.76	5	23.55	28.615

2		37.13	10	3.71
3		1	7.5	0.13
4	()	5	5	1
5	DMF	1	5	0.2
6		0.25	10	0.025

Q 28.615 10 Q 100

7.2.1.2 M

7.2-2

M M>20 10<M 20

5<M 10 M=5 M1 M2 M3 M4 7.2-2

7.2-2 M

		10/
		5/
	a	5/
/	/	10
	b	10
		5
a	300	p 10.0MPa
b		

7.2-2 M 7.2-3

7.2-3 M

	/						M
							0
							10
							10

7.2-3 M 10 M3

7.2.1.3

P

P

7.2-4

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

10 Q 100 M

10

M3

P3

7.2.2 E

HJ169-2018

D

7.2.2.1

7.2-5

E1	5km					5
		500m		1000		
		200m		200		
E2	5km					1
	5	500m		500	1000	
		200m		100	200	
E3	5km					1
	500m		500			200m
				100		

5km

1

500m

500

7.2-5

E3

7.2.2.2

pH

5km

7.2.2.3

7.2-6

G1	()
G2	()
G3	

7.2-7

D3	Mb 1.0m K 1.0×10 ⁶ cm/s
D2	0.5m Mb 1.0m K 1.0×10 ⁶ cm/s Mb 1.0m 1.0×10 ⁻⁶ cm/s < k 1.0×10 ⁴ cm/s
D1	() "D2" "D3"

7.2-8

	G1	G2	G3
D1	E1	E1	E2
D2	E1	E2	E3
D3	E2	E3	E3

1m

1× 10⁻⁶cm/s

E3

7.2.3

7.2-9

(E)	(P)			
	(P1)	(P2)	(P3)	(P4)
(E1)	IV ⁺	IV	III	III
(E2)	IV	III	III	II
(E3)	III	III	II	I

7.2-10

	E3	P3	II
	/	/	/
	E3	P3	II

P3

E3

II

7.3

HJ169-2018

7.3-1

7.3-2

7.3-1

	IV IV ⁺	III	II	I

7.3-2

	II	
	/	/
	II	

7.3-2

3km

2.6-1

3km

1km

1km

2.5km

1km

7km²

2.5-1

7.4

" "

7.4.1

B

7.1-2

7.4.2

2013

DMF

7.4-1

7.4-1

1				
2				
3				

Q

1

/

2

3

7.4.3

/

/

7.4.4

DMF

Q

7.4-2

7.4-2					
2#			/		
4#			/		

7.5

7.5.1

2-3

7.5.2

7.6

7.6.1

7.6.2

7.6.2.1

1

1000m

2

GB50187-2012

GB50489-2009

GB50016-2006

5m

GB50016-2006 3.4.1

3.00h

3

250

GB2893-2008

GB7231-2003

4

7

2008

GB50011-2001

GB50223-2008

GB50016-2006

3.6.3

1.5h

1.5h

5

GB50016-2006

GB50016-2006

4m

4m

12m×12m

18m×18m

1

- - - - -

7.6-1

1				

27450				
2			-	
			-	
			-	
3				

GB190-85

GB191-85

GB12465-90

2

1m/s

3m/s

HG23011 23018-1999

(
)
(
)
)
)
(

0.01 0.10mm

1 2

3

30

80%

DCS

GB50160-2008 5.3.7

60%

30m

30m

200

1

2

3

4

5

6

7

8

9

10

11

1—2

12

13

1m/m

±3m/m

±

0.02

0.10mm

14

15

16 ()

17 /

MSDS

18

250mm

19

/

1

2

3

4

5

6

30min

1

2

3

4

5

(()))

/

SH3063-1999

1

(GB50058-92)

2

3

4

5

4

6

(GB50007-94)

7

3m/s

8

GB50058-92

(

)

9

" 119"

7.6.2.2

Q/SY1190-2013

HJ169-2018

" - - "

1# 2#

1.5m

1260m³

1

1260m³

1/3

30

Q/SY 1190-2013

7.6-2

7.6-2

V ₁		m ³	50
V ₂		m ³ 180m ³	180
V ₃		m ³	0
V ₄		m ³	0
V ₅	60h	120m ³ m ³ 2m ³ /h	120
V		-	350
V		1260m ³	1260
	V	V	

