

(污染影响类)

2025 9

中华人民共和国生态环境部制

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.....	28
.....	58
.....	70
.....	101
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17 2024

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	<p style="text-align: center;">"</p> <p style="text-align: center;">"</p> <p style="text-align: center;">" " "</p> <p style="text-align: center;">69.9 /</p> <p>GB18918-2002 A</p> <p style="text-align: center;">56 /</p> <p style="text-align: center;">" "</p> <p style="text-align: center;">" "</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td style="text-align: center;">m³/d</td> </tr> <tr> <td></td> <td style="text-align: center;">6</td> </tr> <tr> <td></td> <td style="text-align: center;">10</td> </tr> <tr> <td></td> <td style="text-align: center;">40 20 40</td> </tr> <tr> <td></td> <td style="text-align: center;">5</td> </tr> <tr> <td></td> <td style="text-align: center;">1</td> </tr> <tr> <td></td> <td style="text-align: center;">1.2</td> </tr> <tr> <td></td> <td style="text-align: center;">1.2</td> </tr> <tr> <td></td> <td style="text-align: center;">2</td> </tr> <tr> <td></td> <td style="text-align: center;">2.5</td> </tr> <tr> <td></td> <td style="text-align: center;">1</td> </tr> <tr> <td></td> <td style="text-align: center;">69.9</td> </tr> </table> <p style="text-align: center;">6 m³/d</p> <p style="text-align: center;">" "</p>		m ³ /d		6		10		40 20 40		5		1		1.2		1.2		2		2.5		1		69.9
	m ³ /d																								
	6																								
	10																								
	40 20 40																								
	5																								
	1																								
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	1																								
	69.9																								
	29																								

2024

3

2022 11 4

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2022 25

10

/ 20 /

12 /

40 /

2025

97%

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“ ”

2022

2022 7 "

1-4

1.

2.

3.

4.

4

5

6

7

2019 12

m³/d 5

8

9



10

11

	2024	7	13		
	2021	11	25		
		"	"		
	2021	21	2024	11	12
					2023
ZH53011220005					
1.					
2024					
2021-2035		4274.70			
20.34%					
1.85%					
5151.56km ²					
24.37%					
2.45%					
2.					
2025		81.5%	45		
		80%			
V			22		
		100%			
		99.1%			
PM _{2.5}			24	/	
			0		



90

97

7.

2025

90%

96%

85%

2025



2.

“ ”

3.

4. “ ”

5.

6.

1. 2025

9. 2023 %

10. 30%
2020
7%

11.

40%

12. GDP
23%

13.

“ ”

14.

“ ”
~”18”- “ ”
“ ”
“ ”

©

		2.		
		1. 2. 3. 4. 5. 6.	95% 85 100	1. 2. 3. 4. 5. 6.
				GB3095-2012 100%
		1. 2.		GB18597-2023
			80%	



" "

2022 9

"

"

"

"

" "

26

A&38

“ ”

2024 1 1



100%

0.3 /	0.05 /	
-------	--------	--

2023 115

2016 2016 11

1

2017 3 1

2016

2019 1 24

10950 m³/a 30 m³/d 2021 3 5

102°41 17.92 24°57 52.99

Ä

5

m³/d

BOD COD NH₃-N TP

DB5301/T43-2020 A * ~~DB5301/T43-2020 A~~

DB5301/T43-2020 B

GB18918-2002

A

12 m³/d

14.6 m³/d

10 m³/d

12.2 m³/d

15 m³/d /



5 m³/d

35 m³/d

5

m³/d

BOD COD NH₃-N TP

DB5301/T43-2020 A

TN

DB5301/T43-2020 B

GB18918-2002 A

2015 1 1

2016 9 1 2018 12 29

2017 10 1

2021

“ ” 94

“ 10 500 ”



