

1		5
2		7
3		8
4		9
5		9
1.1		10
1.2	 1. Ǫ. Ā. ^N Ć.	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.

8.5		208
8.6		209
8.7		211
8.8		211
8.9		211

1

2

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1

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190

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22

23

24 .

25 ÖM `!@#8)008;)30*6 } 5žfaB@° YH8dTÇ@

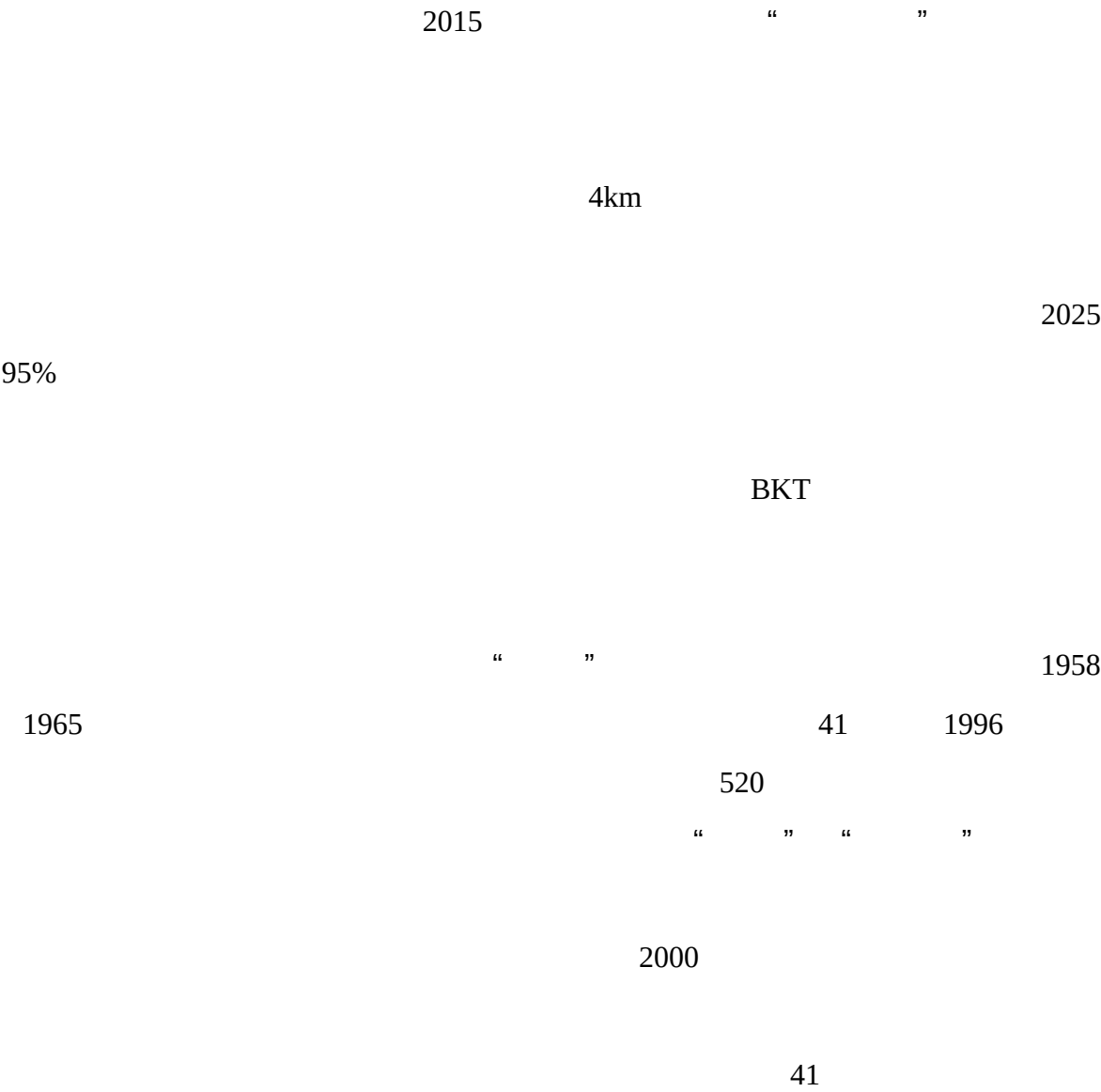
26

1

2 Ö * Aî%26Ö30pñk008535pElt" f†ELt

3

Lt . 4 Ö * Aî.Î 93^ž á z ï s



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 307.4968

eo

ss

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- 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

2013
 2018 12 21
 2018
 2015 4 2015 1 9
 14 [2010]
 2 2010 9 15
 15 2014
 58 2014 9 5
 16 9 m

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			

$$k \quad m''$$
$$\begin{array}{cc} \mathfrak{k} & \mathfrak{k} \\ \mathfrak{k} & \end{array}$$
k

1

m "

 $\mathbb{k} \quad \mathbb{k}$

m "

2

m "

m "

3

m "

m "

4

 $\mathbf{k}$

5

m "

6

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 BOD₅ 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=0.92m³/d

HJ610-2016

1.5-5

	I	II	III

HJ610-2016

A

II

1.5-5

	Pmax010%
	1%0Pmax 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

1.5-6Pi 0.16% 1%

HJ2.2-2018

2GB3096-2008

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=0.92m³/d 200m³/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 _x C	
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	≤20
3	BOD ₅	≤4
4	SS	≤30*
5	NH ₃ -N	≤1.0
6		≤0.2
7	TP P	≤0.2
8		≤0.2
9	F ⁻	≤1.0
10		≤0.05
11	/L	≤10000
“*” SL63-94		

2

GB/T14848-2017 III

1	pH	6.5 8.5
2	N mg/L	≤0.5
3	* COD _{Mn} O ₂ mg/L	≤3.0
4	mg/L	≤1000
5	mg/L	≤450
6	mg/L	≤0.05
7	N mg/L	≤20.0
8	N mg/L	≤1.00
9	mg/L	≤0.002
10	MPN/100L	≤3.0

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
A			3.6

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

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

1vFfs

		“ ”	SE	220	GB3838-2002 III
		0.19m³/s III	W	70	
		1.28m³/s III	WN	2000	
		6.5m³/s III	EN	2927	
		3210 m³ 3760 m³ 4 m³ 62 m³ 1200 558.76 m³	EN	4121	
			EN	9800	
		6.5m³/s			
		5~7L/s · km²	---	---	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

200m	-5
------	----

“ 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

2 “ ”

—

GB3095-2012

GB3838-2002 III

GB/T14848-2017 III

GB3096-2008 2

GB36600-2018

—

—

2019

“ ”

“ ”

3

NO_x COD NH₃-N

303

16

2018 16

2017

5

“

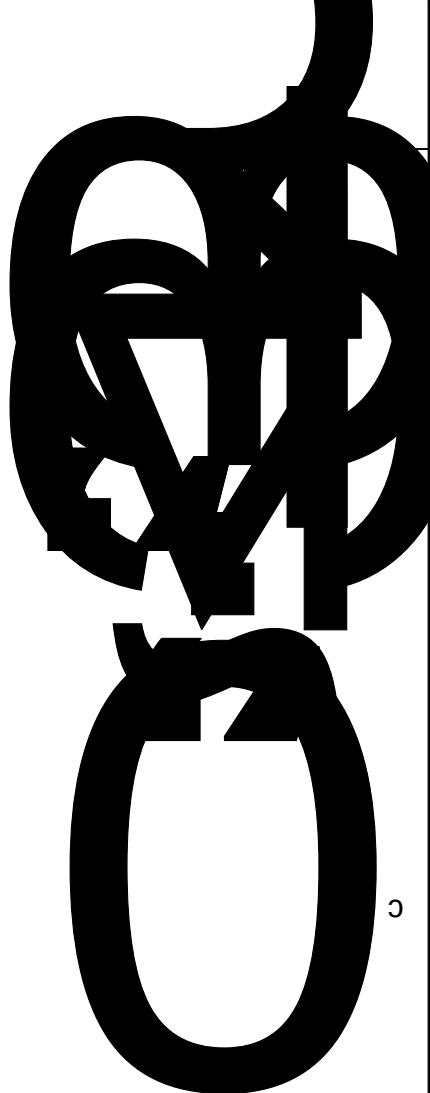
”

