

On April 14, 2016, the Michigan Department of Environmental Quality (MDEQ) Remediation and Redevelopment Division submitted to the Office of Regulatory Reinvention (ORR) a comprehensive revision of the administrative rules for Cleanup Criteria Requirements for Response Activity under the Environmental Remediation section of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). Below is a summary of the schedule and major changes related to the cleanup criteria.

## Schedule

- Following review of the administrative rules by the ORR and Legislative Service Bureau (LSB), the MDEQ intends to hold a series of informal public information meetings across the State, followed by a public hearing in July (which will start the formal public comment period). The final draft rules will be submitted to the Joint Committee on Administrative Rules (JCAR) in September 2016 with the goal of having the rules promulgated by the end of 2016.
- The criteria will take effect immediately upon promulgation and submittals in the MDEQ review process will not be exempted (grandfathered) from the new criteria rules. Consequently, clients with sites that may be materially affected by the proposed changes (and would benefit from reliance on existing criteria) may want to consider expediting submittals (e.g., NFA determinations, response activity plans) taking into account the 180 days allowed for MDEQ review.

## Vapor intrusion changes

- The soil and groundwater volatilization to indoor air inhalation criteria (SVIIC, GVIIC) have been removed and replaced with vapor intrusion (VI) Tier 1 screening levels for soil, groundwater and vapor.
- A new, sequential step-by-step approach has been added to assess the VI pathway (see attached Figure 1).
- Tier 1 screening levels are based on conservative (“worst-case”) assumptions regarding geologic conditions and unrestricted residential use of the property. Exceedance of the Tier 1 screening levels does not identify a site as a Part 201 “facility”.
- Tier 2 criteria are also based on conservative assumptions regarding unrestricted residential use of the property but incorporate property-specific geologic information. Tier 2 criteria are considered generic criteria and exceedance of the Tier 2 criteria will identify a site as a Part 201 “facility”.
- Tier 3A criteria incorporate site-specific information including geology, land use (e.g., non-residential) and building conditions. Tier 3A criteria can be used for non-residential closures but a land use restriction may also be required.
- Tier 3B criteria incorporate site-specific information in an alternate method or model approved by the MDEQ.
- A calculator will be made available through the MDEQ web page to facilitate calculation of Tier 2 and Tier 3A VI criteria. The VI calculator is in the final stages of development by the MDEQ and should be available to the public within 1-2 months.

## Major exposure and toxicity changes

- Residential drinking water pathway: the receptor has been changed from adults-only to children-and-adults which generally results in lower criteria (except for those that default to the MCL).
- Chemical-specific adjustments for mutagenic carcinogens have been added which results in lower criteria for these chemicals.
- Chemical-specific adjustments for non-carcinogenic developmental and reproductive toxins have been added which results in lower criteria for these chemicals.
- Michigan-specific data were used for input values when available.

## Transparency changes

- Abbreviations that identify the basis for each criterion (carcinogen, developmental toxin, etc.) are embedded in the criteria tables.
- References for each toxicity, chemical-specific and chemical-physical property are tabulated in the rules.
- The equation for the flammability and explosivity screening level (FESL) has been added to the rules.
- The MDEQ will also maintain worksheets for each chemical that detail the data and decisions used to calculate the criteria. The intent is to make these worksheets available to the public through the MDEQ web page.

## Flexibility

- The rules allow the use of department-approved generic values for soil type and soil temperature that may be used to calculate facility-specific criteria that are still considered generic for the purpose of closure.
- A calculator will be made available through the MDEQ web page to facilitate calculation of site-specific criteria. The timeframe for availability of this calculator is unknown as it is subject to contractual arrangements with a third-party contractor.

## Draft Criteria

- The attached tables compare the 2013 criteria to the proposed criteria for a select group of commonly analyzed compounds. (Note that this is not a comprehensive list of all changes to the Part 201 cleanup criteria.)
- 15 new chemicals have been added to the proposed criteria tables.
- Criteria for individual carcinogenic polynuclear aromatic hydrocarbons (cPAH) have been removed from the criteria tables. In the proposed rules, each cPAH concentration must be expressed as an equivalent concentration of benzo(a)pyrene using a toxicity equivalent factor (TEF). Then, all TEF-adjusted concentrations must be added together and compared to the criteria for benzo(a)pyrene.

If you have any questions about the proposed Part 201 cleanup criteria administrative rules, please contact Steve Crider in the Ann Arbor office (734.922.4422) or Karen Hathaway in the Grand Rapids office (616.512.7015).