6930.59

45.7

0.66%

2025 11

2026 2

35 m³/d

m³/d

1

10.0×10



1#



35

2
3

BOD COD NH3-N TP

DB5301/T43-2020 A TN

DB5301/T43-2020 B

GB18918-2002 A

15m

GB18918-2002

43.8m

6.8m

35 m³/d

39 m³/d

40m

4.5m

6

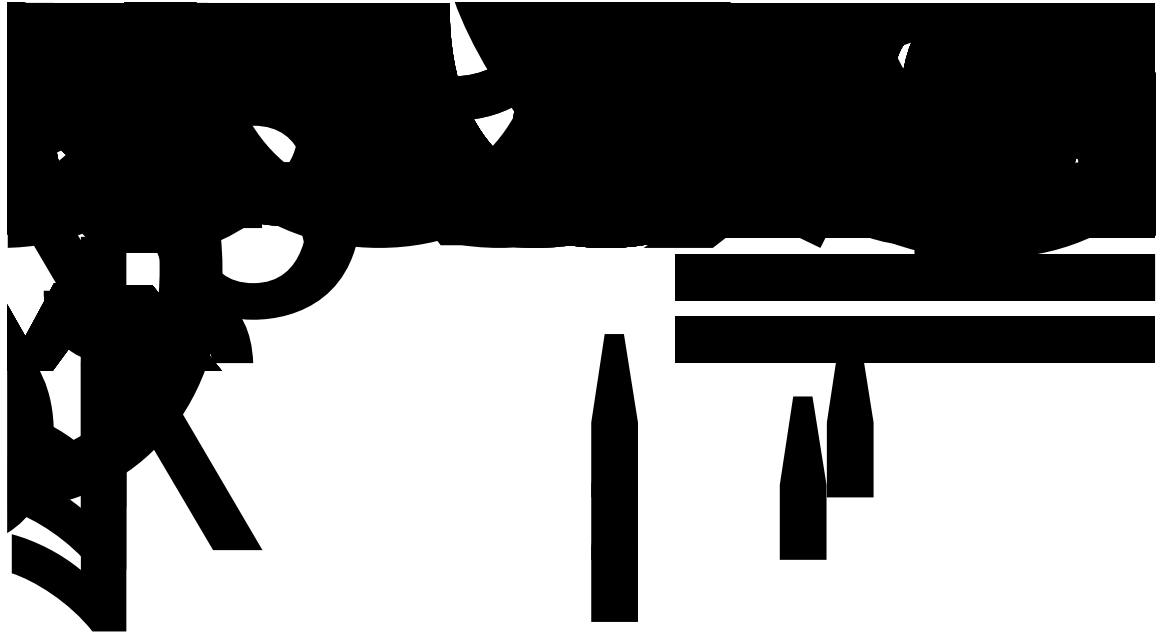
0.83m³/m²h

1.24m³/m²
h

0.5m

5.0m

1.24m³/m²h



20Nm ³ /h 7 bar	2
20Nm ³ /h 7 bar	3
Q=90-150L/h H=20m P=1.1kW	1
7.5kW	2
=1200mm N=4.0kW	4
NP3127 Q=120m ³ /h H=8.0m N=5kW	2
DN1800Q=14000m ³ /h	1
HCRKO/2500-30-7.5	8
HCRKO/2500-30-11	8
D 2500mm N=7.5kW	10
D 2500mm N=5.5k ^k	4
PP4660	12
PP4680 25kW Q=1832m ³ /h H=1.5m	6
NP3301	8
NP3300	5
NP3127	6
Q=60m ³ /h H=15m N=5.9kW	3
ZX40	



KRT K150-315/234UG 21kW	2
Amarex ND100-220/044ULG 3.7kW	2
XZB1000-25	2
KA10S-GK200	5
KA22S-GL225 Q=231.5m ³ /min	2
TJ-3 31066m ³ /h	12
BXH=2438X2134	
T35-II-7.1	7
G2-100	5
PDB8.5	
M-OVAS/70-3.0/NC	4
Q=50~100m ³ /h N=5.5kW	1
NM105BY01L06V	5
NM031BY01L06B	
Q=0.17~1.09m ³ /h	5
=H=20m N=0.55kW	
	2
WNG16	3
Q=25m ³ /h L=20m N=11kW	1
LS 550	1

1.3		Q=4800m ³ /h H=0.8m P=25kW 380V IP68 F 10m		2	2	
1.4		Q=1390m ³ /h H=5.0m N=40kW		1	1	
1.5		3W/m ³		6	6	
1.6		15.0×10 ⁴ m ³ /d		1	1	
1.7		15.0×10 ⁴ m ³ /d		1	1	
2						
2.1		1100m ³ /h L×B=21m×4.5m		2	2	
3						
3.1		Q=80m ³ /h N=86kW		1	1	
3.2		D=16.0m N=1.5kW		1	1	
1.						
2-5						
			219		m ³	
			24852.23		t	
PAM			58.96		t	
PAC			17023.6		t	

	219	5	m ³	
	173965.61	140	t	
PAM	412.72	7	t	
PAC	119165.2	105	t	

2.

1

1%

“ ”

