

青钢老厂区原烧结厂片区场地土壤污染 状况调查报告



1958 400
58
2011 7
2012
2015 11

2019 8 2020 2

6

1

1.1

1.1.1

1958

57

400

58

1994 9

16

2011

7

2012

2015 11

2015

12 23

2017

2017 1 23

131

2017 7 13

5

1958-1962

8

1.5

6

20

1976-1985

13700

6250

1985-2000

2001-

2015

3

2009

2015

1

57

2015

12

23

9667

1.7

4

1

1

1

3

2

50 m²

1

105m²

6

2 350 m³

1

420 m³

3

500 m³

4

1 20 t

3

30 t

2

LF

2

30 t

4

4 60 m

4

5

3

3200 m³/h

1

1500 m³/h

13

10000 m³/h

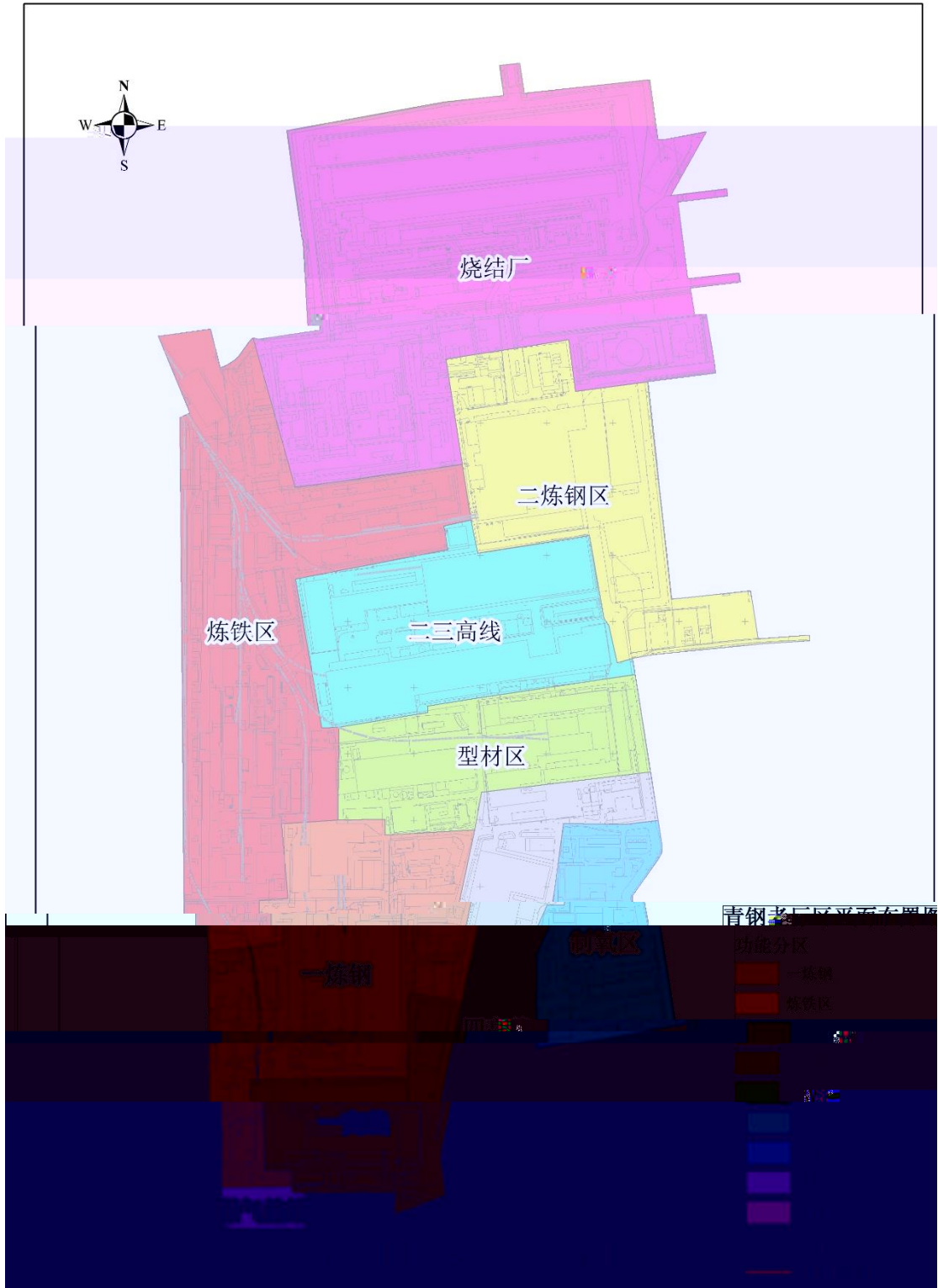
1

1

1

2

33



1.1.3

55

1.1-2

1.1-2

表1.1-2

| | CGCS2000 3 | | | CGCS2000 3 | |
|-----|-------------|------------|-----|-------------|------------|
| | X | Y | | X | Y |
| G1 | 40534344.90 | 4011034.17 | G29 | 40534849.62 | 4009877.85 |
| G2 | 40534583.09 | 4011077.03 | G30 | 40534880.06 | 4009684.97 |
| G3 | 40534672.82 | 4011086.81 | G31 | 40534668.92 | 4009647.93 |
| G4 | 40534666.29 | 4011132.30 | G32 | 40534643.07 | 4009458.87 |
| G5 | 40534697.13 | 4011135.73 | G33 | 40534517.42 | 4009427.29 |
| G6 | 40534704.24 | 4011090.24 | G34 | 40534461.90 | 4009405.74 |
| G7 | 40534893.43 | 4011110.85 | G35 | 40534436.06 | 4009398.32 |
| G8 | 40534905.94 | 4011020.11 | G36 | 40534437.14 | 4009430.19 |
| G9 | 40534913.28 | 4011020.17 | G37 | 40534301.09 | 4009428.94 |