	Statewide Default Background		Residential Drinking Water Protection		Nonresidential Drinking Water Protection Criteria		Residential Direct Contact		Nonresidential Direct Contact		Residential Particulate Soil Inhalation Criteria		Nonresidential Particulate Soil Inhalation Criteria		Residential VSIC		Nonresidential VSIC			
	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016		
Hazardous Substance	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016		
BTEX	Benzene (I, KK)	NA	NA	100	100	100	100	1.80E+05	1.10E+05	8.40E+05	4.30E+05	3.80E+08	1.60E+08	4.70E+08	3.70E+08	13,000	4,400	45,000	8,200	
	Toluene (I)	NA	NA	16,000	9,400	16,000	16,000	5.00E+07	2.00E+07	1.60E+08	6.70E+07	2.70E+10	2.60E+11	1.20E+10	3.70E+11	2.80E+06	8.50E+06	3.30E+06	9.90E+06	
	Ethylbenzene (I)	NA	NA	1,500	1,300	1,500	1,500	2.20E+07	5.50E+05	7.10E+07	3.00E+06	1.00E+10	5.00E+08	1.30E+10	1.10E+09	7.20E+05	22,000	2.40E+06	41,000	
	Xylenes (I, J)	NA	NA	5,600	5,600	5,600	5,600	4.10E+08	5.00E+07	1.00E+09	1.00E+08	2.90E+11	1.10E+10	1.30E+11	1.60E+10	4.60E+07	5.00E+05	5.40E+07	5.80E+05	
TMBs	1,2,3-Trimethylbenzene (I)	NA	NA		2,500		2,700		5.00E+06		1.70E+07		2.60E+08		3.70E+08		19,000		22,000	
	1,2,4-Trimethylbenzene (I)	NA	NA	2,100	1,300	2,100	1,300	3.20E+07	5.00E+06	1.00E+08	1.70E+07	8.20E+10	3.60E+08	3.60E+10	5.10E+08	2.10E+07	22,000	2.50E+07	25,000	
	1,3,5-Trimethylbenzene (I)	NA	NA	1,800	1,500	1,800	1,500	3.20E+07	5.00E+06	1.00E+08	1.70E+07	8.20E+10	2.60E+09	3.60E+10	3.70E+09	1.60E+07	1.30E+05	1.90E+07	1.50E+05	
Chlorinated VOCs	Tetrachloroethylene (KK)	NA	NA	100	100	100	100	2.00E+05	1.50E+06	9.30E+05	5.10E+06	2.70E+09	2.00E+09	1.20E+09	2.90E+09	170,000	38,000	2.10E+05	45,000	
	Trichloroethylene (DD, KK, MM, NN)	NA	NA	100	100	100	100	5.00E+05	33,000	6.60E+05	2.50E+05	1.30E+08	9.80E+07	5.90E+07	9.60E+07	11,000	1,700	14,000	1,400	
	1,1-Dichloroethylene (I, KK)	NA	NA	140	140	140	140	2.00E+05	1.20E+07	6.60E+05	4.30E+07	6.20E+07	1.00E+10	7.80E+07	1.50E+10	1,100	1.00E+05	3,700	1.20E+05	
	cis-1,2-Dichloroethylene	NA	NA	1,400	1,400	1,400	1,400	2.50E+06	5.00E+05	8.00E+06	1.70E+06	2.30E+09	4.10E+08	1.00E+09	5.90E+08	1.80E+05	8,000	2.10E+05	9,300	