2

COD



(3 PAM

PAM

Polyacrylamide

PAM

(4 PAC

PAC

PAC

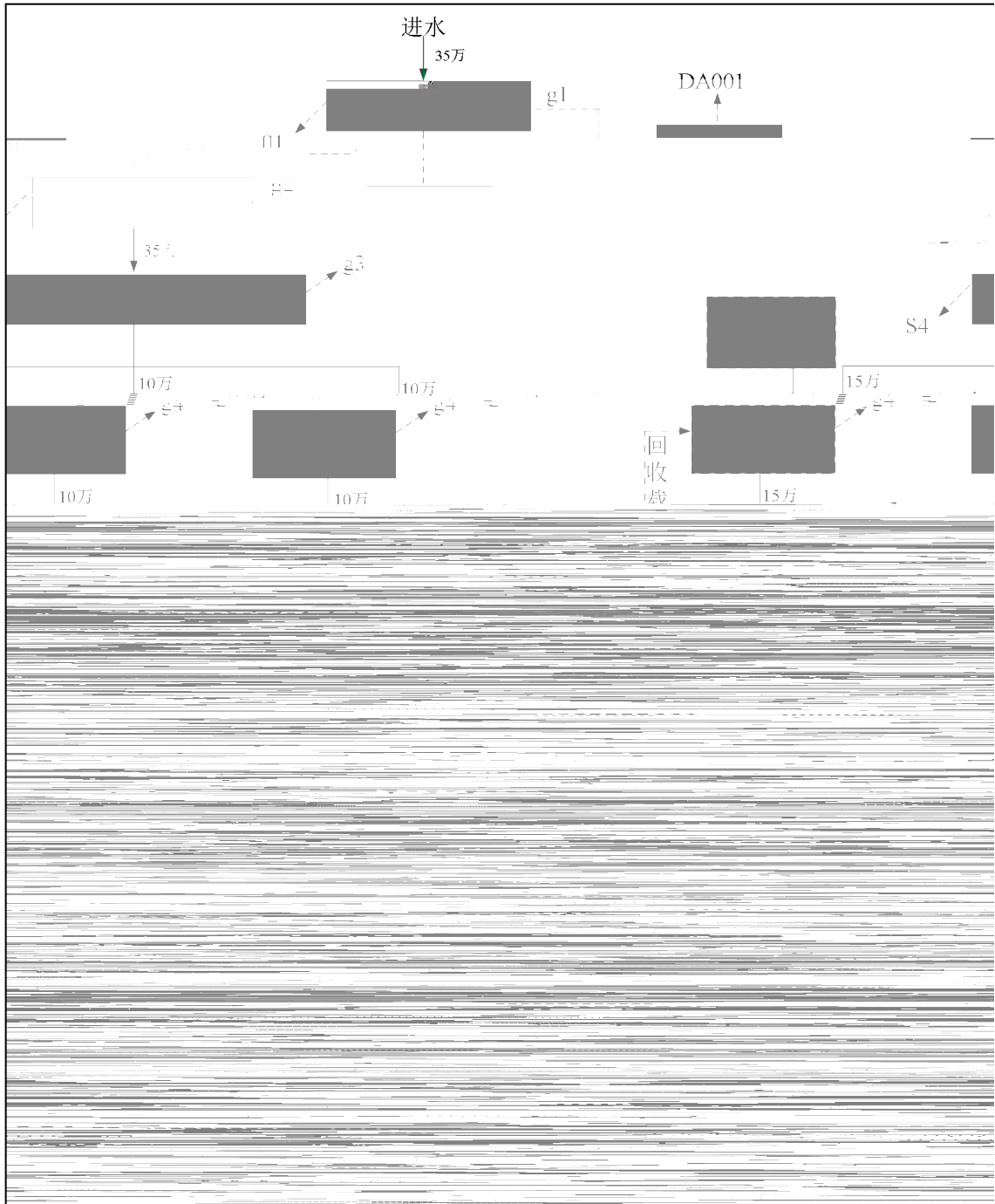
PAC

35

365

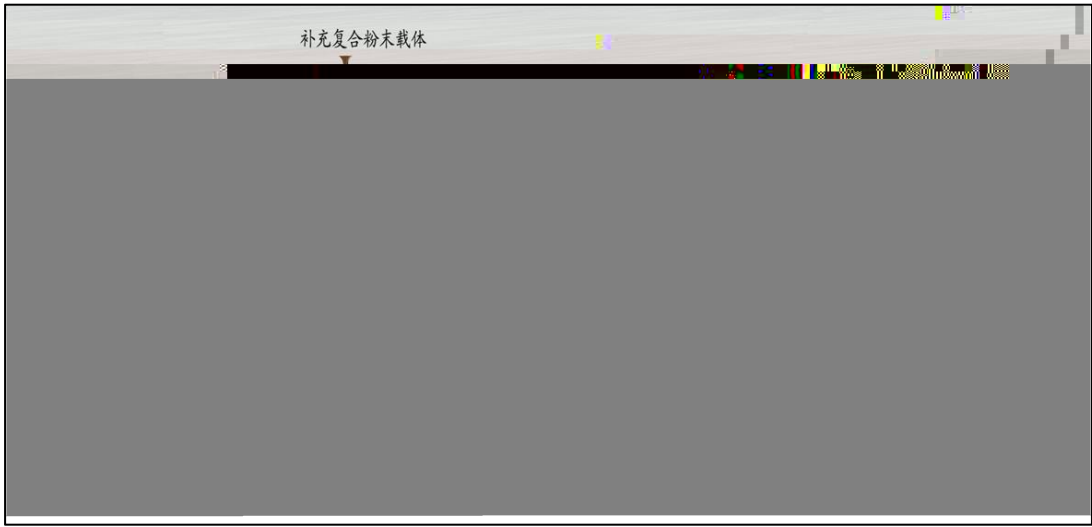
24

5 m³/d



1

		2		9445m ³ /h	
45	m ³ /d				
		8	4	5867-5628-5403m ³ /h	4
4145-3890-3615	m ³ /h			35	m ³ /d
			S1		g1
					AOE
	15m		DA001		
	2				



	1#		1#
	$10.0 \times 10^4 \text{m}^3/\text{d}$		$15.0 \times 10^4 \text{m}^3/\text{d}$
AAO	N		g4
5			
	3	2	
		SS	BOD ₅
6			40m
15072m ²			4.5m
3.62h	5.43h		0.83m ³ /m ² h
	1.24		
	1		
g5			
6			
	“	+D	”
			30 m ³ /d

TP 0.5mg/L 7"3

30 m³/d

5 m³/d

30 m³/d

35 m³/d

D

D

911.23m²

13.72m³/m²h

15.24m³/m²h

17.38m³/m²h

19.31m³/m²h



315		30
2008	5	20
2009	7	10

10950 m³/a 2021 3 5

102°41 17.92

24°57 52.99

13	3	218.93
14	1	10m
15		

04	11.611	0.171	0.029	7.161	7.055	15.182
05	12.355	0.146	0.034	6.943	7.038	16.247
06	10.395	0.11	0.03	6.676	7.06	16.967
07	10.479	0.107	0.03	6.761	7.092	17.576
08	10.526	0.096	0.025	6.964	7.089	18.181
09	11.103	0.163	0.026	7.186	7.061	17.663
10	10.587	0.147	0.028	7.207	6.996	15.797
11	10.639	0.151	0.031	7.098	7.008	14.118
12	10.485	0.139	0.032	7.176	7.004	12.17
	10.69	0.13	0.03	7.11	7.04	11.113
	20	1.0	0.05	10	-	-
					-	-

COD NH₃-N TP
 DB5301/T43-2020 A TN
 DB5301/T43-2020 B

2

10950

m³/a COD 20mg/l 2372.5t/a 1.0mg/l
 118.625t/a TP 0.05mg/l 5.93125t/a TN
 10mg/l 1186.25t/a

2024

		778.545t/a		3.285t/a				
				2023				
		1#AOE		15m		DA001		
				2#AOE		15m		
DA002								
1						DA001 DA002		
				2024				
				1	2	3	GB14554-93	
DA001	2024.02.21		mg/m ³	1.05	1.10	1.22	1.12	/
			kg/h	0.0023	0.0022	0.0025	0.0023	4.9(kg/h)
			mg/m ³	0.06	0.06	0.07	0.06	/
			kg/h	0.00013	0.00012	0.00014	0.00013	0.33(kg/h)
	2024.08.14			354	354	269	354	2000
			mg/m ³	1.58	1.38	1.48	1.48	/
			kg/h	0.0039	0.0034	0.0042	0.0038	4.9(kg/h)
			mg/m ³	0.05	0.06	0.06	0.06	/
kg/h	0.00012		0.00015	0.00017	0.00015	0.33(kg/h)		