“

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“ 5



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1958

” နှစ် ၏ \$

12

153hm² 2011

26

2017 3 31 2018 3 22

2018 3 22

190 2019 9

300

2.1-1

3

1

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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 "

		/	1 2 3	1 2 3
190	“ ”	“ ” 15 RTO 18		18 RTO

2018 5

2019 1

PH
\$XMPD\$TOL@

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				

[illegible]

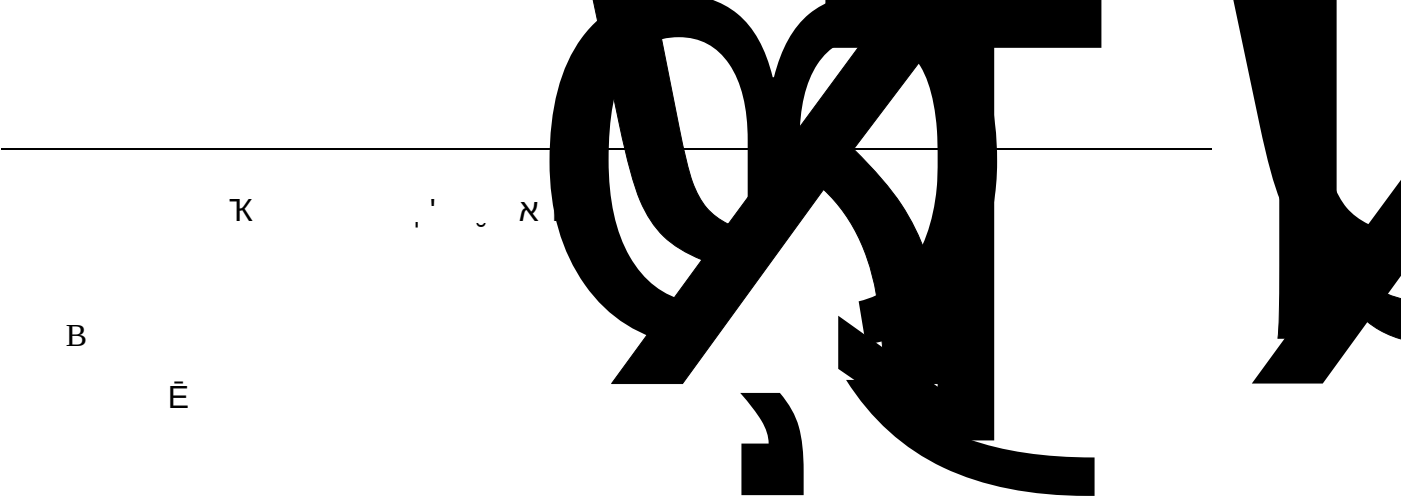
2017

2.1-23

GB3096-2008

2-

2



κ

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B

Ē

			t/a	t/a	
	SO ₂		2723	/	/
			511	/	/
			856	1314.07	
			1186.8	1800	
	NO _x		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
 COD 22.83t/a
 5mg/L SO₂ 1314.07t/a
 289.81t/a
 400mg/m³
 2019 12 30

“ ”

3458.28

2019 11 28

[2019]16

2021 1

4968

7359.6t 1487kg/

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

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

	2218.19t/a 1/a	9332.07t/a 3/a	0	0	0	0	0	0	1931.66t/a
-7590t/a	+9611.8t/a			169803.6t/a =169780.0t/a<169803.6t/a	-9404t/a		+7358.6t/a		
				160471.53t/a	+7590t/a		-14628t/a		
+7358.6t/a		-7590t/a		+9611.8t/a	=162813.93t/a<169803.6t/a				

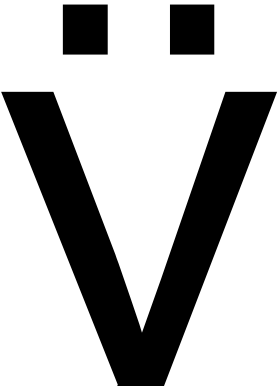
2.1-25			
4			5
			7590t/a
6.27	9611.8t/a	5.61	/a

2.1-26		6	
7			
		1	5
		14 88	
		1 X	
	3#		
	3#		
		12	



$$\begin{matrix} & & 4800\text{m}^3/\text{d} \\ & & + \\ 2400\text{m}^3/\text{d} & & + & 15\text{m} \end{matrix}$$

$$1 \quad 20\text{m}^2$$



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	

63t/h			1080t/d		
			117866760m³/a		
117762810m³/a	103950m³/a		942150m³/a		
838200m³/a	103950m³/a		116859270m³/a		
99.15%			2.1-2		
“			117867754m³/a		
117762810m³/a			104944m³/a		
943144m³/a	838200m³/a		104944m³/a		
116859270m³/a	99.15%		“		
2.1-3					
			117868121.2m³/a		
117762810m³/a	105311.2m³/a		943511.2m³/a		
838200m³/a	105311.2m³/a		116859270m³/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			

“

”

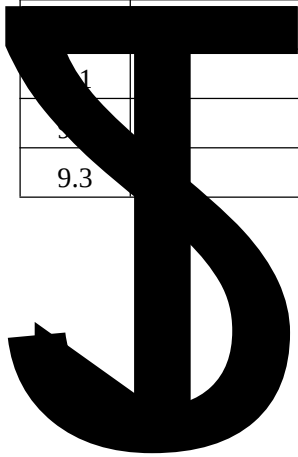
1
 5 14 63.5 14 88
 1 49" 61" X

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

a

2

3.5mg/m³

CO NO_x

HC

3

2.2-3

1m 2-

l D

55m

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

2000m³/h

0.45mg/m³

2

12

367.2m³/a

1.08m³/d

BOD₅

COD

NH₃-N

SS

312.8m³/a

0.92m³/d

GB27632-2011

2

898.25m³/d

523.76m³/d

1108.56m³/d

“

”

2.45m³/d

“

”

0.92m³/d

2533.94m³/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
	CS ₂			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
				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
	SO ₂			58010	3651.1	3140.3	510.8
				198000	2908.83	230.086	678.744
				396000	5817.66	4630.86	1186.80
				0	0	0	0
				652010	12377.59	8001.246	2376.344
	NO _x			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

2533.94m³/d

GB27632-2011 2

1226.6m³/d

1307.34m³/d

2.2-10

		t/a	mg/L	t/a	t/a	mg/L
874204.7 m³/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
1226.6m³/d 423177m³/a						
451027.7m³/a						1307.34m³/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	0	0	0	0	418885	0
	m ³					m ³	
	8.37	0	0	0	0	8.37	0
	1753405	0	0	0	0	1753405	0
	m ³					m ³	
NH							
MC	169.404	0	0	0	0	169.404	0
	700920	0	0	0	0	732780	0
	m ³					m ³	
NH							
MC	24.63	0	0	0	0	24.63	0
	48988.0	884.68					
	m ³						

			0.2026	0.0024 48	0.001468	0.00098	0	0.20358	+0.009 8
			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\44nj~106Á44\59nj

