1 5
2 7
3 8
4 9
5 9

1.1 10
1.2 1

4.2 136
4.3 146
4.4 154
4.5 157
4.6 158
4.7 159
4.8 161

5.1 164
5.2 165
5.3 167
5.4 169
5.5 170
5.6 174
5.7 175
5.8 176

6.1 178
6.2 178
6.3 179

7.1 181
7.2 186
7.3 188
7.4 .....19. Ő Ď ?

8.5 208
8.6 209
8.7 211
8.8 211
8.9 211

1

2

3

4

5

1

2

3

4

5

6

7 190

8

9

10

11

12

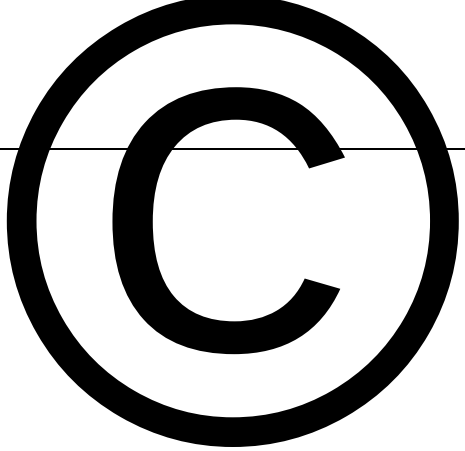
13

14

15

16

17



18

19

20

21

22

23

24 .

25 ÖM ` !@#8ø}ø3;)3ð*6 } 5žfaB@° YH8dTÇ@

26

1

2 Ö * Aî‰ŒéÖ3ø¼@j3žŠœ”ƒ†ELt

3

Lt . 4 Ö * Aî.Î 93 ¸ á ž ï ¢

2015 “ ”

4km

2025

95%

BKT

“ ” 1958

1965 41 1996

520

“ ” “ ”

2000

41

[2016]334

153hm^2

1280

250

15 15 1000

2010 9

[2010]70 2011 12

[2011]138 1

26

2 2012 2

“ ”

“ ” 26

2012 9 [2012]105

2 2017 3 31 520100-2017-9

3 “ ” 325

2015 3 4 [2015]7

4 2018 3 22 5

“ ” 490 2018 3 22

[2018]9 6

190 2019 9

7 300

325 2019

“ ” “ ”

307.4968 /a 17.5032 .0968

eo

s j

1

2

3

4

5

6

1

2

3

4

5

1

2

3

1 2015 1 1

2 2018 12 29

3 2017 6 27

4 2018 10 26

5 2018 12 29

6 2016 11 7

7 2019 1 1

8 2016 7 2

9 2010 12 25

10 2014 7 29

11 2016 2 6

12 2018.10.26

13 2015 4 24

14 2014 7 29

15 2000 3 20

16 2011 1 8

17 2016 2 6

18 1996 9 30

19 2014 12 1

20 2016 7 2

21 2018 10 26

22 2013 37

23 2015 17

24 2016 31

25 2005 39

26

2012 2

27 2017 6 21 682

1 2000

38

2 2001 19

3 1 2018 4

28

4 4 2019 1 1

5 < >

2018 48 2018 10 16

6 2011

150

7 2012

77

8 2016 39

9 “ ” 2016

[redacted]

[redacted]

[redacted]

10 2005 154
11 2008 8 4
12
2012 11
13
2011 26
14
2012 15
15 2018 11 29
16 2018 11 29
17 2017 9 30
18 2015 39
19 2014 13
20 2016 31
21
2018 303
22 2018 11 29
23 “ ”
1998 37 1998.11.25
24 2005.9.30
25 2009.7.29
26 1997.11.21
27 2009.10.1
28 2010.3.1

29 2004.9.25

30 2005.6.7

31

[2010]12 2010.11.8

32 [2010]16 2010.11.7

33 2018 16

2018.6.27

1 HJ2.1-2016

2

2

2019 11

3

2019 12

4

2012 9

5

2015 3

6

2018 3

7

2015 7

8

2019 9

9 190

2018

4

10 2014 5

11

203 10

12 2016

11

13

2019 10

ƙ m "

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1

m "

ƙ ƙ m "

2

m "

m "

3

m "

m "

4

ƙ

5

m "

6

7

III

GB/T14848-2017 III

2

2

1

HJ2.3-2018

Q

III

0.92m³/d Q=0.92m³/d 200m³/d

2 W

COD BOD_5 SS

HJ 2.3-2018 A.2

		kg
1	COD	1
2	BOD_5	0.5
3	SS	4
4		0.8

1.5-2

	COD	BOD_5	SS	
	60	10	10	5

HJ 2.3-2018 1

1.5-3

		COD	BOD_5	SS	
mg/L	0.92m^3/d 312.8m^3/a	60	10	10	5
kg/a		20	4	4	1
kg		1	0.5	4	0.8
	/	20	8	8	1.25

1.5-3

W 20 W=20<6000

Q=0.92m^3/d

HJ610-2016 1.5-5

	I	II	III

HJ610-2016 A II

1.5-5

	PmaxÓ10%
	1%ÒPmax 10%
	Pmax 1%

“

+ + 15m ”

1.5-7

		kg/a	m	m	m
		26.88	10	66	21
		0.57			

1.5-8

/	/	
		77544
		33.5ÁC
		-3ÁC
	m	90
	/km	/
	/o	/

AERSCREEN 1.5-9

kg/a	26.88	0.57
Ci mg/m^3	0.00299	0.0000634
Coi mg/m^3	2.0	0.04
Pi %	0.15	0.16
D10% m	34	34

1.5-6 P_i 0.16% 1%

HJ2.2-2018

2 GB3096-2008

2

<3dB A

HJ2.4-2009

HJ19-2011

HJ 169-2018

1.5-10

	IV IV+	III	II	I
				a
a				

HJ 169-2018 C

1.5-11

/t /t Q

P

1.5-13

Pi 0.16% 1%

2

3dB A

Q=0.92m^3/d 200m^3/d W=20<6000 A

II

$PM_{2.5}$ PM_{10} SO_2 NO_2 CO O_3 PM_{10} $PM_{2.5}$

TSP CO NO_X H_xC

A LAeq A LAeq A LAeq

pH COD BOD_5 SS NH_3-N

LAS --- COD NH_3-N

pH

--- COD NH_3-N

---

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]

1

III

GB3838-2002 III 1.6-1

1	pH	6 9
2	COD	Ò20
3	BOD_5	Ò4
4	SS	Ò30*
5	NH_3-N	Ò1.0
6		Ò0.2
7	TP P	Ò0.2
8		Ò0.2
9	F^-	Ò1.0
10		Ò0.05
11	/L	Ò10000
“ * ”	SL63-94	

2

GB/T14848-2017 III

1	pH	6.5 8.5
2	N mg/L	Ò0.5
3	* COD_{Mn} O_2 mg/L	Ò3.0
4	mg/L	Ò1000
5	mg/L	Ò450
6	mg/L	Ò0.05
7	N mg/L	Ò20.0
8	N mg/L	Ò1.00
9	mg/L	Ò0.002
10	MPN/100L	Ò3.0

6

30		28	280
31		1290	1290
32		1200	1200
33	+	570	570
34		640	640
35		76	760
36		260	663
37	2-	2256	4500
38	[a]	15	151
39	[a]	1.5	14
40	[b]	15	151
41	[k]	151	1500
42		1293	12900
43	[a,h]	1.5	15
44	[1,2,3-cd]	15	151
45		70	700
			3.6
	A		

GB27632-2011 2

GB/T19923-2005 1.6-6

1	pH	6 9	6.5~9.0	
2	COD	70	60	
3	BOD_5	10	10	
4	SS	10	30	
5	NH_3-N	5	10	
6	TP	0.5	1.0	
7	TN	10	10	
8		1	1.0	
9	m^3/t	7	/	

GB16297-1996

2

GB 27632-2011 5

1.6km 2.3km 3.0km

3.7km 1.7-2

3

ڑ ۶ 300m

1.7-2

200m

1.7-2

200m

200m

1.7-2

50m

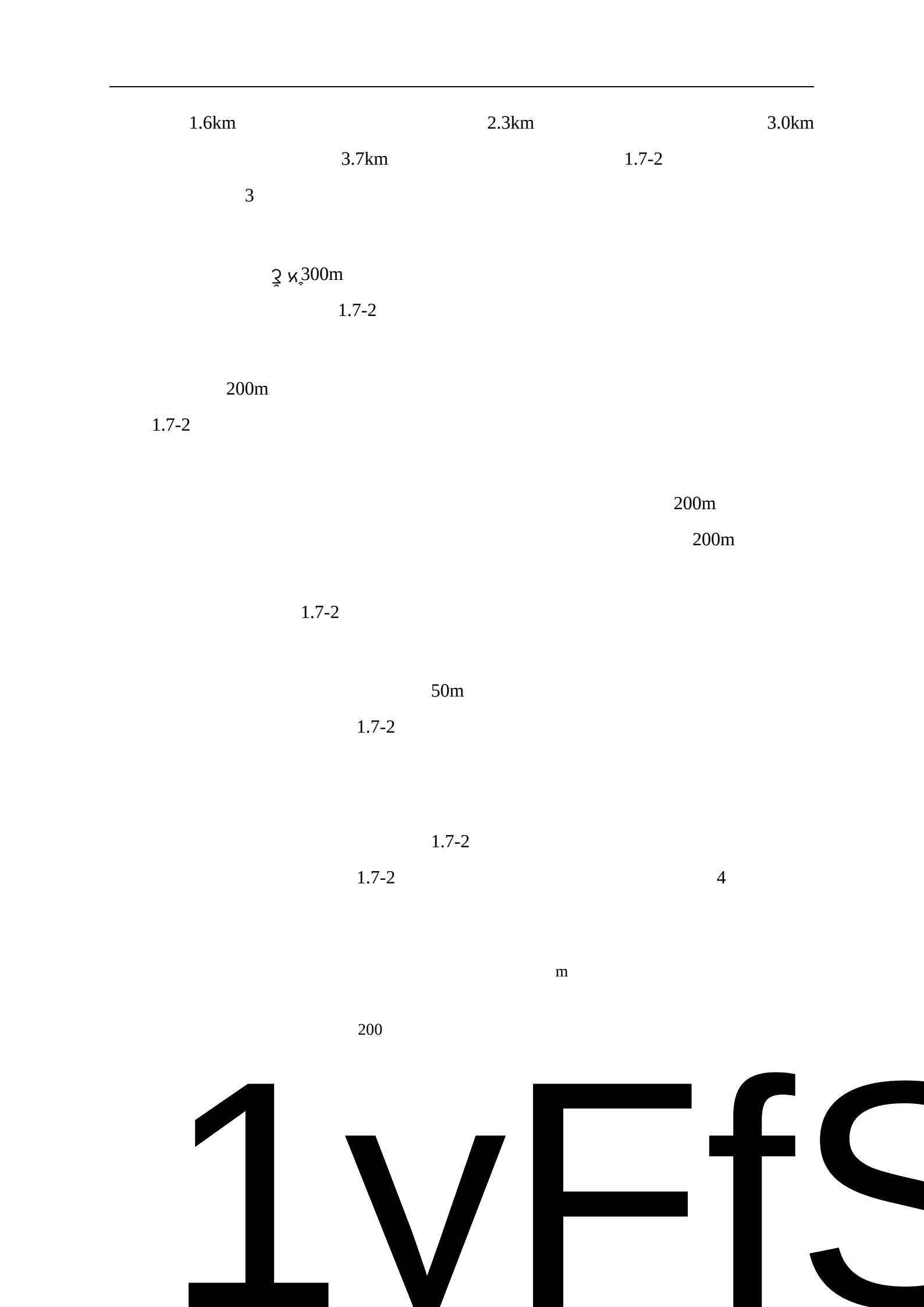
1.7-2

1.7-2

1.7-2 4

m

200



		“ ”	SE	220	GB3838-2002 III
		0.19m^3/s III	W	70	
		1.28m^3/s III	WN	2000	
		6.5m^3/s III	EN	2927	
		3210 m^3 3760 m^3 4 m^3 62 m^3 1200 558.76 m^3	EN	4121	
		6.5m^3/s	EN	9800	
		5~7L/s · km^2	---	---	GB/T14848-2017 III
			S	100	
			WS	1200	
			E	1600	
		6 132	N	1600	
		5 350	NE	2300	