		478	416	416	478	2000
	mg/m ³	1.37	1.52	1.62	1.50	/
	kg/h	0.0027	0.0039	0.0032	0.0029	4.9(kg/h
2024.02.21	mg/m ³	0.08	0.07	0.08	0.08	/
	kg/h	0.00016	0.00013	0.00016	0.00015	0.33(kg/h
DA002		478	416	478	478	2000
	mg/m ³	1.72	1.67	1.-		
2024.08.14						

	3#	0.04	0.05	0.04	0.05	0.05	
	4#	0.05	0.07	0.07	0.08	0.08	
	1#	<10	<10	<10	<10	<10	
	2#	<10	<10	<10	<10	<10	20
	3#	<10	<10	<10	<10	<10	
	4#	<10	<10	<10	<10	<10	
		1.48	1.47	1.46	1.54	1.54	/
	/%	0.0002070	0.0002060	0.0002040	0.0002160	0.000216	1
		1.46	1.45	1.49	1.50	1.50	/
	/%	0.0002040	0.0002030	0.0002090	0.0002110	0.000211	1
	1#	0.007	0.005	0.004	0.005	0.007	
	2#	0.008	0.009	0.008	0.008	0.009	0.06
	3#	0.008	0.009	0.007	0.009	0.009	
	4#	0.010	0.009	0.010	0.008	0.010	
	1#	0.04	0.05	0.04	0.05	0.05	
	2#	0.05	0.04	0.06	0.05	0.06	1.5
	3#	0.09	0.07	0.08	0.07	0.09	
	4#	0.09	0.07	0.09	0.07	0.09	
2024.04.26	1#	<10	<10	<10	<10	<10	
	2#	<10	<10	<10	<10	<10	20
	3#	<10	<10	<10	<10	<10	
	4#	<10	<10	<10	<10	<10	
		1.89	1.63	1.66	1.79	1.89	/
	/%	0.0002650	0.0002280	0.0002320	0.0002510	0.000265	1
		1.70	1.62	1.72	1.63	1.72	/
	/%	0.0002380	0.0002270	0.0002410	0.0002820	0.000241	1

2024.07.13

GB18918-2002

GB18918-2002

			t/a	
1		/	10.95	
2			210	
3			821	
4			19	
5			18250	
6		HW49900-217-08	0.5	
7		HW08900-047-49	0.15	
8		HW29900-023-29	1	

È 100%

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GB3095-2012

GB3095-2012

347m

GB3095-2012

NH₃ H₂S

HJ2.2 2018

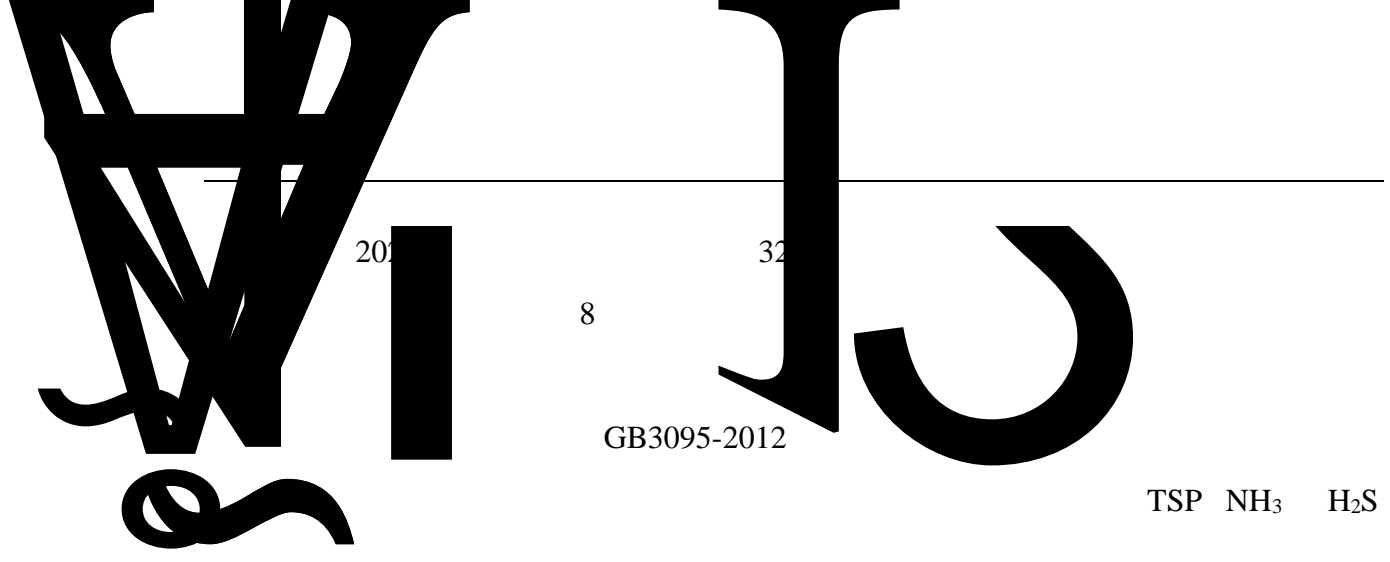
D D.1

SO ₂	24	20	60	μg/m ³
	1	50	150	
NO ₂	24	40	40	
	1	80	80	
PM ₁₀	24	200	200	
	1	40	70	
PM _{2.5}	24	50	150	
	1	15	35	
O ₃	8	35	75	
	1	100	160	
CO	24	160	200	
	1	4	4	
TSP	24	10	10	
	1	80	200	
	24	120	300	
	1	20	20	

