2020 1

15369212280

/

071500

13070570936

/

061000

5 501 502

1

2

3

1

2

3

4

5

6

7

8 XHBG201911111 XHBG201912059

2016 9 24191.45

20 m^3/d

GB18918-2002 A

GB3838-2002

COD 40mg/L BOD_5 10mg/L SS 10mg/L TN 15mg/L NH_3-N 5mg/L TP 0.4mg/L

2016 9

2016 12 5 2016 02

2016 10 9

682

2019 11

[2017]4

[2017]727

2018 9

1

1.1

1 2015 1 1

2 2016 9 1

3 2018 1 1

4 2016 1 1

5 2018 12 29

6 2016 11 7

7 2017 10 1

8 2005 5 1

1.2

1 GB18918-2002

2 GB12348-2008

3 GB16297-1996

4 GB3838-2002

2-1

2-1

	13472277719		071500
	17448.33m^2		115°48'41.472" 38°41'46.907"
	2017 3		2019 10

2.1.2

115°48'41.472" 38°41'46.907" 1

6 /

2

2.1.3

3

2.2

2.2.1

2-2

1		1 Q=1300m³/hr H=16m P=90kW	1 Q 2100m^3/h H 9m P 70kW	1 Q=1300m³/hr H=13m P=90kW	1 Q 2200m^3/h H 13m P 1000kW	
2		16	16 N=7.5kW	16	16 N=7.5kW	
3		4 SA77/TDT90S4	B=1400mm 3mm 90 P=1.1kW 4 B=300mm L=8m P=1.5kW 4 Q=16m^3/h H=70m N=5.5kW 4 B=2000mm 1mm 90 P=1.5kW 4 Q=20m^3/h H=68m N=7.5kW 4	4 SA77/TDT90S4	B=1400mm 3mm 90 P=1.1kW 2 B=300mm L=8m P=1.5kW 1 Q=32m^3/h H=81m N=5.5kW 6 B=2000mm 1mm 90 P=1.5kW 4	2 B=300mm L=8m P=1.5kW 3 32m^3/h 6 20m^3/h 16m^3/h
		8 SXW-900-2000-1	B=1400mm 3mm 90 P=1.1kW 4 B=300mm L=8m P=1.5kW 4	8 SXW-900-2000-1	B=1400mm 3mm 90 P=1.1kW 4 B=300mm L=8m P=1.5kW 4	20m^3/h 10 32m^3/h

		HDPE 2380m 160 170m SS304 136		2380m 160 170m SS304 136		
7		Q=500m^3/min P=69.6kPa		Q=500m^3/min P=69.6kPa		
8		3 Q=3000m³/h H=10m N=110kW	Q=3000m^3/h H=13m N=140kW 3 2 1 DN1000 3 2 1 DN1000 3 2 1	/	/	
9			Q=500L/h P=5bar N=0.25kW 2		Q=500L/h P=5bar N=0.25kW 2	

2-3

1		Q=65kg/h,P=455kw 5	4	Q=65kg/h,P=455kw 5	4	
2		D=150mm 576	+SS316L	D=150mm 576	+SS316L	
3		Q=4000m^3/h 2 1	1 1	Q=4000m^3/h 2 1	1 1	
4		Q=2700 H=18m;P=200kw 5 Q=231.48m^3/h; 27	3 2	Q=2700 H=18m;P=200kw 5 Q=231.48m^3/h; 27	3 2	
5		D=1200mm N=6.5kw 3 D=1700mm N=14.1kw 2	/	/	/	
6		/	/	Q=2200m^3/h H=13m N=100kW 4	3 1	

2-4

		(m)		**m**	**m^2**	**m^2**	**(m)**		**m**	**m^2**	**m^2**
1		24.90×37.60	1	7.80	1039.06	895.81	24.90×37.60	1	7.80	1039.06	895.81
2		39.00×46.80	——	14.90	1961.64	——	39.00×46.80	——	14.90	1961.64	——
3		86.90×71.54	1	8.30	6580.32	6216.83	86.90×71.54	1	8.30	6580.32	6216.83
4	1#	31.20×14.80	1	6.60	566.34	461.76	31.20×14.80	1	6.60	566.34	461.76
5		23.00×10.00	——	——	230.00	——	23.00×10.00	——	——	230.00	——
6		——	——	——	——	——	7.50×7.50	1	——	57.00	——