100 NE 3000

3

178 NE 3500

-5

200m

“ 2018

” 2018 1892

——

2014 5 ——

“

”

5

2012 7

2013 10 22

2013 515 11 2016 11

2017 3 24

2017 123 12

1

“

1

2

3

4 ”

2 “ ”

——

GB3095-2012

GB3838-2002 III

GB/T14848-2017 III

GB3096-2008 2

GB36600-2018

—

—

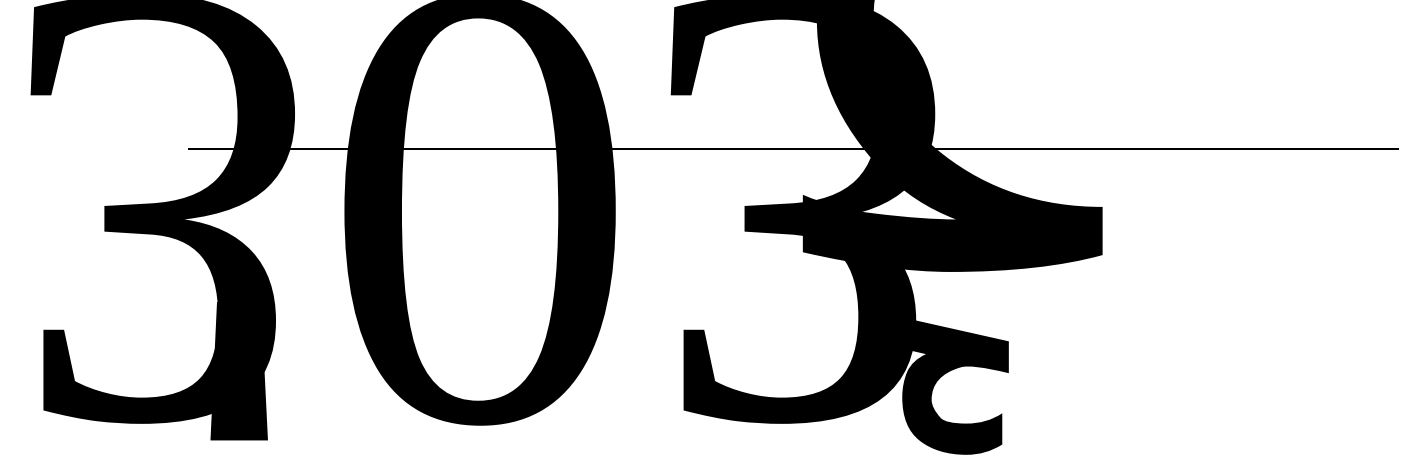
2019

“ ”

“ ”

3

NOx COD NH_3-N



16

2018 16

2017

5

“ ” “ ” —

“ б

1958

153hm^2 2011

12

26

2017 3 31 2018 3 22

2018 3 22

190 2019 9

300

2.1-1

3

1

2

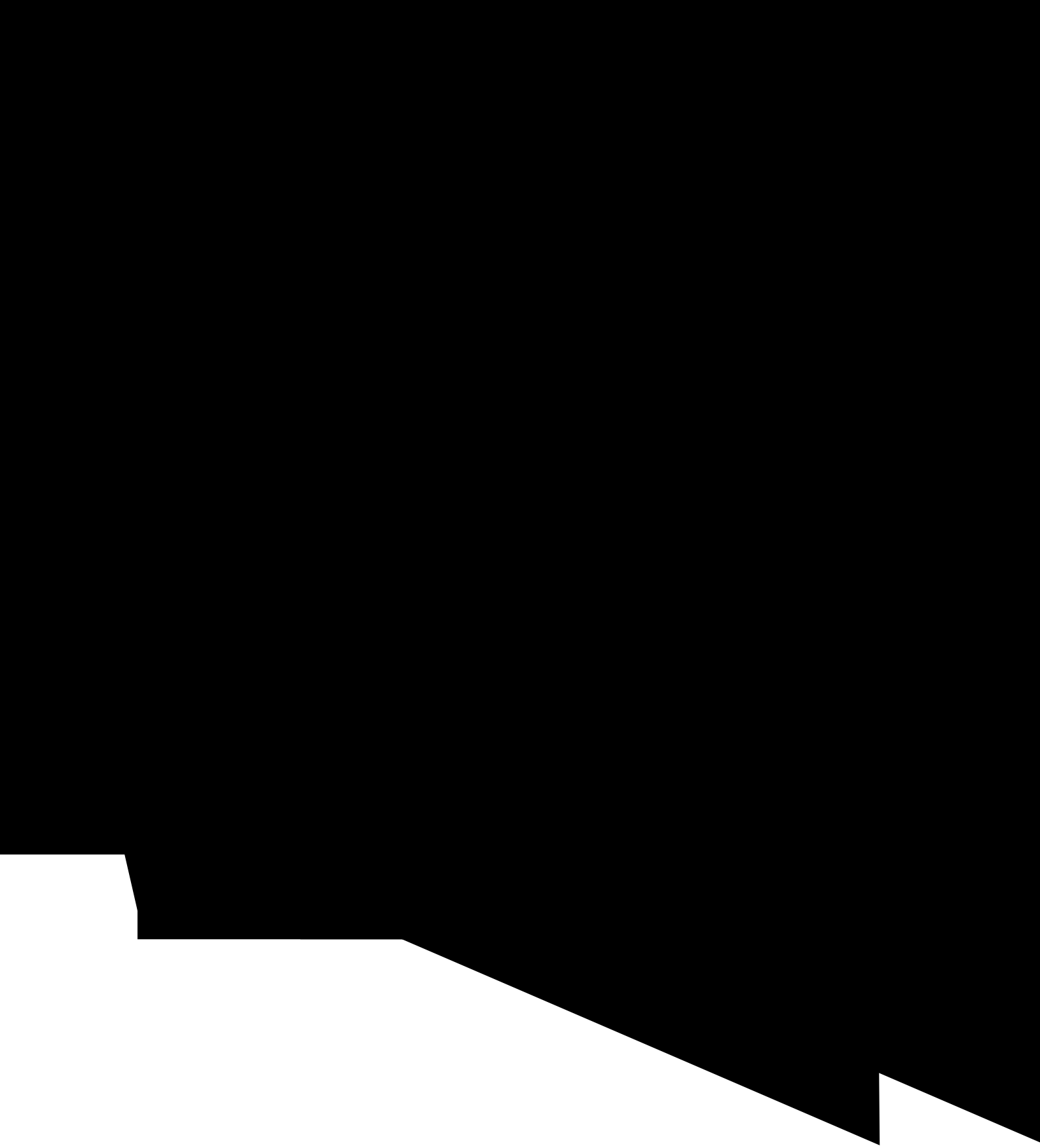
3

/ /

/

/

2.1-1



160471.53t/a 322 /a 9332.07t/a 3 /a

“ ”

14628t/a 28 /a 7358.6t/a 4968 /a “

” 7590t/a 2.2 /a “

”

160792.13t/a 296.6968 /a

4

2.1-3

26

325 490

2.1-3~

2.1-6 2.1-7~ 2.1-10

2.1-11~ 2.1-14

190

2.1-16

1 300m

2

m "

		/ <

2018 5

1

2019

pH

GB27632-2011 5

GB27632-2011 2

GB12348-2008 2

GB13271-2014 1

2

2019

2019

499680

8328 8263

COD NH_3-N

4164 4141

3

2019 1

2019 10 30 ~2019 11 1 2.1-21~2.1-23

			58.1	60	
			45.2	50	

2017 2.1-23 GB3096-2008

2

			t/a	t/a	
	SO_2		2723	/	/
			511	/	/
			856	1314.07	
			1186.8	1800	
	NOx		729	/	/
			137	/	/
			230	289.81	
			871.2	900	
	COD		25.9	/	/
			3.5	/	/
			5.83	5.8	
			13.53	17.03	
	NH_3-N		1.2	/	/
			0.2	/	/
			0.25	0.25	
			1.13	1.33	

2018 11 6 13

COD 22.83t/a 70mg/L NH_3-N 1.58t/a

5mg/L SO_2 1314.07t/a 550mg/m^3 NOx

289.81t/a 400mg/m^3

2019 12 30

“ ”

3458.28

2019 11 28

[2019]16

[2019]24

2020 3 2021 1

1

4968 7359.6t 1487kg/

2

6 3.5B 1 3B

1 2024A 1 2B 1 518/1720

3 7 55

6

2 49~51"

4 145" 2 170"

1 49" 61" X

32

4968

167758.2t/a 307.4968 /a 160792.13t/a

296.6968 /a

1 14 88

1 X

5.61

4991.2

6 2020 6 2020 12

2021 1

“ ” “ ”

167758.2t/a 307.4968 /a

160792.13t/a 296.6968 /a

1

5.61 9611.8 171.33Kg/

2

5# 14 63.5 14

88

1

14 88

1 X

12

3

2.1-25

A

169803.6t/a 325 /a

B

169803.6t/a 325 /a

C

169803.6t/a 325 /a “

” 9404t/a 18 /a

7358.6t/a 4968 /a “ ”

167758.2t/a 307.4968 /a

1 9611.8t/a 5.61 /a

5# 14 63.5

7590t/a 6.27 /a 169780.0t/a

306.8368 /a

D

169803.6t/a 325 /a

160471.53t/a 322 /a

9332.07t/a 3 /a “ ”

14628t/a 28 /a 7358.6t/a 4968

/a “ ” “

” 7590t/a 2.2 /a “

” “ ”