26Á50\42nj~26Á51

300 ° 310 ° 20 ° 30 °

6km T_{1m}

6km T_{1m}

2

1.50 m³

802.2km²

74.9%	Tim	Tiy	P ₁
-------	-----	-----	----------------

74.9%	Tim	Tiy	P ₁
-------	-----	-----	----------------

74.9%	Tim	Tiy	P ₁
-------	-----	-----	----------------

74.9%	Tim	Tiy	P ₁
-------	-----	-----	----------------

74.9%	11m	11y	P ₁
P ₂	2-3		

74.9%	11m	11y	P ₁
P ₂	2-3		

P₂ Z-3
T_{2sh} T_{2s} 1q C₂

P₂ Z-3
T_{2sh} T_{2s} 1q C₂

P₂ Z-3
T_{2sh} T_{2s} 1q C₂

P₂ Z-3
T_{2sh} T_{2s} 1q C₂

[illegible]

2-3	6.5L/s · km ²	6.2L/s · km ²	ly
-----	--------------------------	--------------------------	----

2-3	6.5L/s · km ²	6.2L/s · km ²	ly
-----	--------------------------	--------------------------	----

2-3 6.5L/s · km⁻² 6.2L/s · km⁻²

8

GB50011-2010 2016

GB50011-2010 2016

		GB50011-2010	2016
A	GB18306-2015		6

		GB50011-2010	2016
A	GB18306-2015		6

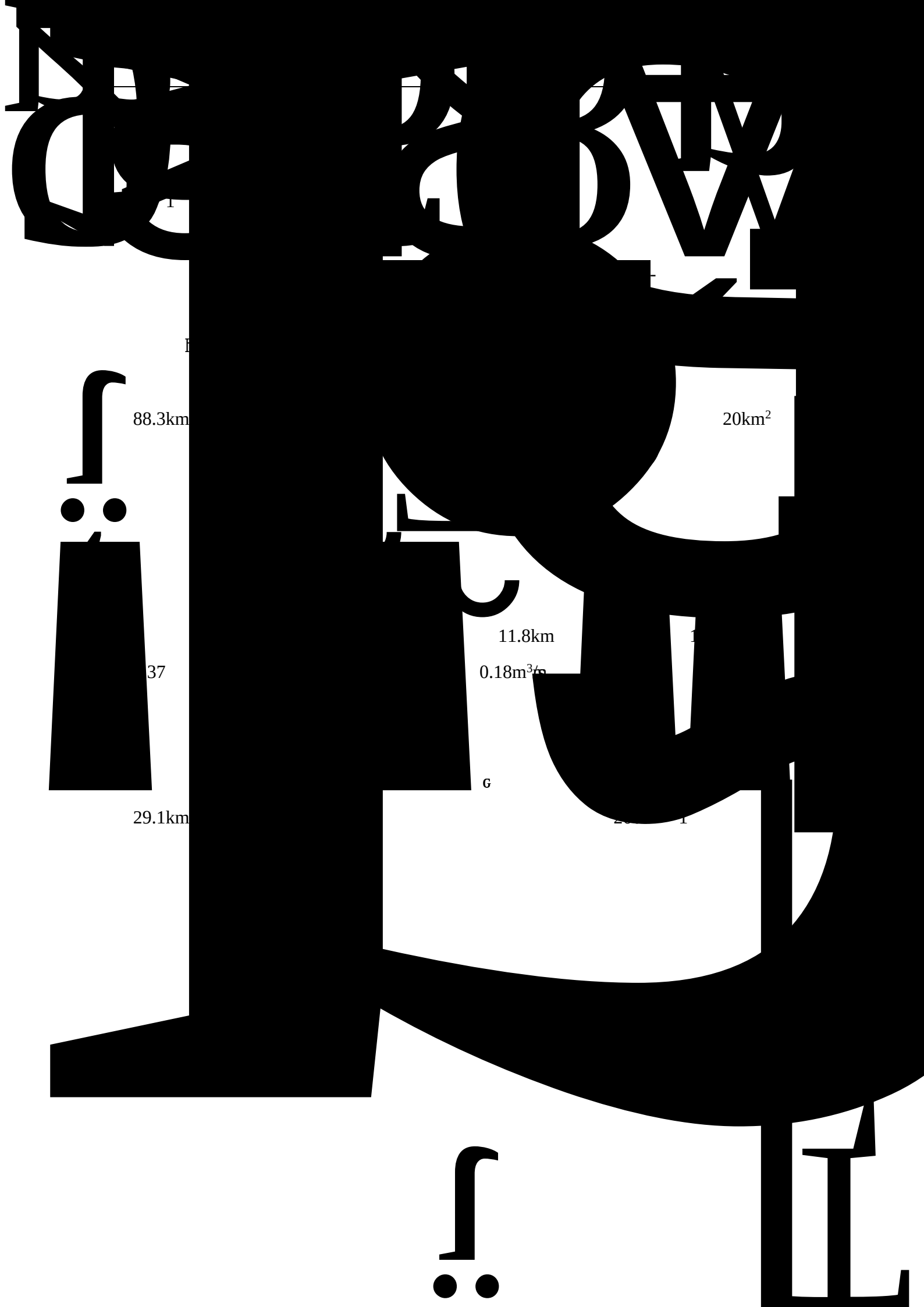
		GB50011-2010	2016
A	GB18306-2015		6

A	GB18306-2015	6
	0.05g	$\hat{e}$ $\bar{E}$

A	GB18306-2015	6
	0.05g	$\hat{e}$ $\bar{E}$

A	GB18306-2015	6