2.2.2

2-5

2-5

	——						
1		Q=2100m^3/h H=9m P=70kW		1	Q=2200m^3/h H=13m P=1000kW	1	
1		N=7.5kW		16	N=7.5kW	16	
1		B=1400mm 3mm 90 P=1.1kW		8	B=1400mm 3mm 90 P=1.1kW	6	2
		B=2000mm 1mm 90 P=1.5kW		10	B=2000mm 1mm 90 P=1.5kW	10	
2		B=300mm L=8m P=1.5kW		8	B=300mm L=8m P=1.5kW	5	3
3		Q=16m^3 /h H=70m N=5.5kW		4	Q=16m^3/h H=70m N=5.5kW	0	4
		Q=20m^3/h H=68m N=7.5kW		12	Q=20m^3/h H=68m N=7.5kW	0	12
		Q=32m^3/h H=68m N=11kW		0	Q=32m^3/h H=68m N=11kW	16	16
1		L=18m P=1.5kW		2	——	——	
		L=24m P=1.5kW		2	——	——	
2		——		——	L=7.8m P=1.5kW	4	
		——		——	L=11.8m P=1.5kW	4	
3		Q=20m^3/h H=20m N=4kW		16	——	——	
4		——		——	Q=150m^3/h H=10m N=7.5kW	2	
		——		——	Q=390m^3/h H=10m N=18.5kW	2	
1		/		84	/	84	
2		DN1500		1	DN1500	1	
		DN1200		2	DN1200	2	
3		DN250		42	DN250	42	
1		Q=52m^3/h		918	Q=52m^3/h	918	
2		DN150		34	DN150	34	
3	HDPE	HDPE		2380	HDPE	2380	
4		SS304		136	SS304	136	

1		Q=500m^3/min P=69.6kPa N=690kW		1	Q=500m^3/min P=69.6kPa N=690kW	1	
2		DN300		1	DN300	1	
3	- -	DN300×DN700×DN2000		1	DN300×DN700×DN2000	1	
4		DN700		1	DN700	1	
5		DN200		1	DN200	1	
6		/		1	/	1	
7		DN700		1	DN700	1	

