



2018 9 28

	I
	1
	3
2.1	3
2.2	3
2.3	4
2.3.1	4
2.3.2	4
2.3.3	5
2.4	5
2.5	7
2.6	7
	10
3.1	10
3.1.1	10
3.1.2	12
3.1.3	12
3.1.4	13
3.1.5	13
3.1.6	14
3.2	20
3.3	21
3.3.1	21
3.3.2	22
3.3.3	24
3.3.4	31
3.3.5	35
3.3.6	36
3.4	37
3.5	38
	39
4.1	39
4.1.1	39
4.1.2	39
4.2	47
	48
5.1	48
5.1.1	48
5.1.2	49
5.2	51
5.2.1	51

5.2.2	51
5.2.3	52
5.2.4	53
5.2.5	53
5.3	53
5.4	55
5.4.1	55
5.4.2	55
5.4.3	55
	59
6.1	59
6.1.1	59
6.1.2	60
6.1.3	62
6.2	63
6.2.1	63
6.2.2	64
6.3	66
6.3.1	66
6.3.2	69
	74
7.1	74
7.2	74

1 1000

2	As
3	As
4	F
5	F
6	Ni
7	Ni
8	Pb
9	Pb
10	Cr
11	Cr

1
2
3
4
5







2018 6 26

pH

a	屈	b	k	a	123- cd
a	h	g, h, i		C10 C40	28

2018 8 1

GB36600- 2018

28

30

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-

30

30

2018 8

1

2018 8 1

1

30

2018 9 30



2018 5

2014 7 7 — DB44/T1415—  
2018 8 1  
GB36600—2018

GB36600—2018 1

2018 3

—

GB36600—2018 1

2018 9 30

1.

2.

2002

3.

4.

5.

6.

1

7.

1958

2006 7

2000

" " " "

" " " " " "

" " " " " "

2008

"

55 330

1000m 260m

83. 957

[ 2012] 140

[ 2014] 66



2.1

1

2

3

2.2

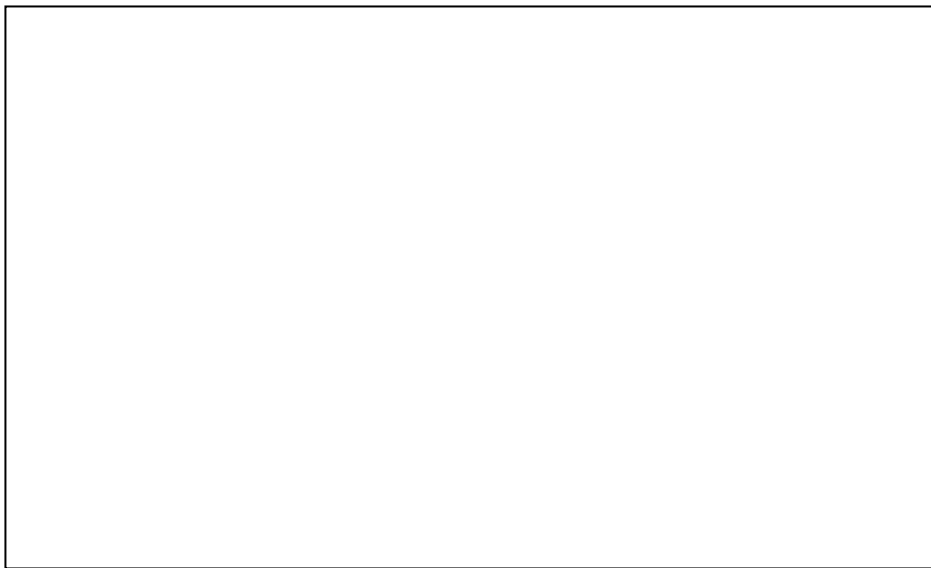
2-1

150m

300m

200 250m

83.957



2-1

## 2.3

### 2.3.1

1		2015	1	1	
2		2018	1	1	
3		2016	1	1	
4			1996	4	1
2016	11	7			
5					2016
42					
6				2005	39
7			2008	39	
8					
	2013	7			
9					27
10				2016	31
11					[2012] 140
12					2017
72					
13				2017. 7. 1	

### 2.3.2

1		HJ 25. 1-2014	
2		HJ 25. 2-2014	
3		HJ 25. 3-2014	
4		HJ 25. 4-2014	
5		HJ 494-2009	
6		HJ/T 164-2004	
7			GB36600-2018
8		(GB14848-2017)	
9		HJ 682-2014	

10 HJ/T 166-2004  
11  
12 JBJ89-92  
13 — DB44 T 1415-2014  
14 B50021  
15 GBJ 145  
16 GB/T50123-1999  
17 2015 10

### 2.3.3

1  
[2004] 47  
2  
[2012] 140  
3  
[2014] 66  
4 [2008] 48  
5 2014  
11

### 2.4

HJ 25.1-2014

—  
—  
—

—

2-2



2-2



2.5

1

2

Fe Mn As Cd Cr

Cr<sup>6+</sup> Cu Hg Ni Pb Zn F pH 21

a 屈 b

k a 123-cd a h

g, h, i 16 C10 C40 1

2-1 2-2

2-1

					%	
1 2000			230	230	100	
		m	280	280	100	42
	Cr <sup>6+</sup> Cu Hg Ni Pb Zn F pH 11		219	219	100	
	a 屈 b k a 123-cd a h g, h, i 16		15	15	100	
	C10 C40 1		15	15	100	
	w o 13		6	6	100	
	pH		8	8	100	
21		8	8	100		
	16		8	8	100	
	C10 C40 1		8	8	100	

2-2

1		1: 5	
2		1: 20	
3	1: 5	1: 10	
4			1: 10
5	1: 5	1: 10	
6		1: 50	
7	1: 10		
8			
9			
10		1: 25	
11		1: 5	
12			



