DEPARTMENT OF

ENVIRONMENTAL CONSERVATION

18 AAC 75

Oil and Other Hazardous Substances
Pollution Control

Public Review Draft
April 7, 2006

Frank Murkowski
Governor

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Commissioner

18 AAC 75.325(c)(2) is repealed:

(c) The site cleanup rules do not apply to

(2) Repealed ,__/__/____

18 AAC 75.325(g) is amended to read:

(g) If using method two or method three for determining the applicable soil cleanup levels as described in 18 AAC 75.340 - 18 AAC 75.341, or if applying the groundwater cleanup levels at Table C in 18 AAC 75.345, a responsible person shall ensure that, after completing site cleanup, the risk from hazardous substances does not exceed a cumulative carcinogenic risk standard of 1 in 100,000 across all exposure pathways and a cumulative noncarcinogenic risk standard at a hazard index of **1** [1.0] across all exposure pathways. Guidance on cumulative risk determinations is provided in the department's *Cumulative Risk Guidance*, dated **January 1, 2006** [NOVEMBER 7, 2000] is adopted by reference.

18 AAC 75.325(h) is amended to read:

(h) If proposing an alternative cleanup level for soil or groundwater, based on a site-specific risk assessment under method four in 18 AAC 75.340(f) or under the provisions of 18 AAC 75.345(b)(3), a responsible person shall ensure that the risk from hazardous substances does not exceed the cumulative carcinogenic risk standard of 1 in 100,000 across all exposure pathways and the cumulative noncarcinogenic risk standard at a hazard index of **1** [1.0] across all exposure pathways. Guidance on cumulative risk determinations is provided in the department's *Cumulative Risk Guidance*, adopted by reference in (g) of this section. Instead of the risk standards required by this subsection, the department may consider a risk standard consistent with the range acceptable under 40 C.F.R. 300.430, revised as of July 1, **2004** [2002], adopted by reference, based on

(1) site-specific conditions;
(2) land use;
(3) hazardous substance characteristics;
(4) statutory compliance;
(5) protection of human health, safety, and welfare, and the environment;
(6) ability of cleanup to be implemented;
(7) long-term and short-term effectiveness;
(8) use of treatment technologies;
(9) public comment; and
(10) cost.

18 AAC 75.325(k) is amended to read:

(k) If a discharge, release, or planned cleanup affects an anadromous fish-bearing stream or lake or an area designated under AS 16.20, activities under the site cleanup rules are subject to coordination with appropriate resource agencies, including the Department of Fish and Game under **AS 16.20 and the Department of Natural Resources, Office of Habitat Management**

and Permitting, under AS 41.14.870. [AS 16.05.870 OR AS 16.20.] (Eff. 1/22/99, Register 149; am 8/27/2000, Register 155; am 1/30/2003, Register 165; am __/__/____, Register_____)

Authority:	AS 46.03.020	AS 46.03.740	AS 46.04.020
	AS 46.03.050	AS 46.03.745	AS 46.04.070
	AS 46.03.710	AS 46.03.822	AS 46.09.020

18 AAC 75.340(e)(1) is amended to read:

(e) Under method three, a responsible person may propose a site-specific alternative cleanup level that modifies

(1) the migration to groundwater or inhalation levels in Table B1 of 18 AAC 75.341(c) or Table B2 of 18 AAC 75.341(d), based on the use of approved site-specific soil data, and the equations set out in the department's *Cleanup Levels Guidance*, dated **January 1, 2006** [NOVEMBER 7, 2002], adopted by reference; the alternative cleanup level that then applies at the site for a hazardous substance is the most stringent of the Table B1 or Table B2 ingestion-based level and the site-specific calculated levels for inhalation or migration to groundwater;

(Eff. 1/22/99, Register 149; am 8/27/2000, Register 155; am 1/30/2003, Register 165; __/__/____, Register ____)

Authority:	AS 46.03.020	AS 46.03.740	AS 46.04.070
	AS 46.03.050	AS 46.03.745	AS 46.09.020
	AS 46.03.710	AS 46.04.020	

18 AAC 75.341 is amended to read:

TABLE B1. Method 2 - SOIL CLEANUP LEVEL TABLE (See notes to table for additional requirements)