	trans-1,2-Dichloroethylene	NA	NA	2,000	2,000	2,000	2,000	3.80E+06	5.00E+06	1.20E+07	1.70E+07	4.70E+09	4.10E+09	2.10E+09	5.90E+09	2.80E+05	62,000	3.30E+05	72,000	
	1,1-Dichloroethane	NA	NA	18,000	24,000	50,000	76,000	2.70E+07	5.00E+07	8.70E+07	1.00E+08	3.30E+10	2.60E+10	1.50E+10	3.70E+10	2.10E+06	4.20E+05	2.50E+06	4.90E+05	
	1,2-Dichloroethane (I, KK)	NA	NA	100	100	100	100	91,000	67,000	4.20E+05	3.60E+05	1.20E+08	4.80E+07	1.50E+08	1.10E+08	6,200	1,700	21,000	3,100	
	Vinyl chloride (KK, LL, MM)	NA	NA	40	40	40	40	3,800	2,300	34,000	24,000	3.50E+08	1.20E+08	8.90E+08	3.20E+08	4,200	980	29,000	2,200	
	PAHs	Acenaphthene	NA	NA	3.00E+05	58,000	8.80E+05	1.80E+05	4.10E+07	1.50E+07	1.30E+08	5.10E+07	1.40E+10	1.10E+10	6.20E+09	1.50E+10	8.10E+07	1.20E+07	9.70E+07	1.40E+07
		Acenaphthylene	NA	NA	5,900	58,000	17,000	1.80E+05	1.60E+06	1.50E+07	5.20E+06	5.10E+07	2.30E+09	1.10E+10	1.00E+09	1.50E+10	2.20E+06	1.60E+07	2.70E+06	1.80E+07
Anthracene		NA	NA	41,000	23,000	41,000	23,000	2.30E+08	7.50E+07	7.30E+08	1.00E+08	6.70E+10	5.10E+10	2.90E+10	7.30E+10	1.40E+09	2.10E+08	1.60E+09	2.40E+08	
Benzo(a)anthracene (Q, MM)		NA	NA	NLL	Q	NLL	Q	20,000	Q	80,000	Q	ID	Q	ID	Q	NLV	NA	NLV	NA	
Benzo(b)fluoranthene (Q, MM)		NA	NA	NLL	Q	NLL	Q	20,000	Q	80,000	Q	ID	Q	ID	Q	ID	NA	ID	NA	
Benzo(k)fluoranthene (Q, MM)		NA	NA	NLL	Q	NLL	Q	2.00E+05	Q	8.00E+05	Q	ID	Q	ID	Q	NLV	NA	NLV	NA	
Benzo(g,h,i)perylene		NA	NA	NLL	62,000	NLL	62,000	2.50E+06	7.10E+05	7.00E+06	2.10E+06	8.00E+08	3.60E+08	3.50E+08	5.10E+08	NLV	NA	NLV	NA	
Benzo(a)pyrene (Q, DD, MM)		NA	NA	NLL	3,800	NLL	3,800	2,000	2,800	8.00E+03	41,000	1.50E+06	98	1.90E+06	96	NLV	NA	NLV	NA	
cPAH (Q)		NA	NA		3,800		3,800		2,800		41,000		98		96		NA		NA	
Chrysene (Q, MM)		NA	NA	NLL	Q	NLL	Q	2.00E+06	Q	8.00E+06	Q	ID	Q	ID	Q	ID	NA	ID	NA	
Dibenzo(a,h)anthracene (Q, MM)		NA	NA	NLL	Q	NLL	Q	2,000	Q	8,000	Q	ID	Q	ID	Q	NLV	NA	NLV	NA	
Fluoranthene		NA	NA	7.30E+05	430,000	7.30E+05	4.60E+05	4.60E+07	1.60E+07	1.30E+08	4.90E+07	9.30E+09	7.20E+09	4.10E+09	1.00E+10	7.40E+08	NA	8.90E+08	NA	
Fluorene		NA	NA	3.90E+05	70,000	8.90E+05	2.20E+05	2.70E+07	1.00E+07	8.70E+07	3.40E+07	9.30E+09	7.20E+09	4.10E+09	1.00E+10	1.30E+08	1.30E+07	1.50E+08	1.50E+07	
Indeno(1,2,3-cd)pyrene (Q, MM)		NA	NA	NLL	Q	NLL	Q	20,000	Q	80,000	Q	ID	Q	ID	Q	NLV	NA	NLV	NA	