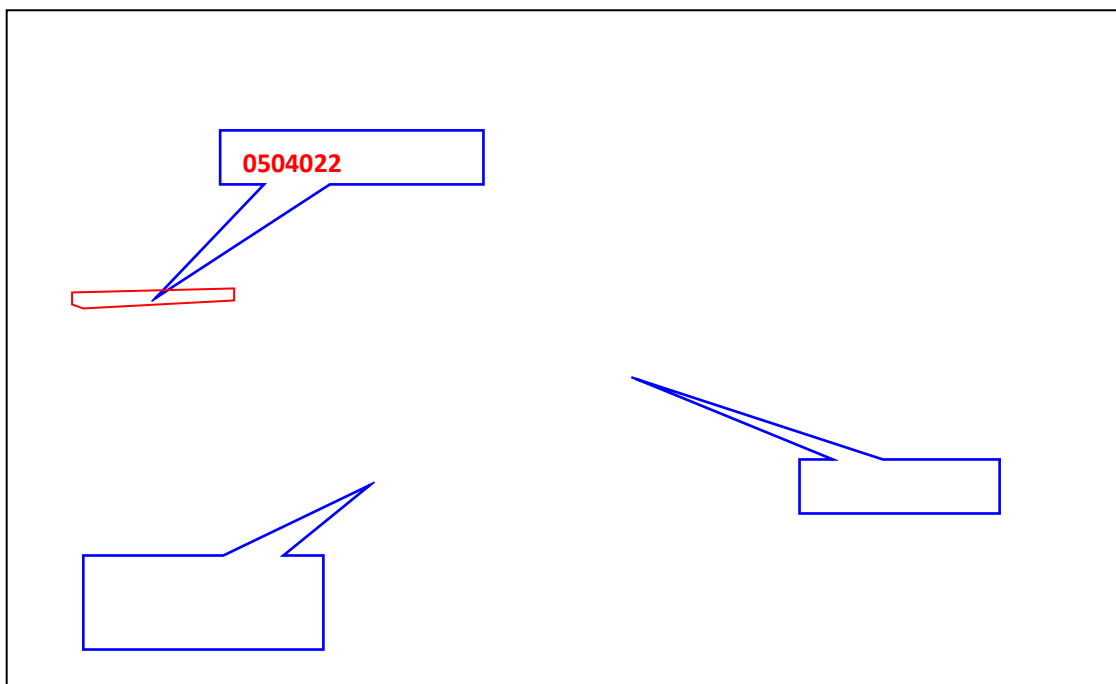
	X	Y	m
13	2521250.346	36530784.551	5.14
14	2521250.554	36530779.413	13.46
15	2521250.384	36530765.954	101.36
16	2521250.003	36530664.598	31.80
17	2521249.863	36530632.799	60.09
18	2521189.772	36530632.963	23.14
19	2521191.012	36530609.852	12.70
20	2521190.763	36530597.152	7.83
21	2521198.563	36530596.452	32.35
22	2521195.334	36530564.263	11.63
23	2521194.930	36530552.644	131.05
24	2521325.737	36530544.660	6.56
25	2521325.852	36530538.097	83.48
26	2521409.336	36530538.074	8.22
27	2521414.680	36530531.823	4.35

10+1

3

2019

3-2



3-2

### 3.1.2

5° 7°

90 116m

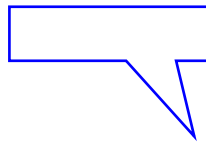
### 3.1.4

1.3km  
15 20m  
63.30m  
418× 10<sup>8</sup>m<sup>3</sup>  
300 380m

### 3.1.5

1: 100

3-3



2014  
430  
693ng/kg  
66.2  
3-3  
430  
45.03ng/kg  
3-2  
0.8mg/kg  
20ng/kg  
216  
60ng/kg

3-2			
mg/kg			%
10	75		17.4
10 20	70		16.3
20 30	69		16.0
30 40	52		12.1
40 50	31		7.2
50 60	32		7.4
60	101		23.5



3-3

					(m)						
				$Q^{es1}$	$Q_4^{a1}$		0.5 5	-			
					$Q_4^{pa1}$	0.6-9			0.2-2cm 3-4cm		
					$Q_4^g$	20-30				0.20-3cm	
					$Q_3w^2$	0-35					
					$Q_3w^1$	6-12					
					$Q_2b^2$	2-16				14	
					$Q_2b^1$	2-20				22 38	
					$Q_4x$	1-2				60-80%	0.5-2cm
					$E_3b$	>650					
					$E_3l$	>165					
					$E_{2,3n}$	130 - 350					
					$E_{2,3g}$	0-221					
$E_{2,3f}$	0-277										
				$K_2l$	<485						

						(m)	
					$K_1x$	<315	
					$C_{2pm}$	<583	
					$C_2h$	114	—
					$C_{1-2}d^2$	207 - 877	
					$C_{1-2}d^1$	178	
					$C_1yt$	92 - 310	
					$D_3w$	115	
					$D_{1-3}l^3$	93.3	
					$D_{1-3}l^2$	18-24	
					$D_{1-3}l^1$	<206	
					$D_1y$	$D_1y^2$	<79
						$D_1y^1$	158 - 275
					$D_2w$	10-54	
					$D_{1-2}x$	36	
					$D_1n$	94.94 - 216	-
					$D_1l$	0-	
						185	
					$h$	1828	Protospongi a sp.
						>499	Protospongi a sp.

2

( 3-4)  
45km 5 15km 5 20°  
25 30°

3-4

3

3-5

3-5

1

5 15m      20 25m       $Q_3 W^2$   
10 15m      100 1000m<sup>3</sup>/d      K=8 30m/d