		Arctic Zone [1]			Under 40 inch Zone [2]			Over 40 inch Zone [3]		
CAS NUMBER [4]	CHEMICAL NAME (Carcinogenics in Bold Type)	**Direct Contact [16]** [INGESTION[5]] (mg/kg)	Inhalation [6] (mg/kg)	Migration to Groundwater [7] (N/A)	**Direct Contact [16]** [INGESTION[5]] (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	**Direct Contact[16]** [INGESTION[5]] (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)
	ORGANICS									
83-32-9	Acenaphthene[15]	8200			6100		210	5000		190
208-96-8	**Acenaphthylene**	**8200**			**6100**		**6.7**	**5000**		**6.0**
67-64-1	Acetone (2-Propanone)	**120000** [1400]	**3200**		**91000** [10000]	**2100**	**88** [10]	8300	**1600**	**79** [9]
309-00-2	**Aldrin**	0.7	35		0.5	24	1.6	.40	18	1.5
120-12-7	Anthracene[15]	41000			30000		4300	**25000** [23000]		3900
71-43-2	**Benzene [15]**	200	**14**[13]		150	9	0.02	120	**6.8**[6.4]	0.02
56-55-3	**Benzo(a)anthracene [15]**	**11** [15]			**8.1** [11]		6	**6.6** [9]		5.5
205-99-2	**Benzo(b)fluoranthene [15]**	**11** [15]			**8.1** [11]		20	**6.6** [9]		17
207-08-9	**Benzo(k)fluoranthene [15]**	**110** [150]			**81** [110]		200	**66** [93]		170
65-85-0	Benzoic acid	**550000** [547500]			410000		390	**330000** [332000]		350
191-24-2	**Benzo (g,h,i) perylene**	**4100**			**3000**		**23000**	**2500**		**21000**
50-32-8	**Benzo(a)pyrene [15]**	**1.1** [1.5]			**0.81** [1]		3	**0.66** [.9]		2.4
111-44-4	**Bis(2-chlorethyl)ether**	10	5		8	3	0.002	6	2.4	0.002
117-81-7	**Bis(2-ethylhexyl)phthalate**	**610** [800]			**450** [590]		1200	**370** [490]		1100
75-27-4	**Bromodichloromethane**	180			130		0.35	110		0.3
75-25-2	**Bromoform (Tribromomethane)**	1400	590[12]		1050	500	0.38	860	370	0.34
71-36-3	Butanol	14000			10000		10	8300		9
85-68-7	Butyl benzyl phthalate	27000			20000		5600	**17000** [16600]		5000
86-74-8	**Carbazole**	**430** [560]			**320** [420]		2	**260** [340]		2
75-15-0	Carbon disulfide	14000	453[12]		10000	453[12]	17	8300	453[12]	16
56-23-5	**Carbon tetrachloride**	86	5		64	3.4	0.03	52	2.6	0.03
57-74-9	**Chlordane**	**28**[32]	750		**21**[24]	510	3	**17** [19]	380	3
106-47-8	p-Chloroaniline	550			410		0.5	330		0.46
108-90-7	Chlorobenzene	2700	160		2000	110	0.6	1700	81	0.5
124-48-1	**Chlorodibromomethane**	130			100		0.2	80		0.2
67-66-3	**Chloroform**	1400	5		1000	3.4	0.34	830	2.4	0.3
91-58-7	**2-Chloronaphthalene**	**11000**	**25000**		**8100**	**17000**	**70**	**6600**	**12000**	**63**
95-57-8	2-Chlorophenol	680			510		1.4	415		1.3
218-01-9	**Chrysene [15]**	**1100**[1500]			**810**[1100]		620	**660** [930]		550
72-54-8	**DDD**	**43** [47]			**32**[35]		47	**26**[28]		42
72-55-9	**DDE**	**30**[33]			**22**[24]		150	**18**[20]		130

TABLE B1. Method 2 - SOIL CLEANUP LEVEL TABLE (See notes to table for additional requirements)

		Arctic Zone [1]			Under 40 inch Zone [2]			Over 40 inch Zone [3]		
CAS NUMBER [4]	CHEMICAL NAME (Carcinogenics in Bold Type)	**Direct Contact [16]** [INGESTION[5]] (mg/kg)	Inhalation [6] (mg/kg)	Migration to Groundwater [7] (N/A)	**Direct Contact [16]** [INGESTION[5]] (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	**Direct Contact[16]** [INGESTION[5]] (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)
50-29-3	**DDT**	**30**[33]	7800		**22**[24]	5300	88	**18** [20]	3900	80
53-70-3	**Dibenzo(a,h)anthracene [15]**	**1.1**[1.5]			**0.81**[1]		6	**0.66**[.9]		5
132-64-9	**Dibenzofuran**	**274**	**4900**		**200**	**3300**	**7.8**	**166**	**2500**	**7**
84-74-2	Di-n-butyl phthalate	14000			10000		1700	8300		1500
117-84-0	Di-n-octyl phthalate	2700			2000		810000	1700		720000
94-75-7	**2,4-D (2,4-dichlorophenoxyacetic acid)**	**1400**			**1000**		**.94**	**830**		**.84**
95-50-1	1,2-Dichlorobenzene	12000	110[12]		9100	110[12]	7	7500	110[12]	6
541-73-1	**1,3-Dichlorobenzene**	**4110**	**1800**		**3040**	**1200**	**12**	**2500**	**890**	**11**
106-46-7	**1,4-Dichlorobenzene**	470	12000		350	8000	0.8	280	6000	0.7
91-94-1	**3,3-Dichlorobenzidine**	**19** [25]			**14**[18]		0.02	**11**[15]		0.02
75-71-8	**Dichlorodifluoromethane**	**27400**	**485**		**20280**	**326**	**60**	**16590**	**243**	**53**
75-34-3	1,1-Dichloroethane	14000	890[12]		10000	890[12]	12	8300	890[12]	11
107-06-2	**1,2-Dichloroethane**	120	7		91	5	0.015	75	3.5	0.01
75-35-4	**1,1-Dichloroethylene**	19	1.3		14	0.9	0.03	11	0.65	0.03
156-59-2	cis-1,2-Dichloroethylene	1400			1000		0.2	830		0.2
156-60-5	trans-1,2-Dichloroethylene	2700			2000		0.4	1700		0.34
120-83-2	2,4-Dichlorophenol	410			300		0.45	250		0.45
78-87-5	**1,2-Dichloropropane**	160	25		120	17	0.017	100	12	0.015
542-75-6	**1,3-Dichloropropene**	110	21		83	14	0.02	68	11	0.02
60-57-1	**Dieldrin**	0.7	12		0.5	8	0.015	0.4*	6	0.014
84-66-2	Diethyl phthalate	110000			81000		190	66000		170
105-67-9	2,4-Dimethylphenol	2700			2000		4	1700		3.6
131-11-3	Dimethyl phthalate	**1000000** [>10^6]			**100000** [>10^6]		1400	830000*		1200
51-28-5	2,4-Dinitrophenol	270			200		0.2	170		0.17
121-14-2	**2,4-Dinitrotoluene**	**13**[17]			**9.3**[12]		0.005	**7.6** [10]		0.0044
606-20-2	**2,6-Dinitrotoluene**	17			9.3		0.0044	**7.6** [10]		0.004
123-91-1	**1,4-Dioxane**	**1020**	**802**		**755**	**540**	**.22**	**617**	**402**	**.20**
1746-01-6 [174-60-16]	**Dioxin [8]**									
115-29-7	Endosulfan	820			610		7	500		6
72-20-8	Endrin	41			30		0.3	25		0.3
100-41-4	Ethylbenzene [15]	13700	89[12]		10000	89[12]	5.5	8300	89[12]	5
106-93-4	**Ethylene Dibromide (1,2 dibromethane)**	**5.6**	**0.73**		**4.15**	**0.49**	**0.00016**	**3.4**	**0.37**	**0.00015**