	0.05g	$\hat{e}$ $\bar{E}$

	266	324	100m		
11					
	106Á43	26Á35			
13.8	857.2hpa	81%	1	3.6	7
22.5	-				



88.3km

20km²

37

11.8km

0.18m^{3/s}

29.1km

G

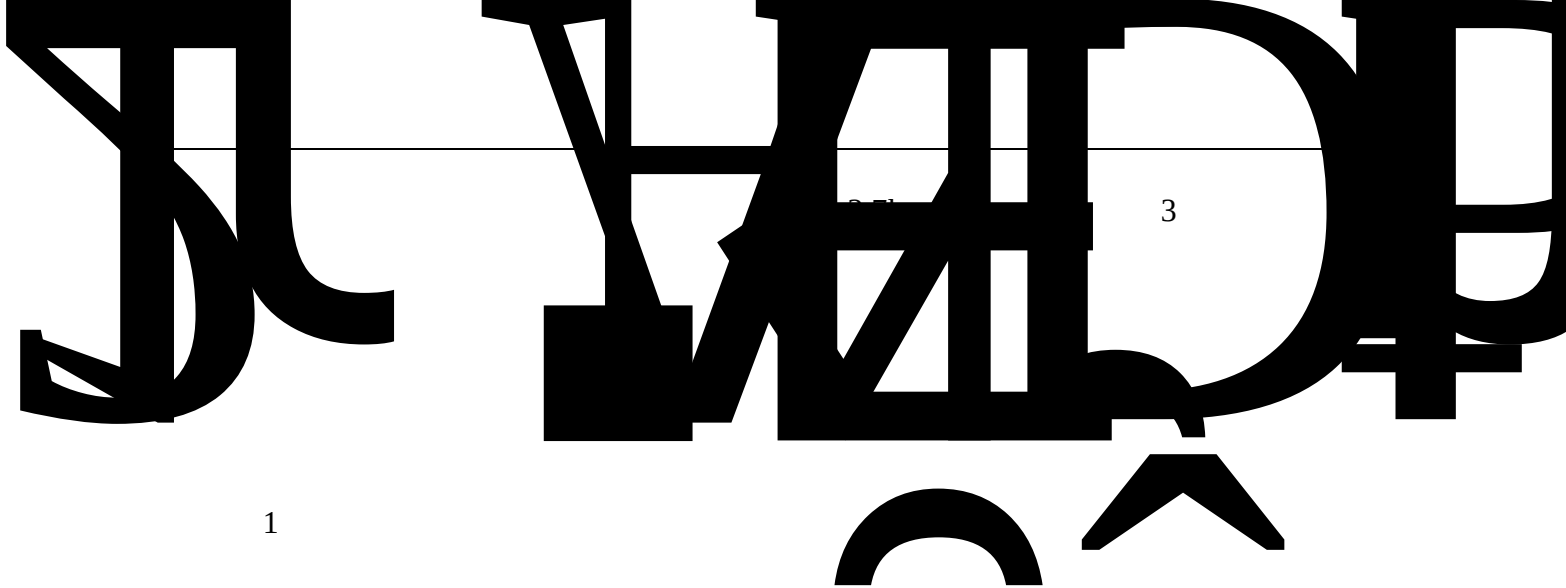
2000 1

11km²

1200

2015 12 25

100



1

III

2

200m

2000m

GB3838-2002

III

70m

2927m

1

201-0-E

2

~

, / ,

S_{i j} đ đ i

C_{i j} đ đ i j mg/L

C_{s i} đ đ i j mg/L

pH

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

. / . .

' ' pH

' ' pH

đ đ pH

đ đ 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	

0.00 0.00 0.00 0.00 0.00

			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			

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

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

0.004ND

		pH	
2019.9.11	17.7	7.23	0.064

3.3-5

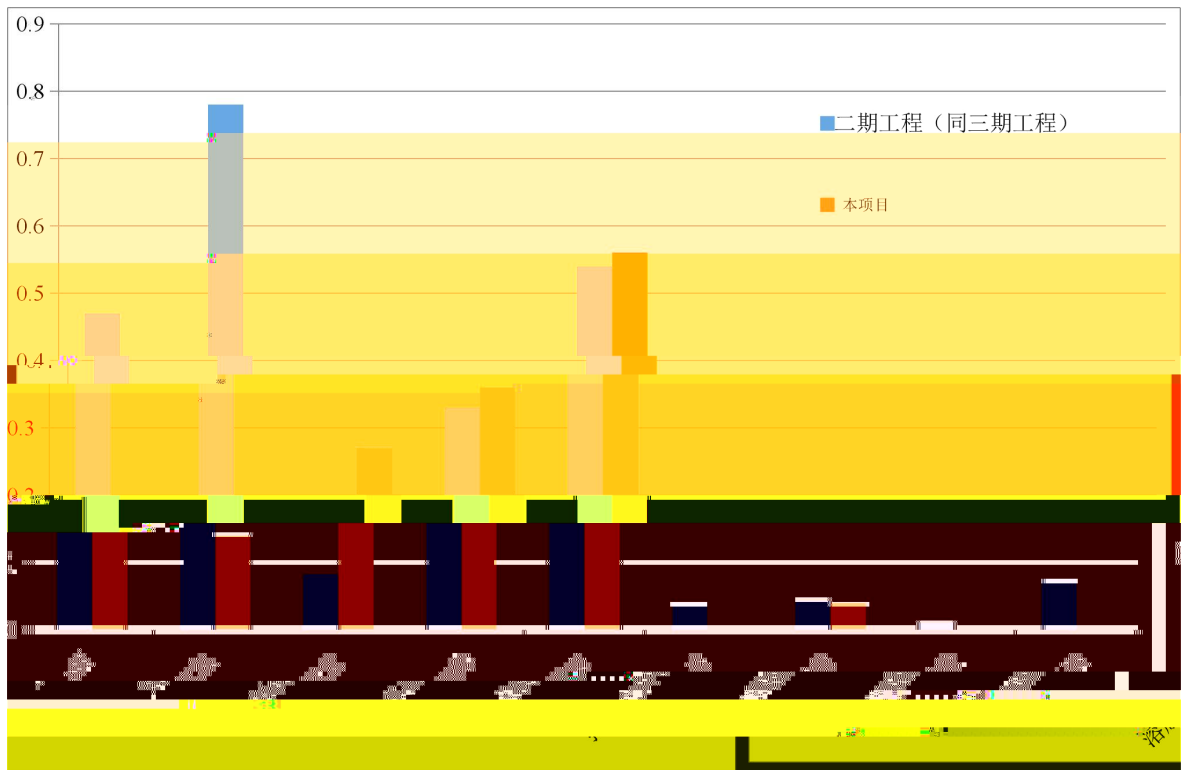
Q1		
Q2		500 1500m
Q1	ZK1	/
Q2	ZK2	/
Q3	ZK4	/
Q4	ZK6	/
Q5	S015	/
Q6	S013	/
Q7	S008	/
Q1		/
Q2		Q7
Q3		/
Q4		Q5
Q5		/

Q2 Q4

3.3-6

3.3-2~3.3-3

Q



50km

3

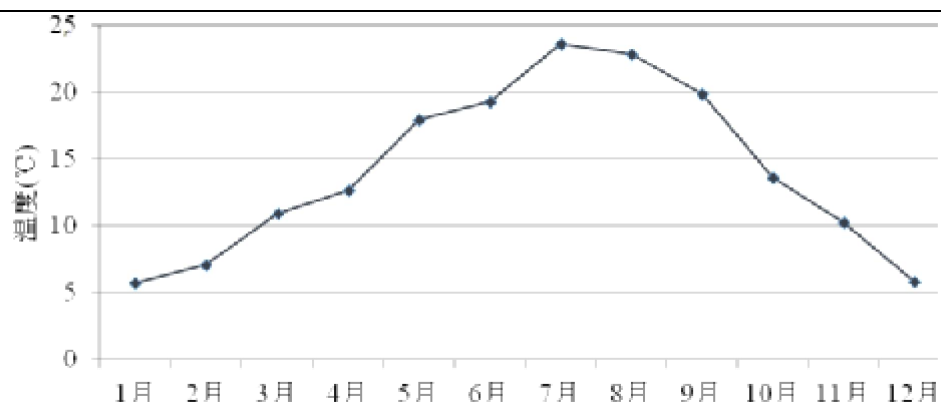
		13.6	7	22.4
1	3.5	33.5	-3	1235mm
230~270d				