5 8m

100 m<sup>3</sup>/d      8 20m

2

0.1 1L/s

0.1L/s

3

1000 m<sup>3</sup>/d

4

5

3.2

3-4

3-6

**3-4**

98 m

1000

350 m

1500

110 m

1145

150m

4200

200m

2700

160m

### 3.3

#### 3.3.1

1958

55

2018

3-2

3-7

3-2

3-3

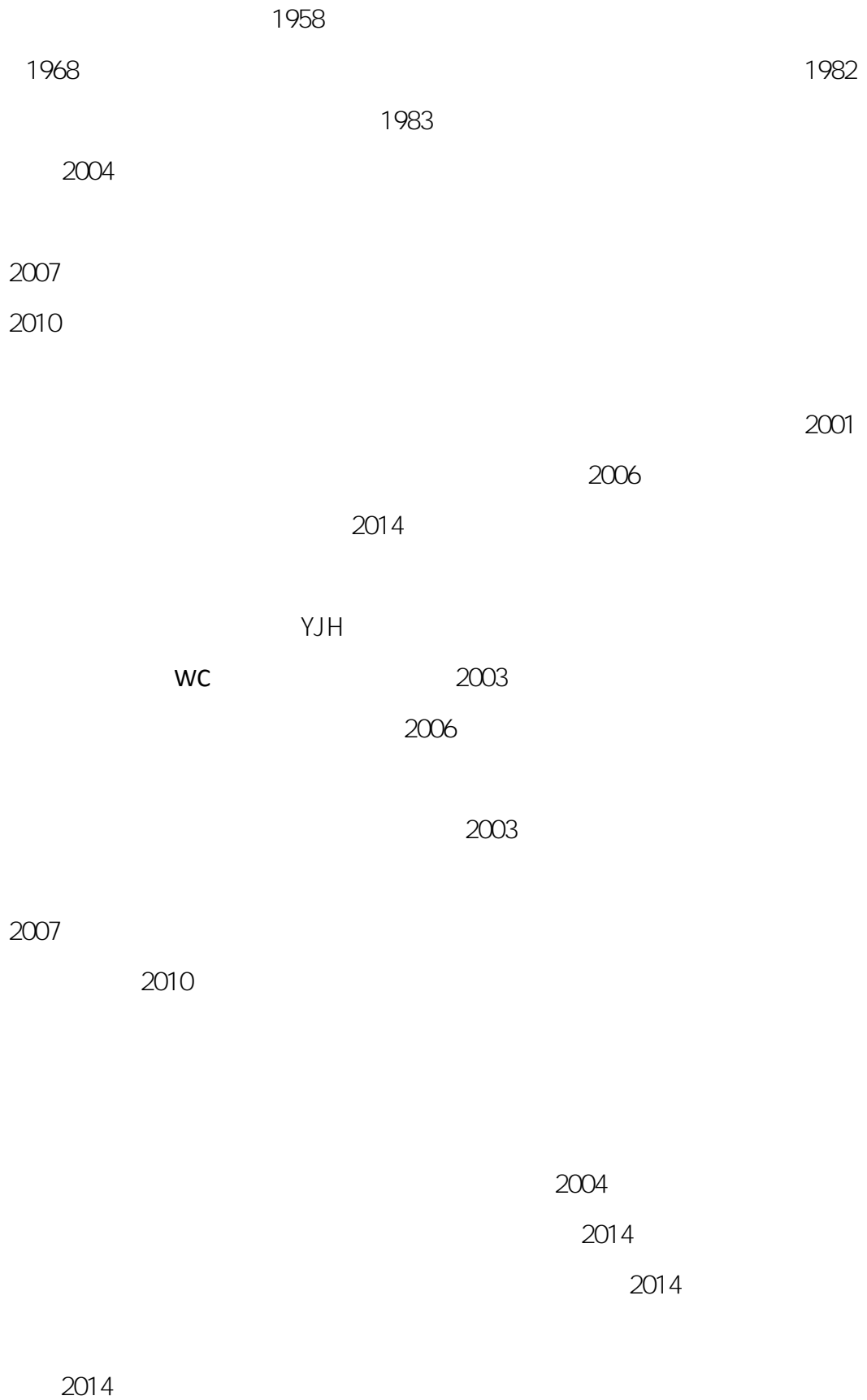
3-4

3-5

3-6

3-7

### 3.3.2





2010  
2000

5

2002 2017

3-7



3-7

## 3-5

			t/a
1		Al Mg Si Cu Mn Ni Zn Sn Pb Ti	3.5
2			5
3			11
4			42
5			3
6			0.1
7			0.4
8			1
9		H <sub>2</sub> SO <sub>4</sub>	65
10		HF	0.8
11			143
12			1.78
13			1.60