1	Q=3000m^3/h H=13m N=140kW	3	——

24		VR80/1.5		3	VR80/1.5	3
25				1		1
26		1400kW		1	1400kW	1
27		DN300 4-20mA		1	DN300 4-20mA	1

28

2.4

2.4.1

4 80L/

·d 0.32m^3/d

6.5m^3/d

20133.74m^3/d

13.74m^3/d 20120m^3/d

80%

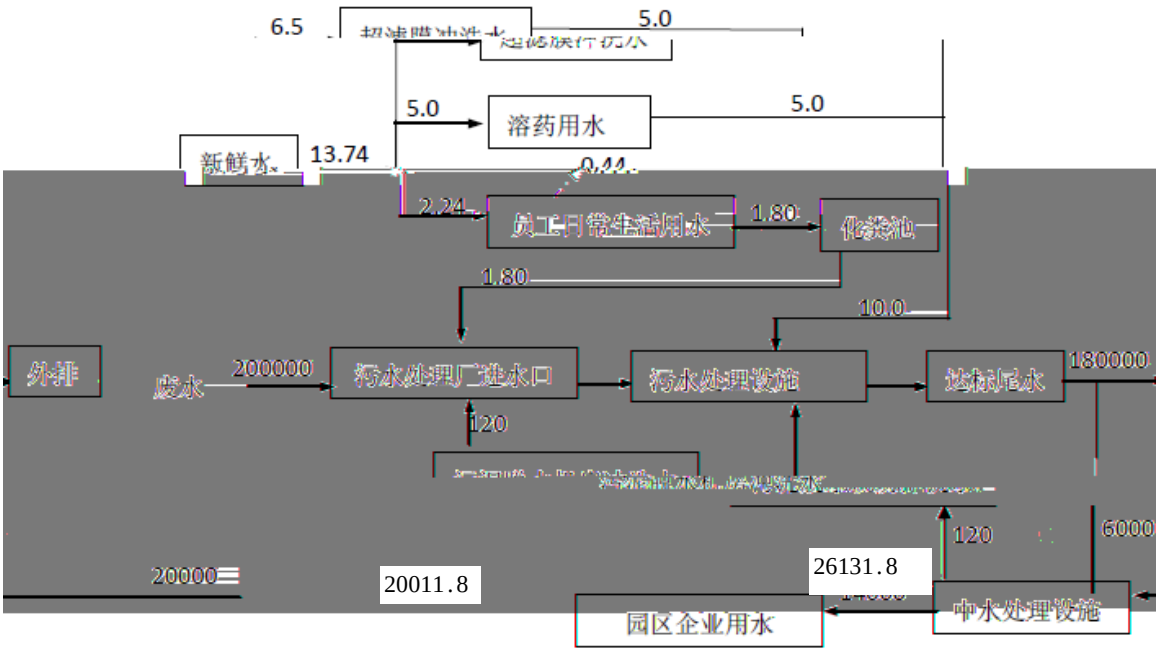
0.26m^3/d

20 t/d

2 t

18 m^3/d

2-1



2-1 m^3/d

2.4.2

95

2.4.3

10kV

100%

10kV

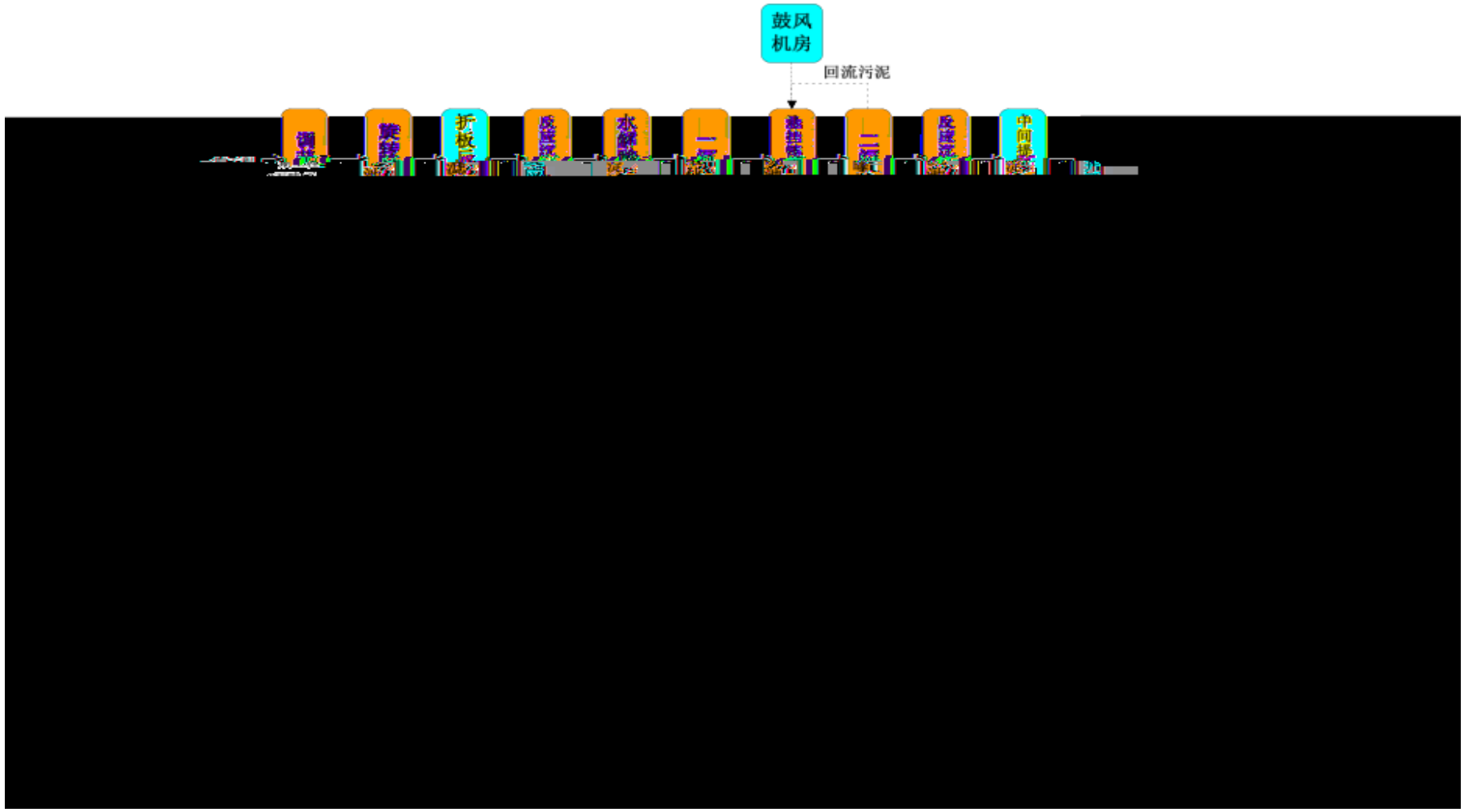
10kV 10kV

10kV 0.4kV

107.31 kWh/a

2.5

2-2



2-2

2.6

1

2 2016 12 5

2016 02

2.7

24191.45

24191.45

2-6

2-6

	500
	2000
	20165.45
	1526
	24191.45

2.8

2 3 16m^3/h 4 20m^3/h

12 32m^3/h 16

4 2

4 1

1

[2015]52

[2018]6

2.9 “ ”

“ ” 2-7

2-7 “ ”

			GB18918-2002	GB18918-2002
		+ + + + + + + + + + + + + 20 m^3/d 18.0 m^3/d	GB18918-2002 A	GB18918-2002 A
			GB12348-2008 3	+ (GB12348-2008)3

2.10

“ ”

3

3.1

——

20m

300m

3.2

20 m^3/d

3.3

3.4

3-1 COD 3-2

"-2

3-5

3-6

3-7

3-8

4

4.1

4.1.1

1

2

3

4 383

17448.33m^2

5 20 m^3/d

6

+ +

+ + + + + + +

+ + + + +

7

8

9 2016 5 2016

≤

1/4

10

4

365

4.1.2

2008-2020

300m

(GB12348-2008) 3

300m

4.1.3

21 2011 ( )

“ ” “ ” 9 “

” “

” 15 “ ” ”

[2009]89

2015 7

4.1.4

1

2

10kV

100%

10kV

10kV 10kV

10kV 0.4kV

3

—

95

4

5

4.0-10.0m

9.0m

4.1.5

(1)

——

