

STATE OF MICHIGAN JOCELYN BENSON, SECRETARY OF STATE DEPARTMENT OF STATE LANSING

February 15, 2022

NOTICE OF FILING

ADMINISTRATIVE RULES

To: Secretary of the Senate

Clerk of the House of Representatives

Joint Committee on Administrative Rules

Michigan Office of Administrative Hearings and Rules (Administrative Rule #20-130-EQ)

Legislative Service Bureau (Secretary of State Filing #22-02-03)

Department of Environment, Great Lakes, and Energy

In accordance with the provisions of Section 46 of Act No. 306 of the Public Acts of 1969, being MCL 24.246, and paragraph 16 of Executive Order 1995-6, this is to advise you that the Michigan Office of Administrative Hearings and Rules filed Administrative Rule #2020-130-EQ (Secretary of State Filing #22-02-03) on this date at 11:31 A.M. for the Department of Environment, Great Lakes, and Energy entitled, "Environmental Contamination Response Activity".

These rules take effect within 7 days upon filing with the Secretary of State unless adopted under section 33, 44, or 45a(9) of the administrative procedures act of 1969, 1969 PA 306, MCL 24.233, 24.244, or 24.245a. Rules adopted under these sections become effective 7 days after filing with the Secretary of State.

Sincerely,

Jocelyn Benson Secretary of State

Sue Sayer, Departmental Supervisor

Office of the Great Seal

Sue Saya / CK

Enclosure



GRETCHEN WHITMER
GOVERNOR

ORLENE HAWKS

February 15, 2022

The Honorable Jocelyn Benson Secretary of State Office of the Great Seal Richard H. Austin Building – 1st Floor 430 W. Allegan Lansing, MI 48909

Dear Secretary Benson:

Re: Administrative Rules – Michigan Office of Administrative Hearings and Rules

Administrative Rules #: 2020-130 EQ

The Michigan Office of Administrative Hearings and Rules received administrative rules, dated April 15, 2021 for the Department of Environment, Great Lakes and Energy "Environmental Contamination Response Activity". We are transmitting these rules to you pursuant to the requirements of Section 46 of Act No. 306 of the Public Acts of 1969, being MCL 24.246, and paragraph 16 of Executive Order 1995-6.

Sincerely.

Michigan Office of Administrative Hearings and Rules



Since 1941

Kevin H. Studebaker, Director

CERTIFICATE OF APPROVAL

On behalf of the Legislative Service Bureau, and as required by section 45 of the Administrative Procedures Act of 1969, 1969 PA 306, MCL 24.245, I have examined the proposed rules of the Department of Environment, Great Lakes, and Energy dated April 15, 2021, amending R 299.44 of the Department's rules entitled "Environmental Contamination Response Activity." I approve the rules as to form, classification, and arrangement.

Dated: November 22, 2021

LEGISLATIVE SERVICE BUREAU

By

Elizabeth R. Edberg, Legal Counsel



GRETCHEN WHITMER
GOVERNOR

ORLENE HAWKS
DIRECTOR

LEGAL CERTIFICATION OF RULES

I certify that I have examined the attached administrative rules, dated April 15, 2021, in which the Department of Environment, Great Lakes and Energy proposes to modify a portion of the Michigan Administrative Code entitled "Environmental Contamination Response Activity" by:

♦ Amending R 299.44.

The Legislative Service Bureau has approved the proposed rules as to form, classification, and arrangement.

I approve the rules as to legality pursuant to the Administrative Procedures Act, MCL 24.201 <u>et seq.</u> and Executive Order No. 2019-6. In certifying the rules as to legality, I have determined that they are within the scope of the authority of the agency, do not violate constitutional rights, and are in conformity with the requirements of the Administrative Procedures Act.

Dated: November 22, 2021

Michigan Office of Administrative Hearings and Rules

Katie Wienczewski,

Lath Wienesgustin

Attorney



STATE OF MICHIGAN

DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

LANSING



CERTIFICATE OF ADOPTION

I, Liesl Eichler Clark, Director of the Department of Environment, Great Lakes, and Energy, do formally adopt the attached administrative rules, by amending R 299.44 of the Michigan Administrative Code.

These rules are adopted pursuant to Sections 20104 and 20120a of the Natural Resources and Environmental Protection Act, 1994 PA 451, MCL 324.20104 and 324.20120a, and Executive Order No. 1995-18, as amended by Executive Order No. 2019-6.

Date Liesl Eichler Clark, Director

MOAHR 2020-130 EQ

DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY REMEDIATION AND REDEVELOPMENT DIVISION

Filed with the secretary of state on February 15, 2022

ENVIRONMENTAL CONTAMINATION RESPONSE ACTIVITY

These rules take effect immediately upon filing with the secretary of state unless adopted under section 33, 44, or 45a(9) of the administrative procedures act of 1969, 1969 PA 306, MCL 24.233, 24.244, or 24.245a. Rules adopted under these sections become effective 7 days after filing with the secretary of state.

(By authority conferred on the director of the department of environment, Great Lakes, and energy by sections 20104, and 20120a of the natural resources and environmental protection act, 1994 PA 451, MCL 324.20104 and 324.20120a)

R 299.44 of the Michigan Administrative Code is amended, as follows:

CLEANUP CRITERIA REQUIREMENTS FOR RESPONSE ACTIVITY

R 299.44 Generic groundwater cleanup criteria.

Rule 44. The generic groundwater cleanup criteria for all categories are shown in table 1 and table 1a.

All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to 1 microgram per liter (ug/L). Criteria with 6 or more digits are expressed in scientific notation. For example, 200,000 is presented as 2.0E+5. A footnote is designated by a letter in parentheses and is explained in the footnote pages that follow the criteria tables. When the risk-based criterion is less than the target detection limit (TDL), the TDL is listed as the criterion (§324.20120a(10)). In these cases, 2 numbers are present in the cell. The first number is the criterion (i.e., TDL), and the second number is the risk-based or solubility value, whichever is lower.