## 3.3.3

1

1

5

10

CNC

3-8 3-9

3-8

3-9

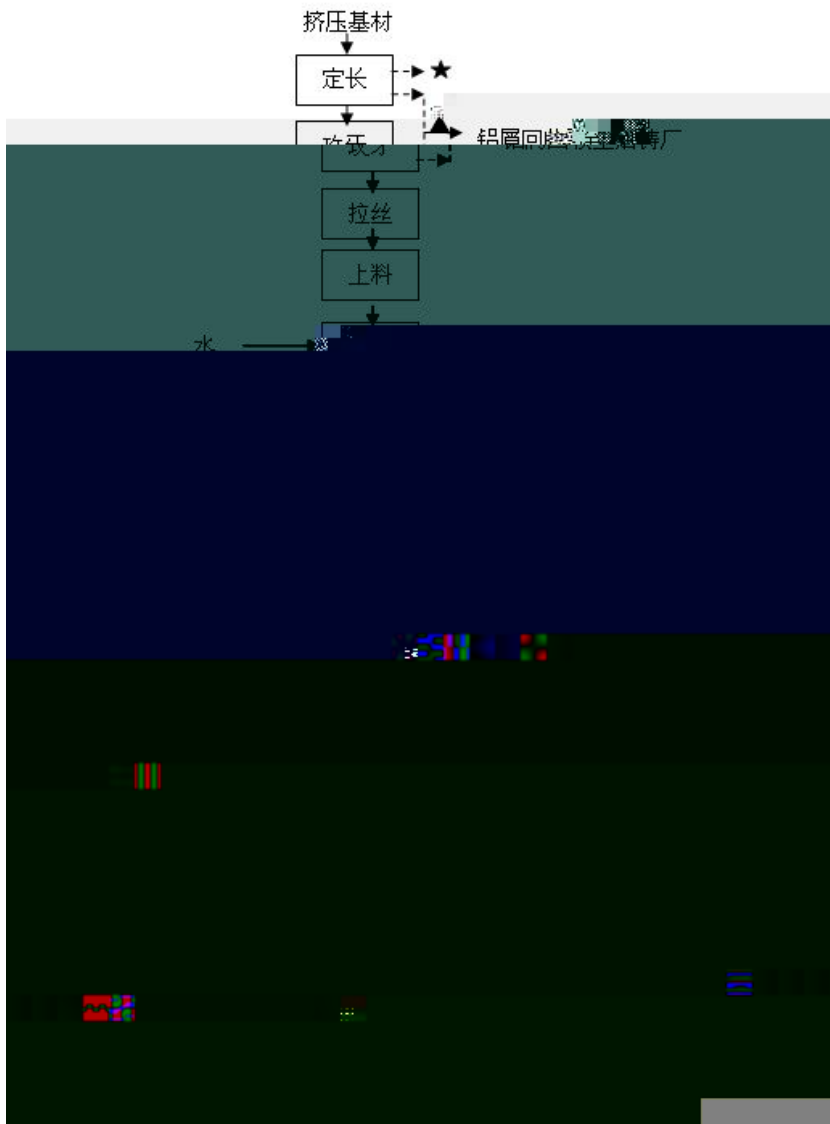
30t/d

4t/d

2

5

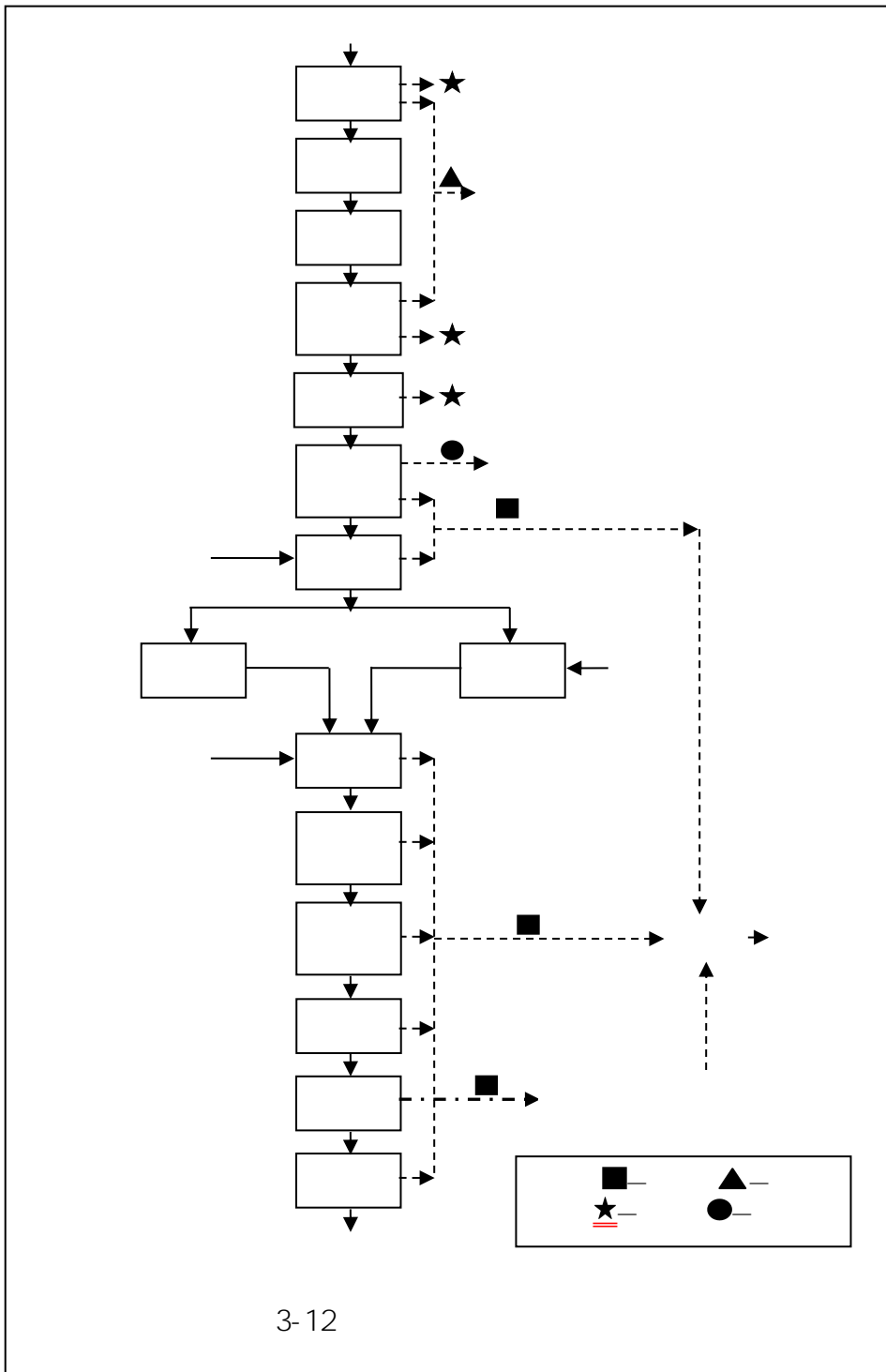
3-10



3-10



3-12



5

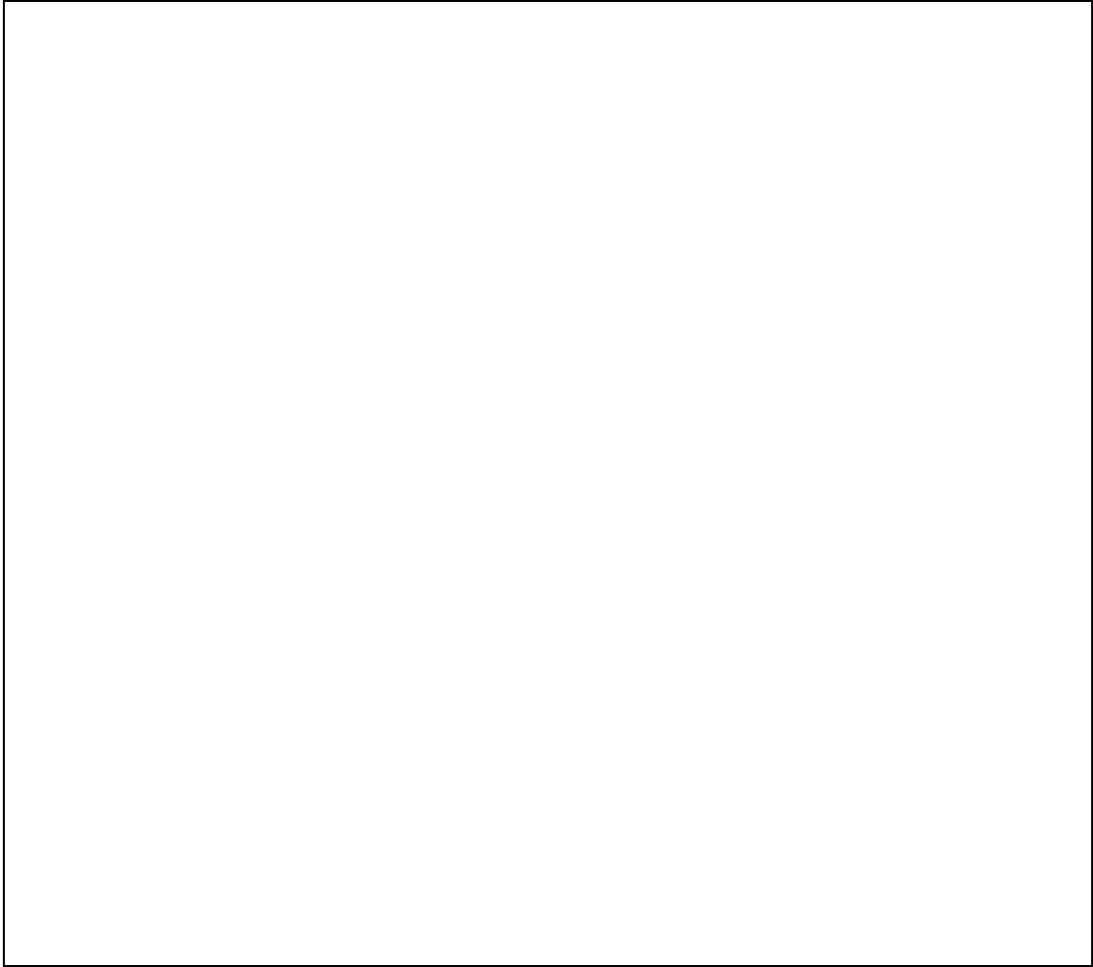
6

7

8

3-13





3-13

9

3. 3. 4

1

2

3

3-14 3-16

3-14

3-15

3-16

3

1

N

GB8978-1996

GB8978-1996

2

4

6

26.67%	2016	2016	
	20.0	30%	15.0

43.33%

115.0

pH

5

1958

55

3.3.5

3-6

1				
2				
3				
4				
5		/	/	/
6		/	/	/
7		/	/	/

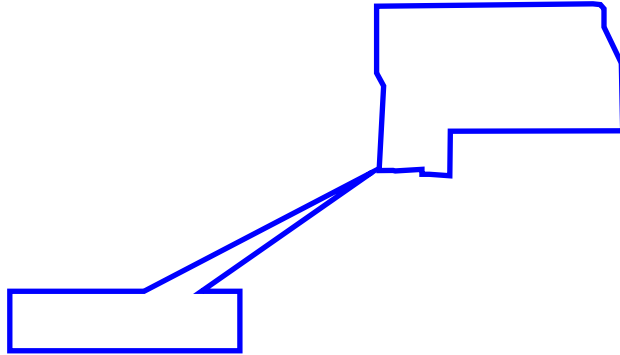
3.3.6

1.

2011-2020

3-17

2



3-17

**3.4**

2018 6

3-7

50

50

3-7

				%
1			15	
2			6	40.0
			9	60.0
3		30	2	13.3
		30 40	3	20.0
		40 50	3	20.0
		50 60	4	26.7
		60	3	20.0
4			3	20.0
			7	46.7
			3	20.0
			2	13.3
5			6	40.0
			9	60.0

### 3.5

1

2



## 4.1

### 4.1.1

HJ/T 25.1-2014 6.2.2

:

1600m<sup>2</sup>( 40m× 40m )

HJ/T 25.1-2014

### 4.1.2

#### 1.

1958

55

40m× 40m

4-1

ZK08411

ZK09614

HJ/T 25.1-2014 6.1.3.2

0.5 2.0m

4-1

5

4-2                      0.5   1.0m                      0.20

0.50m                      0.20m                      1.00   1.15m   2.00   2.15m   3.00

3.15m   4.00   4.15m                      1kg

4-2



				m		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK07609	X: 2521332 Y: 36530484		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK07613	X: 2521292 Y: 36530484		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK07617	X: 2521252 Y: 36530484		0-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK07621	X: 2521212 Y: 36530484		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK08001	X: 2521412 Y: 36530524		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK08005	X: 2521372 Y: 36530524		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK08009	X: 2521332 Y: 36530524		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK08013	X: 2521292 Y: 36530524		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK08017	X: 2521252 Y: 36530524		0-0.50		
				1.00-1.15		

			m
			2.00-2.15
			3.00-3.15
			4.00-4.15
			0.20-0.50
ZK08401	X: 2521412 Y: 36530564		1.00-1.15
			2.00-2.15
			3.00-3.15