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

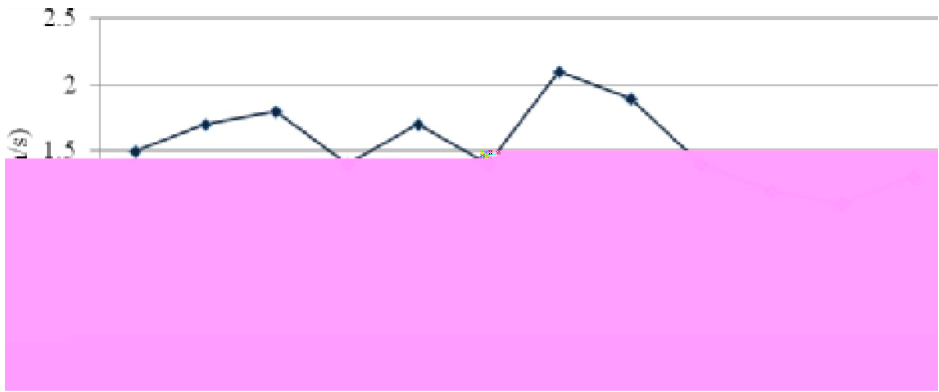


4

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

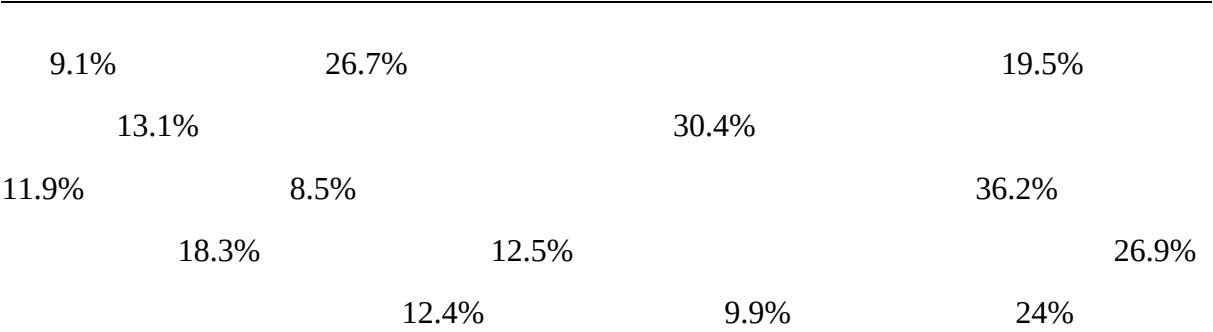


A

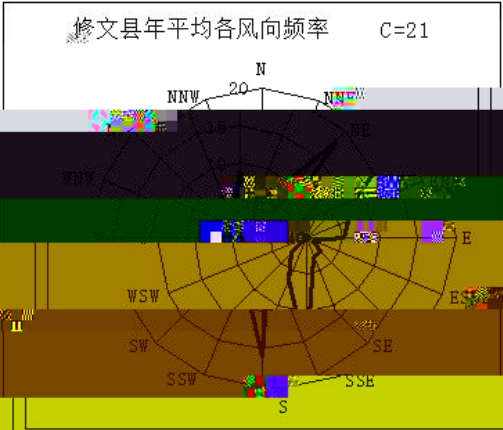
2.2m/s

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

14.9%



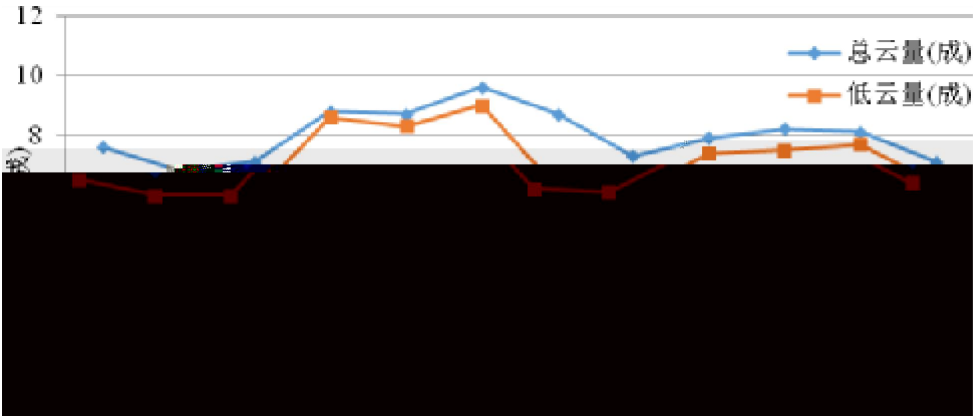
3.3-3

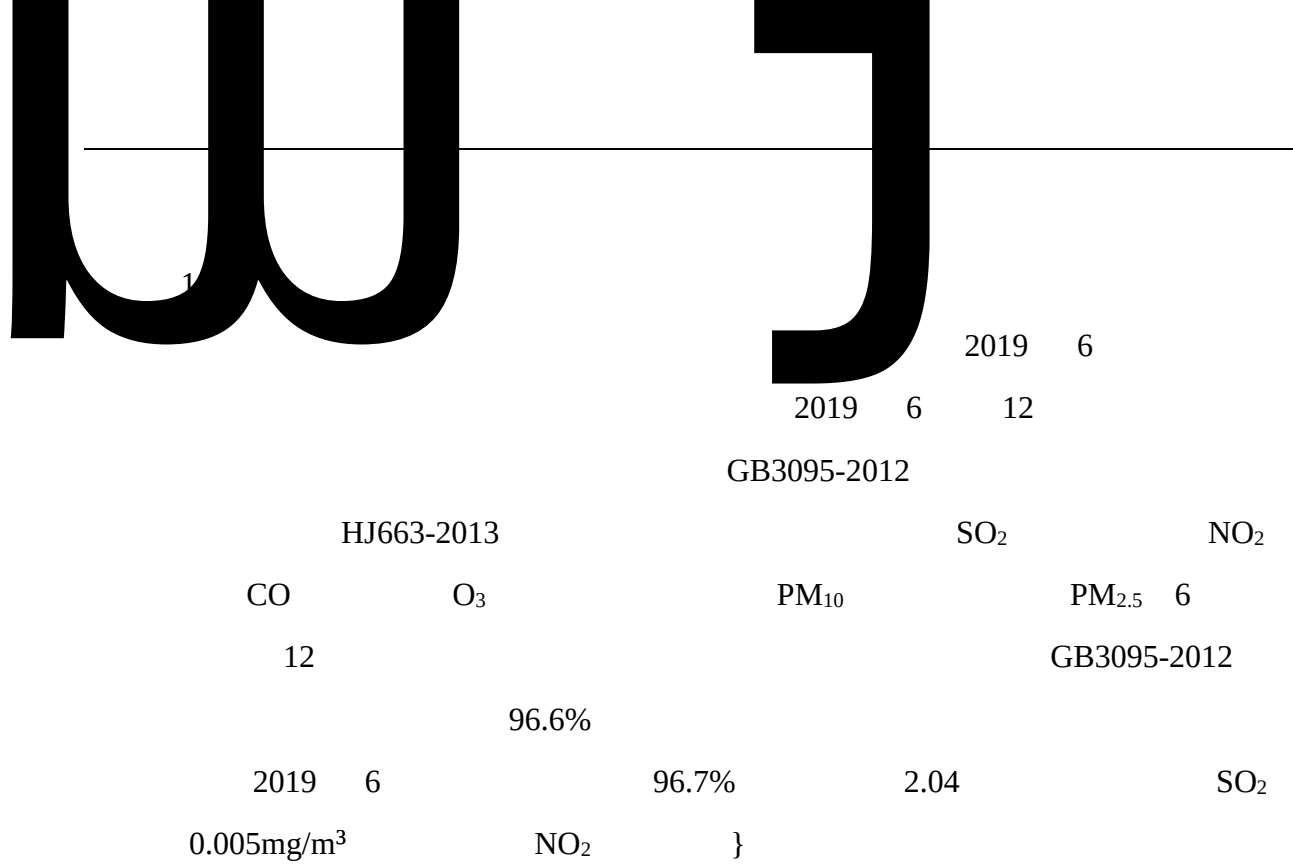


3.4-4

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



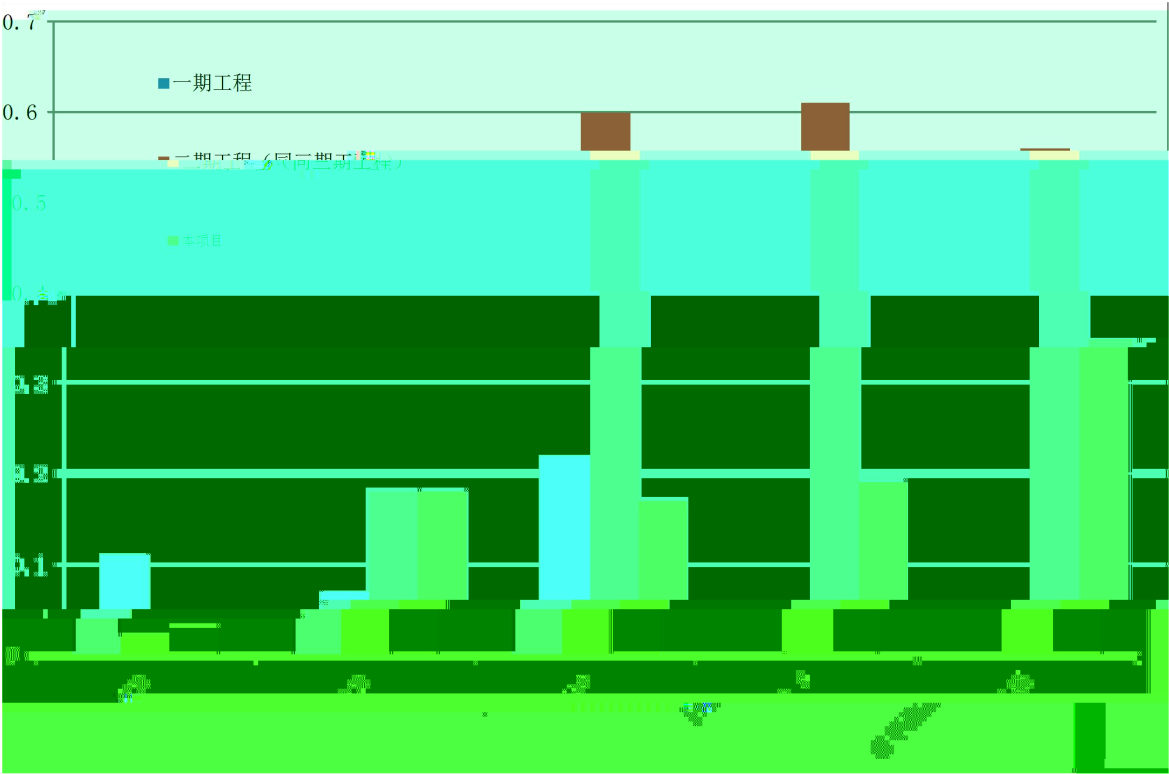


G1 G2

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								



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

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
“ < ” Ög/kg							

			GB	GB
mg/kg			36600-2018	36600-2018
	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
“ < ” Ög/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

			+	+	
2530.57m³/d	1226.6m³/d				
				1303.97m³/d	
		2.45m³/d		0.92m³/d	
		+	+	+	+
2533.94m³/d	1226.6m³/d			1307.34m³/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 NH₃-N

5

2533.94m³/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

m i

E
 1:20
 0.1~0.5L/s
 0.1~1L/s.km²
 3
 1q
 2g
 2-3ls
 - P₂q-m
 T₁y²
 T₁m



F3