		11 11 12/1 011	a the cocond man	TOCI IS LIC TISK-L	ased of solubility valu	e, willchevel is lowe	31.	
Hazardous Substance	Chemical Abstract Service Number	Residential Drinking Water Criteria	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria	Water Solubility	Flammability and Explosivity Screening Level
Acenaphthene	83329	1,300	3,800	38	4,200 (S)	4,200 (S)	4,240	ID
Acenaphthylene	208968	52	150	ID	3,900 (S)	3,900 (S)	3,930	ID
Acetaldehyde (I)	75070	950	2,700	130	1.1E+6	2.3E+6	1.00E+9	8.9E+6
Acetate	71501	4,200	12,000	(G)	ID	ID	ID	ID
Acetic acid	64197	4,200	12,000	(G)	NLV	NLV	6.00E+9	1.0E+9 (D)
Acetone (I)	67641	730	2,100	1,700	1.0E+9 (D,S)	1.0E+9 (D,S)	1.00E+9	1.5E+7
Acetonitrile	75058	140	400	NA	2.4E+7	4.5E+7	2.00E+8	2.1E+7
Acetophenone	98862	1,500	4,400	ID	6.1E+6 (S)	6.1E+6 (S)	6.10E+6	ID
Acrolein (I)	107028	120	330	NA	2,100	4,200	2.10E+8	6.7E+6
Acrylamide	79061	0.5 (A)	0.5 (A)	10 (X)	NLV	NLV	2.20E+9	NA
Acrylic acid	79107	3,900	11,000	NA	1.2E+7	2.8E+7	1.00E+9	1.0E+9 (D)
Acrylonitrile (I)	107131	2.6	11	2.0 (M); 1.2	34,000	1.9E+5	7.50E+7	6.4E+6
Alachior	15972608	2.0 (A)	2.0 (A)	11 (X)	NLV	NLV	1.83E+5	ID
Aldicarb	116063	3.0 (A)	3.0 (A)	NA	NLV	NLV	6.00E+6	ID
Aldicarb sulfone	1646884	2.0 (A)	2.0 (A)	NA	NLV	NLV	7.80E+6	ID
Aldicarb sulfoxide	1646873	4.0 (A)	4.0 (A)	NA	NLV	NLV	2.80E+7	ID
Aldrin	309002	0.098	0.4	0.01 (M); 8.7E-6	180 (S)	180 (S)	180	ID
Aluminum (B)	7429905	50 (V)	50 (V)	NA	NLV	NLV	NA	ID
Ammonia	7664417	10,000 (N)	10,000 (N)	(CC)	3.2E+6	7.1E+6	5.30E+8	ID
t-Amyl methyl ether (TAME)	994058	190 (E)	190 (E)	NA	2.6E+5	5.7E+5	2.64E+6	NA
Aniline	62533	53	220	4	NLV	NLV	3.60E+7	NA
Anthracene	120127	43 (S)	43 (S)	ID	43 (S)	43 (S)	43.4	ID
Antimony	7440360	6.0 (A)	6.0 (A)	130 (X)	NLV	NLV	NA	ID
Arsenic	7440382	10 (A)	10 (A)	10	NLV	NLV	NA NA	ID
Asbestos (BB)	1332214	7.0E MFL (A)	7.0E MFL (A)	NA	NLV	NLV	NA NA	NA
Atrazine	1912249	3.0 (A)	3.0 (A)	7.3	NLV	NLV	70,000	
Azobenzene	103333	23	94	ID	6,400 (S)	6,400 (S)		ID ID
Barium (B)	7440393	2,000 (A)	2,000 (A)	(G)	0,400 (3) NLV	NLV	6,400 NA	ID

All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to 1 microgram per liter (ug/L). Criteria with 6 or more digits are expressed in scientific notation. For example, 200,000 is presented as 2.0E+5. A footnote is designated by a letter in parentheses and is explained in the footnote pages that follow the criteria tables. When the risk-based criterion is less than the target detection limit (TDL), the TDL is listed as the criterion (§324.20120a(10)). In these cases, 2 numbers