			4.00-4.15
			0.20-0.50
ZK08405	X: 2521372 Y: 36530564		1.00-1.15
			2.00-2.15
			3.00-3.15
			4.00-4.15
			0.20-0.50
ZK08409	X: 2521332 Y: 36530564		1.00-1.15
			2.00-2.15
			3.00-3.15
			4.00-4.15
			0.20-0.50
ZK08411	X: 2521300 Y: 36530564		1.00-1.15
			2.00-2.15
			3.00-3.15
			4.00-4.15
			0.20-0.50
ZK08413	X: 2521292 Y: 36530564		1.00-1.15
			2.00-2.15
			3.00-3.15
			4.00-4.15
			0.20-0.50
ZK08417	X: 2521252 Y: 36530564		1.00-1.15
			2.00-2.15
			3.00-3.15
			4.00-4.15
			0.20-0.50
ZK08801	X: 2521412 Y: 36530604		1.00-1.15
			2.00-2.15
			3.00-3.15
			4.00-4.15

				m		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK08813	X: 2521292 Y: 36530604		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK08817	X: 2521252 Y: 36530604		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK09201	X: 2521412 Y: 36530644		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK09205	X: 2521372 Y: 36530644		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK09209	X: 2521332 Y: 36530644		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK09213	X: 2521292 Y: 36530644		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK09217	X: 2521252 Y: 36530644		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK09601	X: 2521412 Y: 36530684		0.70-0.85		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK09605	X: 2521372 Y: 36530684		0.20-0.50		
				1.00-1.15		

				m		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK09609	X: 2521332 Y: 36530684		0.20-0.50		
				0.85-1.00		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK09613	X: 2521292 Y: 36530684		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK09614	X: 2521285 Y: 36530684		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK09617	X: 2521252 Y: 36530684		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK10009	X: 2521332 Y: 36530724		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK10013	X: 2521292 Y: 36530724		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		
	ZK10017	X: 2521252 Y: 36530724		0.20-0.50		
				1.00-1.15		
				2.00-2.15		
				3.00-3.15		
				4.00-4.15		