2015 0163

GB18918-2002 4

300m

(2)

GB18918-2002 A

(3)

85-90dB(A)

(GB12348-2008)3

(4)

——

4000t/d

98% 60% 200t/d

2.5t/d 60% 195.5t/d 60%

4.1.6

4.1.7

SO_2 NO_X COD

4 $SO_2$0t/a NO_X0t/a

COD2628.0t/a 328.5t/a

4.1.8

4.2

(1)

(2)

4.3

24191.45 24191.45

383

17448.33m^2

20 /

1

2

3 + +

+ + + + + +

+ + + + +

+

GB18919-2002 A

4

5

GB12348-2008 3

6

300

$SO_2$0t/a NO_x 0t/a COD 3285t/a

328.5t/a

4-3

5

5.1

5.1.1

GB

18918-2002

5-1

			0.06	mg/m^3	GB 18918-2002
			1.5	mg/m^3	
			20		

5.1.2

GB18919-2002 A

5-2

	COD	40	mg/L	GB18919-2002 A
	BOD_5	10		
		2.0		
		0.4		
		15		
	SS	10		
		1000		

5.1.3

(GB12348-2008)3

≤70dB(A) ≤55dB(A)

5.2

COD 3285t/a NH_3-N 328.5t/a SO_2:0t/a NO_x 0t/a

6

2019 11 16 17

2019 12 24 25

6-1

6-1

2019.11.16	18 t	12.43 t	69.06%
2019.11.17		11.62 t	64.56%
2019.12.24		16.95 t	94.17%
2019.12.25		15.75 t	87.5%

6.1

1

2

3

GB16157-1996 HJ/T55-2000

HJ494-2009

HJ/T91-2002

HJ493-2009

4

5.0m/s

5

6-2

1		HBXH0046	2017.05.20~2022.05.19
2		HBXH0066	2018.11.08~2023.11.07
3		HBXH0048	2019.01.08~2022.01.07
4		HBXH0058	2019.01.08~2022.01.07
5		HBXH0022	2018.12.20~2023.12.19
6		HBXH0011	2015.06.01~2020.05.31
7		HBXH0057	2018.11.05~2023.11.04
8		HBXH0044	2018.11.05~2023.11.04