Part			III	and the second hun	inder is the risk-ba		ue, whichever is low	er.	
Benzidine 92875 0.3 (M); 0.0037 0.3 (M); 0.015 0.3 (M); 0.073 NLV NLV 5.25E+5 ID		Abstract Service Number	Drinking Water Criteria	Drinking Water	Surface Water Interface	Volatilization to Indoor Air Inhalation	Volatilization to Indoor Air Inhalation	The state of the s	Flammability and Explosivity Screening Level
Benzolanthracene (Q) 56553 2.1 8.5 ID NLV NLV 9.4 ID			5.0 (A)	5.0 (A)	200 (X)	5,600	35,000	1.75E+6	68,000
Benzo(a)anthracene (Q) 56553 2.1 8.5 ID NLV NLV 9.4 ID		92875	0.3 (M); 0.0037	0.3 (M); 0.015	0.3 (M); 0.073	NLV	NLV		
Benzo(b)fluoranthene (Q) 205992 1.5 (S,AA) 1.5 (S		56553	2.1	8.5	ID	NLV			
Benzo(k)fluoranthene (Q) 207089 1.0 (M); 0.8 (S) 1.0 (M); 0.8 (S) NA NLV NLV 0.8 ID		205992	1.5 (S,AA)	1.5 (S,AA)	ID	ID	1D		
Benzo(g,h,i)perylene	Benzo(k)fluoranthene (Q)	207089		1.0 (M); 0.8 (S)	NA	NLV			
Benzoic acid 65850 32,000 92,000 NA NLV NLV 3.50E+6 ID			(S)	(S)					
Benzyl alcohol 100516 10,000 29,000 NA NLV NLV 4.40E+7 ID					ID	NLV	NLV	1.62	ID
Benzyl alcohol 100516 10,000 29,000 NA			32,000	92,000	NA	NLV	NLV	3.50E+6	ID
Benzyl chloride		100516	10,000	29,000	NA	NLV	NLV	4.40E+7	
Beryllium 7440417 4.0 (A) 4.0 (A) (G) NLV NLV NA ID		100447	7.7	32	NA	12,000	77,000		
bis(2-Chloroethoxy)ethane 112265 ID ID ID ID NLV NLV 1.89E+7 ID bis(2-Chloroethyl)ether (I) 111444 2 8.3 1.0 (M); 0.79 38,000 2.1E+5 1.72E+7 1.7E+7 bis(2-Ethylhexyl)phthalate 117817 6.0 (A) 6.0 (A) 25 NLV NLV 340 NA Boron (B) 7440428 500 (F) 500 (F) 7,200 (X) NLV NLV NA ID Bromate 15541454 10 (A) 10 (A) 40 (X) NLV NLV NA ID Bromobenzene (I) 108861 18 50 NA 1.8E+5 3.9E+5 4.13E+5 ID Bromodichloromethane 75274 80 (A,W) 80 (A,W) ID 4,800 37,000 6.74E+6 ID Bromoderhane 74839 10 29 35 4,000 9,000 1.45E+7 ID n-Butanol (I) 71363 950 2,700 9,800 (X) <t< td=""><td></td><td>7440417</td><td>4.0 (A)</td><td>4.0 (A)</td><td>(G)</td><td>NLV</td><td></td><td></td><td></td></t<>		7440417	4.0 (A)	4.0 (A)	(G)	NLV			
bis(2-Chloroethyl)ether (I) 111444 2 8.3 1.0 (M); 0.79 38,000 2.1E+5 1.72E+7 1.7E+7 (bis(2-Ethylhexyl)phthalate Boron (B) 7440428 500 (F) 500 (F) 7,200 (X) NLV NLV NA ID Bromate 15541454 10 (A) 10 (A) 40 (X) NLV NLV NLV 38,000 ID Bromobenzene (I) 108861 18 50 NA 1.8E+5 3.9E+5 4.13E+5 ID Bromodichloromethane 75274 80 (A,W) 80 (A,W) ID 4,800 37,000 6.74E+6 ID Bromomethane 75252 80 (A,W) 80 (A,W) ID 4.7E+5 3.1E+6 (S) 3.10E+6 ID Br-Butylacol (I) 71363 950 2,700 9,800 (X) NLV NLV 7.40E+7 4.7E+7 2-Butanone (MEK) (I) 78933 13,000 38,000 2,200 2.4E+8 (S) 2.4E+8 (S) 2.40E+8 ID n-Butyl acetate 123864 <t< td=""><td></td><td>112265</td><td>ID</td><td>ID</td><td>ID</td><td>NLV</td><td></td><td></td><td></td></t<>		112265	ID	ID	ID	NLV			
bis(2-Ethylhexyl)phthalate 117817 6.0 (A) 6.0 (A) 25 NLV NLV 340 NA Boron (B) 7440428 500 (F) 500 (F) 7,200 (X) NLV NLV NA ID Bromate 15541454 10 (A) 10 (A) 40 (X) NLV NLV NA ID Bromobenzene (I) 108861 18 50 NA 1.8E+5 3.9E+5 4.13E+5 ID Bromodichloromethane 75274 80 (A,W) 80 (A,W) ID 4,800 37,000 6.74E+6 ID Bromoform 75252 80 (A,W) 80 (A,W) ID 4,7E+5 3.1E+6 (S) 3.10E+6 ID Bromomethane 74839 10 29 35 4,000 9,000 1.45E+7 ID n-Butanol (I) 71363 950 2,700 9,800 (X) NLV NLV 7.40E+7 4.7E+7 2-Butanone (MEK) (I) 78933 13,000 38,000 2,200 2.4E+8 (S) <td< td=""><td></td><td>111444</td><td>2</td><td>8.3</td><td>1.0 (M); 0.79</td><td>38,000</td><td></td><td></td><td></td></td<>		111444	2	8.3	1.0 (M); 0.79	38,000			
Boron (B) 7440428 500 (F) 500 (F) 7,200 (X) NLV NLV NA ID Bromate 15541454 10 (A) 10 (A) 40 (X) NLV NLV 38,000 ID Bromobenzene (I) 108861 18 50 NA 1.8E+5 3.9E+5 4.13E+5 ID Bromodichloromethane 75274 80 (A,W) 80 (A,W) ID 4,800 37,000 6.74E+6 ID Bromoform 75252 80 (A,W) 80 (A,W) ID 4.7E+5 3.1E+6 (S) 3.10E+6 ID Bromomethane 74839 10 29 35 4,000 9,000 1.45E+7 ID n-Butanol (I) 71363 950 2,700 9,800 (X) NLV NLV 7.40E+7 4.7E+7 2-Butanone (MEK) (I) 78933 13,000 38,000 2,200 2.4E+8 (S) 2.4E+8 (S) 2.40E+8 ID n-Butyl acetate 123864 550 1,600 NA 6.7E+6 (S)	bis(2-Ethylhexyl)phthalate	117817	6.0 (A)	6.0 (A)					
Bromate 15541454 10 (A) 10 (A) 40 (X) NLV NLV 38,000 ID Bromobenzene (I) 108861 18 50 NA 1.8E+5 3.9E+5 4.13E+5 ID Bromodichloromethane 75274 80 (A,W) 80 (A,W) ID 4,800 37,000 6.74E+6 ID Bromoform 75252 80 (A,W) 80 (A,W) ID 4.7E+5 3.1E+6 (S) 3.10E+6 ID Bromomethane 74839 10 29 35 4,000 9,000 1.45E+7 ID n-Butanol (I) 71363 950 2,700 9,800 (X) NLV NLV 7.40E+7 4.7E+7 2-Butanone (MEK) (I) 78933 13,000 38,000 2,200 2.4E+8 (S) 2.4E+8 (S) 2.40E+8 ID n-Butyl acetate 123864 550 1,600 NA 6.7E+6 (S) 6.7E+6 (S) 6.70E+6 2.5E+8 t-Butyl benzyl phthalate 85687 1,200 2,700 (S) 67 (X)	Boron (B)	7440428	500 (F)	500 (F)	7,200 (X)	NLV			
Bromobenzene (I) 108861 18 50 NA 1.8E+5 3.9E+5 4.13E+5 ID Bromodichloromethane 75274 80 (A,W) 80 (A,W) ID 4,800 37,000 6,74E+6 ID Bromoform 75252 80 (A,W) 80 (A,W) ID 4.7E+5 3.1E+6 (S) 3.10E+6 ID Bromomethane 74839 10 29 35 4,000 9,000 1.45E+7 ID n-Butanol (I) 71363 950 2,700 9,800 (X) NLV NLV 7.40E+7 4.7E+7 2-Butanone (MEK) (I) 78933 13,000 38,000 2,200 2.4E+8 (S) 2.4E+8 (S) 2.40E+8 ID n-Butyl acetate 123864 550 1,600 NA 6.7E+6 (S) 6.7E+6 (S) 6.70E+6 2.5E+6 t-Butyl benzyl phthalate 85687 1,200 2,700 (S) 67 (X) NLV NLV NLV 2,690 ID n-Butylbenzene 104518 80 230	Bromate	15541454	10 (A)	10 (A)					
Bromodichloromethane 75274 80 (A,W) 80 (A,W) ID 4,800 37,000 6.74E+6 ID Bromoform 75252 80 (A,W) 80 (A,W) ID 4,7E+5 3.1E+6 (S) 3.10E+6 ID Bromomethane 74839 10 29 35 4,000 9,000 1.45E+7 ID n-Butanol (I) 71363 950 2,700 9,800 (X) NLV NLV 7.40E+7 4.7E+7 2-Butanone (MEK) (I) 78933 13,000 38,000 2,200 2.4E+8 (S) 2.4E+8 (S) 2.40E+8 ID n-Butyl acetate 123864 550 1,600 NA 6.7E+6 (S) 6.7E+6 (S) 6.70E+6 2.5E+6 t-Butyl alcohol 75650 3,900 11,000 NA 1.0E+9 (D,S) 1.0E+9 (D,S) 1.00E+9 6.1E+7 Butyl benzyl phthalate 85687 1,200 2,700 (S) 67 (X) NLV NLV NLV 2,690 ID n-Butylbenzene 135988 80 <	Bromobenzene (I)	108861	18	50					
Bromoform 75252 80 (A,W) 80 (A,W) ID 4.7E+5 3.1E+6 (S) 3.10E+6 ID Bromomethane 74839 10 29 35 4,000 9,000 1.45E+7 ID n-Butanol (I) 71363 950 2,700 9,800 (X) NLV NLV 7.40E+7 4.7E+7 2-Butanone (MEK) (I) 78933 13,000 38,000 2,200 2.4E+8 (S) 2.4E+8 (S) 2.40E+8 ID n-Butyl acetate 123864 550 1,600 NA 6.7E+6 (S) 6.7E+6 (S) 6.70E+6 2.5E+6 t-Butyl alcohol 75650 3,900 11,000 NA 1.0E+9 (D,S) 1.00E+9 (D,S) 1.00E+9 6.1E+7 Butyl benzyl phthalate 85687 1,200 2,700 (S) 67 (X) NLV NLV 2,690 ID n-Butylbenzene 104518 80 230 ID ID NA ID t-Butylbenzene 135988 80 230 ID ID NA </td <td>Bromodichloromethane</td> <td>75274</td> <td>80 (A,W)</td> <td>80 (A,W)</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Bromodichloromethane	75274	80 (A,W)	80 (A,W)					
Bromomethane 74839 10 29 35 4,000 9,000 1.45E+7 ID n-Butanol (I) 71363 950 2,700 9,800 (X) NLV NLV 7.40E+7 4.7E+7 2-Butanone (MEK) (I) 78933 13,000 38,000 2,200 2.4E+8 (S) 2.4E+8 (S) 2.40E+8 ID n-Butyl acetate 123864 550 1,600 NA 6.7E+6 (S) 6.7E+6 (S) 6.70E+6 2.5E+6 t-Butyl alcohol 75650 3,900 11,000 NA 1.0E+9 (D,S) 1.0E+9 (D,S) 1.00E+9 6.1E+7 Butyl benzyl phthalate 85687 1,200 2,700 (S) 67 (X) NLV NLV NLV 2,690 ID n-Butylbenzene 104518 80 230 ID ID ID NA ID t-Butylbenzene 135988 80 230 ID ID ID NA ID t-Butylbenzene 10 98066 80 230 ID	Bromoform	75252	80 (A,W)						
n-Butanol (I) 71363 950 2,700 9,800 (X) NLV NLV 7.40E+7 4.7E+7 2-Butanone (MEK) (I) 78933 13,000 38,000 2,200 2.4E+8 (S) 2.4E+8 (S) 2.40E+8 ID n-Butyl acetate 123864 550 1,600 NA 6.7E+6 (S) 6.7E+6 (S) 6.70E+6 2.5E+6 t-Butyl alcohol 75650 3,900 11,000 NA 1.0E+9 (D,S) 1.0E+9 (D,S) 1.00E+9 6.1E+7 Butyl benzyl phthalate 85687 1,200 2,700 (S) 67 (X) NLV NLV NLV 2,690 ID n-Butylbenzene 104518 80 230 ID ID ID NA ID sec-Butylbenzene 135988 80 230 ID ID ID NA ID t-Butylbenzene (I) 98066 80 230 ID ID ID NA ID	Bromomethane	74839	10						
2-Butanone (MEK) (I) 78933 13,000 38,000 2,200 2.4E+8 (S) 2.4E+8 (S) 2.40E+8 ID n-Butyl acetate 123864 550 1,600 NA 6.7E+6 (S) 6.7E+6 (S) 6.70E+6 2.5E+6 (F.Butyl alcohol 75650 3,900 11,000 NA 1.0E+9 (D,S) 1.0E+9 (D,S) 1.00E+9 6.1E+7 (D,S) n-Butyl benzyl phthalate 85687 1,200 2,700 (S) 67 (X) NLV NLV 2,690 ID n-Butylbenzene 104518 80 230 ID ID ID NA ID sec-Butylbenzene 135988 80 230 ID ID ID NA ID t-Butylbenzene (I) 98066 80 230 ID ID ID NA ID	n-Butanol (I)	71363	950	2.700					
n-Butyl acetate 123864 550 1,600 NA 6.7E+6 (S) 6.7E+6 (S) 6.70E+6 2.5E+6 (EButyl alcohol 75650 3,900 11,000 NA 1.0E+9 (D,S) 1.0E+9 (D,S) 1.00E+9 6.1E+7 (D)	2-Butanone (MEK) (I)	78933	13,000						
t-Butyl alcohol 75650 3,900 11,000 NA 1.0E+9 (D,S) 1.0E+9 (D,S) 1.00E+9 6.1E+7 Butyl benzyl phthalate 85687 1,200 2,700 (S) 67 (X) NLV NLV 2,690 ID n-Butylbenzene 104518 80 230 ID ID ID NA ID sec-Butylbenzene 135988 80 230 ID ID NA ID t-Butylbenzene (I) 98066 80 230 ID ID NA ID	n-Butyl acetate	123864	550						
Butyl benzyl phthalate 85687 1,200 2,700 (S) 67 (X) NLV NLV 2,690 ID n-Butylbenzene 104518 80 230 ID ID ID ID NA ID sec-Butylbenzene 135988 80 230 ID ID ID NA ID t-Butylbenzene (I) 98066 80 230 ID ID ID NA ID	t-Butyl alcohol	75650							
n-Butylbenzene 104518 80 230 ID ID ID NA ID sec-Butylbenzene 135988 80 230 ID ID ID NA ID t-Butylbenzene (I) 98066 80 230 ID ID ID NA ID	Butyl benzyl phthalate	85687							
sec-Butylbenzene 135988 80 230 ID ID ID NA ID t-Butylbenzene (I) 98066 80 330 ID ID ID NA ID	n-Butylbenzene	104518							
t-Butylbenzene (I) 98066 80 230 ID ID NA ID	sec-Butylbenzene	135988							
	t-Butylbenzene (I)	98066	80	230	ID	ID	ID	NA NA	ID