HDPE

HDPE

1.5mm

25mm

HDPE

HDPE

HDPE

HDPE

HDPE

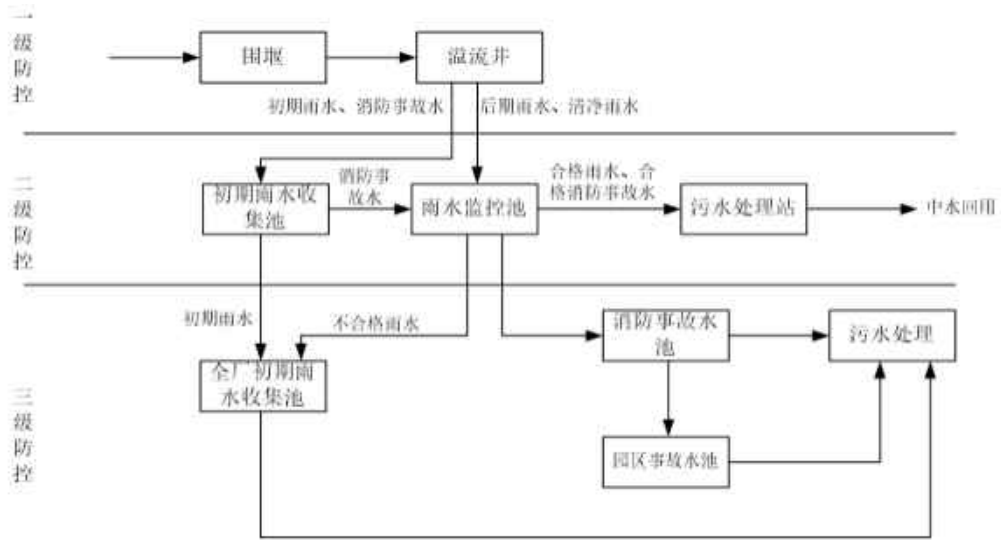
HDPE

60%

3h

3

7.6-1



7.6-1

900×900×1200

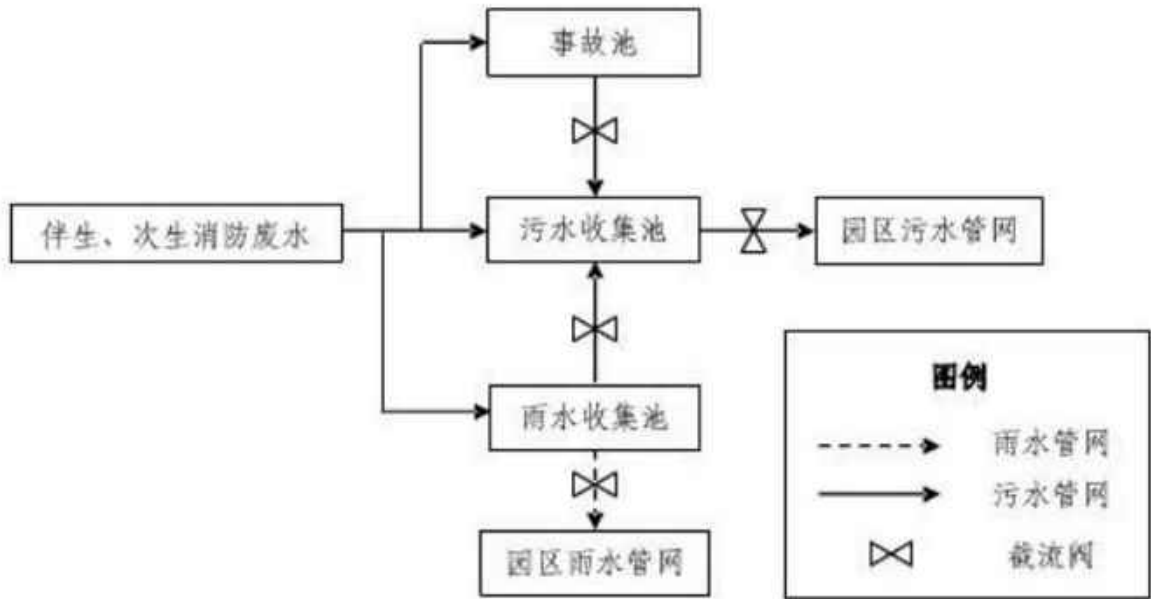
160

300

110

300

7.6-2



7.6-2

7.6.2.3

" "

"

"

GB/T 50934-2013

GB50473

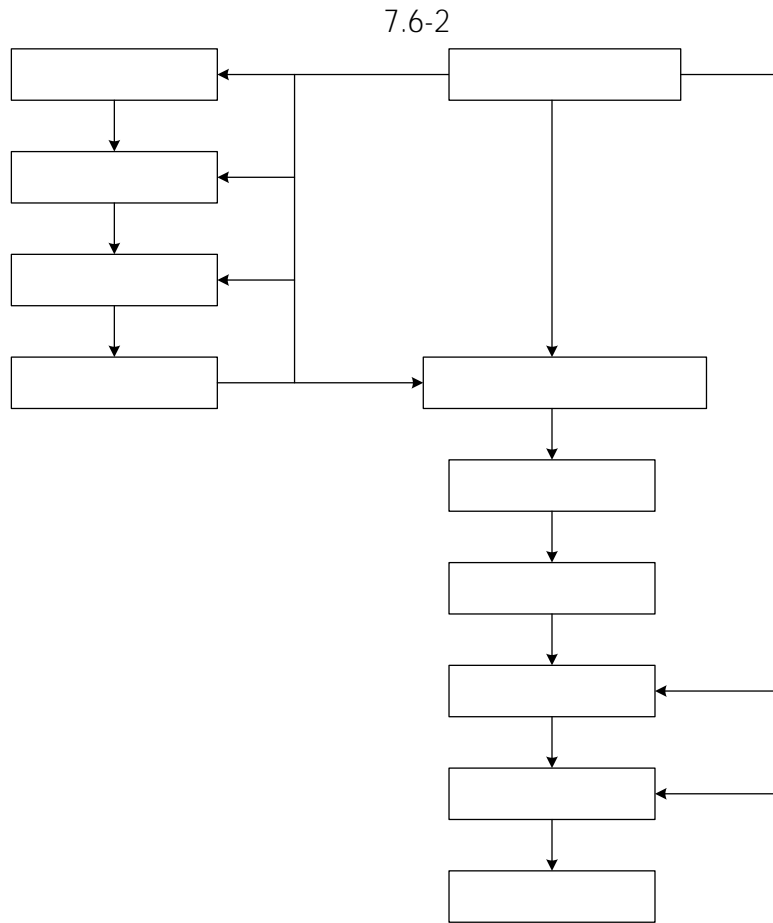
I	500mm×500mm	200m	
300mm			
II		C30	P8
III	100mm		

I			300mm
	70m	300mm	
100m			
II			
III		200mm	
500mm×500mm			
IV			
7.6.3			

2022 5 30

152922-2022-1M

7.6.3.1



7.6-2

7.6.3.2

7.6.3.3

4

4

I

II

III

IV

I () II III () IV ()

4h

A:

380V/220V

4

B:

A:

B:

C:

D:

7.6.3.4

()

1

1

2

2

pH COD

7.6.3.5

7.6-2



7.6-2

7.6.3.6

7.6.3.7

7.6.3.8

7.6-3

7.6-3

1		--
2		
3		
4		— —

5		
6		1 2
7		
8		
9		
10		
11		
12		
13		
14		
15		

7.7

7.7.1

7.7.2

40

							DMF	
	/t	117.76	37.13	1	5	1	0.25	
		500m	<u>0</u>		5km	<u>1000</u>		
		200m						
			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			
		+					I	
						/		
			SLAB	AFTOX				
				-1	_____m			
				-2	_____m			
					h			
					d			
					d			

27450

" "	" "