160792.13t/a 296.6968 /a

7590t/a 6.27 /a

14 9611.8t/a 5.61 /a

162813.93t/a 296.0368 /a

A

57672.94t/a 26 /a

169803.6t/a 325 /a 292950t/a 490 /a 520426.54t/a 841

/a

B

57672.94t/a 26 /a

169803.6t/a 325 /a 292950t/a 490 /a 520426.54t/a 841

/a

C

57672.94t/a 26 /a	169803.6t/a 325 /a	292950t/a 490 /a	/	/	/	/	/	520426.54t/a 841 /a
57672.94t/a 26 /a	169803.6t/a 325 /a	292950t/a 490 /a	/	/	/	/	/	520426.54t/a 841 /a
57672.94t/a 26 /a	169803.6t/a 325 /a	292950t/a 490 /a	/	/	/	/	/	520426.54t/a 841 /a
57672.94t/a 26 /a	169803.6t/a 325 /a	292950t/a 490 /a	/	9404t/a 18 /a	7358.6t/a 4968 /a	7590t/a 6.27 /a	9611.8t/a 5.61 /a	515902.94t/a 822.8368 /a
55454.75t/a 25 /a	160471.53t/a 322 /a	292950t/a 490 /a	/a 1461t/a	9051t/a 2.6 /a 0.4 /a 7590t/a 2.2 /a	14628t/a 28 /a	7358.6t/a 4968 /a	7590t/a 6.27 /a	9611.8t/a 5.61 /a	512679.68t/a 811.4368 /a

	2218.191t/a /a	9332.073t/a /a	0	0	0	0	0	0	1931.66t/a
-7590t/a +7358.6t/a	+9611.8t/a -7590t/a			169803.6t/a =169780.0t/a<169803.6t/a 160471.53t/a +9611.8t/a	-9404t/a +7590t/a =162813.93t/a<169803.6t/a	+7358.6t/a -14628t/a			

2.1-25

4

5

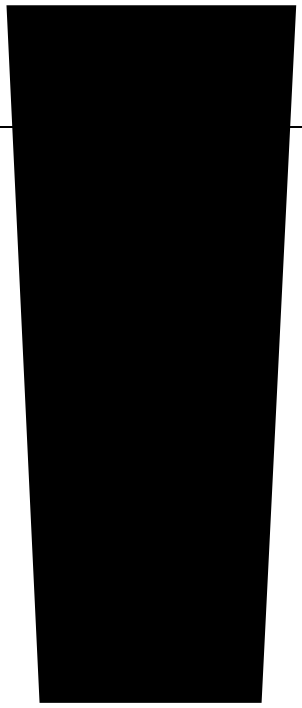
7590t/a

6.27 9611.8t/a 5.61 /a

2.1-26 6

7

		1	5
		14 88	
		1 X	
	3#		
	3#		
		12	



4800m^3/d

2400m^3/d

“ + + 15m ”

1 20m^2

1		2425	1		1		
2		88"	14		14		5#
3	X		1		1		

1

2.1-29

1		t	9.09	3090.6	
2		t	3.92	1332.8	
3		t	7.48	2543.2	
4		t	0.25	85	
5		t	0.32	108.8	
6		t	2.59	880.6	
		t	23.65	8041	
5		t			
6		t	1.37	465.8	
7		t	4.25	1445	
		t	5.62	1910.8	
		t	29.27	9951.8	9611.8t

2

2.1-30

	t/a			t/a		
1		90.6	1		9611.8	
2		1332.8	2		4.08	
3		2543.2				
4		85				
5		108.8				
6		880.6	3		306.0	
7						
8		465.8				
		1445	4		29.92	
		9951.8	-		9951.8	-

C	1.8-2.1	4.2- III - 4	
S	32.06 112.8 -120 444.6	207 232 112 4.1- III - 4	8ppm
ZnO	81.37 1975	215	LD507950mg/kg
$C_{18}H_{36}O_2$		113	4640mg/kg
	47-53% 31-36% 15-18% 1% 1.25g/mL		
	1.112	121.11	
2-		515-520 21g/m^3	

1080t/d

63t/h

117866760m^3/a

117762810m^3/a 103950m^3/a 942150m^3/a

838200m^3/a 103950m^3/a 116859270m^3/a

99.15% 2.1-2

“ ” 117867754m^3/a

117762810m^3/a 104944m^3/a

943144m^3/a 838200m^3/a 104944m^3/a

116859270m^3/a 99.15% “ ”

2.1-3

117868121.2m^3/a

117762810m^3/a 105311.2m^3/a 943511.2m^3/a

838200m^3/a 105311.2m^3/a 116859270m^3/a

99.15% 2.1-4

2.1-32

t/h

t/h t/h

42.6	31.1	40.6	27.2	1	35t/h	1	35t/h	35	70
73.8	50.8	64.4	42.2	1	63t/h	1			

“ ”

1

5 14 63.5 14 88

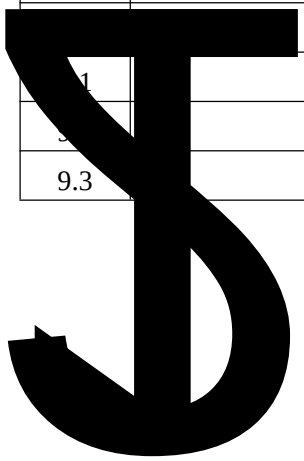
1 49" 61" X

7

2.1-33

1				
1.1		/		
	14.00R25	/	56100	
2				
		t/a	3090.6	
		t/a	1332.8	
		t/a	2543.2	
		t/a	85	
		t/a	108.8	
		t/a	880.6	
		t/a	8041	
		t/a		
		t/a	465.8	
		t/a	1445	
		t/a	1910.8	
		t/a	9951.8	
3		d	340	
4			76	12

			68	
			8	
5		ha	153.7104	2305.66
6		m^2	169712.47	
7		m^2	260437.85	
8			4991.20	
8.1			4886.80	
8.2			104.4	
9.1			1730	
9.2			67	
9.3			120	



88 ″

. c

20 6 8

1

50L 0.8

($_1$) /1000

— t/ · d

Ь 0.6 0.9 0.8

— L/ · d

2.2-1

	pH	BOD_5	COD		SS
mg/L	6.5 9.0	100~150	200~300	10~20	20~80

20 0.8t/d 144t

2.2-2

2

3.5mg/m^3

CO NOx HC

3

2.2-3

1m ಹ2-



1

AP-42

8.68×10^{-6}t/t 1.86×10^{-7}t/t

4423.4t/a 3090.6t/a 1332.8t/a

38.40kg/a 0.82kg/a

GB27632-2011 2000m^3/t

884.68 m^3/a 4.34mg/m^3

0.09mg/m^3

5#

5# 26 63.5

14 12 63.5 5# 14 88

12 63.5

14 88 4423.4t/a

3090.6t/a 1332.8t/a 38.40kg/a

0.82kg/a

12 63.5 3448t/a

29.93kg/a 0.64kg/a 698.60

m^3/a 4.34mg/m^3 0.09mg/m^3

“ + + 15m ”

30% 5#

2.2-4

	14690	637.56	13.66
	28124	1220.58	26.16
	48322	2097.22	44.94

2 4h

0.03kg/d 12

0.36kg/d 2% 0.0072kg/d 0.002448t/a

2000m^3/h 0.45mg/m^3

2

12

367.2m^3/a 1.08m^3/d BOD_5 COD NH_3-N SS

312.8m^3/a 0.92m^3/d

GB27632-2011 2

898.25m^3/d 523.76m^3/d

1108.56m^3/d “ ”

2.45m^3/d “ ”

0.92m^3/d 2533.94m^3/d

				640	0.02778	0.00833	0.01945
				813.6	0.03383	0	0.03383
				884.68	0.03840	0.01152	0.02688
				804.6	0.03492	0	0.03492
				49068.08	2.13109	0.03078	2.10031
				5508	0.00512	0	0.00512
				14690	0.01366	0	0.01366
				28124	0.02616	0	0.02616
				839.6	0.00078	0.00023	0.00055
	CS_2			640	0.0006	0.00018	0.00042
				813.6	0.000915	0	0.000915
				884.68	0.00082	0.00025	0.00057
				804.6	0.00075	0	0.00075
				49068.08	0.045475	0.00066	0.044815
				58010	10525.7	10420.3	105.5
				198000	7271	7198.29	72.71
				396000	14544.14	14398.7	145.44
				0	0	0	0
				652010	32340.84	32017.29	323.65
				58010	3651.1	3140.3	510.8
				198000	2908.83	230.086	678.744
	SO_2			396000	5817.66	4630.86	1186.80
				0	0	0	0
				652010	12377.59	8001.246	2376.344
	NOx			58010	137	0	137
				198000	55.4	0	55.4

			396000	871.2	0	871.2
			0	0	0	0
			652010	1063.6	0	1063.6
			4752	0.71	0.61	0.10
			/	/	/	/
			4752	0.71	0.61	0.10
			/	0.0066	0.004	0.0026
			/	0.002448	0.001468	0.00098
			9504	1.429048	1.225468	0.20358

2

2533.94m^3/d

GB27632-2011 2

1226.6m^3/d

1307.34m^3/d

2.2-10

		t/a	mg/L	t/a	t/a	mg/L
874204.7 m^3/a	COD	174.84	200	122.39	27.06	60
	BOD_5	87.42	100	78.68	4.51	10
	SS	157.36	180	148.62	4.51	10
	NH_3-N	17.48	20	13.11	2.26	5
		4.37	5	3.50	0.45	1
451027.7m^3/a			1226.6m^3/d 423177m^3/a			1307.34m^3/d

3

2.2-11

				/dB A		/dB A
			12	85		Ò65

2.2-12

	/	
t/a	t/a	t/a
51098	51098	0
56715	56715	0
45676		

“ ”

2.2-13

“ ”

	450714.9	312.8	0	312.8	0	451027.7	+312.8
COD	27.04	0.06	0.12	0.02	0	27.06	+0.02
BOD_5	4.51	0.03	0.08	0.004	0	4.51	+0.004
SS	4.51	0.06	0.14	0.004	0	4.51	+0.004
NH_3-N	2.254	0.004	0.00	0.001	0	2.26	+0.001
	0.45	0.001	0.001	0	0	0.45	0
	418885 m^3	0	0	0	0	418885 m^3	0
	8.37	0	0	0	0	8.37	0
	1753405 m^3	0	0	0	0	1753405 m^3	0
NH MC	169.404	0	0	0	0	169.404	0
	700920 m^3	0	0	0	0	732780 m^3	0
NH MC	24.63	0	0	0	0	24.63	0
	48988.0 m^3	884.68					

			0.2026	0.002448	0.001468	0.00098	0	0.20358	+0.0098
			51098	0	0	0	0	51098	0
			56715	0	0	0	0	56715	0
			45676	0	0	0	0	45676	0
			21010	306	0	0	512	20804	-206
			4810	0	0	0	0	4810	0
			249.9	0.5	0	0	0.6	249.8	-0.1
			1937	4.08	0	0	0	1941.08	+4.08

