

(征求意见稿)

《污染场地土壤修复技术导则》编制组

二〇〇九年十一月

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1.1	1
1.2	1
1.3	1
2	2
2.1	2
2.1.1	2
2.1.2	2
2.2	3
3	3
3.1	3
3.2	3
3.3	3
4	3
4.1	4
4.2	4
4.2.1	4
4.2.2	4
4.2.3	5
5	6
5.1	6
5.2	.....	7
5.3	.....	7
5.4	.....	7
5.4.1	.....	7
5.4.2	.....	7
5.5	.....	7
5.6	.....	8
5.6.1	.....	8
5.6.2	.....	8
5.6.3	.....	8
5.6.4	.....	8
5.6.5	—	8
5.6.6	.....	8
5.6.7	.....	8
6	.....	9
6.1	.....	9
6.2	.....	12
6.3	.....	12
7	.....	13
8	.....	13

1

1.1

2008
(2008 44)
364
2008

1.2

())
() ()

1.3

) 2008 3 ()
2008 5 26 ()
2009

3 26 27 () ()
) 5 7 8 ()

7 20

()
7 28 ()
()
2006 8 26

9 14 9 30

10 19

10 29

) ()
2
2.1
2.1.1
1976 1980
() (USEPA)

USEPA
“ ”
1982 ~2002 764
(SVE) () 25%
/ (18%) (12%) SVE
/ 21%
1982 ~2002 1835
3058 993

2.1.2
1990 II A

2.2

/

/ —

3

3.1

3.2

2004 47)

(

(2005 39)

3.3

(HJ/T25-1999)

() (HJ350-2007)

(HJ/T332-2007)

4

4.1

-

4.2

4.2.1

4.2.1.1

“ - - ”

/ /

4.2.1.2

4.2.2

/

4.2.2.1

4.2.2.2 /

/ / /

4.2.2.3

10^{-3}cm/s

25%

4.2.2.4

0.01

66.66Pa

4.2.2.5

(150~540°C)

150~315°C)

(

315~540°C)

(

4.2.2.6

4.2.3

1

1982 2002
1781 42%
341 (73.5%)

58%

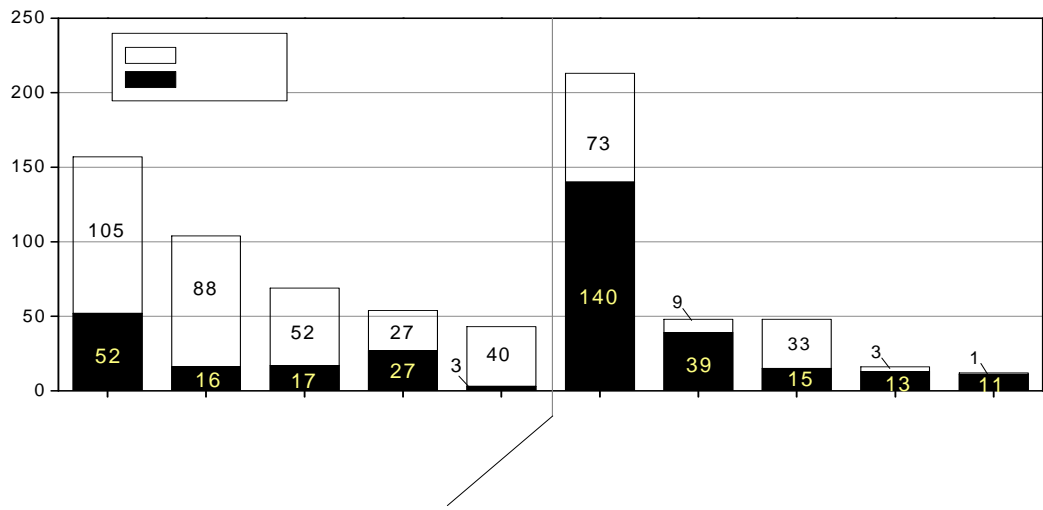
123 (26.5%)