μg/m³

mg/m³

μg/m³



20

32

8

GB3095-2012

TSP NH₃ H₂S

1

G1

102°41 22.195 E

24°57 56



	0.2	0.01

TSP

GB3095-2012

NH₃ H₂S

HJ2.2 2018

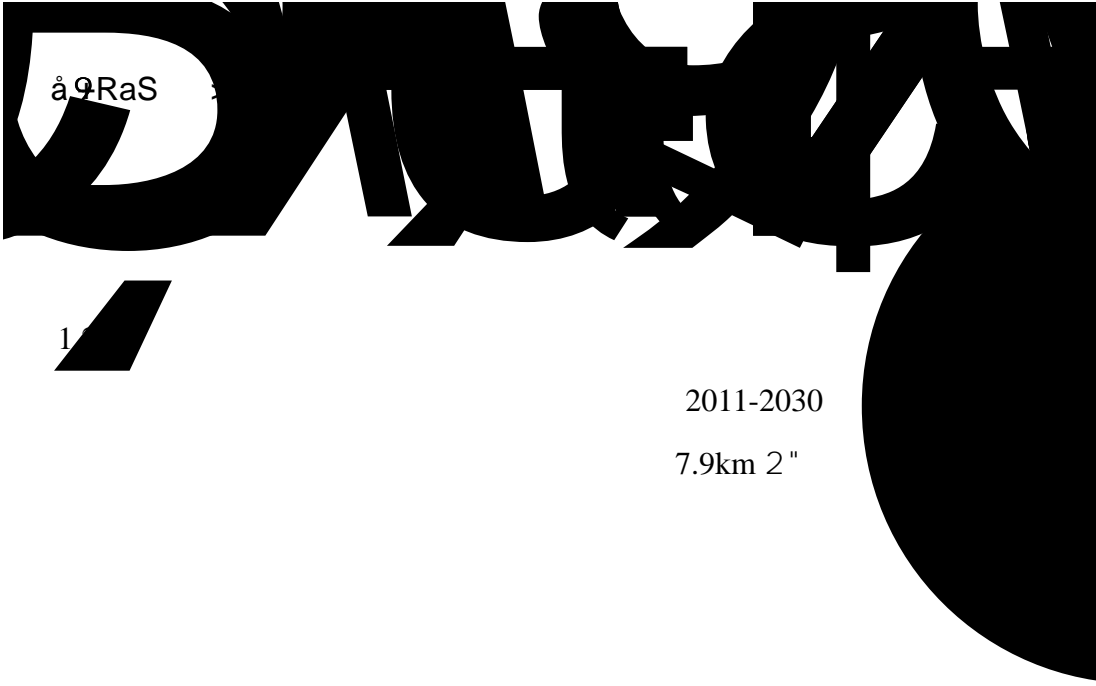
D D.1

500m

GB3095-2012

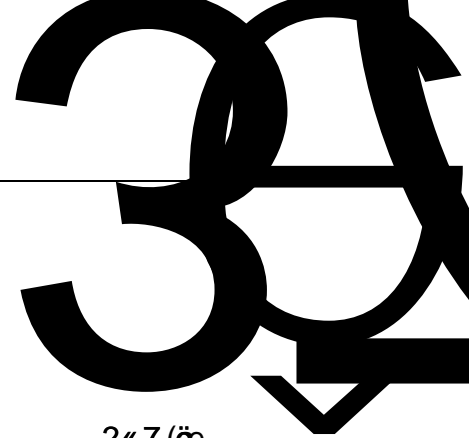
<https://air.cnemc.cn:18007/> 2025 09 05 09 07

a





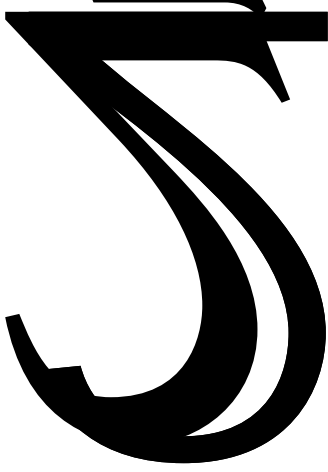
GB3838-2002



2«7 (ëë

2019-2029

GB3096-2008 1



1

1

N1

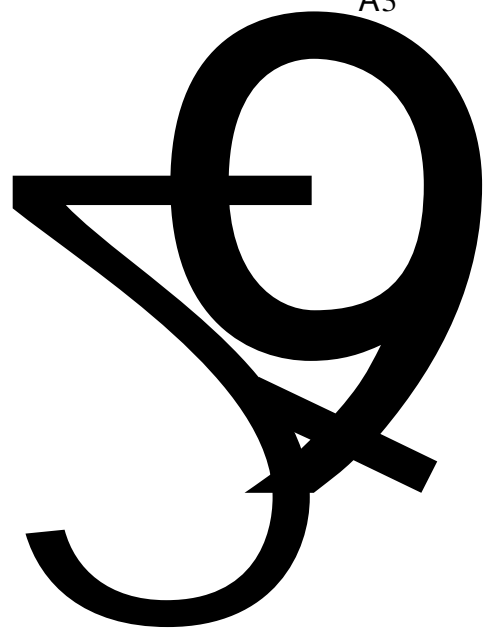
102°41 14.615 E 24°57 53.623 N

2

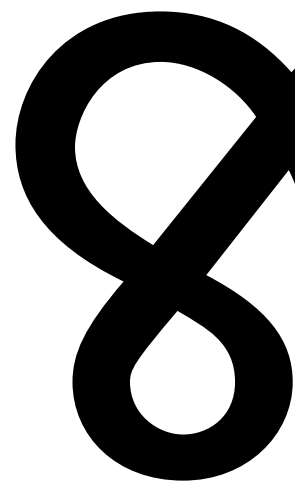
2025 09 07

Ä3

Leq



a ~ b



500m

3-7

5

°	°	m		m		
102.6860 97	24.96603 3	1888	N	40	1200	GB3096-2008 1
102.6860 97	24.96603 3	1888	W N	40	1200	
102.6898 95	3.					