106Á43¶44¤~106Á44¶59¤ 26Á50¶42¤~26Á51

90%

300 ° 310 ° 20 ° 30 °

T_{2sh}

6km T_{1m}

2

1.50 m^3

802.2km^2

74.9% Tim Tiy P_1

P_2 2-3

T_{2sh} T_{2s} 1q C_2

Tiy

2-3 6.5L/s · km^2 6.2L/s · km^2

8

GB50011-2010 2016

A GB18306-2015 6

0.05g ê Ē

266 324 100m

11

106Á43¶ 26Á35¶

13.8 857.2hpa 81% 1 3.6 7

22.5 -


88.3km
20km²
11.8km
37
0.18m³/m
29.1km

7.5km 11km^2

3210 m^3

3760 m^3 4 m^3 62 m^3 1200

558.76 m^3 2015 12 25

5~9

1200mm-860mm 1080mm

1996

1272.5m

III

9

2

100m

1.2km 1.6km 1.6km

2.3km 3.0km 3.7km

100m

1.2km

1.6km

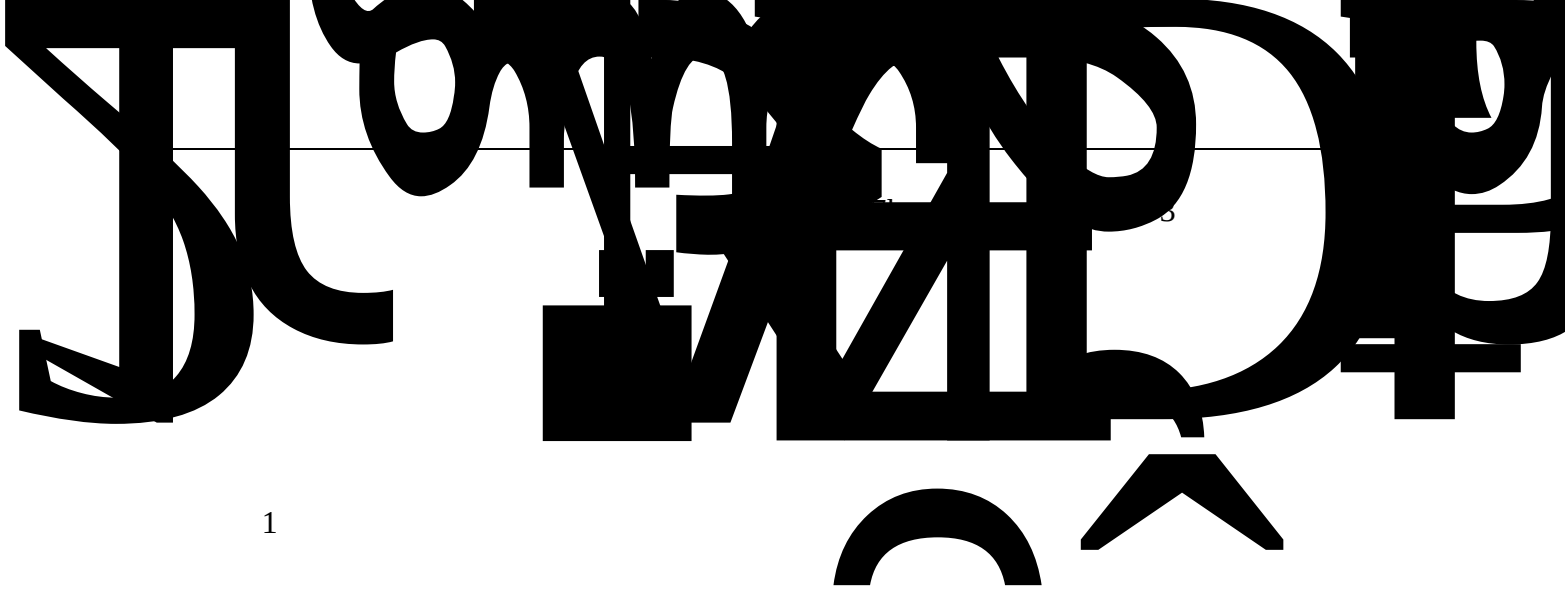
1.6km 6

132

2.3km 5

350

3.0km 100



1

III GB3838-2002 III

2

200m 70m

2000m 2927m

1

2

2

$S_{i\ j}$

, ,

, ,

$S_{i\ j}$ ð ði

$c_{i\ j}$ ð ð i j mg/L

$c_{s\ i}$ ð ð i j mg/L

pH

$S_{pH\ j}$= 7.0 pH_j / 7.0 pH_{sd} .

. / . .

' ' pH

' ' pH

ð ð pH

ð ð pH

1

3

3.2-2

3.2-2 3 ,

1 GB3838-2002 III

3.2-3

W1	200m
W2	200m
W3	500m
W4	500m
W5	1000m

W1	200m	W1
W2	200m	/
W3	500m	W2
W4	500m	

100m 1.2km

1.6km 1.6km 2.3km

3.0km 3.7km

800m

1

14 2012 3 2012 6

HJ610-2011

2 5

14 2

3.3-1 3.3-1

			(N)	(E)
Q1	ZK1	S	26Á51¶55 ŋj	106Á43¶45ŋj
Q2	ZK2	S	26Á51¶32ŋj	106Á43¶55 ŋj
Q3	ZK4		26Á52¶25ŋj	106Á44¶12 ŋj
Q4	ZK6		26Á52¶50ŋj	106Á44¶54 ŋj
Q5	S015	E	26Á52¶34ŋj	106Á45¶13 ŋj
Q6	S013	E	26Á52¶59ŋj	106Á46¶23 ŋj
Q7	S008	S	26Á50¶26ŋj	106Á43¶43 ŋj
Q8	S005	SW	26Á51¶40ŋj	106Á42¶45 ŋj
Q9	501	SE	26Á51¶15ŋj	106Á45¶53 ŋj
Q10	CK3	S	26Á50¶36ŋj	106Á- 3 v

2

3.3-2

				/		m
		N	E	m		
Q1	ZK1	26Á51¶55ŋj	106Á43¶45ŋj	125.00	1280.47	1276.00
Q2	ZK2	26Á51¶32ŋj	106Á43¶55ŋj	118.50	1291.96	1284.25
Q3	ZK4	26Á52¶25ŋj	106Á44¶12 ŋj	120.50	1268.14	1253.40
Q4	ZK6	26Á52¶50ŋj	106Á44¶54ŋj	120.45	1270.86	1257.20
Q5	S015	26Á52¶34ŋj	106Á45¶13ŋj	0	1275.86	1275.60
Q6	S013	26Á52¶59ŋj	106Á46¶23 ŋj	0	1250.00	1250.00
Q7	S008	26Á50¶26ŋj	106Á43¶43 ŋj	0	1310.00	1310.00
Q8	S005	26Á51¶40ŋj	106Á42¶45ŋj	0	1286.00	1286.00
Q9	501	26Á51¶15ŋj	106Á45¶53ŋj			

3

3.3-4

6

1

GB/T14848-2017 III

			pH									
	2019.9.10	16.7	7.35	0.055	0.8	360	252	0.004ND	0.75	0.003ND	0.0003ND	33
	2019.9.11	17.1	7.21	0.049	0.7	358	254	0.004ND	0.70	0.003ND	0.0003ND	34
Q11	2019.9.12	16.2	7.44	0.061	0.9	365	253	0.004ND	0.76	0.003ND	0.0003ND	49
		16.7	7.33	0.055	0.8	361	253		0.74			39
			6.5 8.5	0.5	3	1000	450	0.05	20	1.0	0.002	3.0
			0.22	0.11	0.27	0.36	0.56		0.04			
			0	0	0	0	0	0	0	0	0	
	2019.9.10	18.1	7.17	0.084	1.0	270	203	0.004ND				