2

7  
1.0m 7  
1  
1000m  
1  
1  
9 10m  
15m  
1  
1  
8  
1.0m



4.2

CNAS

CMA

5.1

1

2

3

5.1.1

XRF

5-1

XRF

X

X

5-1

XRF

5-2

XRF

4

48 h

GB50021-2001

### 5.1.2

75mm PVC 130mm 5m 7m  
5 0.2 0.50m  
5-1

5-1

5-3

5-4 pH

pH

± 10%

50

24

pH

5-3

5-4

1m

DNAPL

DNAPL

LNAPL

LNAPL

4

48h

## 5.2

### 5.2.1

1

RTK

2

3

2

8

1



2

GPS

ZK09614

" S"

S09614

" SD"

ZK09614

SD09614

" SSC"

ZK09614

SSC09614

5.2.4

1

HJ/T166-2004

(HJ/T164-2004

2

4

5.2.5

5.3

pH

5-1

pH

5-2

5-1

1	As	-	GB/T 22105. 2- 2008
2	Hg		GB/T 22105. 1- 2008
3	Cr Ni Cu Zn		GB/T 14506. 30- 2010
4	pH		LY/T 1239- 1999
5	Cd Pb		GB/T 14506. 30- 2010
6	Cr <sup>6+</sup>		GB/T 15555. 4- 1995
7	F		GB/T 14506. 30- 2010
8		-	2017 1625
9			2017 1625

5-2

1	As		GB/T 5750- 2006
2	Hg		GB/T 5750- 2006
3	Cr		GB/T 5750- 2006
4	pH		GB/T 5750- 2006
5	Cd Pb		GB/T 5750- 2006
6	Fe F Cr <sup>6+</sup>		GB/T 5750- 2006
7	Ni		GB/T 5750- 2006
8	Zn Cu Mn		GB/T 5750- 2006
9			GB/T 5750- 2006
10		108	GB/T 5750- 2006
11			GB/T 5750- 2006
12			



5.4

5.4.1

20	20	20	
		208	11
7	1		

5.4.2

1

2

3

5.4.3

	EPA	20	1	
				5
	11			HJ/T
166-2004	13-2		11	

## 5-3

	mg/kg	mg/kg	%	%
	Cr <sup>6+</sup>		/	/
	As	3.17	2.84	5.5 ± 20
	Cd	0.02	0.024	9.1 ± 30
	Cr	34.7	35.4	1.0 ± 10
T07205-5	Cu	10.5	10	2.4 ± 10
T07205-6	F	319	286	5.5 ± 5
4.00-4.15m	Hg	0.021	0.021	0.0 ± 30
	Ni	11.2	10.8	1.8 ± 10
	Pb	11.8	11.5	1.3 ± 10
	Zn	18.3	17.6	1.9 ± 10
	Cr <sup>6+</sup>		/	/
	As	3.37	3.3	1.0 ± 20
	Cd	0.025	0.025	0.0 ± 30
	Cr	58.6	54.1	4.0 ± 10
T07209-5	Cu	13	13.5	1.9 ± 10
T07209-6	F	452	442	1.1 ± 5
4.00-4.15m	Hg	0.024	0.032	14.3 ± 30
	Ni	14.3	13.9	1.4 ± 10
	Pb	14.5	14.6	0.3 ± 10
	Zn	23.3	23.3	0.0 ± 10
	Cr <sup>6+</sup>		/	/
	As	8.03	8.5	2.8 ± 20
	Cd	0.033	0.024	15.8 ± 30
	Cr	82.2	82.4	0.1 ± 10
T08413-2	Cu	21.5	21.1	0.9 ± 10
T08413-3	F	381	389	1.0 ± 5
2.00-2.15m	Hg	0.0479	0.072	20.1 ± 30
	Ni	11.7	12.1	1.7 ± 10
	Pb	13.5	14.1	2.2 ± 10
	Zn	30.2	29.7	0.8 ± 10
	Cr <sup>6+</sup>			
T08801-5				
T08801-6				
4.00-4.15m				

		mg/kg	mg/kg	%	%
	Pb	13.6	13.6	0.0	± 10
	Zn	29.2	27.4	3.2	± 10
T08809-5 T08809-6 4.00-4.15m	Cr <sup>6+</sup>			/	/
	As	11.5	10.7	3.6	± 10
	Cd	0.032	0.029	4.9	± 30
	Cr	51.4	51.2	0.2	± 10
	Cu	19	17.1	5.3	± 10
	F	288	332	7.1	± 5
	Hg	0.042	0.034	10.5	± 30
	Ni	12.8	12.1	2.8	± 10
	Pb	11.5	11.1	1.8	± 10
	Zn	30.4	28.6	3.1	± 10
T08817-5 T08817-6 4.00-4.15m	Cr <sup>6+</sup>			/	/
	As	13	11.5	6.1	± 10
	Cd	0.037	0.03	10.4	± 30
	Cr	81.6	77.9	2.3	± 10
	Cu	23.6	21	5.8	± 10
	F	333	380	6.6	± 5
	Hg	0.0528	0.0748	17.2	± 30
	Ni	23.3	25.1	3.7	± 10
	Pb	15.2	14.8	1.3	± 10
	Zn	33.1	33.3	0.3	± 10
T09209-5 T09209-6 4.00-4.15m	Cr <sup>6+</sup>			/	/
	As	4.98	4.55	4.5	± 20
	Cd	0.026	0.028	3.7	± 30
	Cr	61.7	54.6	6.1	± 10
	Cu	12.5	11.6	3.7	± 10
	F	525	473	5.2	± 5
	Hg	0.027	0.024	5.9	± 30
	Ni	16.3	15.5	2.5	± 10
	Pb	16	15.4	1.9	± 10
	Zn	23.7	23	1.5	± 10
T09217-5 T09217-6 4.00-4.15m	Cr <sup>6+</sup>			/	/
	As	7.89	8.12	1.4	± 20
	Cd	0.033	0.036	4.3	± 30
	Cr	59.6	59.9	0.3	± 10
	Cu	12.3	12.1	0.8	± 10
	F	220	218	0.5	± 5
	Hg	0.0731	0.0761	2.0	± 30
	Ni	17	18.1	3.1	± 10