hTTP@2 F3
F1

F2 E3

F1 F2

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¾¼¼□

“ Ƶ Ě m ”

	F2	
P2q-m	“ ”	
-1		2-3ls

10^{-3}cm/s F2

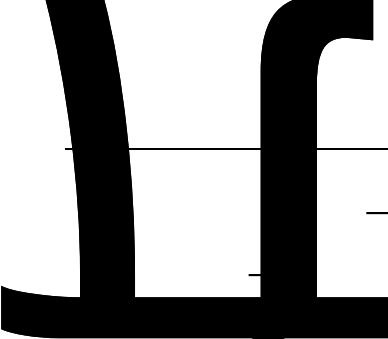
“ ”

566.04m/d

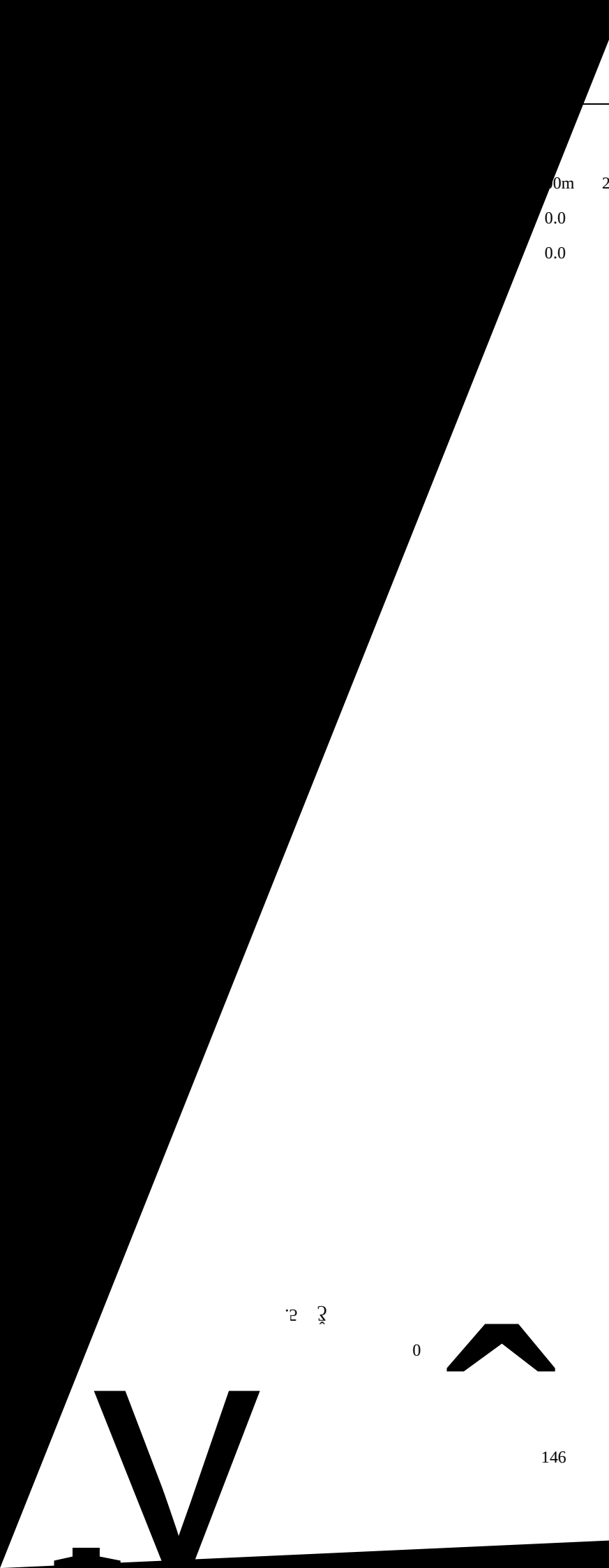
2 2-3ls T₁m T₁y²

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

D HJ 610 2016



	—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

2 2

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

1.44 $\times 10^{-3}$ mg/m³

3.07 $\times 10^{-5}$ mg/m³

G1

0.69144mg/m³

P244

≤ 2.0 mg/m³

D

≤ 40 ug/m³

150

1.67E-02

0.84

6	2100	-5200	0.00403	5.37%
---	------	-------	---------	-------

5

$2.99 \times 10^{-3} \text{mg/m}^3$ $6.34 \times 10^{-5} \text{mg/m}^3$

$1.88 \times 10^{-2} \text{mg/m}^3$ $4.03 \times 10^{-4} \text{mg/m}^3$

2mg/m^3

$40 \mu\text{g/m}^3$

1

100~115dB A

5#

4.4-1

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

2

	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

×

200m

1

2

/

g/kg

ρ _____

kg/m³

g

g

g

_____ m²
_____ 0.2m
_____ m²

= +

_____ 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 800m³

			/		
		106°44'28.45"		26°51'18.30"	
	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						