| G10 | 40534979.61 | 4011032.41 | G38 | 40534301.09 | 4009376.65 |
| G11 | 40534925.56 | 4010935.99 | G39 | 40534189.62 | 4009376.91 |
| G12 | 40535009.96 | 4010946.20 | G40 | 40534176.64 | 4009392.12 |
| G13 | 40535011.37 | 4010935.58 | G41 | 40534174.39 | 4009616.63 |
| G14 | 40534936.36 | 4010926.49 | G42 | 40534171.14 | 4009991.29 |
| G15 | 40534951.25 | 4010810.24 | G43 | 40534165.86 | 4010600.57 |
| G16 | 40535029.12 | 4010819.13 | G44 | 40534181.30 | 4010607.94 |
| G17 | 40535031.34 | 4010805.18 | G45 | 40534133.64 | 4010723.69 |
| G18 | 40534955.20 | 4010796.43 | G46 | 40534212.40 | 4010734.03 |
| G19 | 40534975.68 | 4010667.88 | G47 | 40534227.16 | 4010676.12 |
| G20 | 40534873.39 | 4010654.75 | G48 | 40534255.00 | 4010693.40 |
| G21 | 40534909.20 | 4010326.33 | G49 | 40534276.36 | 4010721.48 |
| G22 | 40535028.12 | 4010338.85 | G50 | 40534284.99 | 4010719.22 |
| G23 | 40535039.69 | 4010266.25 | G51 | 40534377.38 | 4010732.39 |
| G24 | 40535115.47 | 4010271.75 | G52 | 40534373.00 | 4010817.17 |
| G25 | 40535118.03 | 4010263.85 | G53 | 40534372.35 | 4010819.95 |
| G26 | 40534881.08 | 4010242.74 | G54 | 40534369.73 | 4010869.68 |
| G27 | 40534850.01 | 4010236.62 | G55 | 40534368.32 | 4010869.62 |
| G28 | 40534895.07 | 4009946.56 | | | |