GB3095-2012

		102.6829 64	24.96401 9	1885	W	180	60	
		102.6829 8626	24.96366 965	1885	W	171	120	
		102.6838 4457	24.95680 255	1884	S	347		GB3095-2012
		102.6884 57	24.96164 6	1887	E	20		
		102.6856 25	24.95474 0	1886	S	1200		
		102.6838 4457	24.95680 255	1884	S	347		GB3838-20 02

2011-2025

102°36'-102°48' 24°40'-25°02'

1950

1887.4 100

355.16

287.49

347m

2010 9

1865.3

Simocyclocheilus grahami

Schizothorax grahami

Acrossocheilus yunnanensis

GB16297-1996

3-8

	mg/m ³
	1.0

H₂S NH₃
GB18918-2002

4

3-11

1		1.5
2		0.06
3		20
4	%	1

GB12348-2008

1

3-11

1	55	45

BOD COD NH₃-N TP

DB5301/T43-2020 A

TN

DB5301/T43-2020

B

GB18918-2002

A

1	COD	50	20	
2	BOD ₅	10	4	
3	SS	10	/	
4		1	/	
5		1	/	
6		0.5	/	
7	N	15	5(10	10(15
8	N	5(8	1.0(1.5	

9	P	0.5	0.05
10		30	/
11	pH		/



1

2

3

4

5

	4-1



1

H₂S NH₃

BOD₅

DO

			AOE
	15m	DA002	AAO
	1		
	DA001		
	1#AOE	15m	DA001
	21000m ³ /h		
	5 m ³ /d		
	2024		DA001
	0.0042kg/h	1.48mg/m ³	0.00017kg/h
	0.06mg/m ³	2800m ³ /h	478
		DA001	0.0049kg/h
	1.48mg/m ³	0.0002kg/h	0.06mg/m ³
	3300m ³ /h	558	
	DA001		
	GB14554-93	2	
	4.9kg/h	0.33kg/h	2000
	DA002		



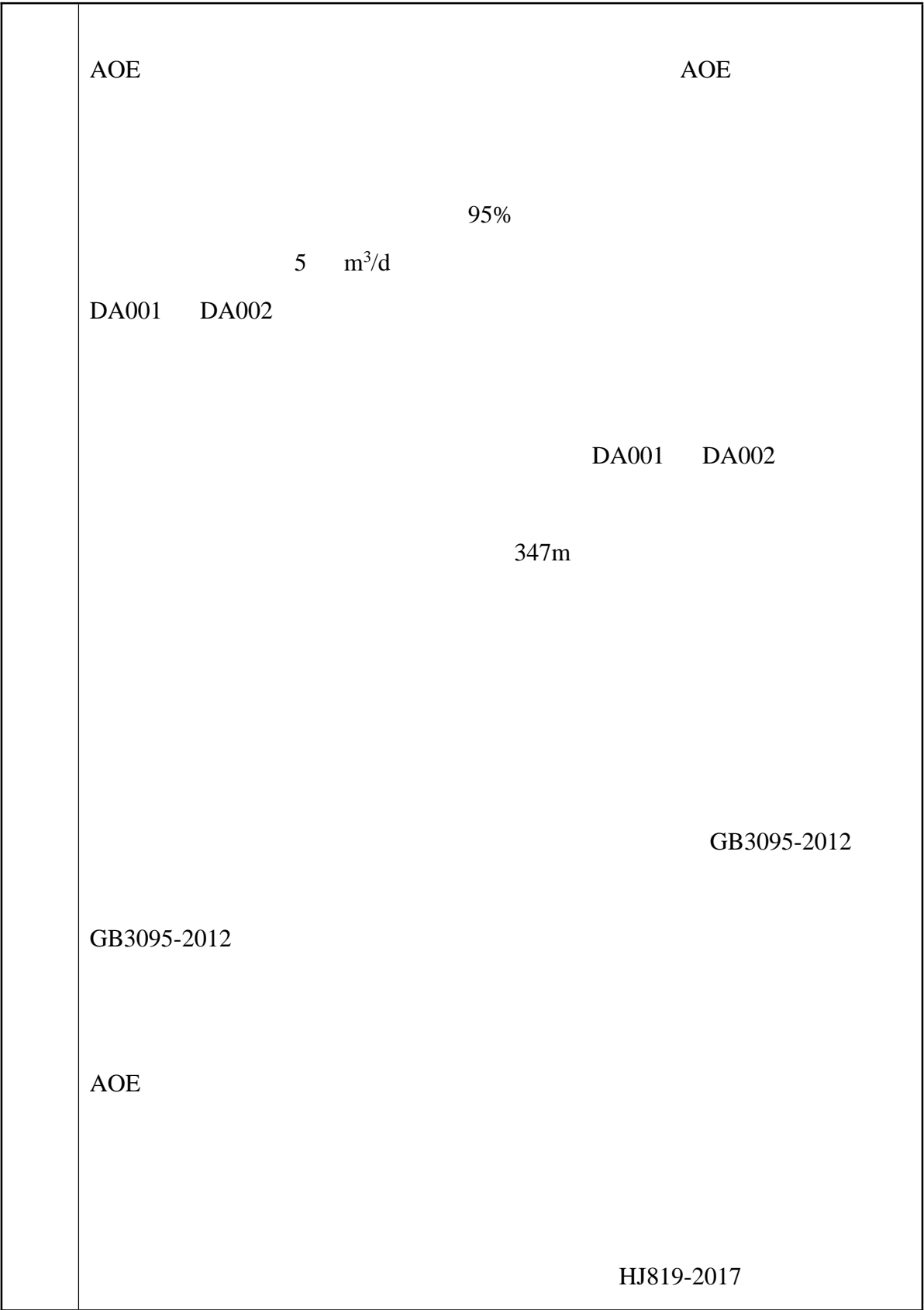
2#AOE

15m

DA002



0.27mg/m³
GB18918-2002 1.5mg/m³
0.02mg/m³
GB18918-2002
0.06mg/m³ 20
3
2024
0.000969%
0.00113%