8

8.1

8.2

8.2.1

8.2.1.1

1

1,4-

1,4-

1,4

G1-1

VOCs

1

+

+

1,4

G2-1

1

1

VOCs

1

25m

DA005

8GL

G3-1

DMF

G3-2

DMF

G3-3

1

+

1

VOCs

1

25m

DA006

2#

1,4-

G_{F1}

1

+

2#

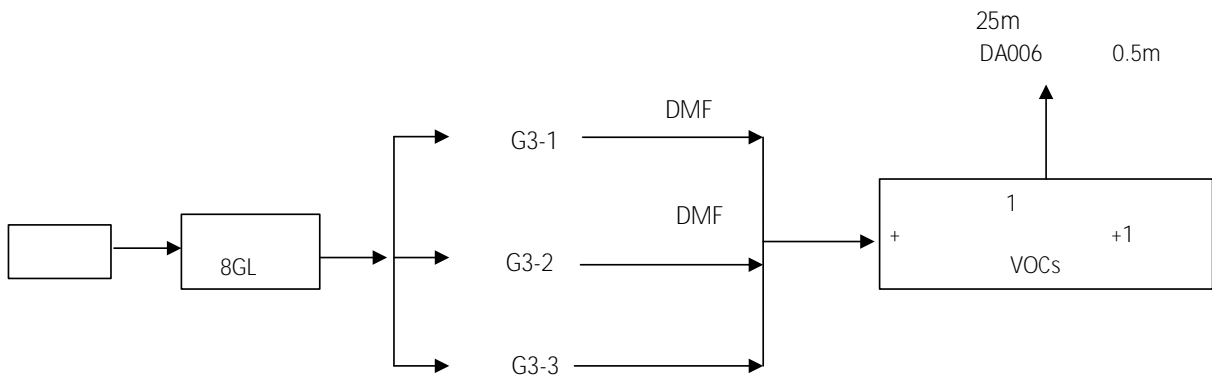
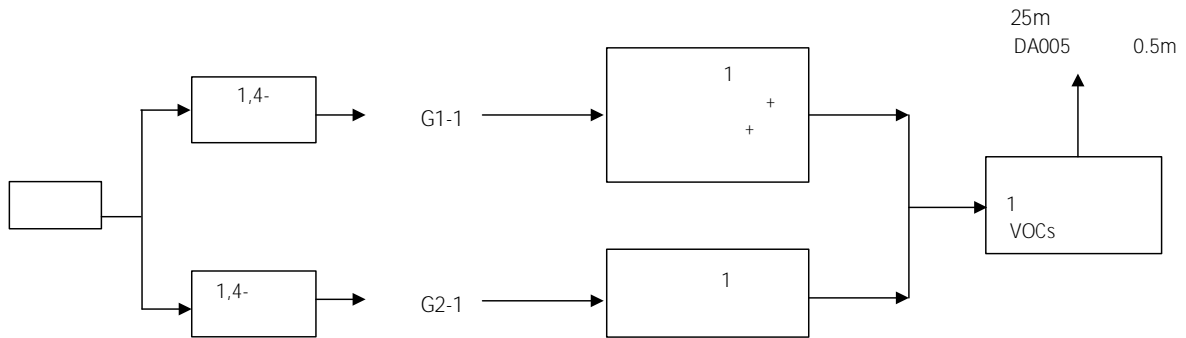
1

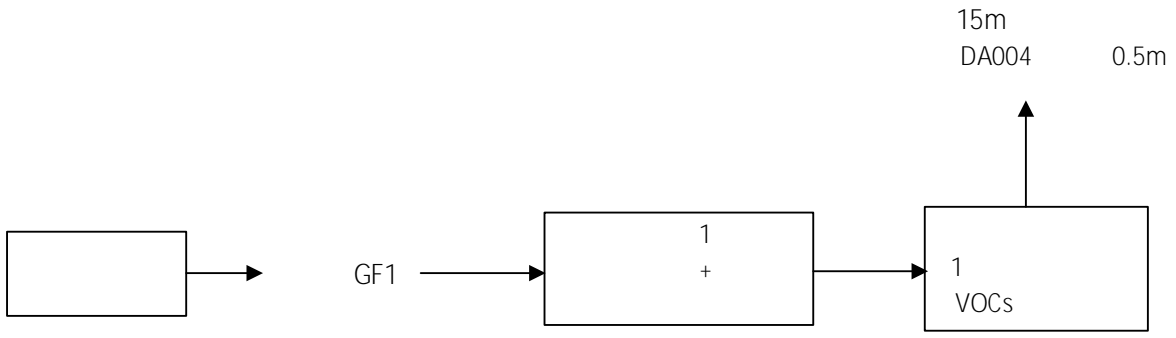
VOCs 1 15m DA004

8.2-1 8.2-1

8.2-1

	1,4-	G1-1		1 +	1 VOCs	25m DA005 0.5m
	1,4-	G2-1		1		
	8GL	G3-1	DMF	1 +	1 VOCs	25m DA006 0.5m
		G3-2	DMF			
		G3-3				
2#		G _{F1}		1 +	1 VOCs	15m DA004 0.5m