Q2

0.00ИD

		pH	
2019.9.11	17.7	7.23	0.064

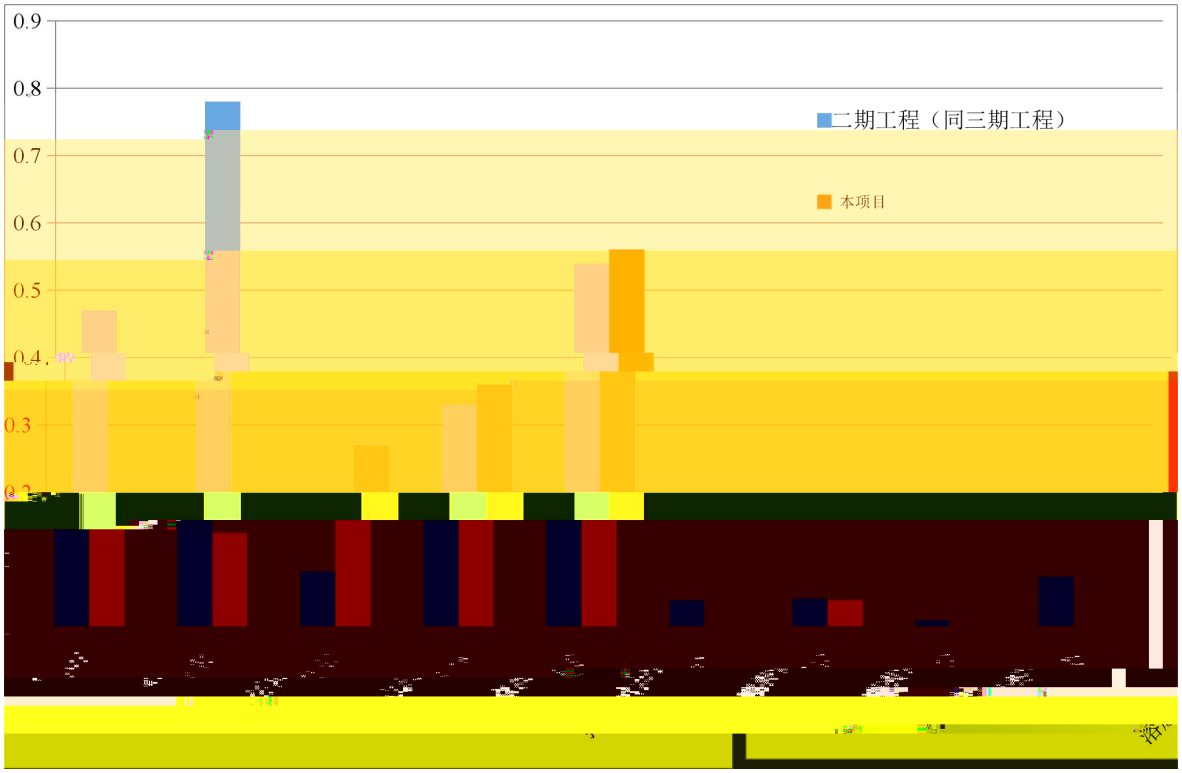
3.3-5

Q1		
Q2		500 1500m
Q1	ZK1	/
Q2	ZK2	/
Q3	ZK4	/
Q4	ZK6	/
Q5	S015	/
Q6	S013	/
Q7	S008	/
Q1		/
Q2		Q7
Q3		/
Q4		Q5
Q5		/

Q2 Q4 3.3-6

3.3-2~3.3-3

Q


0.9
0.8
0.7
0.6
0.5
0.4
0.3
二期工程（同三期工程）
本项目

50km

3

13.6 7 22.4

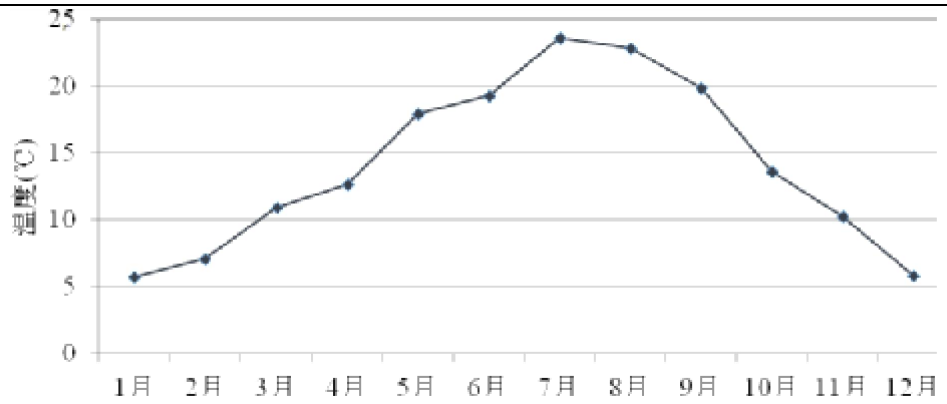
1 3.5 33.5 -3 1235mm

230~270d

3.4-1 3.4-2

3.4-1

895.0	889.8	900.2	901.2	896.7	
15.5	24.0	15.1	3.7	14.4	
18.0	27.9	16.8	5.1	16.6	
%	78	76	84	84	81

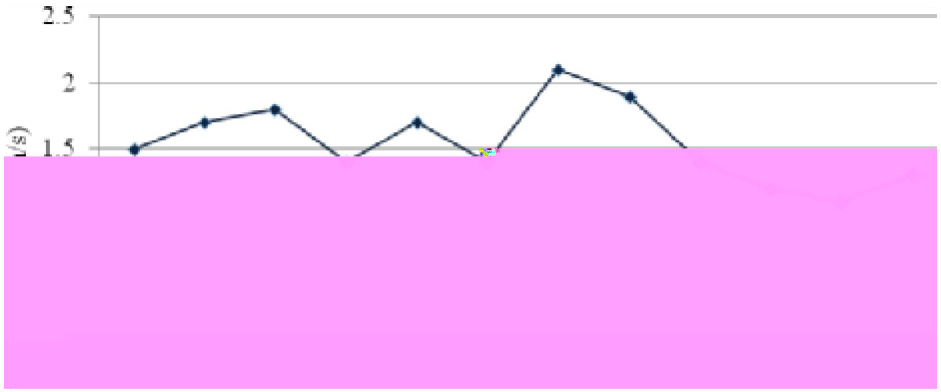


4

3.4-3

3.4-2

	1	2	3	4	5	6	7	8	9	10	11	12
m/s	1.5	1.7	1.8	1.4	1.7	1.4	2.1	1.9	1.4	1.2	1.1	1.3



A

2.2m/s

2.5m/s 2.0m/s 1.9m/s 2.2m/s

14.9%

9.1% 26.7% 19.5%

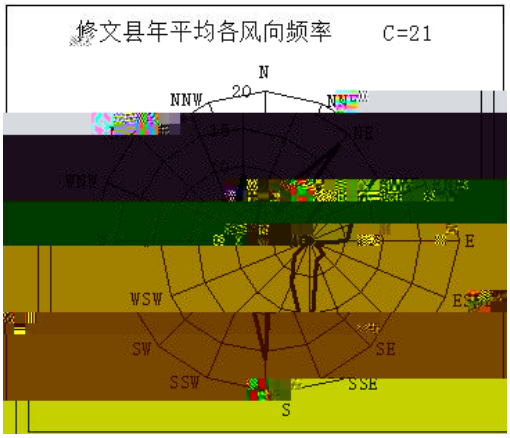
13.1% 30.4%

11.9% 8.5% 36.2%

18.3% 12.5% 26.9%

12.4% 9.9% 24%

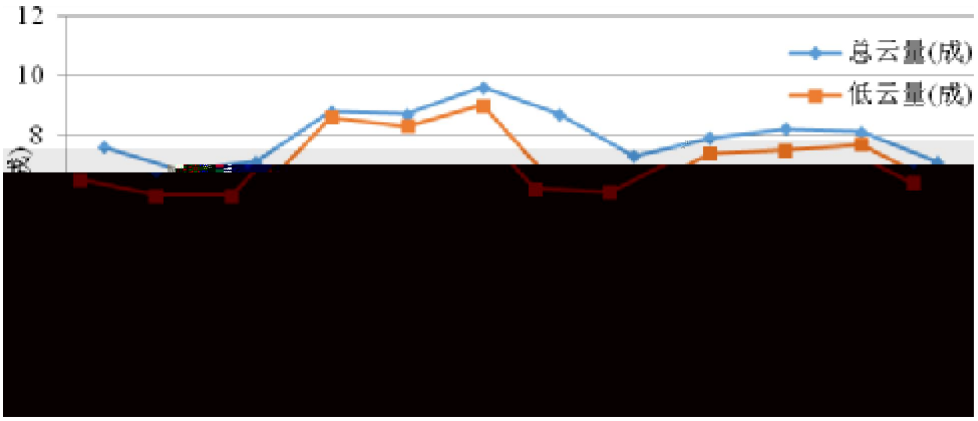
3.3-3

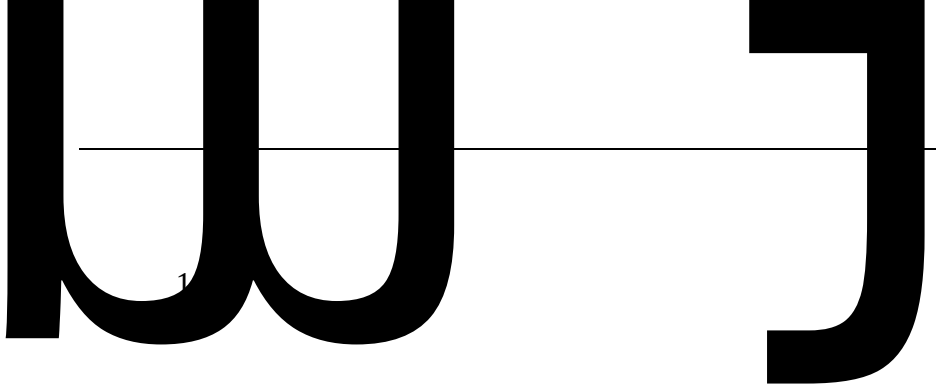


3.4-4

3.4-4

	1	2	3	4	5	6	7	8	9	10	11	12
	7.6	6.8	7.1	8.8	8.7	9.6	8.7	7.3	7.9	8.2	8.1	7.1
	6.5	6	6	8.6	8.3	9	6.2	6.1	7.4	7.5	7.7	6.4