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		Arctic Zone [1]			Under 40 inch Zone [2]			Over 40 inch Zone [3]		
CAS NUMBER [4]	CHEMICAL NAME (Carcinogenics in Bold Type)	**Direct Contact [16]** [INGESTION[5]] (mg/kg)	Inhalation [6] (mg/kg)	Migration to Groundwater [7] (N/A)	**Direct Contact [16]** [INGESTION[5]] (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	**Direct Contact[16]** [INGESTION[5]] (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)
107-21-1	**Ethylene Glycol**	**270000**			**200000**		**198**	**170000**		**177**
206-44-0	Fluoranthene	5500			4100		2100	3300		1900
86-73-7	Fluorene[15]	5500			4100		270	3300		240
76-44-8	**Heptachlor**	2.5	1.2		2	0.8	8	**1.1*** [1.5]	0.6	7
1024-57-3	**Heptachlor epoxide**	**0.94** [1]	50		**0.69** [.9]	33	0.2	**0.57** [.75]	25	0.2
118-74-1	**Hexachlorobenzene**	7	10		5	7	0.73	3.0*	5	0.7
87-68-3	**Hexachloro-1,3-butadiene**	27	82		20	55	8	**17** (23*)	41	7
319-84-6	**alpha-Hexachlorocyclohexane**	**1.6**[2]	8		**1.2**[1.3]	5.5	0.0026	**0.96**[0.77]*	4	0.002
319-85-7	**beta-Hexachlorocyclohexane**	**5.5** [6]	65		**4.1** [4.6]	43	0.009	**3.4** [4]	32	0.008
58-89-9	**gamma-Hexachlorocyclohexane (Lindane)**	**7.7** [9]			**5.7** [6.4]		0.003	**4.6** [5]		0.003
77-47-4	Hexachlorocyclopentadiene	960	11		710	7	130	470*	5	120
67-72-1	**Hexachloroethane**	139	580		101	390	1.6	**83**[230]*	290	1.4
193-39-5	**Indeno(1,2,3-c,d)pyrene [15]**	**11**[15]			**8.1**[11]		54	**6.6**[9]		50
78-59-1	**Isophorone**	**9000** [11800]			**6600** [8700]		3	**5400** [7200]		2.6
98-82-8	**Isopropylbenzene**	**13700**	**10900**		**10100**	**7320**	**20**	**8300**	**5460**	**18**
72-43-5	Methoxychlor	680			510		52	**390*** [410]		47
74-83-9	Methyl bromide	190	21		140	14	0.16	120	11	0.14
78-93-3	**Methyl ethyl ketone (2-Butanone)**	**82000**	**233000**		**61000**	**156000**	**54**	**50000**	**116600**	**54**
74-95-3	**Methylene bromide**	**1370**	**307**		**1010**	**207**	**1.1**	**830**	**153**	**1**
75-09-2	**Methylene chloride**	1500	270		1100	180	0.015	900	135	0.01
91-57-6	**2-Methylnaphthalene**	**550**			**410**		**31**	**332**		**28**
95-48-7	2-Methylphenol (o-cresol)	6800			5100		7	**4100** [4200]		6
1634-04-4	**Methyl tert-butyl ether (MTBE)**	**6230**	**980**		**4610**	**660**	**1.3**	**3770**	**490**	**1.2**
91-20-3	Naphthalene[15]	2700	180		2000	120	21	1700	92	19
98-95-3	Nitrobenzene	68	130		51	90	0.06	**41** [42]	67	0.06
86-30-6	**n-Nitrosodiphenylamine**	**1700** [2300]			**1300** [1700]		3.4	**1100** [1400]		3
621-64-7	**n-Nitrosodi-n-propylamine**	**1.2** [1.6]			**0.90** [1.2]		0.00036	**0.74** [1.0]		0.0003
85-01-8	**Phenanthrene**	**41000**			**30000**		**2100**	**25000**		**1900**
108-95-2	Phenol	**41000** [82000]			**30000** [60800]		67	**25000*** [50000]		60
87-86-5	**Pentachlorophenol**	**52** [46.7[13]]			**39**[35[13]]		0.01	**32** [28[13]]		0.009
1336-36-3 [133-63-63]	**Polychlorinated Biphenyls (PCBs)[9]**	1	1		1	1		1	1	