8.2-1

2

) (

VOCs 96%

65%

VOCs

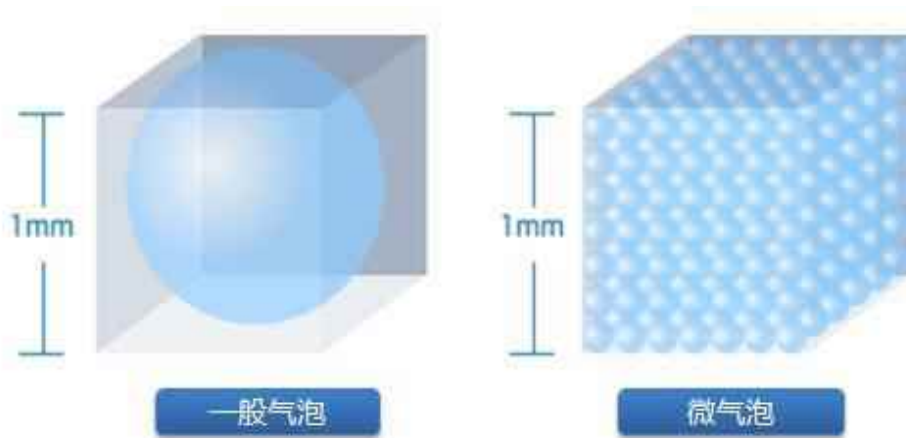
10 μ m

μ m



V

10 μ m 1mm 100 100 100



8.2-2

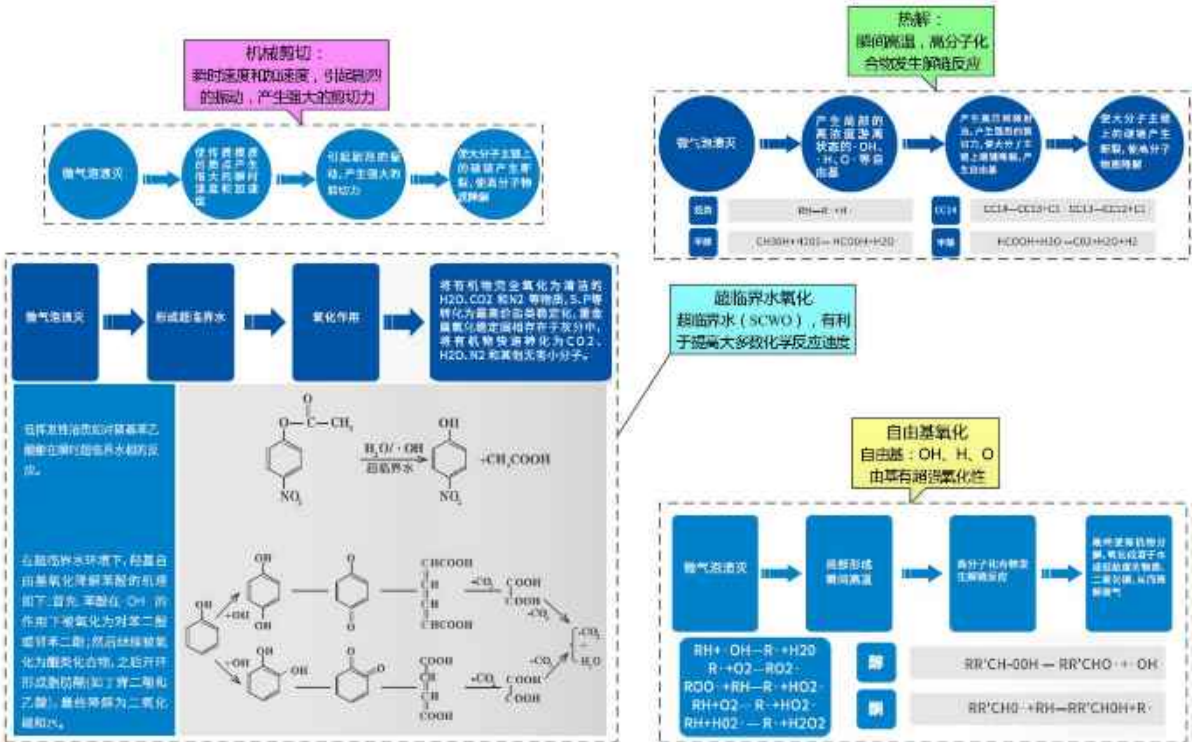


H⁺ OH⁻



4

8.2-3



8.2-3

VOCs

0.1us

5500k

1800atm

VOCs

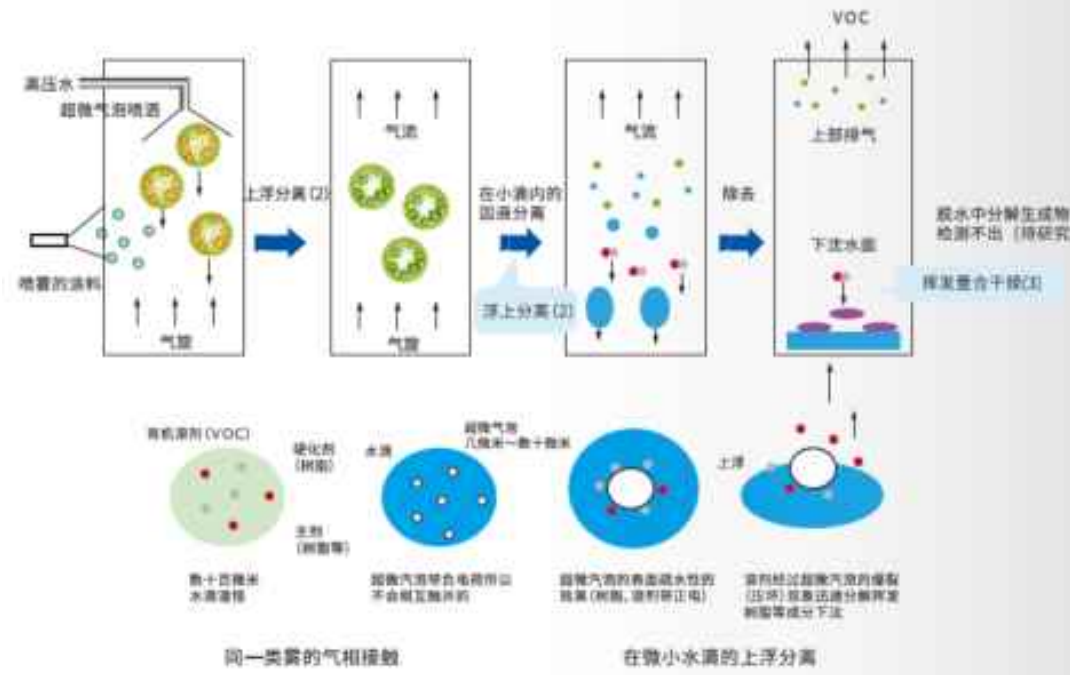
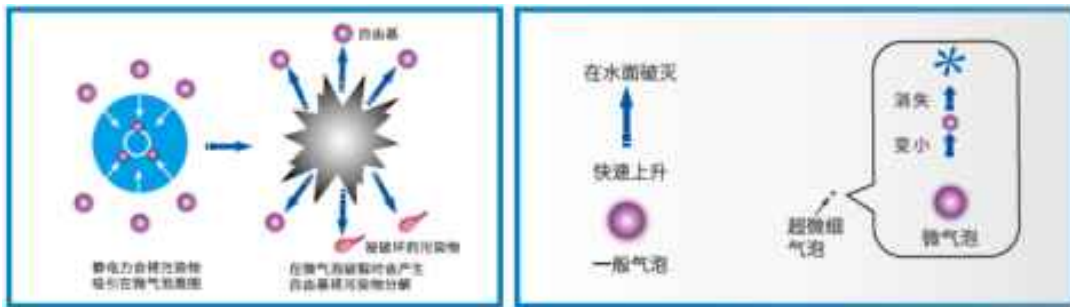
8.2-4