6-3 /

1		TH-110F	XH001-1		HYHH19-02857	2020.03.04
			XH001-2		HYHH19-02862	2020.03.04
			XH001-3		HYHH19-02864	2020.03.04
2		721G	XH013		HYHH19-02003	2020.03.04
			XH219		HFGF19-00149	2020.08.01
3	-	T6	XH012		HYHH19-02245	2020.03.04
4	pH	PHS-3E	XH007		HYHH19-02008	2020.03.04
5		BSA124S	XH015		HYHH19-02305	2020.03.04
6		101-2ASB	XH020			

6-4

					L/min	L/min	%	%	
1		TH-110F	XH001-1	I	0.5	0.501	-0.2	±2.5	
				П	0.5	0.496	0.8	±2.5	
			XH001-2	I	0.5	0.498	0.4	±2.5	
				П	0.5	0.503			

6-5-4

		mg/L	mg/L	%		
		40	39	-2.5	±15%	
		40	39	-2.5	±15%	
		200	204	2.0	±15%	
		200	202	1.0	±15%	

6-5-4

		mg/L	mg/L	mg/L	%	%	
	1-1-1 -W	1.00	2.12	1.08	104	90-110	
	1-3-1 -W	0.100	0.187	0.081	106	90-110	
	2-1-1 -W	1.00	2.08	1.05	103	90-110	
	2-3-1 -W	0.100	0.171	0.067	104	90-110	

6-6

6-7

			mg/L		mg/L	(%)		
	1-1-4	-W	20	19	20	2.6	≤20%	
mg/L	1-1-1	-W	447	451	449	0.45		

6-8-1

pH	202175	7.33±0.06	7.34	
$CaCO_3$ mmol/L	200740	1.60±0.06	1.56	
N mg/L	200844	5.02±0.17	5.14	
μg/L	202268	40.6±5.6	40.8	
mg/L	201749	2.01±0.10	1.98	
μg/L	202045	5.15±0.42	4.88	
mg/L	202428	1.50±0.06	1.50	
mg/L	202525	1.21±0.04	1.20	
mg/L	201844	70.0±2.8	70.6	

6-8-2

		mg/L	**mg/L**	**mg/L**	**%**	**%**	
N	1-1-1 -DX	0.40	0.40	ND	100	95-105	
SO_4^{2-}	1-1-1 -DX	60	139	80	98.3	90-110	
N	1-1-1 -DX	0.050	0.122	0.072	100	90-110	

6-8-3

					%	**%**	
	1-1-1 -DX	5.00	4.55	ND	91.0	85-115	
	1-1-1 -DX	5.00	4.78	0.11	93.4	90-110	
	1-1-1 -DX	25.0	26.3	2.32	95.9	90-110	

6-8-4

					%	%	
		30.00	30.998	0.000	103	80-120	
		30.00	31.609	0.000	105	80-120	

6-8-5

		mg/L	mg/L	%		
		4.00	3.98	-0.50	±15%	
		4.00	4.02	0.50	±15%	

6-9

		mg/L		mg/L	(%)		
mg/L	1-1-1 -DX	0.58	0.60	0.59	1.7	≤20%	
($CaCO_3$) mg/L	1-1-1 -DX	88.3	91.4	89.8	1.7	≤8%	
mg/L	1-1-1 -DX	381	387	384	0.78	≤10%	
N mg/L	1-1-1 -DX	4.1	4.1	4.1	0	≤5%	
N mg/L	1-1-1 -DX	0.070	0.075	0.072	3.4	≤10%	
N mg/L SO_4^{2-m}	1-1-1 -DX	ND	ND	/	/	≤15%	

6-10

		94.0dB A			
2019.11.16		93.9	93.9	0	0.5dB A
		93.8	93.9	0.1	
2019.11.17		93.8	93.8	0	
		93.9	93.9	0	

6.2

6.2.1

6-9

3 ○1# ○2# ○3#		2 4

6-10

	pH	2 4
		2 4
	pH	2 4
		2 4

6-11

	A Leq(A)	2 1

28m

		HJ 347.2-2018	/XH049	
8		BOD_5 HJ 505-2009	SPX-150B /XH098	0.5mg/L
9		GB/T 7494-1987	721G /XH013	0.05mg/L
10		GB/T 11903-1989	/	/