		mg/kg	mg/kg	%	%
	Pb	9.3	9.2	0.5	± 20
	Zn	27.4	27.4	0.0	± 10
T09605-5 T09605-6 4.00-4.15m	Cr <sup>6+</sup>			/	/
	As	6.15	4.69	13.5	± 20
	Cd	0.033	0.026	11.9	± 30
	Cr	60.7	54.5	5.4	± 10
	Cu	12.7	13.2	1.9	± 10
	F	424	424	0.0	± 5
	Hg	0.0166	0.0163	0.9	± 30
	Ni	13.2	13.8	2.2	± 10
	Pb	14.2	14	0.7	± 10
	Zn	22.5	21.9	1.4	± 10
	T10009-5 T10009-6 4.00-4.15m	Cr <sup>6+</sup>			/
As		10	10	0.0	
Cd		0.028	0.024	7.7	± 30
Cr		87	87.2	0.1	± 10
Cu		12.6	12.7	0.4	± 10
F		459	407	6.0	± 5
Hg		0.167	0.183	4.6	± 25
Ni		17.9	17.1	2.3	± 10
Pb		14.8	15	0.7	± 10
Zn		29.9	29.2	1.2	± 10
T10017-2 T10017-3 2.00-2.15m	Cr <sup>6+</sup>			/	/
	As	15.5	15.8	1.0	± 10
	Cd	0.037	0.033	5.7	± 30
	Cr	102	103	0.5	± 5
	Cu	40.9	39.9	1.2	± 10
	F	389	404	1.9	± 5
	Hg	0.0865	0.092	3.1	± 30
	Ni	19.2	19	0.5	± 10
	Pb	18	17.9	0.3	± 10
	Zn	44.8	44.2	0.7	± 10

5-5

# 6.1

## 6.1.1

42

1  $Q_4^m$

3

0.10 0.30m

0.10 0.20m

0.20 0.30m

2

0.20 3.90m

ZK09217

3.90m

ZK08813

2.00m

2

$Q_3^w$

$Q_3^w$

3

1.50 4.80m

ZK09201 ZK09617

4.80m

ZK09601

4.30m

2

0.90 6.60m

ZK07209

6.60m

ZK08411

5.50m

1

1. 00 1. 50m

ZK09614

1. 50m

ZK07201

1. 40m

1

0. 2 4. 0cm

55%

45%

0. 70 10. 00m

ZK08809

10. 00m

ZK08411

9. 00m

3

$E_{2-3n}$

350m

## 6. 1. 2

6-1

w

0.5 0.25 0.075 0.05

ZK08805  
TG1

23.5 2.03 1.64 2.70 0.643 99 34.1 20.5 13.6 0.22 4.01E-08 6.21E-08 0.0 1.8 34.1 5.2 11.5 7.7 39.7 31.8

### 6.1.3

1.

2

$Q_4^m$

$Q_3W^1$

15m

$E_{2,3}n$

350m

2

42

7m

8m

90m

25m

$100m^3/d$

$E_{2,3}n$

0.36L/s

3.



3-4

7 8m

1

30m<sup>3</sup>/h 3-4 D8 1000m

## 6.2

### 6.2.1

42 280m 254

219 15 15 6

24 8 8 8

As Cd Cr Cr<sup>6+</sup> Cu Hg Ni Pb Zn F

pH 11

a 屈 b k a

123-cd a h g, h, i 16

C10 C40 1

13

Fe Mn As Cd Cr

Cr<sup>6+</sup> Cu Hg Ni Pb Zn F pH 21

a 屈 b

k a 123-cd a h

g, h, i 16 C10 C40 1

6.2.2

1

GB36600-2018

GB36600-2018

GB36600-2018 A.1

60mg/kg

—

DB44

T 1415-2014

—

DB44 T 1415-2014

GB36600-2018

6-2

6-2

mg/kg

	mg/kg	mg/kg	mg/kg	mg/kg
As	60	120	--	--
Cd	20	47	--	--
Cr	/	/	350	--
Cr <sup>6+</sup>	3	30	/	--
Cu	2000	8000	--	--
Hg	8	33	--	--
Ni	150	600	--	--
Pb	400	/	--	--
Zn	/	/	500	--

	mg/kg	mg/kg	mg/kg	mg/kg
F	/	/	1000	--
pH	/	/	/	/
	25	255	/	--
	/	/	/	367
	/	/	/	679
	/	/	/	644
	/	/	/	381
	/	/	/	5037
	/	/	/	508
	/	/	/	381
a	5.5	55	/	--
屈	490	4900	/	--
b	5.5	55	/	--
k	55	550	/	--
a	0.55	5.5	/	--
123-cd	5.5	55	/	--
a h	0.55	5.5	/	--
g, h, i	/	/	/	381
C10 C40	826	5000	/	/

"/"

"--"

2

(GB14848-2017)

pH

6-3

6-3

mg/L

	150	300	450	650	650
	300	500	1000	2000	2000
	0.02	0.10	0.50	1.50	1.50
	2.0	5.0	20.0	30.0	30.0
	0.01	0.10	1.00	4.80	4.80
	0.001	0.001	0.002	0.01	0.01
	0.001	0.01	0.05	0.1	0.1
	1.0	2.0	3.0	5.0	5.0
Fe	0.1	0.2	0.3	2.0	2.0
Mn	0.05	0.05	0.1	1.5	1.5
As	0.001	0.001	0.01	0.05	0.05