All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to 1 microgram per liter (ug/L). Criteria with 6 or more digits are expressed in scientific notation. For example, 200,000 is presented as 2.0E+5. A footnote is designated by a letter in parentheses and is explained in the footnote pages that follow the criteria tables. When the risk-based criterion is less than the target detection limit (TDL), the TDL is listed as the criterion (§324.20120a(10)). In these cases, 2 numbers

				TEST IS THE TIER DUT	oca or oorability vall	te, will chevel is low	CI	
Hazardous Substance	Chemical Abstract Service Number	Residential Drinking Water Criteria	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria	Water Solubility	Flammability and Explosivity Screening Level
Cadmium (B)	7440439	5.0 (A)	5.0 (A)	(G,X)	NLV	NLV	NA	ID
Camphene (I)	79925	ID	ID	NA	440	1,000	33,400	ID
Caprolactam	105602	5,800	17,000	NA	NLV	NLV	5.25E+9	NA
Carbaryl	63252	700	2,000	NA	ID	ID	1.26E+5	ID
Carbazole	86748	85	350	10 (M); 4.0	NLV	NLV	7,480	ID
Carbofuran	1563662	40 (A)	40 (A)	NA	NLV	NLV	7.00E+5	ID
Carbon disulfide (I,R)	75150	800	2,300	ID	2.5E+5	5.5E+5	1.19E+6	13,000
Carbon tetrachloride	56235	5.0 (A)	5.0 (A)	45 (X)	370	2,400	7.93E+5	15,000 ID
Chlordane (J)	57749	2.0 (A)	2.0 (A)	2.0 (M); 0.00025	56 (S)	56 (S)	56	ID
Chloride	16887006	2.5E+5 (E)	2.5E+5 (E)	(FF)	NLV	NLV	NA	ID
Chlorobenzene (I)	108907	100 (A)	100 (A)	25	2.1E+5	4.7E+5 (S)	4.72E+5	1.6E+5
p-Chlorobenzene sulfonic acid	98668	7,300	21,000	1D	ID	ID	NA	ID
1-Chloro-1,1-difluoroethane	75683	15,000	44,000	NA	3.9E+6 (S)	3.9E+6 (S)	3.90E+6	NA
Chloroethane	75003	430	1,700	1,100 (X)	5.7E+6 (S)	5.7E+6 (S)	5.74E+6	1.1E+5
2-Chloroethyl vinyl ether	110758	- ID	ID	NA	ID	ID	1.50E+7	ID
Chloroform	67663	80 (A,W)	80 (A,W)	350	28,000	1.8E+5	7.92E+6	ID
Chloromethane (I)	74873	260	1,100	ID	8,600	45,000	6.34E+6	36,000
4-Chloro-3-methylphenol	59507	150	420	7.4	NLV	NLV	3.90E+6	1D
beta-Chloronaphthalene	91587	1,800	5,200	NA	ID	ID	6,740	ID
2-Chlorophenol	95578	45	130	18	4.9E+5	1.1E+6	2.20E+7	ID
o-Chlorotoluene (I)	95498	150	420	ID	2.2E+5	3.7E+5 (S)	3.73E+5	ID
Chlorpyrifos	2921882	22	63	2.0 (M); 0.002	2.9	6.6	1,120	ال ID
Chromium (III) (B,H)	16065831	100 (A)	100 (A)	(G,X)	NLV NLV	NLV		
Chromium (VI)	18540299	100 (A)	100 (A)	11	NLV	NLV	NA NA	ID
Chrysene (Q)	218019	1.6 (S)	1.6 (S)	ID	ID	ID	NA 1.0	ID
Cobalt	7440484	40	100	100	NLV		1.6	ID
Copper (B)	7440508	1,000 (E)	1,000 (E)	(G)	NLV	NLV	NA	ID
Cyanazine	21725462	2.3	9.4	56 (X)		NLV	NA TOF 5	ID
		0	5.4	JO (A)	NLV	NLV	1.70E+5	ID

All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to 1 microgram per liter (ug/L). Criteria with 6 or more digits are expressed in scientific notation. For example, 200,000 is presented as 2.0E+5. A footnote is designated by a letter in parentheses and is explained in the footnote pages that follow the criteria tables. When the risk-based criterion is less than the target detection limit (TDL), the TDL is listed as the criterion (§324.20120a(10)). In these cases, 2 numbers