6-15

				/
1	pH	GB/T 5750.4-2006 5.1	pH PHS-3E/XH007	/
2		GB/T 5750.4-2006 1.1 -	/	/
3		GB/T 5750.4-2006 2.2 -	/	/
4		GB/T 5750.7-.0CID 103 >>BDC /C2_0 1 Tf -9.236-1.25 Td <4AF2>Tj E		

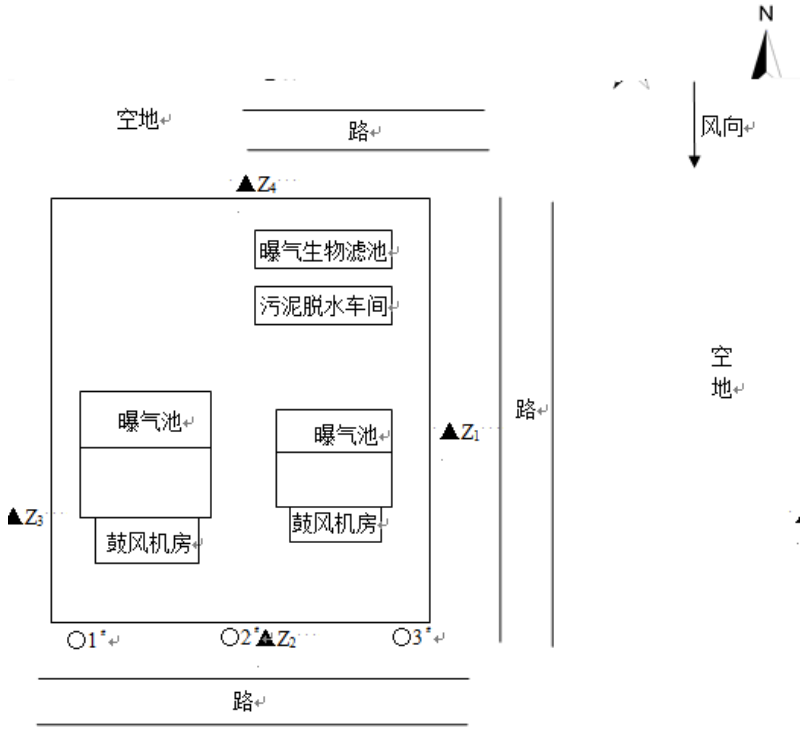
9	N	GB/T 5750.5-2006 9.1	/	0.02mg/L
10	SO_4^{2-}	GB/T 5750.5-2006 1.3	721G /XH013	5mg/L
11		4- HJ 503-2009	721G /XH219	0.0003mg/L
12		GB/T5750.5-2006 4.1 -	721G /XH013	0.002mg/L
13		GB/T 7484-1987	PXSJ-216F /XH008	0.05mg/L
14		GB/T 5750.6-2006 10.1	721G /XH219	0.004mg/L
15		GB/T 5750.6-2006 8.2	F732-VJ /XH021	0.2μg/L
16		GB/T 5750.6-2006 2.1	AA-6880F/AAC /XH040	0.03mg/L
17		GB/T 5750.6-2006 3.1		0.01mg/L
18		GB/T 5750.6-2006 9.7	ICP-MS G8421A 7800/XH143	0.06μg/L
19		GB/T 5750.6-2006 6.6		0.09μg/L
20	Cl^-	GB/T 5750.5-2006 2.1	50mL	1.0mg/L
21		GB/T 5750.4-2006 10.1	721G /XH013	0.050mg/L

22		GB/T 5750.12-2006 2.1	GNP-150 /XH049	/

6-16

1	A	GB 12348-2008	AWA5680 /XH033

6.2.3



6-1

2019.11.16 1.3m/s 1.0m/s

2019.11.17 0.9m/s 2.2m/s

○ ▲

7

7.1

7.1.1

7-1

mg/m^3	2019.11.16		○1#	0.074	0.077	0.071	0.075
			○2#	0.103	0.108	0.112	0.133
			○3#	0.069	0.090	0.068	0.083
	2019.11.17		○1#	0.075	0.074	0.063	0.080
			○2#	0.091	0.079	0.096	0.088
			○3#	0.138	0.093	0.104	0.099
mg/m^3	2019.11.16		○1#	0.002	0.003	0.003	0.002
			○2#	0.003	0.004	0.003	0.003
			○3#	0.003	0.003	0.002	0.003
	2019.11.17		○1#	0.002	0.003	0.003	0.002
			○2#	0.003	0.004	0.003	0.003
			○3#	0.002	0.003	0.003	0.002
	2019.11.16		○1#				