A

$$1.0 \times 10^{-7} \text{cm/s}$$

B

$$1.0 \times 10^{-12} \text{cm/s}$$

$$1.0 \times 10^{-7} \text{cm/s}$$

C

o

3

1

4.3.2

5		

1

10kg/d

2

1

4.08t/a

306t/a

100m²

2016

“ HW08 ”

0.5t/a

1

20m²

2019 12

2019 12

21

2

1

5.4-1

100m²

3

1

5.4-2

20m²

GB 18597-2001 2013

“ ”

16

0.5t/a

5

HJ2025-2012

A

B

C

D

E

a

b

c

d

_____ 2

GB185 A

GB13392

GB19

D

E

a

b

c

Đ

NOx

COD

2019.12.30

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

6.3-1

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

1

7.1-1

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4

“ ”

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		“ + +		
		15m ”		

1

2

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7.2-1~7.2-5

1
2
3
4
5
6

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87

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“

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“

”

2

200m

200m

z

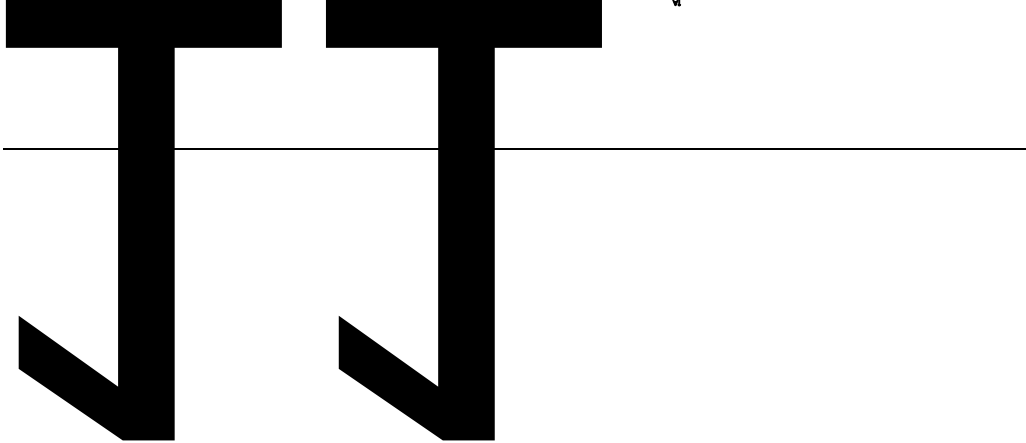
1

2

7.4-1

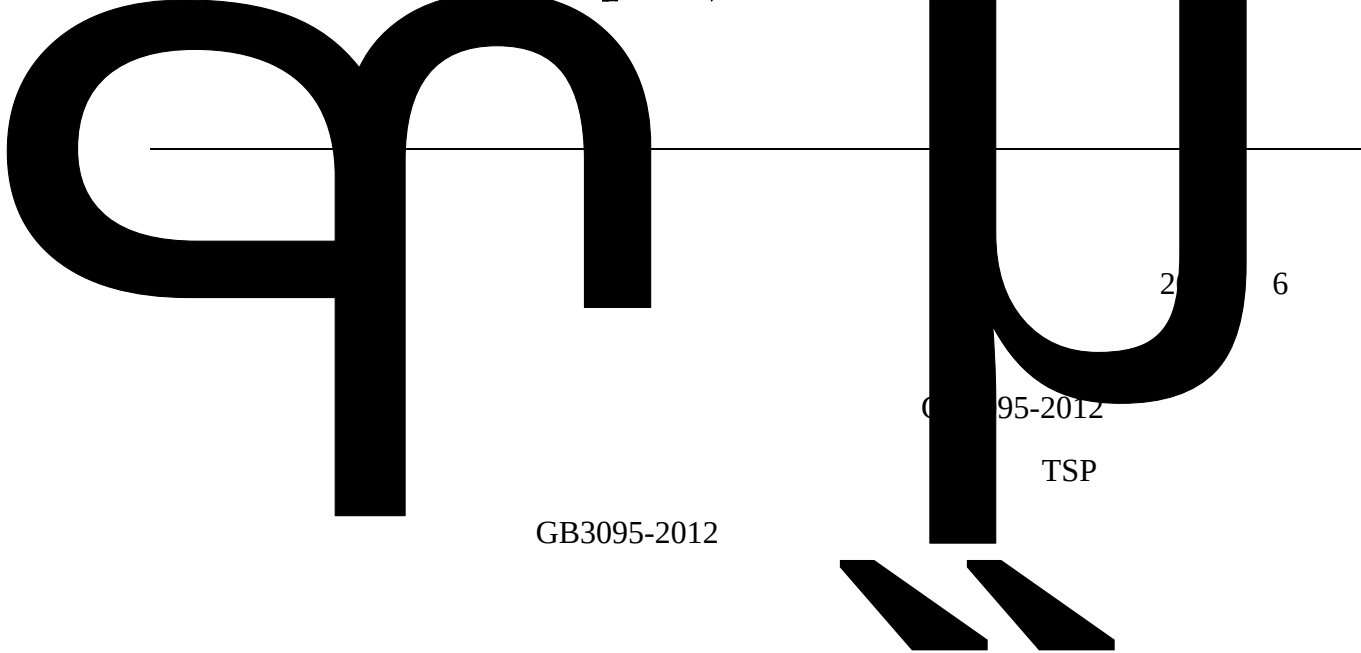
	“ + + 15m ” 30%	GB 27632-2011 5 GB14554-93	
		GB18483-2001	
	4800m ³ /d 2400m ³ /d	GB27632-2011 2	
		GB12348-2008 2	
	1 100m ²	GB18599- 2001	
	1 20m ²	GB 18597-2001	
	1 800m ³	---	
		---	/

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



5.61

9611.8 171.33Kg/



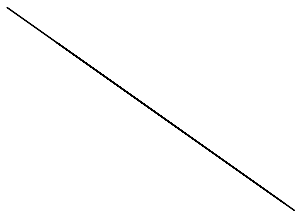
4

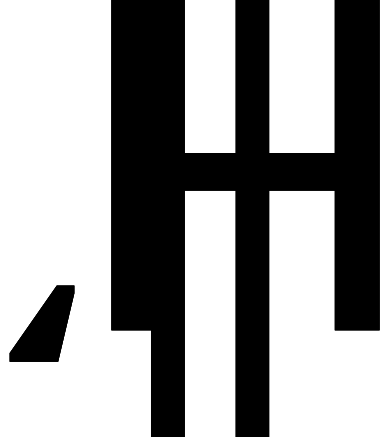
GB3096-2008

2

0a

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3

8.4-1

1		COD BOD ₅ SS NH ₃ -N TP TN			WS1#		<div>→ → → → →</div>	WS-001		

4

8.4-2

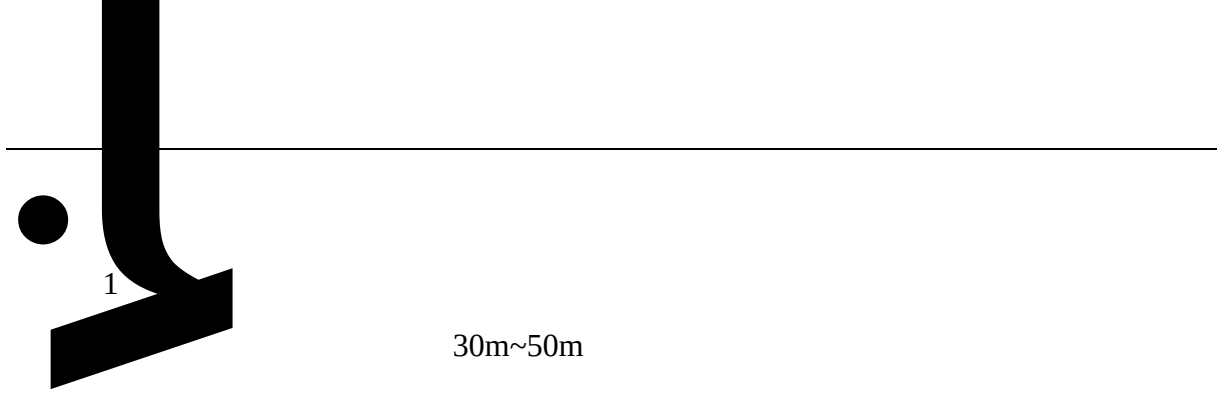
				/								
1	WS-001	106 ° 44'17.72"	26 ° 51'07.46"	451027.7					III	106 ° 44'14.69"	26 ° 51'06.65"	/