		II III		The state of the s		alac, Willond Vol 15 IC	11011	
Hazardous Substance	Chemical Abstract Service Number	Residential Drinking Water Criteria	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria	Water Solubility	Flammability and Explosivity Screening Level
Cyanide (P,R)	57125	200 (A)	200 (A)	5.2	NLV	NLV	NA	ID
Cyclohexanone	108941	33,000	94,000	NA	1,500	3,300	2.30E+7	NA
Dacthal	1861321	73	210	NA	NLV	NLV	500	ID
Dalapon	75990	200 (A)	200 (A)	NA	NLV	NLV	5.02E+8	ID
4-4'-DDD	72548	9.1	37	NA	NLV	NLV	90	ID
4-4'-DDE	72559	4.3	15	NA	NLV	NLV	120	ID
4-4'-DDT	50293	3.6	10	0.02 (M); 1.1E-5	NLV	NLV	25	NA
Decabromodiphenyl ether	1163195	30 (S)	30 (S)	NA	30 (S)	30 (S)	30	ID
Di-n-butyl phthalate	84742	880	2,500	9.7	NLV	NLV	11,200	NA
Di(2-ethylhexyl) adipate	103231	400 (A)	400 (A)	ID	NLV	NLV	471	ID
Di-n-octyl phthalate	117840	130	380	ID	NLV	NLV	3,000	ID
Diacetone alcohol (I)	123422	ID	ID	NA	NLV	NLV	1.00E+9	1.0E+9 (S)
Diazinon	333415	1.3	3.8	1.0 (M); 0.004	NLV	NLV	68,800	NA
Dibenzo(a,h)anthracene (Q)	53703	2.0 (M); 0.21	2.0 (M); 0.85	ID	NLV	NLV	2.49	ID
Dibenzofuran	132649	ID	1D	4	10,000 (S)	10,000 (S)	10,000	ID
Dibromochloromethane	124481	80 (A,W)	80 (A,W)	ID	14,000	1.1E+5	2.60E+6	ID
Dibromochloropropane	96128	0.2 (A)	0.2 (A)	ID	220	1,200 (S)	1,230	NA
Dibromomethane	74953	80	230	NA	ID	ID	1.10E+7	ID
Dicamba	1918009	220	630	NA	NLV	NLV	4.50E+6	ID
1,2-Dichlorobenzene	95501	600 (A)	600 (A)	13	1.6E+5 (S)	1.6E+5 (S)	1.56E+5	NA
1,3-Dichlorobenzene	541731	6.6	19	28	18,000	41,000	1.11E+5	ID
1,4-Dichlorobenzene	106467	75 (A)	75 (A)	17	16,000	74,000 (S)	73,800	NA
3,3'-Dichlorobenzidine	91941	1.1	4.3	0.3 (M); 0.2	NLV	NLV	3,110	ID
Dichlorodifluoromethane	75718	1,700	4,800	ID	2.2E+5	3.0E+5 (S)	3.00E+5	ID
1,1-Dichloroethane	75343	880	2,500	740	1.0E+6	2.3E+6	5.06E+6	3.8E+5
1,2-Dichloroethane (I)	107062	5.0 (A)	5.0 (A)	360 (X)	9,600	59,000	8.52E+6	2.5E+6
1,1-Dichloroethylene (i)	75354	7.0 (A)	7.0 (A)	130	200	1,300	2.25E+6	97,000
cis-1,2-Dichloroethylene	156592	70 (A)	70 (A)	620	93,000	2.1E+5	3.50E+6	5.3E+5

All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to 1microgram per liter (ug/L). Criteria with 6 or more digits are expressed in scientific notation. For example, 200,000 is presented as 2.0E+5. A footnote is designated by a letter in parentheses and is explained in the footnote pages that follow the criteria tables. When the risk-based criterion is less than the target detection limit (TDL), the TDL is listed as the criterion (§324.20120a(10)). In these cases, 2 numbers

La constantino	I to the offerior	(, IDL), al	id the second hu	line is the lisk-bas	ed of Solubility va	alue, whichever is lo	wer.	
Hazardous Substance	Chemical Abstract Service Number	Residential Drinking Water Criteria	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria	Water Solubility	Flammability and Explosivity Screening Level
trans-1,2-Dichloroethylene	156605	100 (A)	100 (A)	1,500 (X)	85,000	2.0E+5	6.30E+6	2.3E+5
2,6-Dichloro-4-nitroaniline	99309	2,200	6,300	NA	NLV	NLV	7,000	ID
2,4-Dichlorophenol	120832	73	210	11	NLV	NLV	4.50E+6	ID
2,4-Dichlorophenoxyacetic acid	94757	70 (A)	70 (A)	220	NLV	NLV	6.80E+5	ID
1,2-Dichloropropane (I)	78875	5.0 (A)	5.0 (A)	230 (X)	16,000	36,000	2.80E+6	5.5E+5
1,3-Dichloropropene	542756	8.5	35	9.0 (X)	3,900	26,000	2.80E+6	1.3E+5
Dichlorovos	62737	1.6	6.7	NA	NLV	NLV	1.60E+7	NA
Dicyclohexyl phthalate	84617	ID	1D	NA	ID	ID	4,000	ID
Dieldrin	60571	0.11	0.43	0.02 (M); 6.5E-6	200 (S)	200 (S)	195	ID
Diethyl ether	60297	10 (E)	10 (E)	ID	6.1E+7 (S)	6.1E+7 (S)	6.10E+7	6.5E+5
Diethyl phthalate	84662	5,500	16,000	110	NLV	NLV	1.08E+6	NA
Diethylene glycol monobutyl ether	112345	88	250	NA	NLV	NLV	1.00E+9	ID
Diisopropyl ether	108203	30	86	ID	8,000 (S)	8,000 (S)	8,041	8,000 (S)
Diisopropylamine (I)	108189	5.6	16	NA	2.1E+7	3.7E+7 (S)	3.69E+7	4.6E+6
Dimethyl phthalate	131113	73,000	2.10E+05	NA	NLV	NLV	4.19E+6	NA
N,N-Dimethylacetamide	127195	180	520	4,100 (X)	NLV	NLV	1.00E+9	NA
N,N-Dimethylaniline	121697	16	46	NA	2.4E+5	1.3E+6 (S)	1.27E+6	NA NA
Dimethylformamide (I)	68122	700	2,000	NA	NLV	NLV	1.00E+9	ID
2,4-Dimethylphenol	105679	370	1,000	380	NLV	NLV	7.87E+6	ID
2,6-Dimethylphenol	576261	4.4	13	NA	NLV	NLV	6.14E+6	ID
3,4-Dimethylphenol	95658	10	29	25	NLV	NLV	4.93E+6	ID
Dimethylsulfoxide	67685	2.2E+5	6.3E+5	1.9E+5	NLV	NLV	1.66E+8	ID
2,4-Dinitrotoluene	121142	7.7	32	NA	NLV	NLV	2.70E+5	1D
Dinoseb	88857	7.0 (A)	7.0 (A)	1.0 (M); 0.48	NLV	NLV	52,000	ID
1,4-Dioxane (I)	123911	7.2 (11)	350	2,800 (X)	NLV	NLV	9.00E+8	1.4E+8
Diquat	85007	20 (A)	20 (A)	20 (M); 6.0	NLV	NLV	7.00E+5	1.4E+8
Dissolved oxygen (DO)	NA	ID	ID	(EE)	ID	ID	NA NA	NA NA
Diuron	330541	31	90	NA	NLV	NLV	37,300	ID

All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to 1 microgram per liter (ug/L). Criteria with 6 or more digits are expressed in scientific notation. For example, 200,000 is presented as 2.0E+5. A footnote is designated by a letter in parentheses and is explained in the footnote pages that follow the criteria tables. When the risk-based criterion is less than the target detection limit (TDL), the TDL is listed as the criterion (§324.20120a(10)). In these cases, 2 numbers