7-2-2

	2019.12.24	pH	6.60	6.62	6.63	6.65
		mg/L	405	393	390	399
		mg/L	26	22	27	24
		mg/L	6.86	7.48	7.66	7.41
		mg/L	8.80	8.84	8.94	8.99
		mg/L	0.10	0.08	0.06	0.08
		mg/L	108	103	106	110
		MPN/L	2.4×10^2	2.4×10^2	2.4×10^2	2.4×10^2
		mg/L	1.18	1.09	1.14	1.12
			4	4	4	4
	2019.12.25	pH	6.67	6.69	6.64	6.69
		mg/L	355	343	496	436
		mg/L	25	28	23	26
		mg/L	7.17	6.76	6.48	5.67
		mg/L	8.80	8.74	8.78	8.94
		mg/L	0.08	0.09	0.07	0.05
		mg/L	101	98.3	141	124
		MPN/L	2.2×10^2	2.2×10^2	2.2×10^2	2.2×10^2
		mg/L	0.99	1.07	1.15	1.04

7.1.4

pH	2019.12.24	8.38
		0
NTU		0
mg/L		0.59
$CaCO_3$ mg/L		89.8
mg/L		384
N mg/L		4.1
N mg/L		0.072
N mg/L		ND
SO_4^{2-} mg/L		80
mg/L		ND
mg/L		ND
mg/L		0.48
mg/L		ND
μg/L		ND
mg/L		ND
mg/L		ND
μg/L		ND
μg/L		ND
Cl^- mg/L		60.0
mg/L		ND
MPN/100mL		

7.2

7.2.1

0.003mg/m^3 0.138mg/m^3

20 GB 18918-2002

7.2.2

2019.11.16

pH 8.10~8.16 COD 22mg/L 0.325mg/L SS

8mg/L TP 0.10mg/L TN 4.02mg/L BOD_5 5.4mg/L 2019.11.17 pH 8.07~8.21 COD 19.3mg/L 0.254mg/L SS 8mg/L TP 0.07mg/L TN 4.33mg/L BOD_5 5.3mg/L 2019.12.24 0.078mg/L 2019.12.25 0.085mg/L GB18918-2002 A

7.2.3

50.9 53.8dB(A) 44.4 46.3dB(A) GB12348-2008 3

7.2.4

GB14848-2017 III GB5749-2006

7.2.5

7.3

365 24 18 m^3/d(6570 m^3/a)

18 m^3/d(6570 m^3/a)

COD 6570 m^3/a×22mg/L×10^{-6}=1445.4t/a

6570 m^3/a×0.325mg/L×10^{-6}=21.35t/a

TP 6570 m^3/a×0.1mg/L×10^{-6}=6.57t/a

TN 6570 m^3/a×4.33mg/L×10^{-6}=284.48t/a

COD 3285t/a NH_3-N 328.5t/a SO_2:0t/a NO_x:0t/a

8

8.1

100%

1

0.003mg/m^3

0.138mg/m^3 20 GB 18918-2002

2

2019.11.16 pH 8.10~8.16 COD 22mg/L 0.325mg/L SS 8mg/L TP 0.10mg/L TN 4.02mg/L BOD_5 5.4mg/L 2019.11.17 pH 8.07~8.21 COD 19.3mg/L 0.254mg/L SS 8mg/L TP 0.07mg/L TN 4.33mg/L BOD_5 5.3mg/L 2019.12.24 0.078mg/L 2019.12.25 0.085mg/L GB18919-2002 A

3

50.9 53.8dB(A) 44.4 46.3dB(A) GB12348-2008 3

4

GB14848-2017 III GB5749-2006

5

5

365 24 18 m^3/d(6570 m^3/a)

18 m^3/d(6570 m^3/a)

COD 6570 m^3/a×22mg/L×10^{-6}=1445.4t/a

6570 m^3/a×0.325mg/L×10^{-6}=21.35t/a

TP 6570 m^3/a×0.1mg/L×10^{-6}=6.57t/a

TN 6570 m^3/a×4.33mg/L×10^{-6}=284.48t/a

COD 3285t/a NH_3-N 328.5t/a SO_2:0t/a NO_x 0t/a

6

8.2

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