70

/ (S/S)
S/S

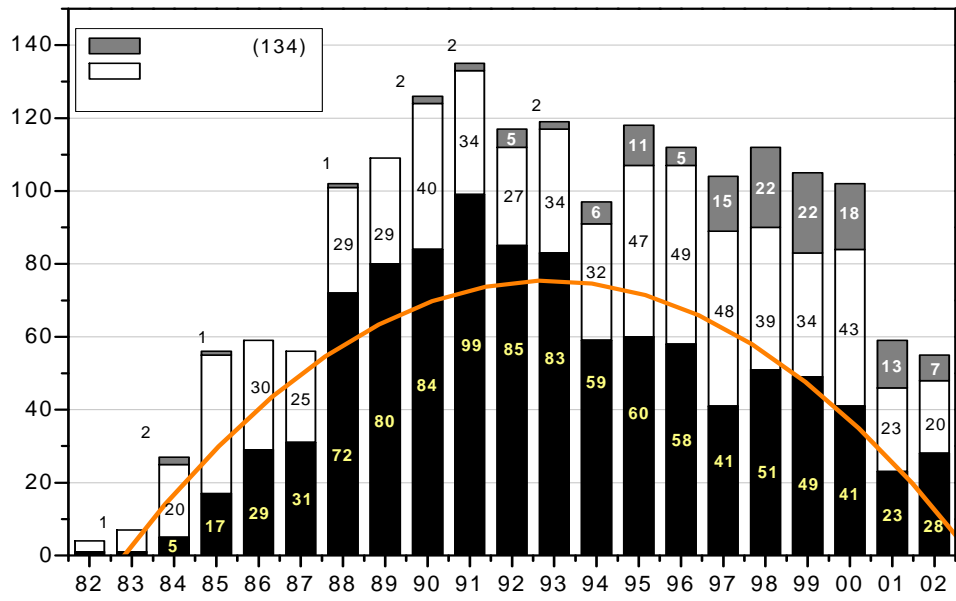
70

SVE



1

2



5.2

4

5.3

EPA CERCLA

-

-

5.4

5.4.1

5.4.2

5.5

5.6

5.6.1

—) (—

5.6.2

CERCLA

EPA

5.6.3

HJ

HJ

5.6.4

5.6.5 — —

—

5.6.6

5.6.7

5.7

6

6.1

1	1	(Site remediation technologies: a reference
manual	1997)	(Guidance Document for
the Remediation of Contaminated Soils		1998)
(Guidelines on Remediation of Contaminated Sites		2002)
3	2	

	(the Environment Agency)	(Guidance on the use of stabilisation/solidification for the treatment of contaminated soil)	2004
	(Contaminated site management working group)	(Site remediation technologies: a reference manual)	1997
	(Canadian council of ministers of the environment)	(National classification system for contaminated sites)	1992
	(New Brunswick Department of Environment and Local Government)	(Guideline for the management of contaminated sites)	2003()
	Labrador (Province of Newfoundland and Labrador)	(Guidance document for the management of impacted sites)	2004
	(Prince Edward Island)	(Petroleum contaminated site remediation guidelines)	1999
	(Saskatchewan environment and resource management)	(Guidelines for the treatment and disposal of petroleum contaminated soils at municipal waste disposal grounds)	1995
	(New Jersey Department of Environmental Protection)	(Guidance Document for the Remediation of Contaminated Soils)	1998
	(Washington State Department of Ecology Toxics Cleanup Program)	(Guidance for Remediation of Petroleum Contaminated Soils)	1995
	(Danish environmental protection agency) (Danish Ministry of the Environment)	(Guidelines on Remediation of Contaminated Sites)	2002
	(Ministry for the Environment)	(Contaminated Land Management Guidelines)	
		1) (Reporting on Contaminated Sites in New Zealand)	2003
		2) (Hierarchy and Application in New Zealand of Environmental Guideline Values)	2003
		3) (Risk Screening System)	2004
		4) (Classification and Information Management Protocols)	2006
		5) (Site Investigation and	2004