Hazardous Substance	Chemical Abstract Service Number	Residential Drinking Water Criteria	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria	Water Solubility	Flammability and Explosivity Screening Level
Endosulfan (J)	115297	44	130	0.03 (M); 0.029	ID	ID	510	ID
Endothail	145733	100 (A)	100 (A)	NA	NLV	NLV	1.00E+8	. ID
Endrin	72208	2.0 (A)	2.0 (A)	ID	NLV	NLV	250	ID
Epichlorohydrin (I)	106898	5.0 (M); 2.0 (A)	5.0 (M); 2.0 (A)	NA	3.2E+5	6.3E+5	6.60E+7	4.7E+7
Ethanol (I)	64175	1.9E+6	3.8E+6	ID	NLV	NLV	1.00E+9	9.7E+7
Ethyl acetate (i)	141786	6,600	19,000	NA	6.4E+7 (S)	6.4E+7 (S)	6.40E+7	4.2E+6
Ethyl-tert-butyl ether (ETBE)	637923	49 (E)	49 (E)	ID	2.9E+6	5.6E+6 (S)	5.63E+6	ID
Ethylbenzene (I)	100414	74 (E)	74 (E)	18	1.1E+5	1.7E+5 (S)	1.69E+5	43,000
Ethylene dibromide	106934	0.05 (A)	0.05 (A)	5.7 (X)	2,400	15,000	4.20E+6	ID
Ethylene glycol	107211	15,000	42,000	1.9E+5 (X)	NLV	NLV	1.00E+9	NA
Ethylene glyco! monobutyl ether	111762	3,700	10,000	NA	2.9E+6	6.5E+6	2.24E+8	NA
Fluoranthene	206440	210 (S)	210 (S)	1.6	210 (S)	210 (S)	206	ID
Fluorene	86737	880	2,000 (S)	12	2,000 (S)	2,000 (S)	1,980	ID
Fluorine (soluble fluoride) (B)	7782414	2,000 (E)	2,000 (E)	ID	NLV	NLV	NA	ID
Formaldehyde	50000	1,300	3,800	120	63,000	3.6E+5	5.50E+8	ID
Formic acid (I,U)	64186	10,000	29,000	ID	7.7E+6	1.5E+7	1.00E+9	1.0E+9 (D)
1-Formylpiperidine	2591868	80	230	NA	ID	ID	NA NA	ID
Gentian violet	548629	15	63	NA	NLV	NLV	1.00E+6	ID
Glyphosate	1071836	700 (A)	700 (A)	NA	NLV	NLV	1.16E+7	ID
Heptachlor	76448	0.4 (A)	0.4 (A)	0.01 (M); 0.0018	180 (S)	180 (S)	180	ID
Heptachlor epoxide	1024573	0.2 (A)	0.2 (A)	ID	NLV	NLV	200	ID
n-Heptane	142825	2,700 (S)	2,700 (S)	NA	2,700 (S)	2,700 (S)	2,690	200
Hexabromobenzene	87821	0.17 (S); 20	0.17 (S); 58	ID	ID	ID	0.17	ID
Hexachlorobenzene (C-66)	118741	1.0 (A)	1.0 (A)	0.2 (M); 0.0003	440	3,000	6,200	ID
Hexachlorobutadiene (C-46)	87683	15	42	0.053	1,600	3,200 (S)	3,230	
alpha-Hexachlorocyclohexane	319846	0.43	1.7	ID	2,000 (S)	2,000 (S)		ID
beta-Hexachlorocyclohexane	319857	0.88	3.6	ID	NLV	2,000 (S) NLV	2,000	ID_
Hexachlorocyclopentadiene (C-56)	77474	50 (A)	50 (A)	ID	130	420	240 1,800	ID ID

All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to 1 microgram per liter (ug/L). Criteria with 6 or more digits are expressed in scientific notation. For example, 200,000 is presented as 2.0E+5. A footnote is designated by a letter in parentheses and is explained in the footnote pages that follow the criteria tables. When the risk-based criterion is less than the target detection limit (TDL), the TDL is listed as the criterion (§324.20120a(10)). In these cases, 2 numbers

are present in the cen. The first numb	Or to the think	lion (i.e., TDL), and	die second number i	s the risk-based of	Residential	Nonresidential		
Hazardous Substance	Chemical Abstract Service Number	Residential Drinking Water Criteria	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Groundwater Volatilization to Indoor Air Inhalation Criteria	Groundwater Volatilization to Indoor Air Inhalation Criteria	Water Solubility	Flammability and Explosivity Screening Level
Hexachloroethane	67721	7.3	21	6.7 (X)	27,000	50,000 (S)	50,000	ID
n-Hexane	110543	3,000	8,600	NA NA	12,000 (S)	12,000 (S)	12,000	12,000 (S)
2-Hexanone	591786	1,000	2,900	ID	4.2E+6	8.7E+6	1.60E+7	NA
Indeno(1,2,3-cd)pyrene (Q)	193395	2.0 (M); 0.022 (S)	2.0 (M); 0.022 (S)	ID	NLV	NLV	0.022	1D
Iron (B)	7439896	300 (E)	300 (E)	NA	NLV	NLV	NA	ID
Isobutyl alcohol (I)	78831	2,300	6,700	NA	7.6E+7 (S)	7.6E+7 (S)	7.60E+7	ID
Isophorone	78591	770	3,100	1,300 (X)	NLV	NLV	1.20E+7	ID
Isopropyl alcohol (I)	67630	470	1,300	57,000 (X)	NLV	NLV	1.00E+9	6.0E+7
Isopropyl benzene	98828	800	2,300	28	56,000 (S)	56,000 (S)	56,000	29,000
Lead (B)	7439921	4.0 (L)	4.0 (L)	(G,X)	NLV	NLV	NA	ID
Lindane	58899	0.2 (A)	0.2 (A)	0.03 (M); 0.026	ID	ID	6,800	ID
Lithium (B)	7439932	170	350	440	NLV	NLV	NA	ID
Magnesium (B)	7439954	4.0E+5	1.1E+6	NA	NLV	NLV	NA	ID
Manganese (B)	7439965	50 (E)	50 (E)	(G,X)	NLV	NLV	NA	ID
Mercury (Total) (B,Z)	Varies	2.0 (A)	2.0 (A)	0.0013	56 (S)	56 (S)	56	ID
Methane	74828	ID	ID	NA	(K)	(K)	NA	(AA)
Methanol	67561	3,700	10,000	5.9E+5 (X)	2.9E+7 (S)	2.9E+7 (S)	2.90E+7	4.5E+6
Methoxychlor	72435	40 (A)	40 (A)	NA	ID	ID	45	ID
2-Methoxyethanol (I)	109864	7.3	21	NA	NLV	NLV	1.00E+9	ID
2-Methyl-4-chlorophenoxyacetic acid	94746	7.3	21	NA	NLV	NLV	9.24E+5	ID
2-Methyl-4,6-dinitrophenol	534521	20 (M); 2.6	20 (M); 7.3	NA	NLV	NLV	2.00E+5	ID
N-Methyl-morpholine (I)	109024	20	56	NA	NLV	NLV	1.00E+9	ID
Methyl parathion	298000	1.8	5.2	NA	NLV	NLV	50,000	ID
4-Methyl-2-pentanone (MIBK) (I)	108101	1,800	5,200	ID	2.0E+7 (S)	2.0E+7 (S)	2.00E+7	ID ID
Methyl-tert-butyl ether (MTBE)	1634044	40 (E)	40 (E)	7,100 (X)	4.7E+7 (S)	4.7E+7 (S)	4.68E+7	ID
Methylcyclopentane (I)	96377	ID	ID	NA	22,000	49,000	73,890	ID
4,4'-Methylene-bis-2- chloroaniline	101144	1.1	4.5	NA	NLV	NLV	14,000	ID
Methylene chloride	75092	5.0 (A)	5.0 (A)	1,500 (X)	2.2E+5	1.4E+6	1.70E+7	ID