2-Methylnaphthalene		NA	NA	57,000	1,900	1.70E+05	6,100	8.10E+06	1.00E+06	2.60E+07	3.40E+06	6.70E+08	5.10E+08	2.90E+08	7.30E+08	1.50E+06	2.30E+05	1.80E+06	2.70E+05	
Naphthalene		NA	NA	35,000	29,000	1.00E+05	9.50E+04	1.60E+07	2.50E+07	5.20E+07	8.50E+07	2.00E+08	3.70E+07	8.80E+07	8.40E+07	3.00E+05	13,000	3.50E+05	24,000	
Phenanthrene		NA	NA	56,000	96,000	1.60E+05	3.00E+05	1.60E+06	7.50E+06	5.20E+06	2.60E+07	6.70E+06	5.10E+06	2.90E+06	7.30E+06	1.60E+05	24,000	1.90E+05	28,000	
Pyrene	NA	NA	4.80E+05	2.40E+05	4.80E+05	2.40E+05	2.90E+07	1.20E+07	8.40E+07	3.70E+07	6.70E+09	5.10E+09	2.90E+09	7.30E+09	6.50E+08	9.60E+07	7.80E+08	1.10E+08		
MI 10 Metals	Arsenic (B, KK)	5,800	5,500	4,600	4,700	4,600	4,700	7,600	9,000	37,000	5.20E+04	7.20E+05	2.90E+05	9.10E+05	6.60E+05	NLV	NA	NLV	NA	
	Barium (B, KK)	75,000	45,000	1.30E+06	1.30E+06	1.30E+06	1.30E+06	3.70E+07	6.80E+07	1.30E+08	1.00E+08	3.30E+08	2.60E+08	1.50E+08	3.70E+08	NLV	NA	NLV	NA	
	Cadmium (B, KK)	1,200	2,000	6,000	6,000	6,000	6,000	5.50E+05	59,000	2.10E+06	2.20E+05	1.70E+06	6.90E+05	2.20E+06	1.60E+06	NLV	NA	NLV	NA	
	Chromium (III) (B, H, KK)	18,000	15,000	1.00E+09	1.00E+08	1.00E+09	1.00E+08	7.90E+08	1.00E+08	1.00E+09	1.00E+08	3.30E+08	5.10E+06	1.50E+08	7.30E+06	NLV	NA	NLV	NA	
	Chromium (VI) (H, KK, MM)	NA	NA	30,000	31,000	30,000	31,000	2.50E+06	2,000	9.20E+06	36,000	2.60E+05	43,000	2.40E+05	2.40E+05	NLV	NA	NLV	NA	
	Copper (B)	32,000	14,000	5.80E+06	1.70E+05	5.80E+06	5.50E+05	2.00E+07	6.20E+05	7.30E+07	2.50E+06	1.30E+08	1.00E+08	5.90E+07	1.50E+08	NLV	NA	NLV	NA	
	Lead (B, L, DD, KK)	21,000	11,000	7.00E+05	1.80E+05	7.00E+05	1.80E+05	4.00E+05	1.90E+05	9.00E+05	3.30E+05	1.00E+08	7.70E+06	4.40E+07	1.10E+07	NLV	NA	NLV	NA	
	Selenium (B, KK)	410	610	4,000	4,200	4,000	4,200	2.60E+06	3.10E+06	9.60E+06	1.20E+07	1.30E+08	1.00E+09	5.90E+07	1.50E+09	NLV	NA	NLV	NA	
	Silver (KK)	1,000	NA	4,500	800	13,000	2,600	2.50E+06	2.50E+05	9.00E+06	6.70E+05	6.70E+06	1.50E+08	2.90E+06	2.20E+08	NLV	NA	NLV	NA	
	Zinc (B)	47,000	39,000	2.40E+06	1.80E+06	5.00E+06	5.00E+06	1.70E+08	1.00E+08	6.30E+08	1.00E+08	ID	NA	ID	NA	NLV	NA	NLV	NA	
Mercury (Total) (Z, DD, KK)	130	NA	1,700	40	1,700	40	1.60E+05	16,000	5.80E+05	1.50E+05	2.00E+07	1.50E+07	8.80E+06	2.20E+07	52,000	160	62,000	190		