8.2-5



8.2-4

VOCs



8.2-5

PLC

6

9.2-6

VOCs

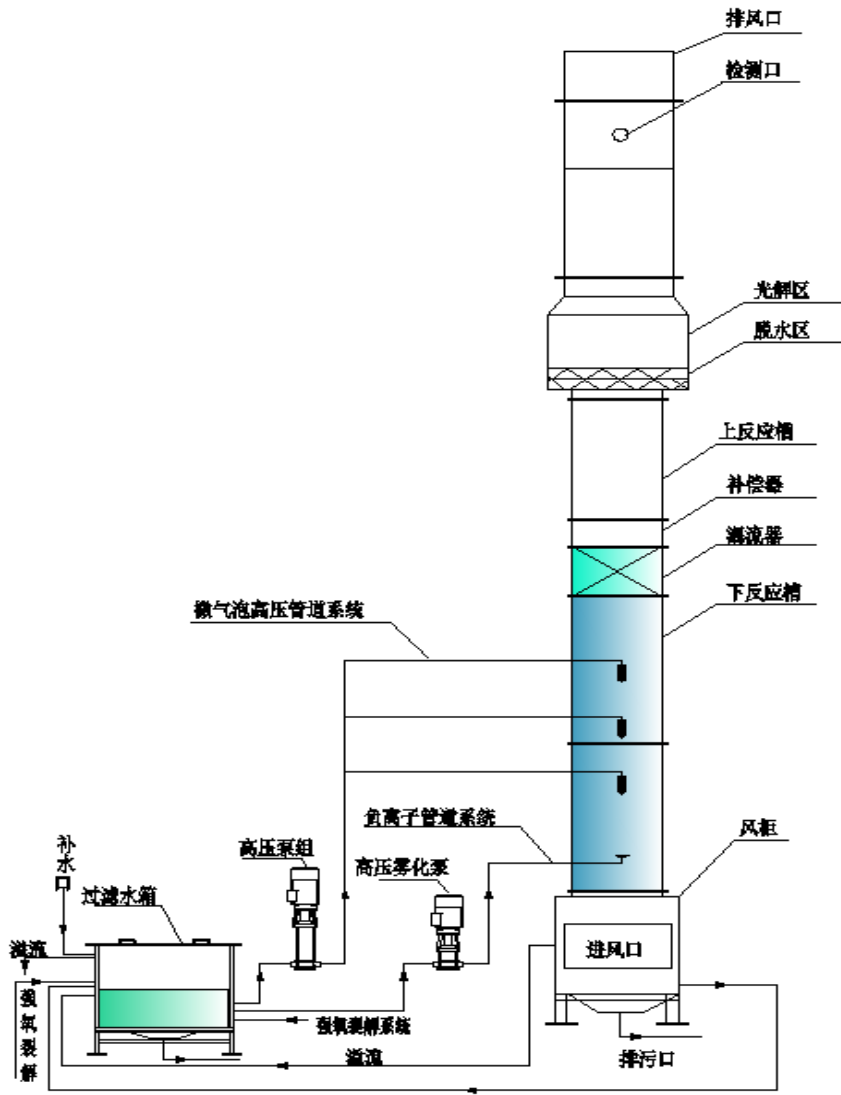
85 120m

9 10s

5000k

1800atm

VOCs



8.2-6

PLC

PLC

3

SO₂ NOx VOCs VOCs CO₂

80%
27450

73.3% 89.3%

VOCs 80%

1 + + 1

SO₂ NOx HCl 1.4mg/m³ 69.4mg/m³ 12.4mg/m³

GB16297-1996 2

0.64mg/m³ GB 14554-93 VOCs

6.6mg/m³

DB12/524-2020 1 TRVOC

1 +

1 VOCs NOx HCl 5.0mg/m³

1.667mg/m³ GB16297-1996 2

VOCs 10.0mg/m³

DB12/524-2020 1 TRVOC

2# 1 + 1

0.5‰

90%

GB37822-2019

VOCs

VOCs

VOCs

VOCs

VOCs

VOCs

a VOCs

VOCs

b VOCs

a)

200mm

b)

27.6kPa

500m³

GB 16297

80%

c)

27.6kPa 500m³
5.2kPa < 27.6kPa 2500m³

GB 16297

90%

VOCs

a)

VOCs

b) VOCs

VOCs

VOCs

a)

VOCs

b)

VOCs

() VOCs

VOCs

VOCs

VOCs

VOCs

VOCs



- a)
- b)
- c)
- d)
- e)
- f)
- g)
- h)
- i)

- a)
- b)

VOCs

8.2-2

8.2-2		VOCs	umol/mol
VOCs		5000	2000
VOCs		5000	2000
		2000	500

VOCs

a)

b)

6

c)

12

d)

5

e)

90d

a)

b)

c)

d)

e)

f)

g)

h)

VOCs

VOCs

i)

a)

5d

b)

15d

b)

1)

2)

3)

3

8.2.1.3

HJ

1116—2020 “ 5

”

8.2-3

8.2-3

HJ 1116—2020					5						
								SO ₂ NOx HCl VOCs	1 + 1 1 25m	1 + VOCs DA005	
								NOx HCl VOCs	1 1 25m	+ VOCs DA006	1
							2#	HCl VOCs	1 1 15m	+ VOCs DA004	1
								VOCs			