1

2019 6

2019 6 12

GB3095-2012

HJ663-2013 SO_2 NO_2

CO O_3 PM_{10} $PM_{2.5}$ 6

12 GB3095-2012

96.6%

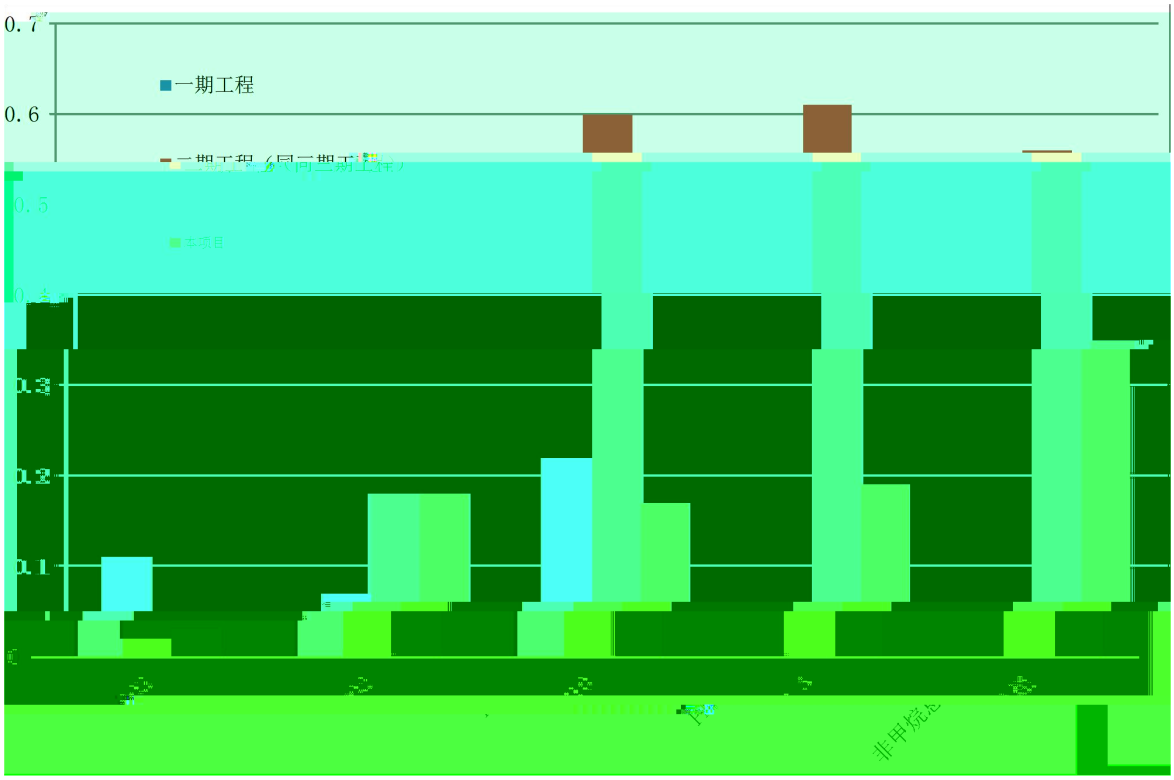
2019 6 96.7% 2.04 SO_2

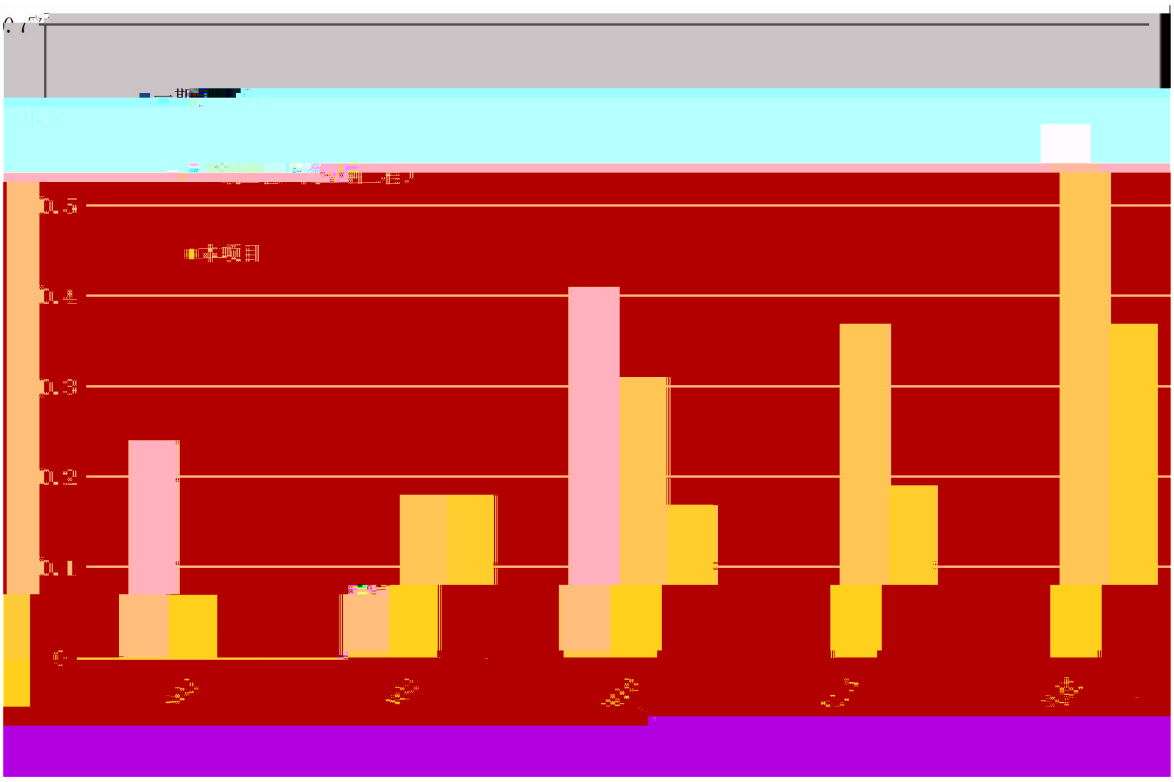
0.005mg/m^3 NO_2 }

G1 G2 3.4-9

3.4-1~3.4-2

			G6	G2	G6	G2	G1	G2
1	SO_2		0.11	0.24	0.02	0.07	0.03	0.03
2	NO_2		0.07	0.08	0.18	0.18	0.18	0.18
3	PM_{10}		0.22	0.41	0.60	0.31	0.17	0.17
4	$PM_{2.5}$		/	/	0.61	0.37	0.19	0.19
5		1	/	/	0.56	0.59	0.35	0.37
2019 6								





3.4-9 3.4-1~3.4-2

GB3095-2012

1

GB3096-2008 2

2

200m

70 20 30

2019

2019 10 30 10:52~12:40 22:06~22:36

1m 4

10

3.5-1

N1		Leq	1.0m	
N2		Leq	1.0m	
N3		Leq	1.0m	
N4		Leq	1.0m	

1

GB3096-2008 2 60dB

50dB

2

3.5-2

				Leq dB			
N1		2019 10 30 10:52~12:40 22:06~22:36		54.6	2		/
				44.1			
N2				54.4	2		
				44.8			
N3				55.9	2		
				46.5			
N4				52.4	2		
				44.4			

3.5-2 4

GB3096-2008 2

3.5-3

N1		
N2		
N1		N1
N2		N1
N3		N1
N4		/
N5		N1
N1		N1 N1
N2		N1 N2
N3		N1 N3
N4		N1 N4
N5		N1 N5
N1		N1 N3 N3
N2		N1 N2 N2
N3		N1 N1 N1
N4		N1 N5 N4

N1~N4

3.5-4

1			54	52.6	50.4	54.6
			43.6	43.3	43.8	44.1
2			54	51.2	43.6	54.4
			43.6	40.1	40.2	44.8
3			54	56.1	57.2	55.9
			43.6	44.4	44.2	46.5
4			54	52.8	56.4	52.4
			43.6	43.1	48.2	44.4

3.5-4

GB3096-2008 2

5#

HJ19-2011

200m

1

2

2004

1998

3

1km

3.7-1 3.7-2

	/	/	/	/
			/	/
	/	/	/	/

	/				
			pH SS COD NH_3-N		

1

2 ظه

T1			0-0.2m 1
T2			0-0.2m 1
T3			0-0.2m 1

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]

HJ/T 166

HJ964-2018

$$= \rho /$$

— i

ρ — i mg/l

— i mg/l

1

3.7-5~ 3.7-7

mg/kg						GB 36600-2018	GB 36600-2018
		$S_{i,j}$		$S_{i,j}$			
pH	8.26	--	--	--	--	---	---
	0.180	0.0028		0.0010		65	172
	0.133	0.0035		0.0016		38	82
	9.55	0.159		0.068		60	140
	31.3	0.0017		0.00087		18000	36000
	28.3	0.035		0.011		800	2500
	82.9	/	/	/	/	900	2000
	37.1	0.041		0.019		/	/
	<0.5	-		-		5.7	78
	<1.3	-		-		2.8	36
	<1.1	-		-		0.9	10
	<1	-		-		37	120
1,1-	<1.2	-		-		9	100
1,2-	<1.3	-		-		5	21
1,1-	<1	-		-		66	200
-1,2-	<1.3	-		-		596	2000
-1,2-	<1.4	-		-		54	163
	<1.5	-		-		616	2000
1,2-	<1.1	-		-		5	47
1,1,1,2-	<1.2	-		-		10	100
1,1,2,2-	<1.2	-		-		6.8	50
	<1.4	-		-		53	183
1,1,1-	<1.3	-		-		840	840
1,1,2-	<1.2	-		-		2.8	15
	<1.2	-		-		2.8	20
1,2,3-	<1.2	-		-		0.5	5
	<1	-		-		0.43	4.3
	<1.9	-		-		4	40
	<1.2	-		-		270	1000
1,2-	<1.5	-		-		560	560
1,4-	<1.5	-		-		20	200
	<1.2	-		-		28	280
	<1.1	-		-		1290	1290

	<1.3	-		-		1200	1200
+	<1.2	-		-		570	570
	<1.2	-		-		640	640
	<0.09	-		-		76	760
	<0.1	-		-		260	663
2-	<0.06	-		-		2256	4500
[a]	<0.1	-		-		15	151
[a]	<0.1	-		-		1.5	15
[b]	<0.1	-		-		15	151
[k]	<0.1	-		-		151	1500
	<0.1	-		-		1293	12900
[a, h]	<0.1	-		-		1.5	15
[1,2,3-cd]	<0.1	-		-		15	151
	<0.09	-		-		70	700
“ < ” Õg/kg							

			GB 36600-2018	GB 36600-2018
mg/kg	$S_{i,j}$	$S_{i,j}$		

-1,2-	<1.3	-	-	596	2000
-1,2-	<1.4	-	-	54	163
	<1.5	-	-	616	2000
1,2-	<1.1	-	-	5	47
1,1,1,2-	<1.2	-	-	10	100
1,1,2,2-	<1.2	-	-	6.8	50
	<1.4	-	-	53	183
1,1,1-	<1.3	-	-	840	840
1,1,2-	<1.2	-	-	2.8	15
	<1.2	-	-	2.8	20
1,2,3-	<1.2	-	-	0.5	5
	<1	-	-	0.43	4.3
	<1.9	-	-	4	40
	<1.2	-	-	270	1000
1,2-	<1.5	-	-	560	560
1,4-	<1.5	-	-	20	200
	<1.2	-	-	28	280
	<1.1	-	-	1290	1290
	<1.3	-	-	1200	1200
+	<1.2	-	-	570	570
	<1.2	-	-	640	640
	<0.09	-	-	76	760
	<0.1	-	-	260	663
2-	<0.06	-	-	2256	4500
[a]	<0.1	-	-	15	151
[a]	<0.1	-	-	1.5	15
[b]	<0.1	-	-	15	151
[k]	<0.1	-	-	151	1500
	<0.1	-	-	1293	12900
[a, h]	<0.1	-	-	1.5	15
[1,2,3-cd]	<0.1	-	-	15	151
	<0.09	-	-	70	700

“ < ”

mg/kg						GB 36600-2018	GB 36600-2018
		$S_{i,j}$		$S_{i,j}$			
pH	7.74	--	--	--	--	---	---
	0.090	0.0014		0.00052		65	172
	0.167	0.0044		0.0020		38	82
	12.0	0.20		0.086		60	140
	36.7	0.0020		0.00102		18000	36000
	40.5	0.051		0.016		800	2500
	116	/	/	/	/	900	2000
	37.3	0.041		0.019		/	/
	<0.5	-		-		5.7	78
	<1.3	-		-		2.8	36
	<1.1	-		-		0.9	10
	<1	-		-		37	120
1,1-	<1.2	-		-		9	100
1,2-	<1.3	-		-		5	21
1,1-	<1	-		-		66	200
-1,2-	<1.3	-		-		596	2000
-1,2-	<1.4	-		-		54	163
	<1.5	-		-		616	2000
1,2-	<1.1	-		-		5	47
1,1,1,2-	<1.2	-		-		10	100
1,1,2,2-	<1.2	-		-		6.8	50
	<1.4	-		-		53	183
1,1,1-	<1.3	-		-		840	840
1,1,2-	<1.2	-		-		2.8	15
	<1.2	-		-		2.8	20
1,2,3-	<1.2	-		-		0.5	5
	<1	-		-		0.43	4.3
	<1.9	-		-		4	40
	<1.2	-		-		270	1000
1,2-	<1.5	-		-		560	560
1,4-	<1.5	-		-		20	200
	<1.2	-		-		28	280
	<1.1	-		-		1290	1290

	<1.3	-		-		1200	1200
+	<1.2	-		-		570	570
	<1.2	-		-		640	640
	<0.09	-		-		76	760
	<0.1	-		-		260	663
2-	<0.06	-		-		2256	4500
[a]	<0.1	-		-		15	151
[a]	<0.1	-		-		1.5	15
[b]	<0.1	-		-		15	151
[k]	<0.1	-		-		151	1500
	<0.1	-		-		1293	12900
[a, h]	<0.1	-		-		1.5	15
[1,2,3-cd]	<0.1	-		-		15	151
	<0.09	-		-		70	700
“ < ” Õg/kg							