HJ 1083-2020

HJ 1120-2020

4-3

DA001

1 /

GB14554-93 2

DA002

			COD7115.4925t/a	300.03t/a
	248.2t/a	156.585t/a		
	70	90dB	A	
		HJ24-2021		
				4-6

/m									
	dB A	X	Y	Z	m	dB A	dB A		m
1#	85	93.08	499.55	0	2	85	20	65	28
2#	85	89.61	504.91	0	2	85	20	65	28
3#	85	92.13	504.91	0	3	85	20	65	27
4#	85	89.61	502.07	0	3	85	20	65	27
5#	85	92.77	502.07	0	1	85	20	65	26
6#	85	89.92	499.55	0	1	85	20	65	26
7#	85	89.3	497.46	0	2	85	20	65	25
8#	85	93.11	497.14	0	2	85	20	65	25
1#	85	102.15	437.19	0	8	85	20	65	24
2#	85	102.23	433.42	0	6	85	20	65	24
3#	85	115.58	437.87	0	6	85	20	65	23
4#	85	115.95	433.79	0	25			65	23

2#	85	131.1	415.84	0	8	85	20	65	29
3#	85	130.82	407.11	0	8	85	20	65	30
4#	85	130.67	402.13	0	7	85	20	65	30
1#	80	153.77	408.3	0	7	80	20	60	31
2#	80	153.77	404.85	0	6	80	20	60	30
1#	80	145.09	401.54	0	6	80	20	60	28
2#	80	149.42	401.54	0	6	80	20	60	28

“ ” E 09... C 4

· 卍 0 e e 01



	5#	75	63.71	212.32	0	11	70	20	50	33
	6#	75	52.24	214.97	0	11	70	20	50	33
	1#	75	140.35	197.15	0	14	70	20	50	183
	2#	75	128.37	195.82	0	14	70	20	50	183
	3#	75	138.58	203.81	0	12	70	20	50	184
	4#	75	128.81	206.47	0	12	70	20	50	184
	5#	75	110.62	195.37	0	11	70	20	50	185
	6#	75	98.2	194.49	0	11	70	20	50	185
	7#	75	110.18	204.69	0	12	70	20	50	187
	8#	75	98.64	206.02	0	12	70	20	50	187
	1#	75	38.02	194.31	0	13	70	20	50	185
	2#	75	25.97	195.2	0	13	70	20	50	185
	3#	75	39.36	204.57	0	10	70	20	50	186
	4#	75	25.17	204.47	0	10	70	20	50	186
	5#	75	37.3	214.79	0	12	70	20	50	187
1#		75	61.14	279.17	0	12	70	20	50	187
2#		75	170.28	278	0	13	70	20	50	187
3#		75	60.68	270.49	0	13	70	20	50	186
4#		75	200.09	278.9	0	14	70	20	50	186
5#		75	34.17	276.89	0	14	70	20	50	185

	6#	75	135.04	275.74	0	15	70	20	50	185
	1#	75	135.04	275.74	0	15	70	20	50	186
	2#	75	104.32	275.74	0	12	70	20	50	186
	3#	75	135.35	265.17	0	12	70	20	50	185
	1#	80	68.36	327.38	0	3	80	20	60	29
	2#	80	57.17	326.21	0	3	80	20	60	30
	3#	80	43.75	326.67	0	2	80	20	60	31
	4#	80	35.89	326.21	0	2	80	20	60	32
	5#	80	26.17	325.74	0	2	80	20	60	33
D	1#	85	70.97	432.99	0	3	85	20	65	29
D	2#	85	64.34	432.45	0	3	85	20	65	30
D	1#	75	58.57	431.43	0	2	75	20	55	33
D	2#	75	51.97	430.96	0	2	75	20	55	35
	1#	75	73.1	460.25	0	2	75	20	55	36
	2#	75	63.63	460.73	0	2	75	20	55	36
	1#	80	100.78	476.75	0	3	80	20	60	80
	2#	80	101.74	471.48	0	3	80	20	60	80
	3#	80	100.78	466.21	0	3	80	20	<0 m	

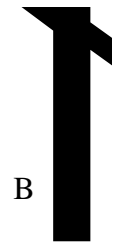
		3#	85		238.17	250.96	0	6	85		20	65	24
		4#	85		239.12	245.57	0	5	85		20	65	23
		5#	85		239.44	233.53	0	6	85		20	65	23
		6#	85		239.44	239.55	0	6	85		20	65	22
		7#	85		238.81	229.42	0	6	85		20	65	22
		1#	85		105.39	407.73	3	3	85		20	65	68
		2#	85		107.92	407.87	3	3	85		20	65	70
		3#	85		110.49	407.45	3	3	85		20	65	72
		4#	85		113.48	406.16	3	3	85		20	65	74
		5#	85		116.47	406.59	3	4	85		20	65	76
		1#	80		104.42	404.7	3	4	80		20	60	68
		2#	80		107.45	403.83	3	4	80		20	60	70
		3#	80		111.34	401.67	3	4	80		20	60	72
		4#	80		113.5	402.54	3	4	80		20	60	74
		5#	80		117.4	401.24	3	2	80		20	60	76
		1#	75		104.34	410.21	3	2	75		20	55	68
		2#	75		106.68	410.11	3	2	75		20	55	70
		3#	75		109	409.76	3	2	75		20	55	72
		4#	75		111.85	409.76	3	2	75		20	55	74
		5#	75		115.76	409.22	3	2	75		20	55	76
			75		102.94	408.02	3	3	75		20	55	76
		1#	80		104.76	412.82	3	3	80		20	60	68
		2#	80		106.75	412.64	3	3	80		20	60	70