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}		
“ ”		√	“ ”		“ ”				



2

□

		C □		C □	
		k ≤ -20% □		K -20% □	
		□			
		m			
		SO ₂ t/a	NO _x t/a	t/a	VOCs t/a
“ □ ” “ √ ” “ ”					

1

39.82 m 223 m

223m

2

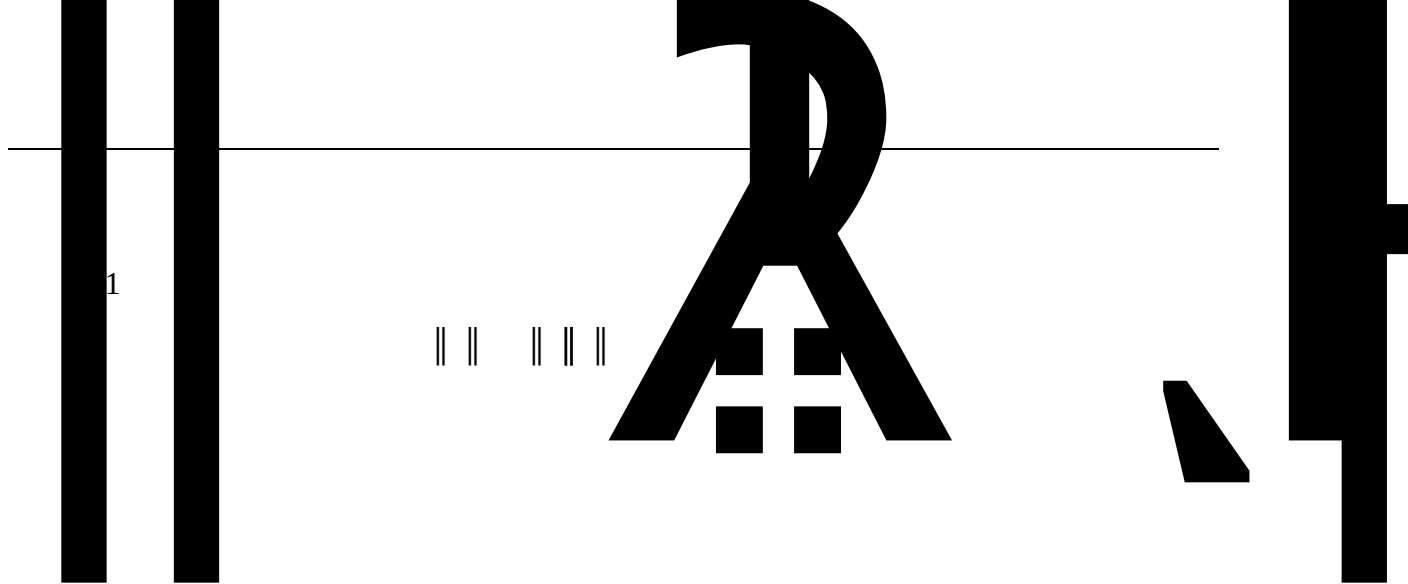
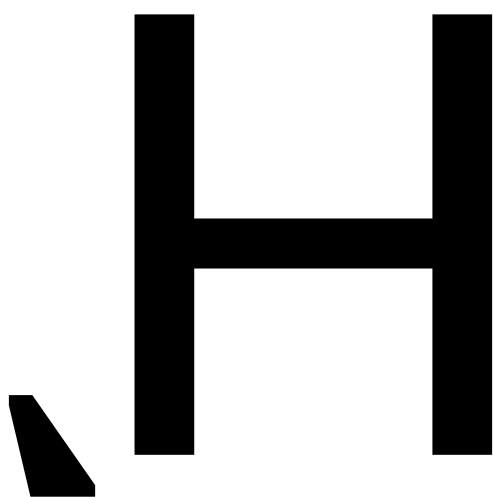
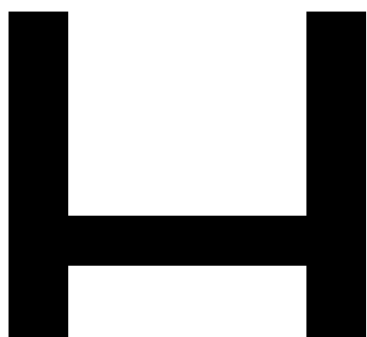
7.81 34.24dB(A)
GB12348-2008 2

52.40 55.93dB(A)

44.10 46.75dB(A)

GB3096-2008 2

5 200m



8.4-5

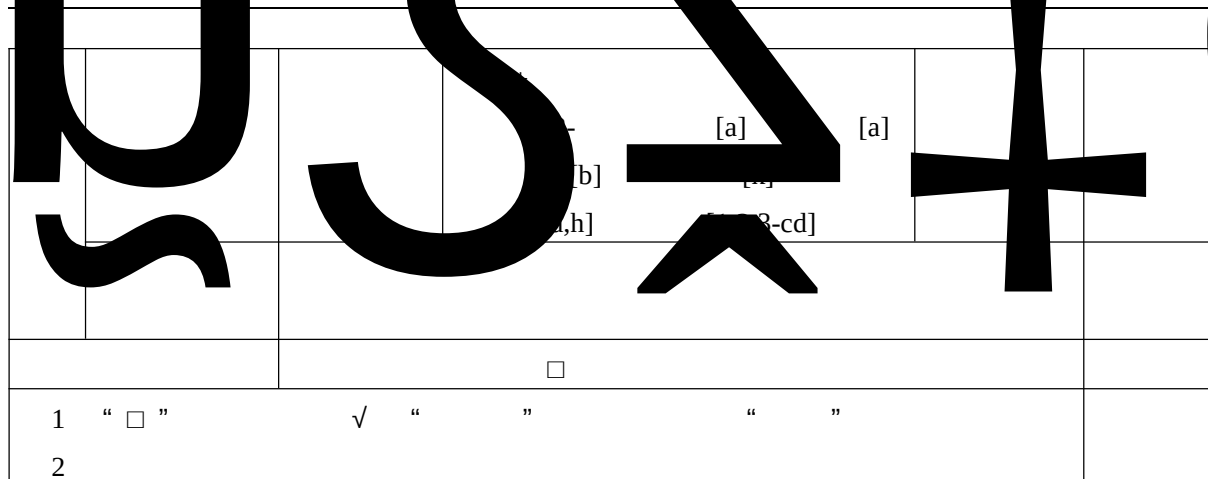
153 hm²

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-
		1,2,3- VtE&— ATE → @		1,2-
	1,4-			+
		2-	[a]	[a]
[b] aκ 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-				+



0%

8.4-6

		/t	5				
			500m		<u>800</u>	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

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