Criteria in in ug/kg-ppb

Key

Unchanged

Proposed Criteria Increase

Proposed Criteria Decrease

New Criteria

	Residential Drinking Water Criteria		Nonresidential Drinking Water Criteria		Groundwater Surface Water Interface Criteria		Water Solubility		Flammability and Explosivity Screening Level	
	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016
Hazardous Substance										
BTEX										
Benzene (I, KK)	5.0	5.0	5.0	5.0	200	200	1,750,000	1,790,000	68,000	68,000
Toluene (I)	790	470	790	790	270	270	526,000	526,000	61,000	61,000
Ethylbenzene (I)	74	66	74	74	18	18	169,000	169,000	43,000	43,000
Xylenes (I, J)	280	280	280	280	41	41	186,000	106,000	70,000	58,000
TMBs										
1,2,3-Trimethylbenzene (I)		120		130		ID		75,200		75,000
1,2,4-Trimethylbenzene (I)	63	63	63	63	17	17	55,890	57,000	56,000	57,000
1,3,5-Trimethylbenzene (I)	72	72	72	72	45	45	61,150	48,200	ID	48,000
Chlorinated VOCs										
Tetrachloroethylene (KK)	5.0	5.0	5.0	5.0	60	60	200,000	206,000	ID	NA
Trichloroethylene (DD, KK, MM, NN)	5.0	5.0	5.0	5.0	200	200	1,100,000	1,280,000	ID	NA
1,1-Dichloroethylene (I, KK)	7.0	7.0	7.0	7.0	130	130	2,250,000	2,420,000	97,000	97,000
cis-1,2-Dichloroethylene	70	70	70	70	620	620	3,500,000	6,410,000	530,000	290,000
trans-1,2-Dichloroethylene	100	100	100	100	1,500	1,500	6,300,000	4,520,000	230,000	250,000
1,1-Dichloroethane	880	1,200	2,500	3,800	740	740	5,060,000	5,040,000	380,000	380,000
1,2-Dichloroethane (I, KK)	5.0	5.0	5.0	5.0	360	360	8,520,000	8,600,000	2,500,000	2,100,000
Vinyl chloride (KK, LL, MM)	2.0	2.0	2.0	2.0	13	13	2,760,000	8,800,000	33,000	32,000
PAHs										
Acenaphthene	1,300	360	3,800	1,100	38	38	4,240	3,900	ID	NA
Acenaphthylene	52	360	150	1,100	ID	ID	3,930	16,100	ID	NA
Anthracene	43	43	43	43	ID	ID	43.4	43.4	ID	NA
Benzo(a)anthracene (Q, MM)	2.1	Q	8.5	Q	ID	ID	9.4	9.4	ID	NA
Benzo(b)fluoranthene (Q, MM)	1.5	Q	1.5	Q	ID	ID	1.5	1.5	ID	NA
Benzo(k)fluoranthene (Q, MM)	1.0	Q	1.0	Q	NA	NA	0.80	0.80	ID	NA
Benzo(g,h,i)perylene	1.0	1.0	1.0	1.0	ID	ID	0.26	0.26	ID	NA
Benzo(a)pyrene (Q, DD, MM)	5.0	0.20	5.0	0.20	ID	ID	1.62	1.62	ID	NA
cPAH (Q)		0.20		0.20		ID		1.62		NA
Chrysene (Q, MM)	1.6	Q	1.6	Q	ID	ID	1.6	2.0	ID	NA
Dibenzo(a,h)anthracene (Q, MM)	2.0	Q	2.0	Q	ID	ID	2.49	2.49	ID	NA
Fluoranthene	210	240	210	260	1.6	1.6	206	260	ID	NA
Fluorene	880	240	2,000	760	12	12	1,980	1,690	ID	NA
Indeno(1,2,3-cd)pyrene (Q, MM)	2.0	Q	2.0	Q	ID	ID	0.02	0.19	ID	NA
2-Methylnaphthalene	260	24	750	76	19	19	24,600	24,600	ID	NA
Naphthalene	520	590	1,500	1,900	11	11	31,000	31,000	NA	NA
Phenanthrene	52	180	150	570	2.0	2.0	1,000	1,150	ID	NA
Pyrene	140	140	140	140	ID	ID	135	135	ID	NA
MI 10 Metals										
Arsenic (B, KK)	10	10	10	10	10	10	NA	NA	ID	NA
Barium (B, KK)	2,000	2,000	2,000	2,000	G	G	NA	NA	ID	NA
Cadmium (B, KK)	5.0	5.0	5.0	5.0	G,X	G,X	NA	NA	ID	NA
Chromium (III) (B, H, KK)	100	100	100	100	G,X	G,X	NA	NA	ID	NA
Chromium (VI) (H, KK, MM)	100	100	100	100	11	11	NA	NA	ID	NA
Copper (B)	1,000	30	1,000	95	G	G	NA	NA	ID	NA
Lead (B, L, DD, KK)	4.0	1.0	4.0	1.0	G,X	G,X	NA	NA	ID	NA
Selenium (B, KK)	50	50	50	50	5.0	5.0	NA	NA	ID	NA
Silver (KK)	34	5.9	98	19	0.20	0.20	NA	NA	ID	NA
Zinc (B)	2,400	1,800	5,000	5,000	G	G	NA	NA	ID	NA
Mercury (Total) (Z, DD, KK)	2.0	2.0	2.0	2.0	0.20	0.0013	56	600	ID	NA