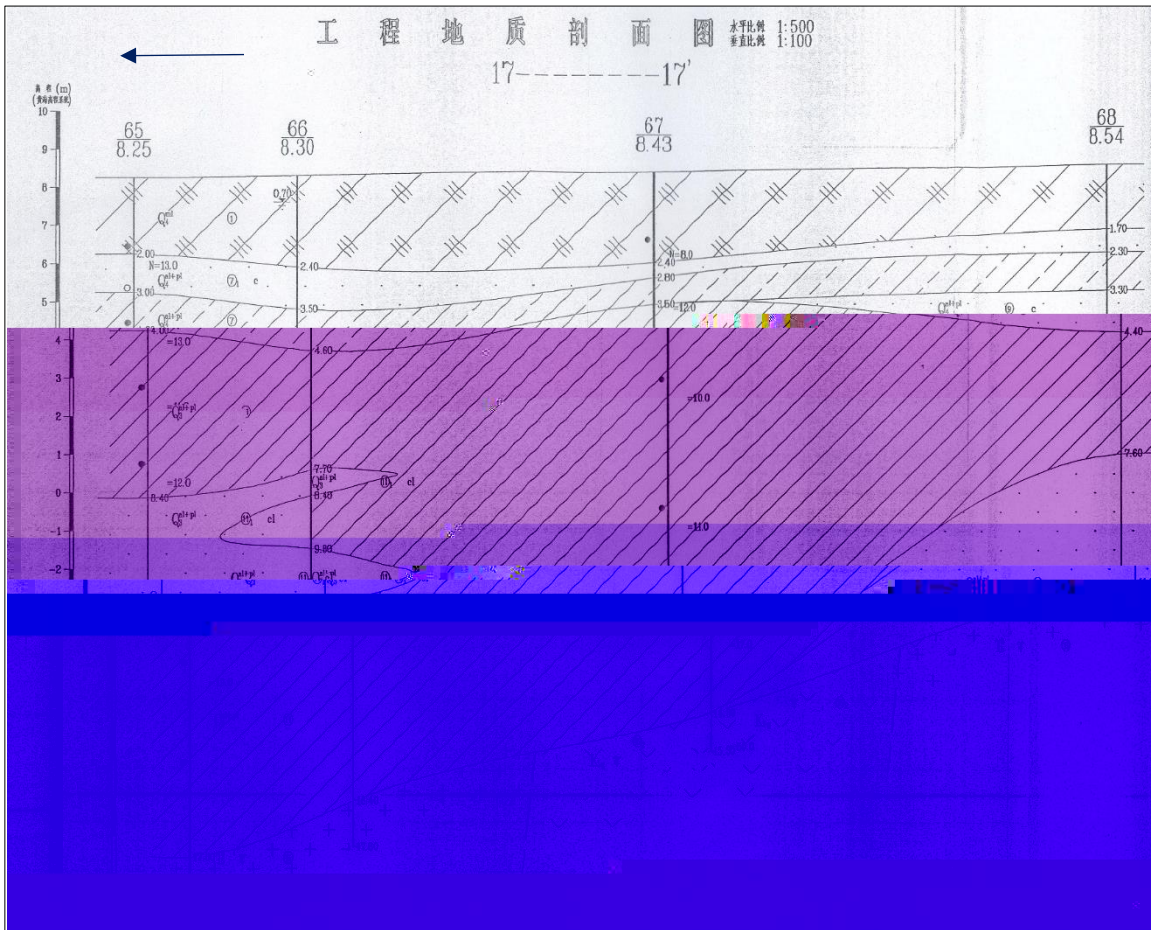
1.1.4

2

6.76~9.07

0.60 3.00

1.0



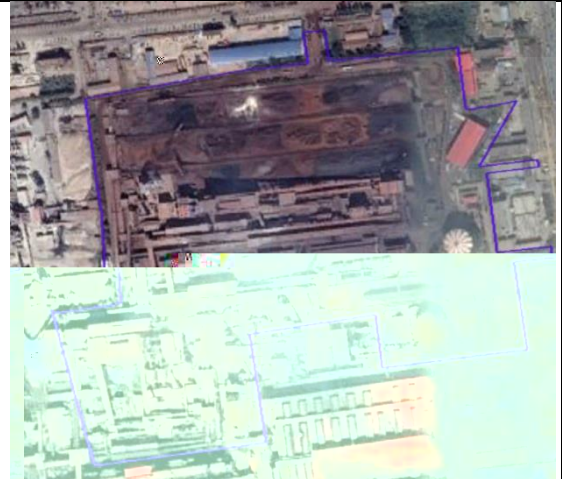
1.1-3

表1.2-1

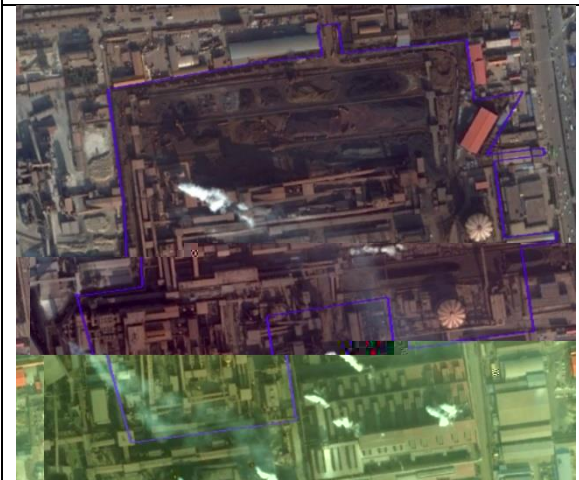
| | | | | | m² |
|---|------------|--|---|--|----------------------|
| 1 | 1993 -2015 | | | | 149614.02 |
| 2 | | | / | | 98631.43 |
| 3 | | | / | | 37289.68 |
| 4 | 2015 -2017 | | | | / |
| 5 | 2017 - | | | | / |