All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to 1 microgram per liter (ug/L). Criteria with 6 or more digits are expressed in scientific notation. For example, 200,000 is presented as 2.0E+5. A footnote is designated by a letter in parentheses and is explained in the footnote pages that follow the criteria tables. When the risk-based criterion is less than the target detection limit (TDL), the TDL is listed as the criterion (§324.20120a(10)). In these cases, 2 numbers

are present in the cell. The first number is the criterion (i.e., TDL), and the second number is the risk-based or solubility value, whichever is lower. Residential Nonresidential Groundwater Groundwater Flammability Nonresidential Groundwater Chemical Residential Drinking Volatilization Volatilization to Water and Explosivity Drinking Water Surface Water Abstract Water Criteria to Indoor Air Indoor Air Solubility Screening Criteria Interface Criteria Service Inhalation Inhalation Level Hazardous Substance Number Criteria Criteria 2-Methylnaphthalene 91576 260 750 19 25,000 (S) 25,000 (S) 24,600 ID Methylphenols (J) 1319773 370 1.000 30 (M): 25 NLV NLV 2.80E+7 NA Metolachlor 51218452 240 990 15 NLV NLV 5.30E+5 ID Metribuzin 21087649 180 520 NA ID ID 1.20E+6 ID Mirex 2385855 0.02 (M); 6.8E-6 (S) 0.02 (M); 6.8E-6 (S) 0.02 (M); 6.8E-6 (S) D ID 6.80E-6 NA Molybdenum (B) 7439987 73 210 3,200 (X) NLV NLV NA ID Naphthalene 91203 520 1,500 11 31,000 (S) 31,000 (S) 31.000 NA Nickel (B) 7440020 100 (A) 100 (A) (G) NLV NLV NA ID Nitrate (B,N) 14797558 10,000 (A,N) 10,000 (A.N) ID NLV NLV NA ID Nitrite (B,N) 14797650 1,000 (A,N) 1,000 (A.N) NA NLV NLV NA ID Nitrobenzene (1) 98953 3.4 9.6 180 (X) 2.8E+5 5.5E+5 2.09E+6 NA 2-Nitrophenol 88755 20 58 ID NLV NLV 2.50E+6 ID n-Nitroso-di-n-propylamine 621647 5.0 (M); 0.19 5.0 (M): 0.77 NA NLV NLV 9.89E+6 ID N-Nitrosodiphenylamine 86306 270 1,100 NA NLV NLV 35,100 ID Oxamvl 23135220 200 (A) 200 (A) NA NLV NLV 2.80E+8 ID Oxo-hexyl acetate 88230357 73 210 NA ID ID NA ID Pendimethalin 40487421 280 (S) 280 (S) NA NLV NLV 275 ID Pentachlorobenzene 608935 6.1 17 5.0 (M); 0.019 ID ID 650 ID Pentachloronitrobenzene 82688 32 (S) 32 (S) NA 32 (S) 32 (S) 32 ID Pentachlorophenol 87865 1.0 (A) 1.0 (A) (G.X) NLV NLV 1.85E+6 ID Pentane 109660 ID ID NA 38,000 (S) 38.000 (S) 38.200 340 2-Pentene (I) 109682 ID ID NA ID ID 2.03E+5 ID NA 6.5 to 8.5 (E) 6.5 to 8.5 (E) 6.5 to 9.0 ID ID NA NA Phenanthrene 85018 52 150 2.0 (M); 1.4 1,000 (S) 1,000 (S) 1.000 ID Phenol 108952 4.400 13,000 450 NLV NLV 8.28E+7 NA Phenytoin 57410 17 68 89 (X) NLV NLV 32,000 ID Phosphorus (Total) 7723140 63,000 2.40E+05 (EE) NLV NLV NA ID Phthalic acid 88993 14,000 40.000 NA NLV NLV

1.42E+7

ID

All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to 1 microgram per liter (ug/L). Criteria with 6 or more digits are expressed in scientific notation. For example, 200,000 is presented as 2.0E+5. A footnote is designated by a letter in parentheses and is explained in the footnote pages that follow the criteria tables. When the risk-based criterion is less than the target detection limit (TDL), the TDL is listed as the criterion (§324.20120a(10)). In these cases, 2 numbers

	- till billolloll	(mon, rou), and	the account mum	per is the lisk-hased of	Solubility value	whichever is lower.		
Hazardous Substance	Chemical Abstract Service Number	Residential Drinking Water Criteria	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria	Water Solubility	Flammability and Explosivity Screening Level
Phthalic anhydride	85449	15,000	44,000	NA NA	NLV	NLV	6.20E+6	NA
Picloram	1918021	500 (A)	500 (A)	46	NLV	NLV	4.30E+5	ID
Piperidine	110894	3.2	9.2	NA	NLV	NLV	1.00E+9	ID
Polybrominated biphenyls (J)	67774327	0.03	0.09	ID	NLV	NLV	1.66E+7	ID
Polychlorinated biphenyls (PCBs) (J,T)	1336363	0.5 (A)	0.5 (A)	0.2 (M); 2.6E-5	45 (S)	45 (S)	44.7	ID
Prometon	1610180	160	460	NA	NLV	NLV	7.50E+5	ID
Propachlor	1918167	95	270	NA	NLV	NLV	6.55E+5	ID
Propazine	139402	200	560	NA	NLV	NLV	8,600	ID
Propionic acid	79094	12,000	35,000	ID	NLV	NLV	1.00E+9	1.0E+9 (D)
Propyl alcohol (I)	71238	1,400	4,000	NA	NLV	NLV	1.00E+9	7.1E+7
n-Propylbenzene (I)	103651	80	230	ID	ID	iD	NA NA	ID
Propylene glycol	57556	1.5E+5	4.2E+5	2.9E+5	NLV	NLV	1.00E+9	ID
Pyrene	129000	140 (S)	140 (S)	ID	140 (S)	140 (S)	135	ID
Pyridine (I)	110861	20 (M); 7.3	21	NA	5,500	12,000	3.00E+5	81,000
Selenium (B)	7782492	50 (A)	50 (A)	5	NLV	NLV	NA	ID
Silver (B)	7440224	34	98	0.2 (M); 0.06	NLV	NLV	NA NA	ID
Silvex (2,4,5-TP)	93721	50 (A)	50 (A)	30	NLV	NLV	1.40E+5	ID
Simazine	122349	4.0 (A)	4.0 (A)	17	NLV	NLV	4,470	ID
Sodium	17341252	2.3E+S(HH)	3.5E+5	NA	NLV	NLV	NA	ID
Sodium azide	26628228	88	250	50 (M); 7.3	ID	ID	NA NA	ID ID
Strontium (B)	7440246	4,600	13,000	21,000	NLV	NLV	NA	ID
Styrene	100425	100 (A)	100 (A)	80 (X)	1.7E+5	3.1E+5 (S)	3.10E+5	1.4E+5
Sulfate	14808798	2.5E+5 (E)	2.5E+5 (E)	NA NA	NLV	NLV	NA NA	1,42+3
Tebuthiuron	34014181	510	1,500	NA	NLV	NLV	2.50E+6	ID
2,3,7,8-Tetrabromodibenzo-p-dioxin (O)	50585416	(0)	(O)	(0)	NLV	NLV	0.00996	ID
1,2,4,5-Tetrachlorobenzene	95943	1,300 (S)	1,300 (S)	2.9 (X)	1,300 (S)	1,300 (S)	1,300	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (O)	1746016	3.0E-5 (A)	3.0E-5 (A)	1.0E-5 (M); 3.1E-9	1,300 (3) NLV	1,300 (S) NLV	0.019	ID
1,1,1,2-Tetrachloroethane	630206	77	320	ID	15,000	96,000	1.10E+6	ID ID