3.7-5~ 3.7-7 T1 T2 T3

GB36600-2018

— mg/L

— mg/L

— mg/L

— m^3/s

— m^3/s

4.1-1

	W2
m^3/s	0.236
COD mg/L	5
NH_3-N mg/L	0.092

4

+ +

2530.57m^3/d 1226.6m^3/d

1303.97m^3/d

2.45m^3/d 0.92m^3/d

+ + + +

2533.94m^3/d 1226.6m^3/d 1307.34m^3/d

4.1-2 4.1-3

	m^3/d		mg/L	kg/d
	1307.34	COD	60	78.44
		NH_3-N	1	1.31

4.1-3

COD NH_3-N

5

2533.94m^3/d

4.1-4

	m^3/d		mg/L	kg/d
	2533.94	COD	200	506.79
		NH_3-N	20	50.68

4.1-5

COD 5 21.55 26.55 20 1.33

mİ

2

E

1:20

0.1~0.5L/s 0.1~1L/s.km^2

3

$_1$q $_2$g $_{2\text{-}3}$ls

- P_2q-m T_1y^2 T_1m



F1 F2

F3

F3 F2 F3

F1

Ã

È

¾¼¤

“ Ě m "

F2

P2q-m “ ”

-1 2-3ls

2

8 6~9

8 9

3 4~5

- -

3-1ls 11

S013

“ ” “ ”

F1 F2 12

S011 S012 S013 S015

S011 E 106 ° 45'39.34" N 26 ° 52'31.16" 0.93L/s “ ”

S012 E 106 ° 44 ′ 52 ″ N 26 ° 52 ′ 16 ″ 1.10L/s “ ”

S013 E 106 ° 46 ′ 23 ″ N 26 ° 52 ′ 59 ″ 374.50L/s “ ”

S015 E 106 ° 45 ′ 13 ″ N 26 ° 52 ′ 34 ″ 3.33L/s “ ”

1 3-1ls 3-1ls

30.00~50.00m $n \times 10^{-4}$~ n ×

10^{-3}cm/s F2

“ ”

566.04m/d

2 $_{2\text{-}3}$ls T_1m T_1y^2

A

COD NH_3-N

100%

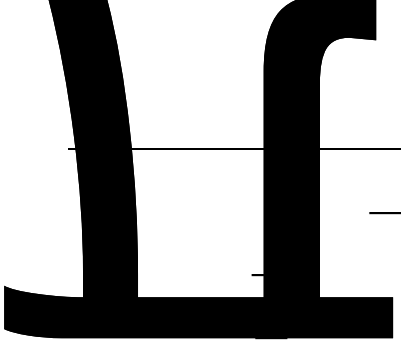
4.2-4

		COD	NH_3-N
mg/L	III	20	1
	III	/	0.5
mg/L		200	20
m^3/d	100%	1307.34m^3/d	

B

HJ 610 2016

D



—t x g/L

— kg

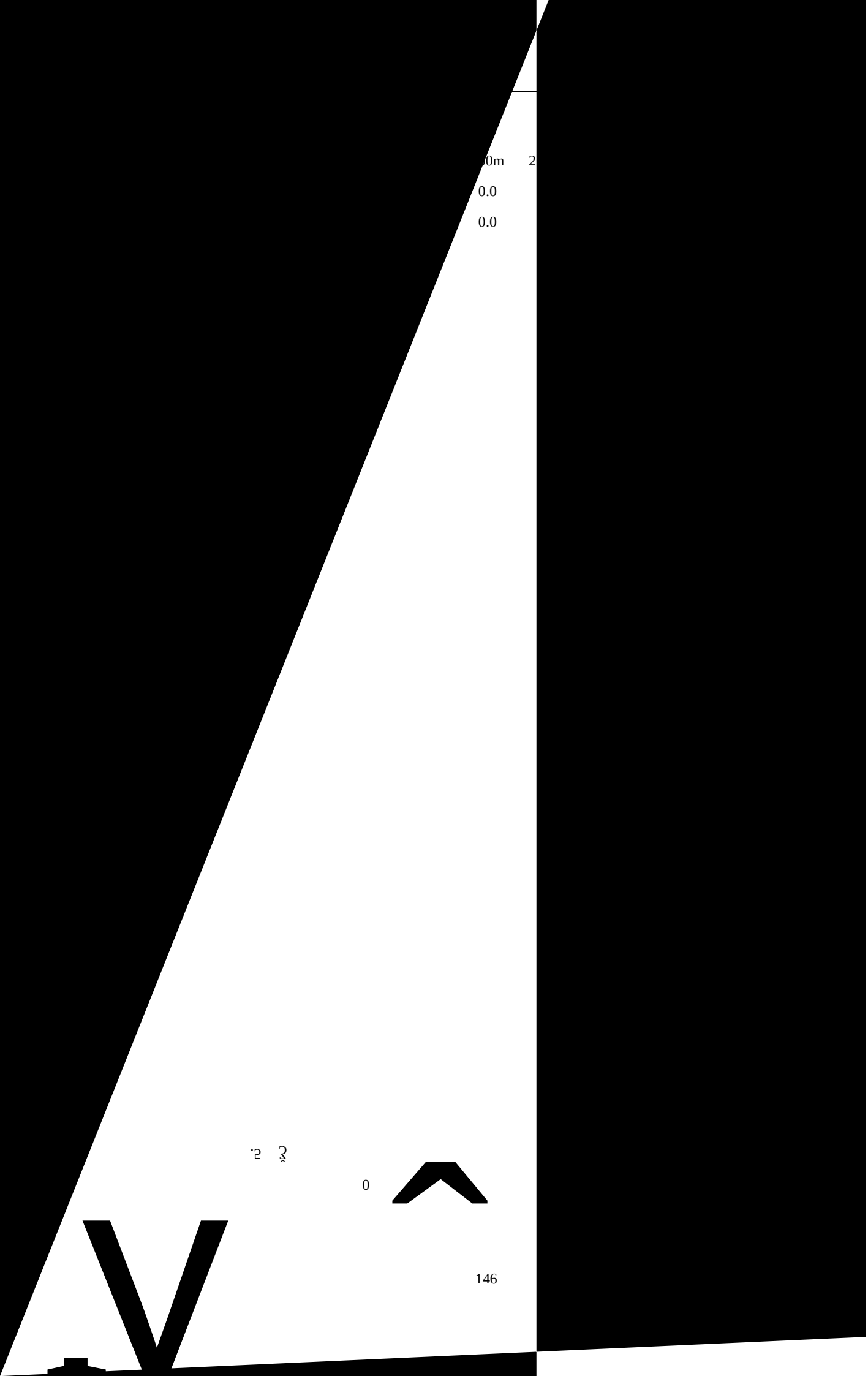
m^2 $100m^2$

— m/d 13.07m/d

— 0.15

— m^2/d $6.5m^2/d$

π


0m 2
0.0
0.0
0
146

GB16297-1996 2

TSP ≤ 1.0mg/m^3

2

NO_2 CO HC

50m 1 0.2mg/m^3

0.13mg/m^3 0.13mg/m^3 0.062mg/m^3

GB3095-2012 2018

5# 12 63.5 3448t/a

29.93kg/a 0.64kg/a

698.60 m^3/a 4.34mg/m^3 0.09mg/m^3

5# 68.33kg/a 1.46kg/a

1583.28 m^3/a 4.34mg/m^3

0.09mg/m^3

5#

GB27632-2011 5 10mg/m^3

GB 37822-2019

GB14554-93 3.0mg/m^3

A

HJ2.2-2018 A

AERSCREEN

B

AERSCREEN

4.3-3 5# 4.3-4

D/m				
	mg/m^3	%	mg/m^3	%
10	2.23E-03	0.11	4.72E-05	0.12
25	2.74E-03	0.14	5.81E-05	0.15
50	2.50E-03	0.12	5.29E-05	0.13
75	1.57E-03	0.08	3.32E-05	0.08
100	1.08E-03	0.05	2.29E-05	0.06
125	8.00E-04	0.04	1.70E-05	0.04
150	6.26E-04	0.03	1.33E-05	0.03
175	5.08E-04	0.03	1.08E-05	0.03
200	4.24E-04	0.02	8.99E-06	0.02
300	2.44E-04	0.01	5.17E-06	0.01

900	5.52E-04	0.03	1.18E-05	0.03
1000	4.93E-04	0.02	1.05E-05	0.03

4.3-4 5# 26

34m 0.24%

0.25% 300m 300m

1.44Ĭ10^{-3}mg/m^3 3.07 × 10^{-5}mg/m^3 G1

0.69144mg/m^3 P244

≤ 2.0mg/m^3

D ≤ 40ug/m^3

2

150	1.67E-02	0.84

6	2100	-5200	0.00403	5.37%

5

2.99Ĭ10^{-3}mg/m^3 6.34Ĭ10^{-5}mg/m^3

1.88Ĭ10^{-2}mg/m^3 4.03 × 10^{-4}mg/m^3

2mg/m^3

40ug/m^3

1

100~115dB A

5#

4.4-1

	779m	323m	748m
	715m	354m	788m
	681m	373m	821m

2

3

14

	dB			dB		
	7.81	54.60	54.60	7.81	44.10	44.10
	19.73	54.40	54.40	19.73	44.80	44.81
	34.24	55.90	55.93	34.24	46.50	46.75
	16.47	52.40	52.40	16.47	44.40	44.41
	/	/	60	/	/	50
	/	/		/	/	

4.4-4 7.81 34.24dB(A)

GB12348-2008 2

52.40 55.93dB(A)

44.10 46.75dB(A)

GB3096-2008 2

5 200m

1

20 0.5kg/d

10kg/d

2

×

1

1kg

2

306t/a

100m^2

3

2016 “ HW08 ” 0.5t/a

200m

1

2

/

—— g/kg

—— g

—— g

—— g

ρ —— kg/m^3

—— m^2

—— 0.2m

—— m^2

= +

—— g/kg

—— g/kg

3

4.7-1

2015 4

2017 6

2017 7 25

520123-2017-041-L 15

HJ 169-2018

C

4.8-1

		/t				
	5	2500		M3	P4	I

1

GB18597- 2001

H2025- 2012

2

1 800m^3

			/		
		106Á44'28.45"		26Á51'18.30"	
	1				
	GB18597- 2001 H2025- 2012				

PH7.05~7.10 0.41mg/L SS 8mg/L BOD_5 7.9mg/L COD 27.6mg/L TP 0.09mg/L NH_3-N 0.165mg/L 0.04mg/L

GB27632-2011 2

GB/T19923-2005

15

190

1108.56m^3/d

2400m^3/d 1291.44m^3/d 2.45m^3/d

0.92m^3/d

+ +

2530.57m^3/d 1226.6m^3/d

1303.97m^3/d

2.45m^3/d

0.92m^3/d + +

+ + 2533.94m^3/d 4800m^3/d

GB27632-2011 2

GB/T19923-2005 1226.6m^3/d

1307.34m^3/d

1

A

1.0×10^{-7}cm/s

B

1.0×10^{-12}cm/s

1.0×10^{-7}cm/s

C

o

3

1

4.3.2

5		

1

10kg/d

2

1

4.08t/a

306t/a

100m^2

2016 “ HW08 ” 0.5t/a

1 20m^2

2019 12 2019 12

21

2

1 5.4-1 100m^2

3

1 5.4-2 20m^2

GB 18597-2001 2013

“ ”

16

0.5t/a

5

HJ2025-2012

A

B

C

D

E

a

b

c

d

2

GB18

A

D

GB13392

GB1

E

a

b

c

Đ

NOx COD

2019 12 30

COD 22.83t/a

4991.2 193.8 3.5

FIRR 40.02% ic=12% 6217

12% FNPV

3.5

1

80% 90%

3-5%

2

3

4

5

1

6.3-1

			---	---	0	
			1		1.0	---
			---	---	---	---
			1		5.0	---
			---	---	---	---
			---	---	---	---
			1		2.0	---
			---	---	---	
		“ + + 15m ”	1		100	
			1		---	

g (,

1

7.1-1



*

1

2

3

4

“ ”

.