2011 4



2012 9



2014 12



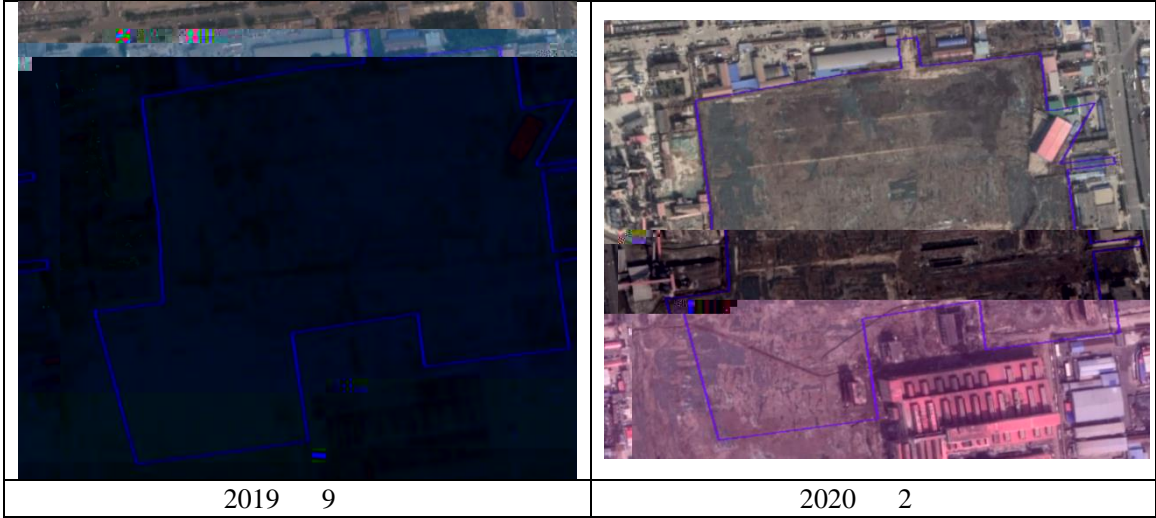
2016 2



2017 3



2017 9



1.2-1

2005

2008

2014 12

2015

2017

9

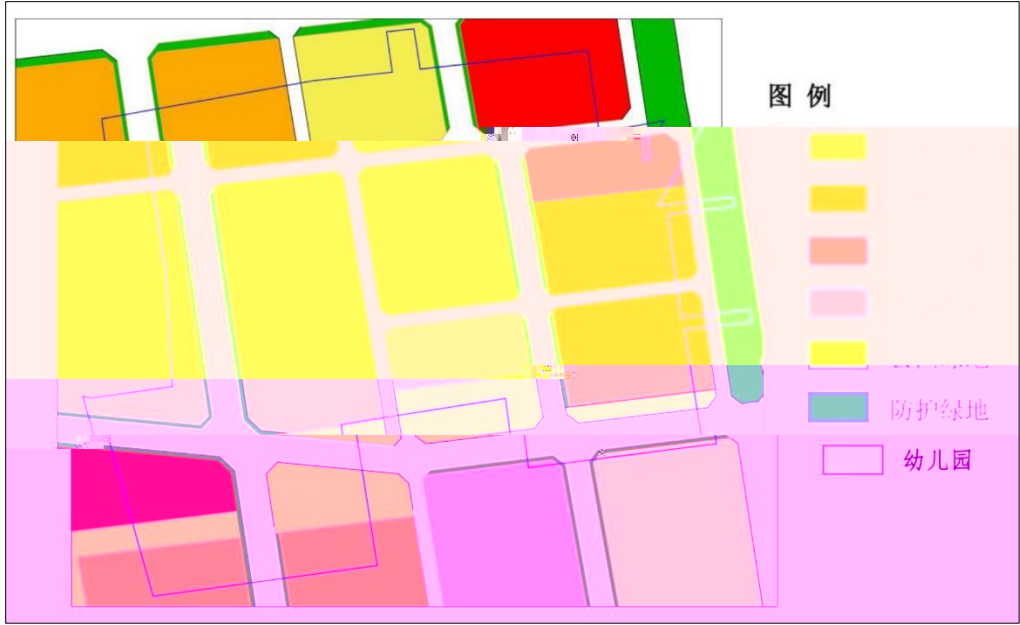
2019

1.2.2

2019 8

1.2.3

1.2-2



1.2-3

1.3

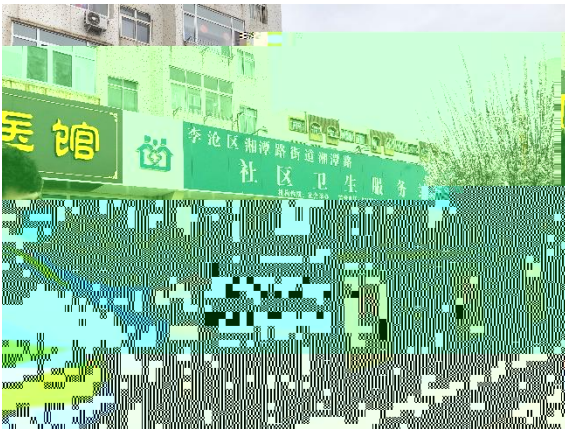
3 km

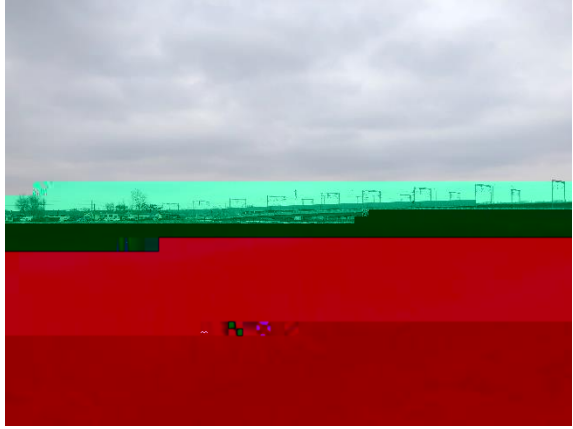
0.6 km

2.8 km

2.3 km

6 km





1.3-1

表1.3-2