Cd	0.0001	0.001	0.005	0.01	0.01
Cr <sup>6+</sup>	0.005	0.01	0.05	0.10	0.10
Cu	0.01	0.05	1.00	1.50	1.50
Hg	0.0001	0.0001	0.001	0.002	0.002
Ni	0.002	0.002	0.02	0.10	0.10
Pb	0.005	0.005	0.01	0.10	0.10
Zn	0.05	0.5	1.00	5.00	5.00
F <sup>-</sup>	1.0	1.0	1.0	2.0	2.0
pH	6.5 pH 8.5			5.5 pH 6.5 8.5 pH 9.0	pH 5.5 pH 9.0
	1	10	100	600	600
	1	360	1800	3600	3600
	1	50	240	480	480
b	0.1	0.4	4.0	8.0	8.0
a	0.002	0.002	0.01	0.5	0.5

3

## 6.3

### 6.3.1

5

6-4

6-5

			%	mg/kg	mg/kg	mg/kg		mg/kg		
As	219	219	100	1.22	252	60	2	120	1	GB36600-2018
Cd	219	219	100	0.02	1.6	20	0	47	0	GB36600-2018
Cr	219	219	100	27.8	437	350	1	/	0	
Cr <sup>6+</sup>	219	219	100			3	0	30	0	GB36600-2018
Cu	219	219	100	7.85	224	2000	0	8000	0	GB36600-2018
Hg	219	219	100	0.01	0.195	8	0	33	0	GB36600-2019
Ni	219	219	100	6.5	591	150	2	600	0	GB36600-2020
Pb	219	219	100	7.5	481	400	1	800	0	GB36600-2021
Zn	219	219	100	12.4	169	4915	0	/	0	
F	219	219	100	127	1630	1000	1	/	0	
pH	219	219	100	3.03	10.63	/	/	/	0	/
	15	14	93.3	0.0012	0.0391	25	0	255	0	GB36600-2018
	15	13	86.7	0.0004	0.0086	367	0	/	0	
	15	8	53.3	0.0006	0.0169	679	0	/	0	
	15	15	100.0	0.0004	0.0088	644	0	/	0	
	15	15	100.0	0.0046	0.1711	381	0	/	0	
	15	15	100.0	0.0002	0.0491	5037	0	/	0	
	15	15	100.0	0.0005	0.3805	508	0	/	0	
	15	15	100.0	0.0005	0.3542	381	0	/	0	
a	15	14	93.3	0.0005	0.2338	5.5	0	55	0	GB36600-2018
屈	15	14	93.3	0.0010	0.2433	490	0	4900	0	GB36600-2018
b	15	14	93.3	0.0009	0.2517	5.5	0	55	0	GB36600-2018
k	15	14	93.3	0.0007	0.1626	55	0	550	0	GB36600-2018
a	15	14	93.3	0.0002	0.2093	0.55	0	5.5	0	GB36600-2018
123-cd	15	14	93.3	0.0007	0.0827	5.5	0	55	0	GB36600-2018
a h	15	14	93.3	0.0002	0.0359	0.55	0	5.5	0	GB36600-2018
g,h,i	15	14	93.3	0.0011	0.0932	381	0	/	0	
C10 C40	15	15	100.0	8	333.1	820	0	5000	0	GB36600-2018

6-5

	23.0	96.1	8	8	100	150	300	450	650	650	0
	69	503	8	8	100	300	500	1000	2000	2000	0
( N )	0.06	42.02	8	8	100	0.02	0.10	0.50	1.50	1.50	6
( N )	0.82	28.25	8	8	100	2.0	5.0	20.0	30.0	30.0	2
( N )	0.005	0.252	8	8	100	0.01	0.10	1.00	4.80	4.80	0
			8	0	∧	0.001	0.001	0.002	0.01	0.01	0

C 3 2

6.3.2

1.

As Cd Cr Cr<sup>6+</sup> Cu Hg Ni Pb Zn

F 10

a 屈 b k a

123-cd a h g, h, i 16

C10 C40 1

5

GB36600-2018

—

DB44 T 1415-2014

6-6 6-1

6-2

6-6

		mg/kg	mg/kg	mg/kg		
						m
T08409-1		252	60	120	ZK08409	0.20-0.50
T08417-2		64.8	60	120	ZK08417	1.00-1.15
T07609-1		1630	1000	/	ZK07609	0.20-0.50
T07617-1		591	150	600	ZK07617	0-0.50
T07617-1		437	350	/	ZK07617	0-0.50
T08009-1		234	150	600	ZK08009	0.15-0.50
T07213-1		481	400	800	ZK07213	0.15-0.50

6-6

7

ZK07213 ZK7609 ZK07617 ZK08009 ZK08409 ZK08417

252mg/kg ZK08409 0.20 0.50m

1630mg/kg ZK07609 0.20 0.50m 591mg/kg

ZK07617 0 0.50m 437mg/kg ZK07617

0 0.50m 481mg/kg ZK07213 0.15

0.50m 5 0.70m

0 0.70m 6 1.00 1.60m

1

6-7







6-7

m		%	m
0-0.50	6	85.7	0-0.70
1.00-1.15	1	14.3	1.00-1.60

6-7

0 0.70m

85.7% 1.00 1.60m

5

2 11

0 0.70m

1.00 1.60m

5

GB36600-2018

—

DB44

T 1415-2014

HJ/T 25.1-2014 4.2.2.3

**2.**

Fe Mn As Cd Cr Cr<sup>6+</sup>

Cu Hg Ni Pb Zn F pH 21

a

b

k

a

123-cd

a h

g, h, i

pH

7  
(GB14848-2017)

			Fe	Mn			Fe
Mn						1988	
	pH		pH				8
			pH	4.75	5.49		
	pH	4.93	5.90				
							0.02
							0.14
mg/kg					0.02	mg/kg	
	ZK08009						
	0.20-0.50m		234mg/kg,			150mg/kg	1
					48.6	70.7 mg/kg	4m
							6
			10.4	47.9mg/kg			