1116—2020

VOCs

8.2.2

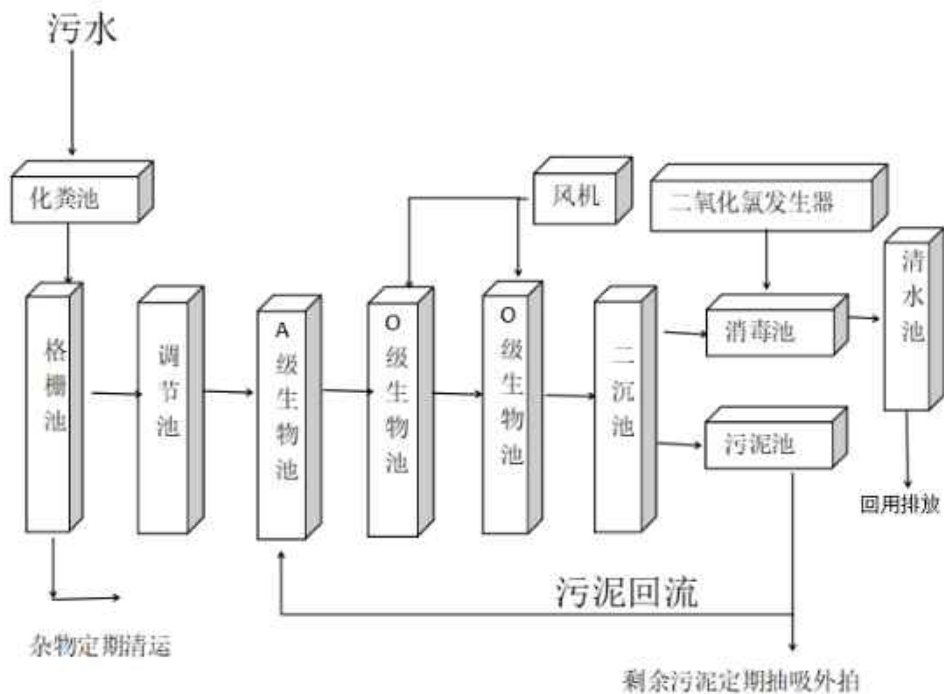
40.308m³/d

pH

8.2-4

			m ³ /a	m ³ /d		mg/L	t/a	
1,4-		W1-1	142.2	0.47	COD	63291.1	9.0	
		W1-2	1923.3	6.41	COD	4320.9	8.31	
						15390.2	29.6	
						1788.6	3.44	
1,4-		W2-1	4003.74	13.35	COD	47815.29	191.44	
						3599.13	14.41	
						184000	736.69	
8GL		W3-1	327.62	1.09	COD	35406.8	11.6	
						1037.8	0.34	
						74812.3	24.51	
			W3-2	39.47	0.13	COD	91968.6	3.63
		W3-3	1597.32	5.32	COD	20127.5	32.15	
						10098.2	16.13	
						209513.4	334.66	
		W3-4	1124.91	3.75	COD	21432.8	24.11	
						3173.6	3.57	
						49799.5	56.02	
		W3-5	471.52	1.57	COD	1726.33	0.814	
					38.17	0.018		
			9630.08	32.09	/	/	/	

		W4-1	120	0.4		61333	7.36	
		W5-1	0.6	0.002	COD	8333	0.01	
			120.6	0.402	/	/	/	
		W6-1	324	1.08	COD	500	0.162	
					SS	100	0.032	
		W6-2	40	0.136	COD	400	0.016	
						COD	30	0.025
						SS	40	0.033
	W6-3	828	2.76		4000	3.312		
				COD	250	0.288		
				BOD	100	0.115		
				SS	150	0.173		
					1000	1.152		
			2344	7.816	/	/	/	
			12094.68	40.308	/	/	/	



8.2-7

BOD₅ 10mg/L
GB18920-2020

“

”

5000m³/d

1

GB18918-2002 A

1km

10000m³/d

+

A²/O

2014 10

2014 11

[2014]52

2015 6

8.2.3

HJ610 2016

“

”

8.2.3.1

" "

8.2.3.2

GB/T 50934-2013

"

"

8.2-5 8.2-7

8.2-6

8.2-5

		1m		
	-			
		10 ⁻⁴ cm/s		

8.2-6

		Mb 6m K 1×10^7 cm/s
		1.5m 10^{-7} cm/s



8.2-7

8.2.3.3

HJ/T164-2004

HJ 610-2016

HJ 610-2016

3

4

8.2-7

8.2-8

1

6

8.2-7

			(m)	(m)	(m)	(m)
JC1		N 39°18'2.5" E 102°42'39.74"	1247	80	25.6	1206.2
JC2		N 39°18'5.84" E 102°43'9.84"	1240	80	24.3	1215.7
JC3		N 39°18'7.34" E 102°43'30.61"	1233	80	26.8	1221.4
JC4		N 39°18'16.42" E 102°43'26.53"	1226	80	26.4	1199.6



8.2-8

4

HJ/T164-2004)

1

1

6

2

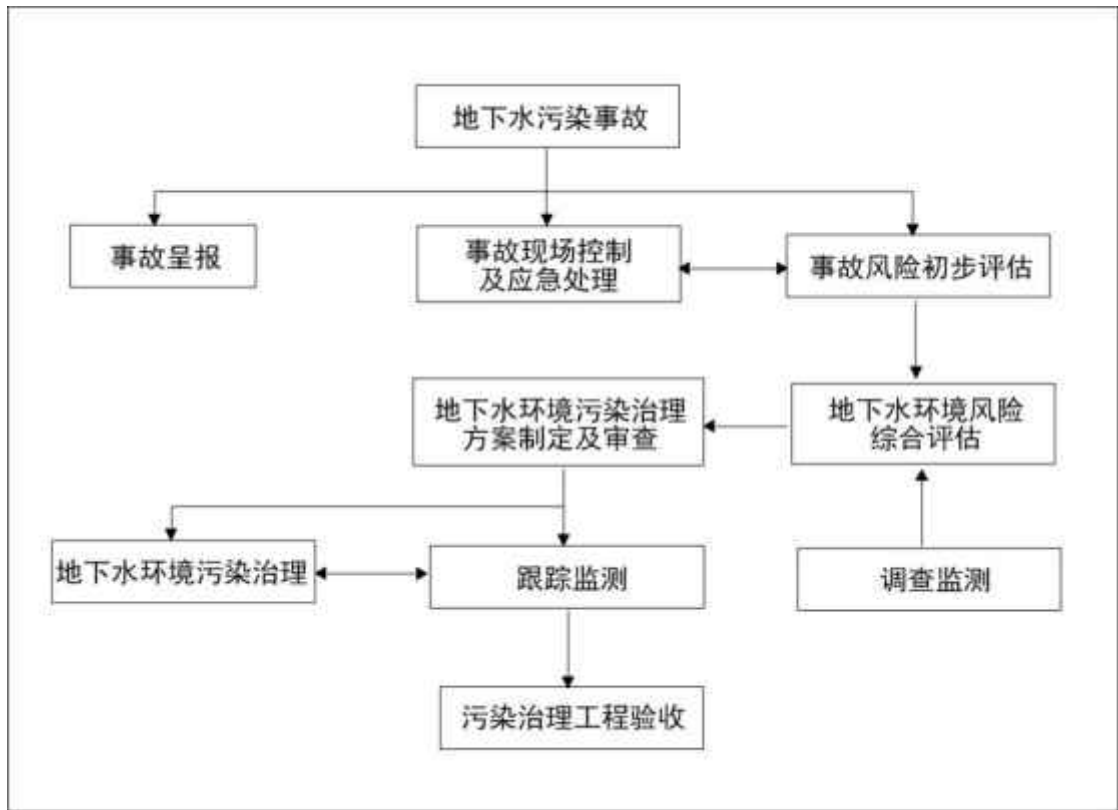
1/5

1

1/5

8.2.3.4

8.2-9



8.2-9

8.2.4

8.2.4.1

8.2-9

--	--	--	--	--	--	--

			1- -4- -9,9- -9,9- 2- -4- 1	HW49/900-041-49	110.16	15d	
				HW49/900-039-49	19.25	15d	
				HW49/900-041-49	1.5	15d	
					130.91	/	/
				/	9.3	/	