| 号 | 分类 | 保护 标 | 对方 | 距离 (km) |
|---|---------|------|-----|---------|
| 1 | 封闭或半封闭海 | 胶 | WS | 3.0 |
| 2 | 居 功 | 村 | NNW | 2.6 |
| | | | NNE | 2.8 |
| | | 家 | NNE | 2.2 |
| | | 刘家 村 | EEN | 2.9 |
| | | 城 | E | 2.9 |
| | | | E | 1.9 |
| | | 家 | E | 1.4 |
| | | 东 | E | 0.9 |
| | | 村 | ES | 1.3 |
| | | 居 | EES | 2.3 |
| | | 大 | SSE | 1.9 |
| | | 岭村 | SSE | 2.6 |
| | | 板 坊 | S | 2.8 |
| | | 埠村 | WWN | 2.3 |
| 3 | 地表 | 白 河 | N | 2.3 |
| 4 | 教机构 | 岛 九 | E | 0.8 |
| | | 岛城 第 | NE | 2.9 |
| | | 城 | NE | 2.7 |
| | | | E | 0.8 |



1.3-2

1.4

5

15

2

85m

2

119 30

121 00

35

35 37 09

10654

1102

36 10'

120

26'

97.98

11

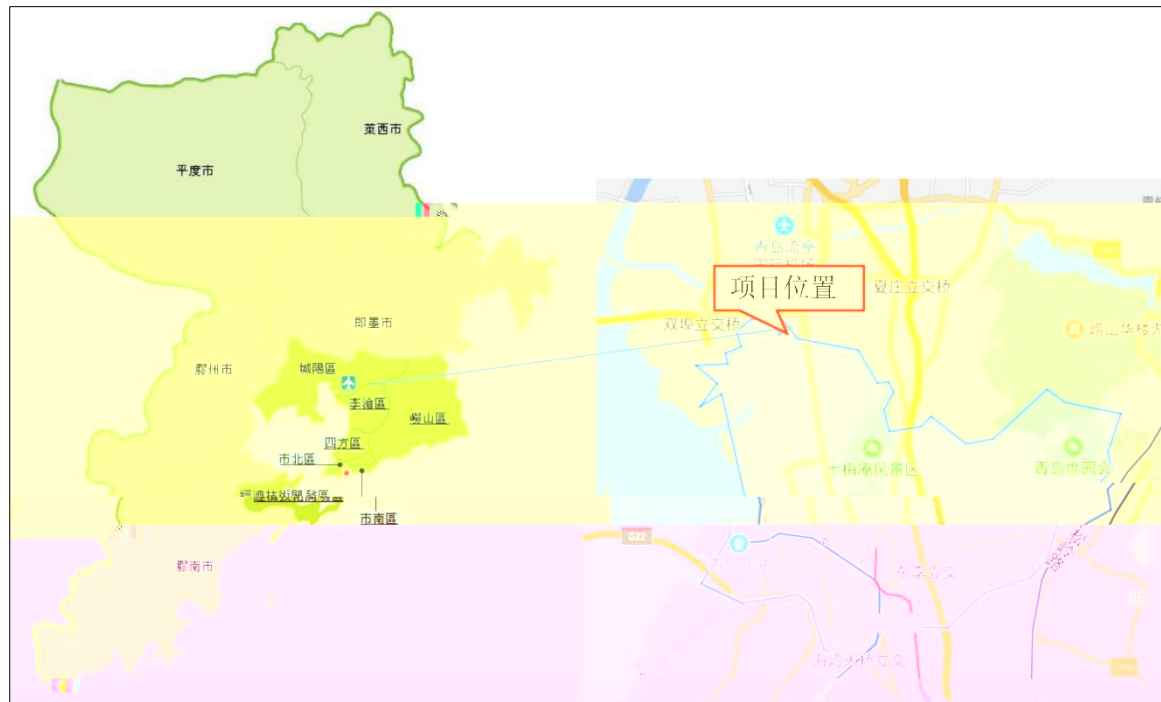
14

11

200



1.4-1



1.4-2

2

2.1

2.1.1

[2017] 1734

2014

[2014]