		“ + + 15m ”		

1

2

3

ď

7.2-1~7.2-5

			4 1	75%	GB 27632-2011 5
					GB14554-93

	4	Leq	4 1	75%	GB3096-2008 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]		GB36600-2018

1

2

3

4

5

6

1

87 002

“

” “ ”

2

200m

200m

ẓ

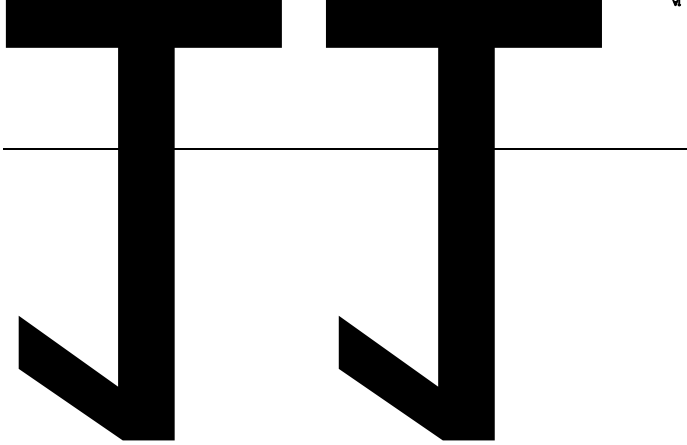
1

2

7.4-1

	“ + + 15m ” 30%	GB 27632-2011 5 GB14554-93	
		GB18483-2001	
	4800m^3/d 2400m^3/d	GB27632-2011 2	
		GB12348-2008 2	
	1 100m^2	GB18599-2001	
	1 20m^2	GB 18597-2001	
	1 800m^3	---	
		---	/

	RTO	GB14554-93 2	2020
	300m 600	---	5
	1		/
	2		/



5.61

9611.8 171.33Kg/

2 6

GB3095-2012

TSP

GB3095-2012

4

GB3096-2008 2

0^a

≥

,H

ʒ ∟ א ، ž

3

8.4-1

1		COD BOD_5 SS NH_3-N TP TN			WS1#		→ → → →	WS-001		

4

8.4-2

				/ t/a								
1	WS-001	106 ° 44'17.72"	26 ° 51'07.46"	451027.7					III	106 ° 44'14.69"	26 ° 51'06.65"	/

5

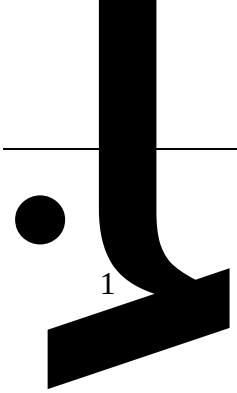
8.4-3

21 km km^2

pH COD BOD_5 SS NH_3-N LAS

I II III IV V

			200m 500m 1500m	
			pH COD BOD_5 SS NH_3-N L_{AS}	
“ ” √ “ ” “ ”				



1

30m~50m

2

□

		C □		C □	
		k ≤ -20% □		K -20% □	
		□			
		m			
		SO_2 t/a	NOx t/a	t/a	VOCs t/a
“ □ ”			“ √ ”	“ ”	

1

39.82 m 223 m

223m

2

7.81 34.24dB(A)

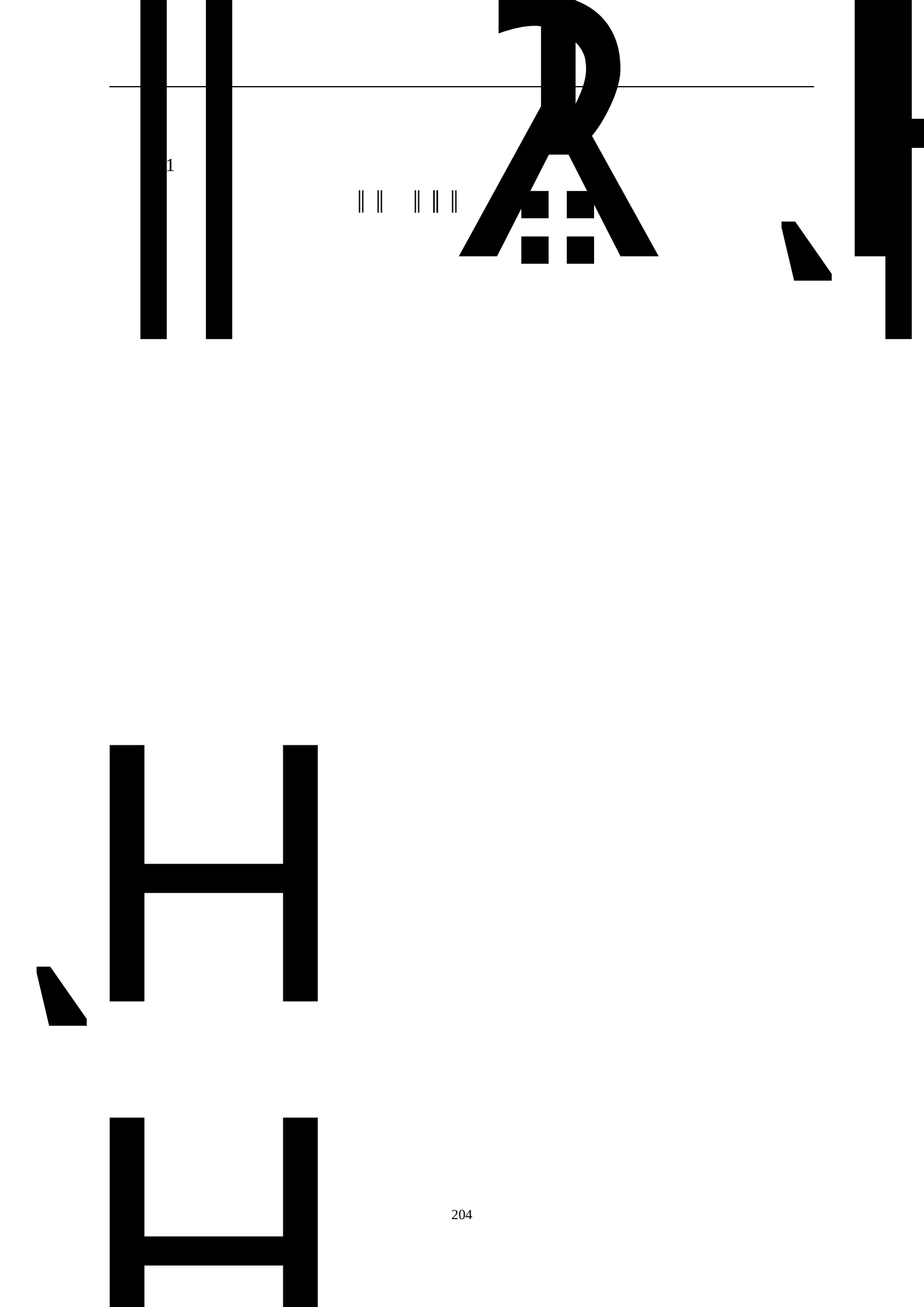
GB12348-2008 2

52.40 55.93dB(A)

44.10 46.75dB(A)

GB3096-2008 2

5 200m



8.4-5

153 hm^2

NE SW 1m

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-

1,2ð- VtE&— ATE –• @ 1,2-

1,4- +

2- [a] [a]

[b] aא q [k]m

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- +

			[a]	[a]	
		[b]	[		
		,h]	[8-cd]		
		□			
1 “ □ ” √ “ ” “ ”					
2					

0%

8.4-6

		/t	5		
		500m	800	5km	____
		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 □	
	IV⁺ □	IV	III □	II □	I
		□	□		
		□			
			/	□	



SLAB AFTOX

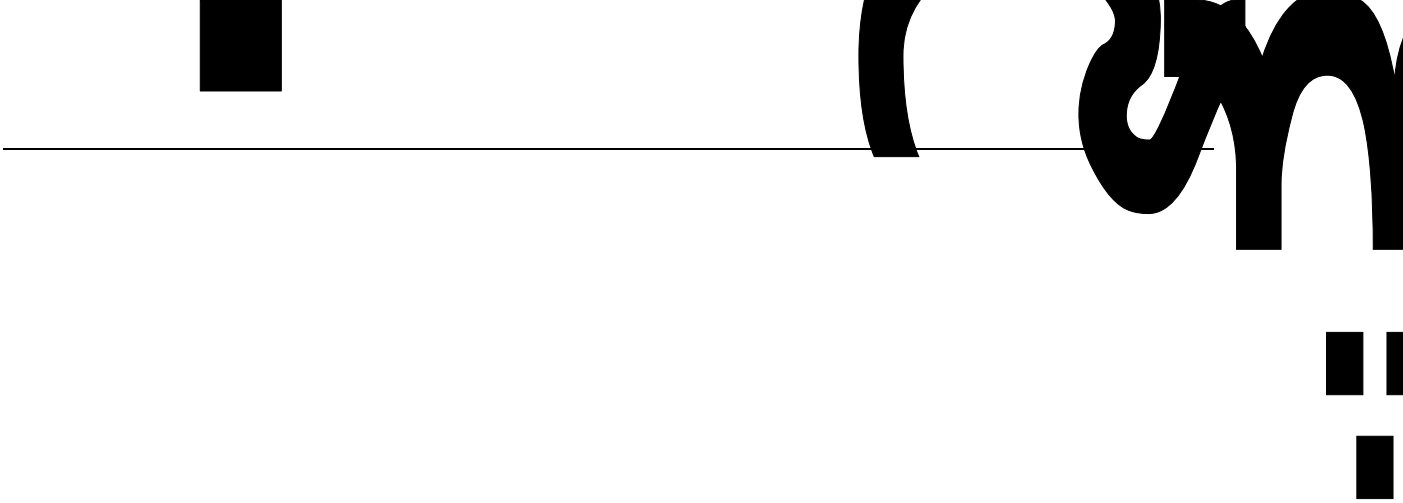
-1 0 m

-2 0 m

h

d

h



1

39.82 m

2

GB12348-2008 2

1

2

2019

12 2019 12

1

2

“ ”