All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to 1 microgram per liter (ug/L). Criteria with 6 or more digits are expressed in scientific notation. For example, 200,000 is presented as 2.0E+5. A footnote is designated by a letter in parentheses and is explained in the footnote pages that follow the criteria tables. When the risk-based criterion is less than the target detection limit (TDL), the TDL is listed as the criterion (§324.20120a(10)). In these cases, 2 numbers

as process in the cont. The machamber	5 the chterion	i.e., IDL), and	a trie second nun	iner is the lisk-bas	ed or solubility vall	ue, whichever is low	/er.	
Hazardous Substance	Chemical Abstract Service Number	Residential Drinking Water Criteria	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria	Water Solubility	Flammability and Explosivity Screening Level
1,1,2,2-Tetrachloroethane	79345	8.5	35	78 (X)	12,000	77,000	2.97E+6	ID
Tetrachloroethylene	127184	5.0 (A)	5.0 (A)	60 (X)	25,000	1.7E+5	2.00E+5	1D
Tetrahydrofuran	109999	95	270	11,000 (X)	6.9E+6	1.6E+7	1.00E+9	60,000
Tetranitromethane	509148	ID	ID	NA	580	3,200	85,000	ID
Thallium (B)	7440280	2.0 (A)	2.0 (A)	3.7 (X)	NLV	NLV	NA	1D
Toluene (I)	108883	790 (E)	790 (E)	270	5.3E+5 (S)	5.3E+5 (S)	5.26E+5	61,000
p-Toluidine	106490	15	62	NA	NLV	NLV	7.60E+6	NA
Total dissolved solids (TDS)	NA	5.0E+5 (E)	5.0E+5 (E)	(EE)	ID	ID	NA	NA
Toxaphene	8001352	3.0 (A)	3.0 (A)	1.0 (M); 6.8E-5	NLV	NLV	740	ID
Triallate	2303175	95	270	NA	ID	ID	4,000	ID
Tributylamine	102829	10	29	ID	14,000	32,000	75,400	ID
1,2,4-Trichlorobenzene	120821	70 (A)	70 (A)	99 (X)	3.0E+5 (S)	3.0E+5 (S)	3.00E+5	NA
1,1,1-Trichloroethane	71556	200 (A)	200 (A)	89	6.6E+5	1.3E+6 (S)	1.33E+6	ID
1,1,2-Trichloroethane	79005	5.0 (A)	5.0 (A)	330 (X)	17,000	1.1E+5	4.42E+6	NA
Trichloroethylene	79016	5.0 (A)	5.0 (A)	200 (X)	2,200	4,900	1.10E+6	ID
Trichlorofluoromethane	75694	2,600	7,300	NA	1.1E+6 (S)	1.1E+6 (S)	1.10E+6	ID
2,4,5-Trichlorophenol	95954	730	2,100	NA	NLV	NLV	1.20E+6	ID
2,4,6-Trichlorophenol	88062	120	470	5	NLV	NLV	8.00E+5	ID
1,2,3-Trichloropropane	96184	42	120	NA	8,300	18,000	1.90E+6	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	1.7E+5 (S)	1.7E+5 (S)	32	1.7E+5 (S)	1.7E+5 (S)	1.70E+5	ID
Triethanolamine	102716	3,700	10,000	NA	NLV	NLV	1.00E+9	ID
Triethylene glycol	112276	4,300	12,000	NA	NLV	NLV	1.00E+6	ID
3-Trifluoromethyl-4-nitrophenol	88302	4,500	13,000	NA	NLV	NLV	5.00E+6	ID
Trifluralin	1582098	37	110	NA	ID	ID	8,100	ID
2,2,4-Trimethyl pentane	540841	ID	ID	NA	2,300 (S)	2,300 (S)	2,330	160
2,4,4-Trimethyl-2-pentene (I)	107404	ID	ID	NA	ID	ID	11,900	1D
1,2,4-Trimethylbenzene (I)	95636	63 (E)	63 (E)	17	56,000 (S)	56,000 (S)	55,890	56,000 (S)
1,3,5-Trimethylbenzene (I)	108678	72 (E)	72 (E)	45	61,000 (S)	61,000 (S)	61,150	1D

All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to 1 microgram per liter (ug/L). Criteria with 6 or more digits are expressed in scientific notation. For example, 200,000 is presented as 2.0E+5. A footnote is designated by a letter in parentheses and is explained in the footnote pages that follow the criteria tables. When the risk-based criterion is less than the target detection limit (TDL), the TDL is listed as the criterion (§324.20120a(10)). In these cases, 2 numbers

Hazardous Substance	Chemical Abstract Service Number	Residential Drinking Water Criteria	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria	Water Solubility	Flammability and Explosivity Screening Level
Triphenyl phosphate	115866	1,200	1,400 (S)	NA	NLV	NLV	1,430	ID
tris(2,3-Dibromopropyl)phosphate	126727	10 (M); 0.71	10 (M); 2.9	ID	4,700 (S)	4,700 (S)	4,700	ID
Urea	57136	ID	ID	NA	NLV	NLV	NA	ID
Vanadium	7440622	4.5	62	27	NLV	NLV	NA	ID
Vinyl acetate (I)	108054	640	1,800	NA	4.1E+6	8.9E+6	2.00E+7	1.8E+6
Vinyl chloride	75014	2.0 (A)	2.0 (A)	13 (X)	1,100	13,000	2.76E+6	33,000
White phosphorus (R)	12185103	0.11	0.31	NA	NLV	NLV	NA	ID
Xylenes (I)	1330207	280 (E)	280 (E)	41	1.9E+5 (S)	1.9E+5 (S)	1.86E+5	70,000
Zinc (B)	7440666	2,400	5,000 (E)	(G)	NLV	NLV	NA NA	ID

TABLE 1a. PER- AND POLYFLUOROALKYL SUBSTANCES GROUNDWATER: RESIDENTIAL AND NONRESIDENTIAL PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to 1 microgram per liter (ug/L). Criteria with 6 or more digits are expressed in scientific notation. For example, 200,000 is presented as 2.0E+5. A footnote is designated by a letter in parentheses and is explained in the footnote pages that follow the criteria tables. Pursuant to section 20120a(10) of the act, MCL 324.20120a, when the risk-based criterion is less than the target detection limit (TDL), the TDL is listed as the criterion. In these cases, 2 numbers are present in the cell. The first number is the criterion (i.e., TDL), and the second number is the risk-based or solubility value, whichever is lower.

Hazardous Substance	Chemical Abstract Service Number	Residential Drinking Water Criteria	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria	Water Solubility	Flammability and Explosivity Screening Level
Hexafluoropropylene oxide dimer acid	13252136	0.37 (A)	0.37 (A)	NA	ID	ID	NA	NA
Perfluorobutane sulfonic acid	375735	0.42 (A)	0.42 (A)	NA	ID	ID	NA	NA
Perfluorohexane sulfonic acid	355464	0.051 (A)	0.051 (A)	NA	ID	ID	NA	NA
Perfluorohexanoic acid	307244	400 (A)	400 (A)	NA	ID	ID	NA.	NA
Perfluorononanoic acid	375951	0.006 (A)	0.006 (A)	NA	ID	ID	NA.	NA NA
Perfluorooctanoic acid (DD)	335671	0.008 (A)	0.008 (A)	12 (X)	ID	ID	9.50E+06	NA
Perfluorooctane sulfonic acid (DD)	1763231	0.016 (A)	0.016 (A)	0.012 (X)	NLV	NLV	3.1	NA

FILED WITH SECRETARY OF STATE

ON 2/15/27 AT 11:31 A.M.