66

1

2

3

4

2.1.2

1

2

2017 72

HJ 25.1 2019

HJ 25.2 2019

| | CGCS2000 3 | | | CGCS2000 3 | |
|----|-------------------|------------|-----|-------------------|------------|
| | X | Y | | X | Y |
| G2 | 40534583.09 | 4011077.03 | G18 | 40534955.20 | 4010796.43 |
| G3 | 40534672.82 | 4011086.81 | G19 | 40534975.68 | 4010667.88 |
| G4 | 40534666.29 | 4011132.30 | G49 | 40534276.36 | 4010721.48 |

2.3

2.3.1

1. 2014 4 24
2. 2016 11 7
3. 2017 6 27
4. 2018 8 31
5. 2018 10 26

2.3.2

1. HJ 25.1 2019
2. HJ 25.2 2019
3. HJ 25.3 2019
4. HJ 25.4 2019
5. 2017 72
6. HJ 25.5

2018

7. HJ 25.6 2019
8. HJ 1019 2019
9. GB36600 2018
10. 2019 9
11. GB/T 14848 2017
12. GB5749 2006
13. DB11/T811 2011
14. GB/T 50145 2007
15. GB/T 50123 1999
16. HJ/T 166 2004

17. HJ/T 164 2004

18. HJ 493 2009

19. GB 50021 2017

20. GB 50026 2007

21. DB11/T 1311 2015

2.3.3

1. 2016 31

2.

2014 66

3.

2014 9

4.

3

3.1

7.65 13.34

3.2

3.2.1

Q_4^{ml}

Q_4^{al+pl}

Q_3^{al+pl}

5^3

X_5^3

1

0.40~12.50

-4.29~11.19

~

30cm

10~20%

0.40~4.30

2.56~8.46

~

表 3.2-1

| | \bar{X} | max/min | | | | n |
|---------------------|-----------|---------|-------|---|---|---|
| | | | | | | |
| g/cm^3 | 191 | 192 | 190 | / | / | 2 |
| W % | 29.00 | 29.4 | 28.7 | / | / | 2 |
| e | 0.858 | 0.866 | 0.850 | / | / | 2 |
| G _s | 2.75 | 2.76 | 2.74 | / | / | 2 |
| Sr % | 93.1 | 93.2 | 93.1 | / | / | 2 |
| $K \cdot 10^6 cm/s$ | 5.8 | 5.8 | 5.8 | / | / | 1 |