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		Arctic Zone [1]			Under 40 inch Zone [2]			Over 40 inch Zone [3]		
CAS NUMBER [4]	CHEMICAL NAME (Carcinogenics in Bold Type)	**Direct Contact [16]** [INGESTION[5]] (mg/kg)	Inhalation [6] (mg/kg)	Migration to Groundwater [7] (N/A)	**Direct Contact [16]** [INGESTION[5]] (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	**Direct Contact[16]** [INGESTION[5]] (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)
57-55-6	**Propylene Glycol**	**68000**			**51000**		**5**	**41000**		**4.5**
129-00-0	Pyrene[15]	4100			3000		1500	2500		1400
100-42-5	Styrene	27400	280[12]		20300	280[12]	1.3	17000	280[12]	1.2
79-34-5	**1,1,2,2-Tetrachloroethane**	56	8		42	5.4	0.017	34	4	0.01
127-18-4	**Tetrachloroethylene (PCE)**	220	80[12]		160	80[12]	0.03	130	79	0.025
108-88-3	Toluene [15]	27400	180[12]		20300	180[12]	5.4	17000	180[12]	4.8
8001-35-2	**Toxaphene**	10	920		8	620	10	6	460	9
120-82-1	1,2,4-Trichlorobenzene	1400	570[12]		1000	570[12]	2	830	570[12]	1.7
71-55-6	1,1,1-Trichloroethane		460[12]			460[12]	1.0		460[12]	0.9
79-00-5	**1,1,2-Trichloroethane**	200	15		150	10	0.017	120	8	0.015
79-01-6	**Trichloroethylene (TCE)**	1000	64		750	43	0.027	620	32	0.02
95-95-4	2,4,5-Trichlorophenol	**14000** [13700]			10000		90	8300		78
88-06-2	**2,4,6-Trichlorophenol**	1000	2300		750	1500	0.6	620	1100	0.5
93-72-1	**2,4,5-TP (2-(2,4,5-Trichlorophenoxy)propionic acid) (Silvex)**	**1100**			**810**			**660**		
96-18-4	**1,2,3-Trichloropropane**	**560**	**0.73**		**415**	**0.49**	**0.14**	**340**	**0.37**	**0.13**
76-13-1	**Trichlorotrifluoroethane (Freon-113)**	**4106250**	**84700**		**3041700**	**76800**	**31800**	**2488700**	**57280**	**28400**
95-63-6	**1,2,4-Trimethylbenzene**	**6840**	**128**		**5070**	**86**	**95**	**4150**	**64**	**85**
108-67-8	**1,3,5-Trimethylbenzene**	**6840**	**55**		**5070**	**37**	**25**	**4148**	**27**	**23**
108-05-4	Vinyl acetate	137900	2200[12]		101000	1500	100	83000	1100	90
75-01-4	**Vinyl chloride (Chloroethene)**	7	6		6	4	0.009	5	3	0.008
1330-20-7	Xylenes (total)[15]	274000	81[12]		203000	81[12]	78	166000	81	69
	INORGANICS									
7440-36-0	Antimony	55			41		3.6	33		3
7440-38-2	**Arsenic**	**6.8** [8]			**5.1** [5.5]		2	**4.1** [4.5]		1.8
7440-39-3	Barium	9600			7100		1100	5800		982
7440-41-7	**Beryllium**	270			200		42	170		38
7440-43-9	Cadmium	**68** [140]			**51** [100]		5	**41** [83]		4.5
7440-47-3	Chromium (Total)	410			300		26	250		23
16065-83-1	Chromium +3	200000			150000		$>10^6$	120000		$>10^6$
18540-29-9	Chromium +6	410			300		26	250		23
57-12-5	Cyanide [10]	2700			2000		27	1700		24
7439-92-1	Lead [11]	400	400		400	400		400	400	
7439-97-6	Mercury (Elemental)		26			18	1.4		13	1.24

TABLE B1. Method 2 - SOIL CLEANUP LEVEL TABLE (See notes to table for additional requirements)

		Arctic Zone [1]			Under 40 inch Zone [2]			Over 40 inch Zone [3]		
CAS NUMBER [4]	CHEMICAL NAME (Carcinogenics in Bold Type)	**Direct Contact [16]** [INGESTION[5]] (mg/kg)	Inhalation [6] (mg/kg)	Migration to Groundwater [7] (N/A)	**Direct Contact [16]** [INGESTION[5]] (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	**Direct Contact[16]** [INGESTION[5]] (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)
7439-97-7	Mercury (Inorganic Compounds)									
22967-92-6	Mercury (Methyl)									
7440-02-0	Nickel	2700			2000		87	1700		78
7782-49-2	Selenium	680			510		3.5	420		3
7440-22-4	Silver	680			510		21	420		19
7440-62-2	Vanadium	960			710		3400	580		3050
7440-66-6	Zinc	41000			30000		9100	25000		8100

NOTES TO TABLE B1 FOLLOW TABLE B2 IN (d) OF THIS SECTION.