		Analysis of Soils)	
	(Ministry for the Environment)	(Guidelines for Assessing and Managing Contaminated Gasworks Sites in New Zealand)	1997
	(Ministry for the Environment) (Ministry of health)	(Health and Environmental Guidelines for Selected Timber Treatment Chemicals)	1997
	(Ministry for the Environment)	(Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand)	1999
	(Ministry for the Environment)	() Working Towards a Comprehensive Policy Framework for Managing Contaminated Land in New Zealand(A Discussion Paper)	2006
	EPA	(EPA Guidelines for Environmental management of on-site remediation)	2006
	(Australian and New Zealand Environment and Conservation council) (National Health and Medical research council)	(Australian and Zealand guidelines for the assessment and management of contaminated sites)	1992
	(Department of environment)	()Draft guidelines for the assessment and management of contaminated land in Queensland	1998
	(EPA in South Australian)	() EPA guidelines: soil bioremediation (ex-situ)	2005

2

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	..6	..1	..2	..11
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		3		..17
2	..9		..4	..17
				..20
	..10		..5	4
	..11		..5	..23
		..20	..6	..23
	..27		..6	..27
			..7	..31
		NJDEP		..33
		..8		..34
3		4		5

	.29			.9				.35
		.32	.31	.9			.36	.44
		.34		.9	.10		.53	
	.34						.67	
	.39							
	.44							
								6
							.69	
							.69	
4	.45			5	1—		CUT-OFF	.71
		.47			.13		.72	
					.13		.73	
			.51		.17		.75	
	.53				.21			.77
					.23	.22		
								7
							.79	
							.81	
								8
5	.55			6	2—		.83	
		.56			.24		.84	
		.59			.24		.86	
			.62		.50		.87	
	.62				.51	.51	.88	
							.89	
							.90	
							.91	
6	.65						.93	
	.67							
	.70			7	3—			.94
		.73			.53			.102
			.80		.53	.53		.109
								.110
	.83							.111
				8	4—			
7	.86				.57		.113	
		.87			.58		.113	
					.58			.116
	.90					.59	.119	
						.64	.122	
					.65		.122	

6.2

1)

85%

85%

2)

“site”

“soils”

6.3

CERCLA

A

7

8

- [1] 3 2006 22 (1)
87 – 90
- [2] — (GB/T 18834 – 2002). 2002.
- [3] (HJ/T 166 -2004). 2004.
- [4] (HJ/T 164 -2004). 2004.
- [5] I
2005 42(4) 666-673
- [6] Suter GW, Efroymsen RA, Sample BE, Jones DS. Ecological Risk Assessment for Contaminated sites. Washington: Lewis Publishers, 2000: 20-35
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- [9] Site remediation technologies: a reference manual. Contaminated site management working group, Canada, 1997
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- [11] Guideline for the management of contaminated sites. New Brunswick Department of Environment and Local Government, Canada, 2003
- [12] Guidance document for the management of impacted sites. Province of Newfoundland and Labrador, Canada, 2004
- [13] Petroleum contaminated site remediation guidelines. Prince Edward Island, Canada, 1999
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- [16] Guidance for Remediation of Petroleum Contaminated Soils. Washington State Department of Ecology Toxics Cleanup Program, 1995

- [17] Guidelines on Remediation of Contaminated Sites. Danish environmental protection agency, Danish Ministry of the Environment, 2002
- [18] Contaminated Land Management Guidelines No 1: Reporting on Contaminated Sites in New Zealand Ministry for the Environment, 2003
- [19] Contaminated Land Management Guidelines No 2: Hierarchy and Application in New Zealand of Environmental Guideline Values. Ministry for the Environment, 2003
- [20] Contaminated Land Management Guidelines No 3: Risk Screening System. Ministry for the Environment 2004
- [21] Contaminated Land Management Guidelines No 4: Classification and Information Management Protocols. Ministry for the Environment, 2006
- [22] Contaminated Land Management Guidelines No 5: Site Investigation and Analysis of Soils. Ministry for the Environment, 2004
- [23] Guidelines for Assessing and Managing Contaminated Gasworks Sites in New Zealand. Ministry for the Environment, 1997
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- [25] Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand. Ministry for the Environment, 1999
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- [27] EPA Guidelines for Environmental management of on-site remediation. South Austration EPA, 2006
- [28] Australian and Zealand guidelines for the assessment and management of contaminated sites. Australian and New Zealand Environment and Conservation council, National Health and Medical research council,1992
- [29] Draft guidelines for the assessment and management of contaminated land in Queensland, Departmeng of environment, 1998
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