3#	80	109.29	412.82	3	3	80	20	60	72
4#	80	112.01	411.91	3	3	80	20	60	74
5#	80	114.72	411.55	3	3	80	20	60	76
1#	75	64.92	384.63	0	2	75	20	55	39
2#	75	59.34	385.19	0	2	75	20	55	44

0



HJ2.4-2021 / A
 " B.1 "



$$L_{oct}(r) = L_{oct}(r_0) - 20 \lg(r/r_0) - \Delta L_{oct}$$

L_{oct} r ———
 L_{oct} r_0 ——— r_0
 r ——— m
 r_0 ——— m
 L_{oct} ———

$L_{\text{oct } 2} \quad T$

i

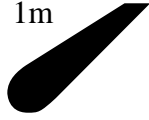
$L_{w \text{ oct}}$

$$L_{w \text{ oct}} = L_{\text{oct } 2}(T) + 10 \lg S$$

-2.39 534.90

YDC /

1m



1



GB12348-2008

GB3096-2008 1

SW90

462-001-S90

4

	1 /	1 /		1 /	1 /
	100%	100%	100%	100%	

100%

GB18599-2020



GB7665-2001



GB18597-2023

a.

b.





PAM PAC

		CAS	t	t	
1		/	2500	0.05	

HJ169-2018

Q

B

Q

Q

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

q₁ q₂ ... q_n —

t

Q₁ Q₂ ... Q_n —

t

Q 1

Q 1

Q

1

1

Q

10

2

10

Q

100

3

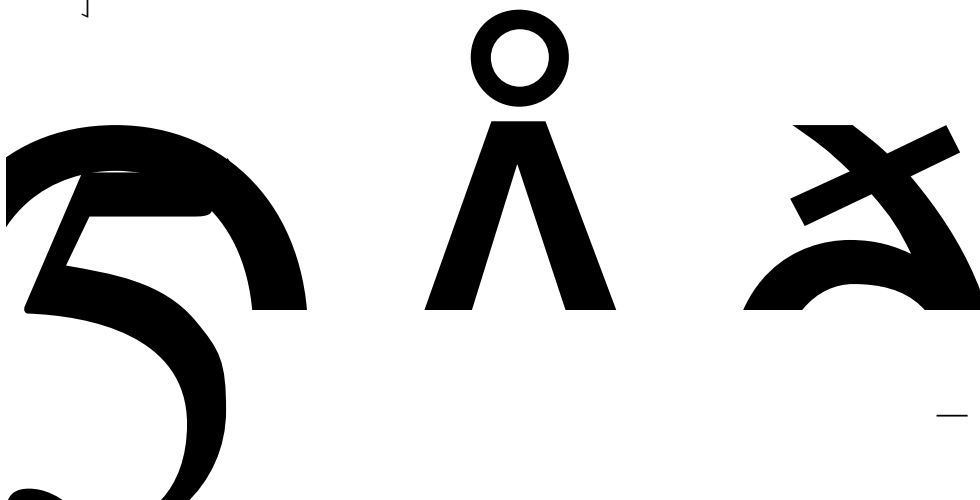
3

Q

†

-

↓



1				
1				
2				
3				
1				

A.

B.

A.

B.

C.

D.

A.

B.

C.

2

A.

B.

C.

D.

F.

" 119"

G.

H.

0

I.

J.

K.

L.

		"	"	"	"		
		t/a	t/a	t/a	t/a	t/a	t/a
		0.071	0.012	0	0.083	+0.012	
		0.0029	0.0005	0	0.0034	+0.00048	
	COD	2190	365	0	2555	+365	
	NH ₃ -N	109.5	18.25	0	127.75	+18.25	
	TN	1095	182.5	0	1277.5	+182.5	
	TP	5.475	0.9125	0	6.3875	+0.9125	
		10.95	0	0	10.95	0	
		210	35	0	245	+35	
		821	137	0	958	+137	
		19	3	0	22	+3	
		18250	3040	0	21290	+3040	
		0.5	0	0	0.5	0	
		0.15	0.02	0	0.17	+0.02	
		1	0	0	1	0	
		" +"	" -"				

	/			
	DA001		AOE	GB14554-93 2
	DA002		AOE	GB14554-93 2
				GB18918-2002
		COD SS TP TN		BOD COD NH ₃ -N TP DB5301/T43-2 020 A TN DB5301/T43-2 020 B GB18918-2002 A

GB1.2348-200
8 1

/ / / /

100%

/

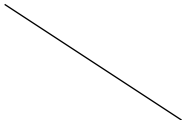
- A.
- B.
- C.

- D.

- E.
- F.
- G.

	<p>A. B.</p> <p>A.</p> <p>B. C.</p> <p>D.</p> <p>A.</p> <p>B. C.</p>
	<p>1. 2. 3. 4.</p>

100%



m ³ /a	4642.8	/	/	876	0	5518.8	+876
t/a	0.071	/	/	0.012	0	0.083	+0.012
t/a	0.0029	/	/	0.0005	0	0.0034	+0.000 48
t/a							

18250

/

/

3040

0

21290

+3040