TABLE B2. METHOD TWO - PETROLEUM HYDROCARBON SOIL CLEANUP LEVELS

Petroleum Hydrocarbon Range	Arctic Zone mg/kg			Under 40 Inch Zone			Over 40 Inch Zone			Maximum Allowable Concentrations[1] [4] mg/kg
	Direct Contact[16] [INGESTION] (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	**Direct Contact[16]** [INGESTION] (mg/kg)	Inhalation (mg/kg)	Migration to groundwater (mg/kg)	**Direct Contact[16]** [INGESTION] (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	
For Laboratory Analysis using AK Methods 101, 102, and 103										
C_6-C_{10} GRO using AK 101	1400	1400	n/a	1400	1400	300	1400	1400	260	1400
C_{10}-C_{25} DRO using AK 102	12500	12500	n/a	10250	12500	250	8250	12500	230	12500
C_{25}-C_{36} RRO using AK 103	13700	22000	n/a	10000	22000	11000	8300	22000	9700	22000
[C_6-C_{10} ALIPHATICS]	[1000]	[1000]	[N/A]	[1000]	[1000]	[270]	[1000]	[1000]	[240]	[1000]
[C_6-C_{10} AROMATICS]	[1000]	[1000]	[N/A]	[1000]	[1000]	[150]	[1000]	[1000]	[130]	[1000]
[C_{10}-C_{25} ALIPHATICS]	[10000]	[10000]	[N/A]	[10000]	[10000]	[7200]	[8300]	[10000]	[6400]	[10000]
[C_{10}-C_{25} AROMATICS]	[5000]	[5000]	[N/A]	[4100]	[5000]	[100]	[3300]	[5000]	[90]	[5000]
[C_{25}-C_{36} ALIPHATICS]	[20000]	[20000]	[N/A]	[20000]	[20000]	[20000]	[20000]	[20000]	[20000]	[20000]
[C_{25}-C_{36} AROMATICS]	[4100]	[10000]	[N/A]	[3000]	[10000]	[3300]	[2500]	[10000]	[2900]	[10000]

See notes to table for further requirements. "n/a" means not applicable.

18 AAC 75.341 Notes to Tables B1 and B2, Note 5 is repealed:

5. [“INGESTION” MEANS A POTENTIAL PATHWAY OF EXPOSURE TO HAZARDOUS SUBSTANCES IN SOIL THROUGH DIRECT CONSUMPTION OF THE SOIL.]

18 AAC 75.341 Notes to Table B1 and B2, Note 13 is repealed:

13. [INGESTION VALUE IS ADJUSTED BY A FACTOR OF 0.5 TO ACCOUNT FOR DERMAL EXPOSURE.]

18 AAC 75.341 Notes to Table B1 and B2, Note 15 is amended to read:

15. If using method two or method three, the applicable petroleum hydrocarbon cleanup levels must be met in addition to the applicable chemical-specific cleanup levels for benzene, ethylbenzene, toluene, and total xylenes; the chemical-specific cleanup levels for the polynuclear aromatic hydrocarbons acenaphthene, **acenaphthylene,** anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, **benzo(g,h,i)perylene,** chrysene, dibenzo(a,h)anthracene, **fluoranthene,** fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, **phenanthrene,** and pyrene must also be met unless the department determines that those cleanup levels need not be met to protect human health, safety, and welfare, and the environment.

18 AAC 75.341 Notes to Table B1 and B2 is amended by adding a new note to read:

16. "Direct contact" means exposure through both incidental ingestion of soil and through dermal absorption of the contaminant from soil.

(Eff. 1/22/99, Register 149; am 8/27/2000, Register 155; am __/__/____, Register_____)

Authority: AS 46.03.020 AS 46.03.740 AS 46.04.070
AS 46.03.050 AS 46.03.745 AS 46.09.020
AS 46.03.710 AS 46.04.020

18 AAC 75.345(b)(1) is amended to read:

18 AAC 75.345. Groundwater and surface water cleanup levels.

(b) Contaminated groundwater must meet

(1) the cleanup levels in Table C if the current use or the reasonably expected potential future use of the groundwater, determined under 18 AAC 75.350, is a drinking water source;

TABLE C. GROUNDWATER CLEANUP LEVELS

(**Carcinogenics in Bold Type**)