0.40~4.50

1.43~7.56

1-3cm

5%

3

11

0.30~7.70

-

2.36 10.24

~

~

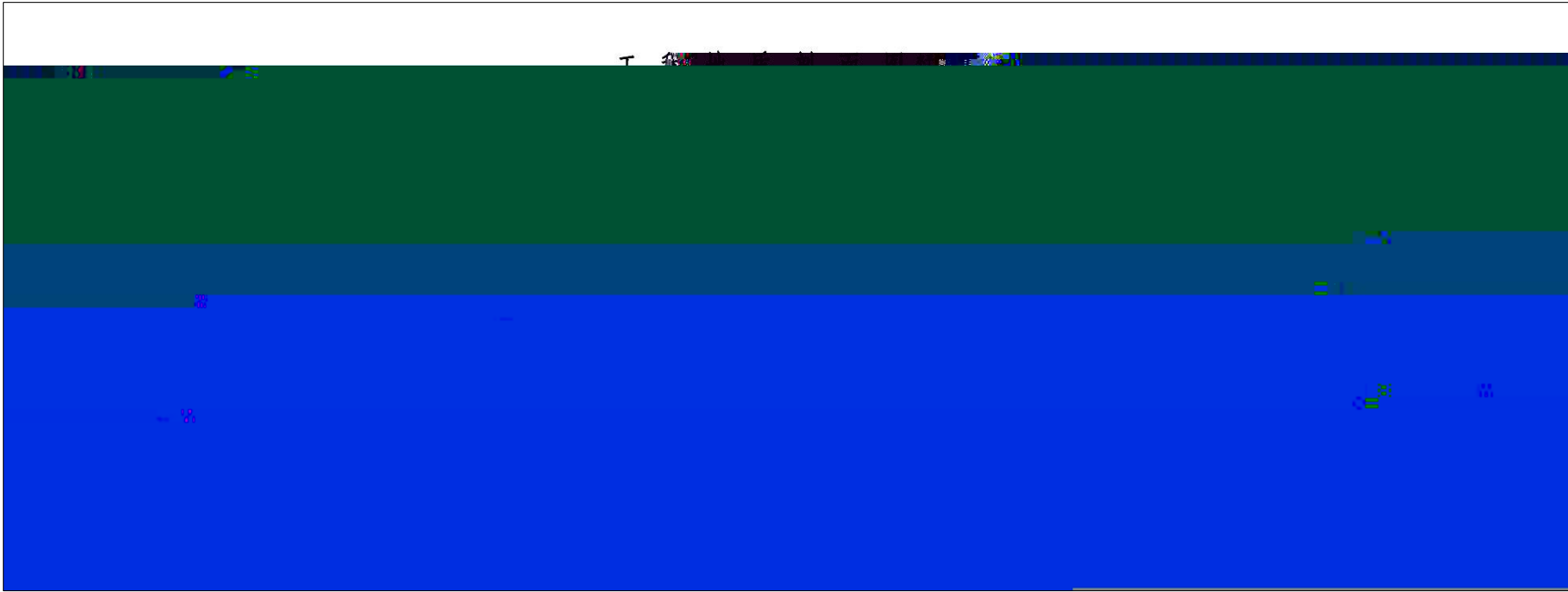
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表3.2-2

| | \bar{X} | max/min | | | | n |
|----------|-----------|---------|------|-------|-------|---|
| g/cm^3 | 1.93 | 1.95 | 1.90 | 0.018 | 0.009 | 7 |
| W % | 26.9 | 30.1 | 23.3 | 2.273 | | |

3.2.2

1-1



4

4.1

| | | | | | | | | |
|-------------|----------------------|-----|------|-------|------|------|------|--|
| | 2019 | 8 | 2019 | 9 | 2020 | 3 | | |
| | | | | | | | 292 | |
| | 1521.2 | | | 1344 | | | 20 | |
| | | | | | 32 | | | |
| 2019 | 8 | | | | | | 100m | |
| 100m | | | | | | | | |
| | 2017 | 72 | | | | | | |
| | 28 | | | 200m | 200m | | | |
| | 40000 m ² | 1 | | | | 10 | 4 | |
| 2 | | | | | | | | |
| | | | | | | | 2-5m | |
| | 3-5m | | | | | | | |
| | | | | 7-12m | | | 2-3m | |
| | | | | | | | | |
| 2019 | 9 | | | | | | | |
| | 40m | 40m | | | | 138 | | |
| | 644 | | | | | PAHs | TPHs | |
| | | | | | | | | |
| 2020 | 3 | | | | | | | |
| | | | | 20m | 20m | | | |

126

559

12

2

22

11

4.2

4.2.1

2019

8

2019

9

2020

3

292

140

1521.2

950

12

1344

114

4.2.2

20

32

3

GB/T14848-2017

pH

5

5.1

1

| | | | |
|------|-------------------------|------------------------|-------------------------|
| | 1958 | | 400 |
| | 2015 | 12 | 23 |
| 1958 | 1999 | | |
| | 2000 | | |
| | 149614.02m ² | 98631.43m ² | 37289.68 m ² |
| | | 2 | 2 50 m ² |
| 2015 | | 2017 | 2018 |

2

PAHs

PAHs

pH

3

(a) TPHs

1

2

(GB/T14848-2017)

3

4