8.2.4.2

1

1

378m²

30

0.44t/d 130.91t/a

15d

6.55t

0.88t/d 263.7t/a

15d

13.2t

378m²

756t

GB18597-2023

GB18597-2023

2

3

4

8.2.4.3

8.2.4.4

GB18597-2023

8.2.4.5

8.2.5

5dB A

15dB A

15dB(A)

" "

10 15dB(A)

GB12348-2008 3

8.2.6

HJ964-2018

8.2.6.1

"

"

"

"

8.2.6.2

"

+

"

8.2.6.3

100m

HJ964-2018

5

1

GB 36600-2018

8.3" "

8.3-1

8.3-1

" "

	SO ₂ NO _x HCl VOCs	1 98% 1 98% 1 0+65% 1 VOCs	+ 95%+0 VOCs VOCs 80%	SO ₂ 1.4mg/m ³ NO _x 69.4mg/m ³ HCl 12.4mg/m ³ 0.64mg/m ³ VOCs 6.6mg/m ³	1 25m DA005 0.5m	SO ₂ NO _x HCl GB16297-1996 2
	NO _x HCl VOCs	1 1	+ 95%+0 VOCs VOCs 80%	NO _x 5.0mg/m ³ HCl 1.667mg/m ³ VOCs 10.0mg/m ³	1 25m DA006 0.5m	GB 14554-93 VOCs DB12/524-2020 1
2#	HCl VOCs	1	+ 65% 1 VOCs 80%	HCl 27.8mg/m ³ VOCs 10.6mg/m ³	1 15m DA004 0.5m	TRVOC
						GB37822-2019 A.1 VOCs DB12/524-2020 2 GB16297-1996 2

	pH		
	GB18597—2023	378m ² 1	---
		65dB(A) 55dB(A)	---
		1.0×10 ⁻⁷ cm/s	---
	1 " "		
	2		

9.1

3000

222

7.4%

9.1-1

9.1-1

		1		1		+	
			+	1	1	VOCs	
		1	25m	DA005	0.5m		
		1					
		VOCs	1	25m	DA006	0.5m	
	2#	1					
		VOCs	1	15m	DA004	0.5m	
		378m ²					
		(GB18597-2023)					0
							32
		GB/T50934-2013 HJ610-2016					
		6m					
		1.0×10 ⁻⁷ cm/s					20
		1.5m					
		1.0×10 ⁻⁷ cm/s					
		4					
	/	1260m ³					0
							222

" "

9.2

16320		143		9656
	5239		1310	
	90.7%		114.6%	
64.8%		17155	(ic=12%)	3.0

9.3

10

"

"

10.1

10.1.1

1

2

10.1.2

QHSE

10.1.3

“

”

1996 470

(15562.1-1995

GB15562.2-1995

2m

“ ”

(GB15562.1-1995)

GB15562.2-1995



10.1-1

危险废物		
废物名称:	危险特性	
废物类别:		
废物代码:		废物形态:
主要成分:		
有害成分:		
注意事项:		
数字识别码:		
产生/收集单位:		
联系人和联系方式:		
产生日期:		废物重量:
备注:		



10.1-2

10.1.4

10.1.5

“ ”

10.2

10.2.1

10.2-1 10.2-3

10.2-1

		m ³ /h		mg/m ³	kg/h							
							m	m	m	kg/h		mg/m ³
2#	DA004	5000		27.8	0.139	102°43 12.03275 E 39°18 4.94585 N	1245	15	0.5	0.26	100	NOx HCl SO ₂
			VOCs	10.6	0.053					1.8	60	
	DA005	5000	SO ₂	1.4	0.007	102°43 19.10091 E 39°18 4.59824 N	1246	25	0.5	9.65	550	GB16297-1996 2
			NO _x	69.4	0.347					2.85	240	
				12.4	0.062					0.915	100	GB 14554-93 VOCs
				0.64	0.0032					1.5	14	
			VOCs	6.6	0.033					9.2	60	
	DA006	3000	NO _x	5.0	0.015	102°43 22.15219 E 39°18 11.16428 N	1244	25	0.5	2.85	240	DB12/524-2020 1 TRVOC
				1.667	0.005					0.915	100	
			VOCs	10.0	0.03					9.2	60	

10.2-2

				(t/a)									
		m ³ /a	m ³ /d					mg/L	t/a				
1,4-		W1-1	142.2	0.47	133.2 9.0				COD	63291.1	9.0	pH	
		W1-2	1923.3	6.41	1,4-	2.50	1-	-4-	-9	5,10	5-		-9,9-
					0.31	2-	-4-	0.05	4.10				
					1.35	1875.60	0.02	3.42					
							35.95						
1,4-		W2-1	4003.74	13.35	1,4-	62.82	1-	-4-	-	-9,10,-			
					2.95	1,4-	29.95	8.10					
					736.69	39.24	3123.99						
8GL		W3-1	327.62	1.09	1.3.3-	-2-	4.23	DMF	0.58				
					24.51	3.13	295.16						
			W3-2	39.47	0.13	0.09	DMF	2.25	37.141	COD	91968.6	3.63	
		W3-3	1597.32	5.32	25.06	83.7							
					125.39	1.73	123.41	2.16					
							1235.77						
		W3-4	1124.91	3.75	14.04	20.95	1.41						
					20.61	8GL	18.68	0.42					
						1048.79							
	W3-5	471.52	1.57	8GL	0.41	0.22	0.054	COD	1726.33	0.814			