Hazardous Substance	CAS Registry Number	Groundwater Cleanup Level (mg/L)
Acenaphthene	83-32-9	2.2
Acenaphthylene	**208-96-8**	**2.2**
Acetone	67-64-1	3.65
Aldrin	309-00-2	0.00005
Anthracene	120-12-7	11.0
Antimony	7440-36-0	0.006
Arsenic	7440-38-2	**0.01** [0.05]
Barium	7440-39-3	2.0
Benzene	71-43-2	0.005
Benzo(a)anthracene	56-55-3	**0.0012** [.001]
Benzo(b)fluoranthene	205-99-2	0.001
Benzo(k)fluoranthene	207-08-9	0.01
Benzoic acid	65-85-0	146.0
Benzo (g,h,i) perylene	**191-24-2**	**1.1**
Benzo(a)pyrene	50-32-8	0.0002
Beryllium	7440-41-17	0.004
Bis(2-chloroethyl)ether	111-44-4	0.00077
Bis(2-ethylhexyl)phthalate	117-81-7	0.006
Bromodichloromethane	75-27-4	0.1
Bromoform (Tribromomethane)	75-25-2	0.1
Butanol	71-36-3	3.65
Butyl benzyl phthalate	85-68-7	7.3
Cadmium	7440-43-9	0.005
Carbazole	86-74-8	0.04
Carbon disulfide	75-15-0	3.65
Carbon tetrachloride	56-23-5	0.005
Chlordane	57-74-9	0.002
p-Chloroaniline	106-47-8	0.15
Chlorobenzene	108-90-7	0.1
Chlorodibromomethane	124-48-1	0.06
Chloroform	67-66-3	0.1
2-Chloronaphthalene	**91-58-7**	**2.9**
2-Chlorophenol	95-57-8	0.2
Chromium (Total)	7440-47-3	0.1
Chromium +3	16065-83-1	55
Chromium +6	18540-29-9	0.1
Chrysene	218-01-9	0.1
Copper	7440-50-8	1.3
Cyanide	57-12-5	0.2
DDD	72-54-8	0.0036
DDE	72-55-9	0.0025
DDT	50-29-3	0.0025
Dibenzo(a,h)anthracene	53-70-3	0.0001
Dibenzofuran	**132-64-9**	**0.073**
Di-n-butyl phthalate	84-74-2	3.65
1,2-Dichlorobenzene	95-50-1	0.6
1,3-Dichlorobenzene	**541-73-1**	**1.1**

TABLE C. GROUNDWATER CLEANUP LEVELS

(**Carcinogenics in Bold Type**)

Hazardous Substance	CAS Registry Number	Groundwater Cleanup Level (mg/L)
1,4-Dichlorobenzene	**106-46-7**	**0.075**
3,3-Dichlorobenzidine	91-94-1	0.002
Dichlorodifluoromethane	**75-71-8**	**7.3**
1,1-Dichloroethane	75-34-3	3.65
1,2-Dichloroethane	107-06-2	0.005
1,1-Dichloroethylene	75-35-4	0.007
cis-1,2-Dichloroethylene	156-59-2	0.07
trans-1,2-Dichloroethylene	156-60-5	0.1
2,4-Dichlorophenol	120-83-2	0.1
2,4-D (2,4-dichlorophenoxyacetic acid)	**94-75-7**	**.07**
1,2-Dichloropropane	78-87-5	0.005
1,3-Dichloropropene	542-75-6	0.009
Dieldrin	60-57-1	0.00005
Diethyl phthalate	84-66-2	29.0
2,4-Dimethylphenol	105-67-9	0.7
2,4-Dinitrophenol	51-28-5	0.07
Dimethyl phthalate	**131-11-3**	**365**
2,4-Dinitrotoluene	121-14-2	0.00125
2,6-Dinitrotoluene	606-20-2	0.00125
Di-n-octyl phthalate	117-84-0	0.7
1,4 Dioxane	**123-91-1**	**.077**
Dioxin	1746-01-6	0.00000003
Endosulfan	115-29-7	0.2
Endrin	72-20-8	0.002
Ethylbenzene	100-41-4	0.7
Ethylene Dibromide (1,2 dibromethane)	**106-93-4**	**0.00005**
Ethylene Glycol	**107-21-1**	**73**
Fluoranthene	206-44-0	1.46
Fluorene	86-73-7	1.46
Heptachlor	76-44-8	0.0004
Heptachlor epoxide	1024-57-3	0.0002
Hexachlorobenzene	118-74-1	0.001
Hexachloro-1,3-butadiene	87-68-3	0.01
alpha-Hexachlorocyclohexane	319-84-6	0.0001
beta-Hexachlorocyclohexane	319-85-7	0.00047
gamma-Hexachlorocyclohexane (Lindane)	58-89-9	0.0002
Hexachlorocyclopentadiene	77-47-4	0.05
Hexachloroethane	67-72-1	0.06
Indeno(1,2,3-c,d)pyrene	193-39-5	0.001
Isophorone	78-59-1	0.9
Isopropylbenzene	**98-82-8**	**3.65**
Lead	7439-92-1	0.015
Mercury	7439-97-6	0.002
Methoxychlor	72-43-5	0.04
Methyl bromide	74-83-9	0.05
Methylene bromide	**74-95-3**	**0.365**

TABLE C. GROUNDWATER CLEANUP LEVELS
(**Carcinogenics in Bold Type**)

Hazardous Substance	CAS Registry Number	Groundwater Cleanup Level (mg/L)
Methylene chloride	75-09-2	0.005
Methyl ethyl ketone (2-Butanone)	**78-93-3**	**22**
Methyl tert-butyl ether (MTBE	**1634-04-4**	**.47**
2-Methylnaphthalene	**91-57-6**	**0.73**
2-Methylphenol (o-cresol)	95-48-7	1.8
Naphthalene	91-20-3	0.7
Nickel	7440-02-0	0.1
Nitrobenzene	98-95-3	0.018
n-Nitrosodiphenylamine	86-30-6	0.17
n-Nitrosodi-n-propylamine	621-64-7	0.0001
Phenanthrene	**85-01-8**	**11**
Pentachlorophenol	87-86-5	0.001
Phenol	108-95-2	22.0
Propylene Glycol	**57-55-6**	**18**
Polychlorinated biphenyls (PCBs)	1336-36-3	0.0005
Pyrene	129-00-0	1.1
Selenium	7782-49-2	0.05
Silver	7440-22-4	0.18
Styrene	100-42-5	0.1
1,1,2,2-Tetrachloroethane	79-34-5	0.004
Tetrachloroethylene	127-18-4	0.005
Thallium	7440-28-0	0.002
Toluene	108-88-3	1.0
Toxaphene	8001-35-2	0.003
1,2,4-Trichlorobenzene	120-82-1	0.07
1,1,1-Trichloroethane	71-55-6	0.2
1,1,2-Trichloroethane	79-00-5	0.005
Trichloroethylene	79-01-6	0.005
2,4,5-Trichlorophenol	95-95-4	3.65
1,2,3, Trichloropropane	**96-18-4**	**.04**
2,4,6-Trichlorophenol	88-06-2	0.077
2-(2,4,4 Trichlorophenoxy)propionic acid (Acetic Acid)	**93-72-1**	**.05**
1,2,3-Trichloropropane	**96-18-4**	**0.0004**
Trichlorotrifluoroethane (Freon-113)	**76-13-1**	**1100**
1,2,4-Trimethylbenzene	**95-63-6**	**1.83**
1,3,5-Trimethylbenzene	**108-67-8**	**1.83**
Vanadium	7440-62-2	0.26
Vinyl acetate	108-05-4	36.5
Vinyl chloride (Chloroethene)	75-01-4	0.002
Xylenes (total)	1330-20-7	10.0
Zinc	7440-66-6	11.0
Petroleum Hydrocarbons		
GRO - C_6 - C_{10} (AK 101)		1.3*
DRO - C_{10} - C_{25} (AK 102)		1.5
RRO - C_{25} - C_{36}		1.1

TABLE C. GROUNDWATER CLEANUP LEVELS (**Carcinogenics in Bold Type**)		
Hazardous Substance	**CAS Registry Number**	**Groundwater Cleanup Level (mg/L)**
[C_6 - C_{10} - Aliphatics]		[1.3*]
[C_6 - C_{10} - Aromatics]		[7.3]
[C_{10} - C_{25} - Aliphatics]		[0.1*]
[C_{10} - C_{25} - Aromatics]		[1.5]
[C_{25} - C_{36} – Aliphatics]		[N/A (insoluble)]
[C_{25} - C_{36} - Aromatics]		[1.1]
*Standards based on estimated solubility		

18 AAC 75.345(b)(2) is repealed:

(2) repealed __/__/____

18 AAC 75.345(c)(3)(A) is amended to read:

(A) a Threshold Odor Number (TON) of 1 for odor, as measured by Method 2150B, *Standard Methods for the Examination of Water and Wastewater*, **21st** [18th] edition, American Public Health Association **(2005)** [(1992)], adopted by reference; or

(Eff. 1/22/99, Register 149; am 8/27/2000, Register 155; am 1/30/2003, Register 165; am __/__/____, Register_____)

Authority: AS 46.03.020 AS 46.03.745 AS 46.04.070
AS 46.03.050 AS 46.03.755 AS 46.09.010
AS 46.03.710 AS 46.04.020 AS 46.09.020
AS 46.03.740

18 AAC 75.360(a)(11)(G)(vi) is amended to read:

18 AAC 75.360. Cleanup operation requirements. A responsible person shall ensure that site cleanup is conducted or supervised by a qualified person. Except as provided in 18 AAC 75.355(b), a responsible person shall submit each of the following elements for approval before work on that element begins, and for additional approval if a modification to an element is anticipated:

(11) for ex-situ cleanup techniques,

(G) if using soil contaminated with petroleum hydrocarbons or metals as a base for a physical barrier,

(vi) a demonstration that the contaminated zone will be compacted to 95 percent or more of the maximum density as specified in American Society

for Testing and Materials (ASTM) D 1557- **02e1** [91], *Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort*, **ASTM International** [UPDATED JANUARY, 1997] and adopted by reference, or ASTM D 4253-**00**[93], *Standard Test Methods for Maximum Index Density and Unit Weight or Solids Using a Vibratory Table*, **ASTM International** [UPDATED FEBRUARY 1993] and adopted by reference;

18 AAC 75.370(a)(4) is amended to read:

18 AAC 75.370. Soil storage and disposal. (a) Unless the department approves the activity in question as protective of human health, safety, and welfare, and of the environment, a responsible person may not blend contaminated soil with uncontaminated soil and shall

(4) place petroleum-contaminated soil on a liner that meets the minimum specifications for the testing methods set out in Table D of this section;