					0.13	470.71		38.17	0.018	
			9630.08	32.09	/		/	/	/	
		W4-1	120	0.4	7.23	0.13	1.36	61333	7.36	
		W5-1	0.6	0.002	0.22	0.004	0.005	COD	8333	0.01
			120.6	0.402	/		/	/	/	
		W6-1	324	1.08	COD SS			COD	500	0.162
								SS	100	0.032
		W6-2	40	0.136	COD			COD	400	0.016
		W6-3	828	2.76	COD SS			COD	30	0.025
								SS	40	0.033
									4000	3.312
		W7-1	1152	3.84	COD BOD SS			COD	250	0.288
								BOD	200	0.23
									25	0.029
								SS	150	0.173
									1000	1.152
			2344	7.816	/		/	/	/	
			12094.68	40.308	/		/	/	/	

10.2-3				t/a					
			1- -4- -9,9- -9,9- 2- -4- 1		HW49/900-041-49	110.16		15d	5.51
					HW49/900-039-49	19.25		15d	1.0
					HW49/900-041-49	1.5		15d	0.08
						130.91	/	/	/
			/	/	9.3		/	/	

10.2.2

" [2013]37 "

"

SO₂ NO_x VOCs

SO₂ 0.051t/a NO_x 2.601t/a VOCs 0.852t/a

10.3

HJ819-2017

HJ1116-2020

31

10.3-1

10.3-2

10.3-1

	DA004 15m 0.5m	1	HCl TVOC	/
	DA005 25m 0.5m	1	SO ₂ NO _x HCl NH ₃ TVOC	/
	DA006 25m 0.5m	1	NO _x HCl TVOC	/

10.3-2

		DA004	HCl TVOC	1 /

	15m	0.5m		
	25m	0.5m	DA005	SO ₂ NO _x HCl NH ₃ TVOC
	25m	0.5m	DA006	NO _x HCl TVOC
				TVOC
	1	1m		Leq
	4			7 38 45
				5
				1 1
a				TVOC TVOC

10.4

" [2017] 4 "

" "

8.3-1

11

11.1

11.1.1

		39°18'8.77"	102°43'9.28"		1500
/ 1 4		800 / 1 4		500 /	8GL
	3000		222	7.4%	

11.1.2

		2024	"	4
	VOCs			
		"		
1,4-	1,4-		8GL 3	
2024		2023	7	"
				"

[2014]20

"

"

11.1.3

28734.55m³/a
2030
0.12%
43200t/a
1 15t/h
2337.8 m³/a

2023 6 5 2022
NO₂ PM_{2.5} PM₁₀ CO O₃ 8h SO₂
HJ2.2-2018

6.4.1.1

GB/T14848-2017
—
GB36600-2018 1

2023 12

"

"

11.1.4

2012

2012

11.1.5

2023 6 5

2022

SO₂

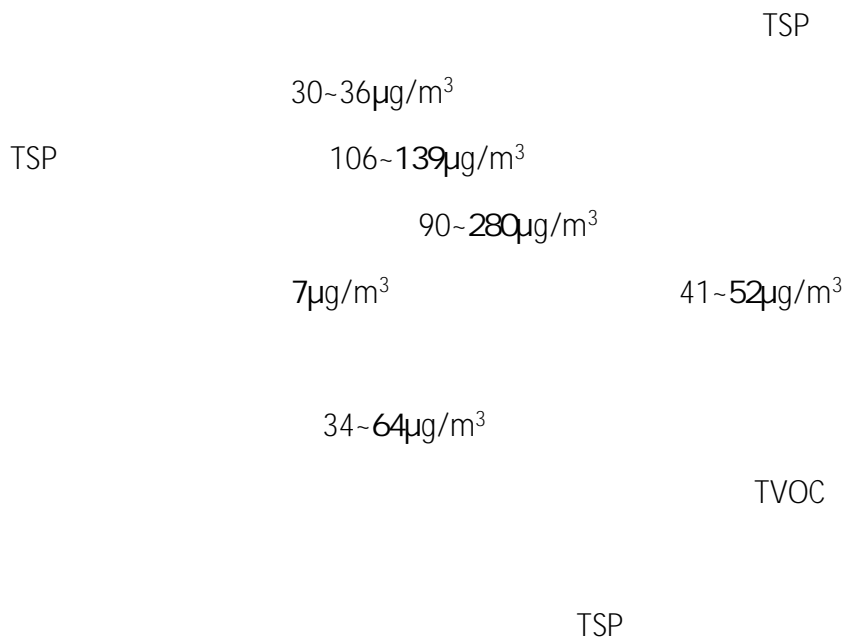
NO₂ PM_{2.5} PM₁₀

CO

O₃ 8h

HJ2.2-2018

6.4.1.1



2022 11 3

	5	100%	0.65	5
100		0.668	5	100
	0.188		5	100%
0.205	5	100	1.11	

III

2024 4 22 2024 4 23

57.2~59.0dB(A)

49.0~52.0dB(A)

A

(GB3096-2008)3

2024 4

23

GB36600-2018

11.1.6

1

1,4-

1,4-

1,4

G1-1

VOCs

1

+

+

1,4

G2-1

1

1

VOCs

1

25m

DA005

SO₂ NO_x HCl

1.4mg/m³

69.4mg/m³

12.4mg/m³

GB16297-1996

2

	0.64mg/m ³		GB 14554-93	VOCs
	6.6mg/m ³			
DB12/524-2020	1	TRVOC		
	8GL			
G3-1		DMF		G3-2
	DMF			G3-3
	1	+		1
VOCs	1	25m	DA006	
	NOx	HCl	5.0mg/m ³	1.667mg/m ³
	GB16297-1996	2	VOCs	10.0mg/m ³
			DB12/524-2020	1
				TRVOC
	2#			
	1,4-			
			GF1	
	1	+		2#
				1
VOCs	1	15m	DA004	
	HCl		27.8mg/m ³	
GB16297-1996	2		VOCs	10.6mg/m ³
			DB12/524-2020	1
				TRVOC
	2			

pH

3

“

”

4

GB3096-2008

3

5

11.1.7

11.1.8

2019 1 1

11.1.9

SO₂ NO_x VOCs

SO₂ 0.051t/a NO_x 2.601t/a VOCs 0.852/a

11.1.10

11.2