TABLE D. BOTTOM LINER SPECIFICATIONS Short-term storage of petroleum-contaminated soil (less than 180 days)		
Method	**Coated Fabric**	**Extruded Fabric**
Cold crack (ASTM D2136**-02)** [-94, SEPT. 15, 19940)]	-60° F	-60° F
Black carbon content (ASTM D1603**-01)** [-94, June 15, 1994)]	2% or greater	2% or greater
[CARBON DISPERSION (ASTM D3015-95**)** , SEPT. 10, 1995)]	[A-2 RANGE]	[A-2 RANGE]
Tensile strength (ASTM **D751-00e1)** [-95E1, FEBRUARY 1997)]	125 lbs (warp)	N/A
Mullen burst (ASTM **D751-00e1)** [-95E, FEBRUARY 1997)]	250 psi	N/A
One inch tensile strength (ASTM D882**-02)** [-97, JUNE 10, 1997)]	N/A	25 lbs (warp)
One inch elongation MD (machine direction)	N/A	550%
Nominal thickness	10 mil	10 mil
Oil resistance (ASTM D471**-98e2)** [-96, JUNE 10, 1996)]	No signs of deterioration and more than 80% retention of tensile and seam strength after immersion for 30 days at 73° F.	No signs of deterioration and more than 80% retention of tensile and seam strength after immersion for 30 days at 73° F.
Long-term storage of petroleum-contaminated soil (180 days to two years)		
Cold crack (ASTM D2136**-02)** [-94, SEPT. 15, 1994)	-60° F	-60° F
Black carbon content (ASTM D1603**-01)** [-94, JUNE 15, 1994)	2% or greater	2% or greater
Carbon dispersion (ASTM D3015-95**)** [, SEPT. 10, 1995)	A-2 range	A-2 range
Tensile strength (ASTM D751**-00e1)** [-95E1, FEBRUARY 1997)	300 lbs (warp)	N/A
Mullen burst (ASTM D751**-00e1)** [-95E1, FEBRUARY 1997)	500 psi	N/A
One inch tensile strength (ASTM D882-**02)** [-97, JUNE 10, 1997)	N/A	45 lbs (warp)
One inch elongation MD (machine direction)	N/A	625%
Nominal thickness	20 mil	20 mil
Oil resistance (ASTM D471**-98e2**) [-96, JUNE 10, 1996)	No signs of deterioration and more than 80% retention of tensile and seam strength after im-	No signs of deterioration and more than 80% retention of tensile and seam strength after immersion for 30 days at

	mersion for 30 days at 73° F.	73° F.
The American Society for Testing and Materials (ASTM) methods referred to in this table [, AND REVISED AS OF THE DATE IDENTIFIED FOR EACH METHOD,] are adopted by reference. "N/A" means not applicable.		

(Eff. 1/22/99, Register 149; am 8/27/2000, Register 155; am __/__/____, Register_____)

Authority: AS 46.03.020 AS 46.03.740 AS 46.04.070
AS 46.03.050 AS 46.03.745 AS 46.09.020
AS 46.03.710 AS 46.04.020

18 AAC 75.380(b)(9)(I) is amended to read:

18 AAC 75.380. Final reporting requirements and site closure. (a) A responsible person shall submit a written final cleanup report to the department for each site undergoing cleanup under the site cleanup rules. The report must be prepared by a qualified person.

(b) The written report required by (a) of this section must contain, as applicable,

(9) a description of cleanup actions taken, including

(I) confirmation that any hazardous waste generated was stored, treated, or disposed of in compliance with 42 U.S.C. 6901 - 6992k (Solid Waste Disposal Act, as amended by Resource Conservation Recovery Act), as amended through **January 6, 2003** [OCTOBER 1, 1998] and adopted by reference; and

(Eff. 1/22/99, Register 149; am __/__/____, Register_____)

Authority: AS 46.03.020 AS 46.03.745 AS 46.04.070
AS 46.03.050 AS 46.03.755 AS 46.09.010
AS 46.03.710 AS 46.04.020 AS 46.09.020
AS 46.03.740

18 AAC 75.495(a)(7) is amended to read:

(7) **Western Alaska Region:** that area north of the area described in (6) of this subsection, encompassed by the boundaries of the southernmost boundary of the Bering Straits Regional Corporation, and **Iditarod and Kuspuk** Regional Educational Attendance Areas [11 and 5], including adjacent shorelines and state waters, and having as its seaward boundary a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured;

(Eff. 5/14/92, Register 122; am 11/27/2002, Register 164 am __/__/____, Register_____)

Authority: AS 46.03.020 AS 46.04.070 AS 46.04.210

18 AAC 75.990 is amended to read:

(109) "risk assessment" [has the meaning given in AS 46.03.450;] **means a determination of potential health effects including effects of contaminant exposure through inhalation, ingestion, dermal absorption, and other means, and the assessment of risk to human health and the environment from contaminants remaining in the land, air, or water as a result of a release;**

Eff. 5/14/92, Register 122; am 9/25/93, Register 127; am 4/4/97, Register 142; am 4/11/97, Register 142; am 1/22/99, Register 149; am 8/27/2000, Register 155; am 10/28/2000, Register 156; am 11/27/2002, Register 164; am 12/14/2002, Register 164; am 1/30/2003, Register 165; am 8/8/2003, Register 167; am 5/26/2004, Register 170

Authority: AS 46.03.050 AS 46.03.710 AS 46.03.740
AS 46.03.745 AS 46.03.755 AS 46.03.822
AS 46.04.020 AS 46.04.030 AS 46.04.035
AS 46.04.055 AS 46.04.070 AS 46.08.140
AS 46.09.010 AS 46.09.020