Criteria in in ug/l-ppb

Key

Unchanged

Proposed Criteria Increase

Proposed Criteria Decrease

New Criteria

Hazardous Substance	ug/l				ug/kg				ug/m³		% volume
	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria	VI Tier 1 Groundwater Screening Level	Flammability and Explosivity Screening Level		Residential Soil Volatilization to Indoor Air Inhalation Criteria	VI Tier 1 Soil Screening Level	Soil Saturation Concentration Screening Levels		Michigan Residential Vapor Intrusion Shallow Soil Gas (sub-slab) Screening Levels	VI Tier 1 Vapor Screening Level	Lower Explosive Limit (PP)
			2013	2016			2013	2016			
<b>BTEX</b>											
Benzene (I, KK)	5,600	1.0	68,000	68,000	1,600	50	4.00E+05	6.20E+05	110	110	1.2
Toluene (I)	5.30E+05	209	61,000	61,000	3.30E+05	3,700	2.50E+05	2.80E+05	1.70E+05	1.73E+05	1.1
Ethylbenzene (I)	1.10E+05	1.0	43,000	43,000	87,000	50	1.40E+05	1.60E+05	2,900	330	0.8
Xylenes (I, J)	1.90E+05	10	70,000	58,000	6.30E+06	NA	1.50E+05	87,000	3,500	7,670	0.9
<b>TMBs</b>											
1,2,3-Trimethylbenzene (I)		5.0		75,000		250		98,000		170	0.8
1,2,4-Trimethylbenzene (I)	56,000	1.0	56,000	57,000	4.30E+06	100	1.10E+05	73,000	7,600	240	0.9
1,3,5-Trimethylbenzene (I)	61,000	2.0	ID	48,000	2.60E+06	100	94,000	61,000	7,600	1,730	1.0
<b>Chlorinated VOCs</b>											
Tetrachloroethylene (KK)	25,000	2.0	ID	NA	11,000	50	88,000	60,000	1,200	1,400	NA
Trichloroethylene (DD, KK, MM, NN)	2,200	1.0	ID	NA	1,000	50	5.00E+05	2.50E+05	70	67	8.0
1,1-Dichloroethylene (I, KK)	200	7.0	97,000	97,000	62	50	5.70E+05	4.80E+05	7,000	7,000	6.5
cis-1,2-Dichloroethylene	93,000	1.0	530,000	290,000	22,000	50	6.40E+05	8.20E+05	240	280	3.0
trans-1,2-Dichloroethylene	85,000	3.0	230,000	250,000	23,000	50	1.40E+06	7.90E+05	2,400	2,770	6.0
1,1-Dichloroethane	1.00E+06	20	380,000	380,000	2.30E+05	86	8.90E+05	6.00E+05	17,000	17,300	5.4
1,2-Dichloroethane (I, KK)	9,600	1.0	2,500,000	2,100,000	2,100	50	1.20E+06	1.00E+06	35	33	6.2
Vinyl chloride (KK, LL, MM)	1,100	1.0	33,000	32,000	270	40	4.90E+05	NA	55	80	3.6
<b>PAHs</b>											
Acenaphthene	4,200	43	ID	NA	1.90E+08	2.10E+05	NA	NA	7,300	7,330	NA
Acenaphthylene	3,900	65	ID	NA	1.60E+06	NA	NA	NA	1,200	7,330	NA
Anthracene	43	43	ID	NA	1.00E+09	1.20E+07	NA	NA	35,000	33,300	0.6
Benzo(a)anthracene (Q, MM)	NLV	1.0	ID	NA	NLV	1.60E+05	NA	NA		5.7	NA
Benzo(b)fluoranthene (Q, MM)	ID	NV	ID	NA	ID	NV	NA	NA		NV	NA
Benzo(k)fluoranthene (Q, MM)	NLV	NV	ID	NA	NLV	NV	NA	NA		NV	NA
Benzo(g,h,i)perylene	NLV	NV	ID	NA	NLV	NV	NA	NA		NV	NA
Benzo(a)pyrene (Q, DD, MM)	NLV	NV	ID	NA	NLV	NV	NA	NA		NV	NA
cPAH (Q)		NV		NA		NV		NA		NV	NA
Chrysene (Q, MM)	ID	NV	ID	NA	ID	NV	NA	NA		NV	NA
Dibenzo(a,h)anthracene (Q, MM)	NLV	NV	ID	NA	NLV	NV	NA	NA		NV	NA
Fluoranthene	210	NV	ID	NA	1.00E+09	NV	NA	NA		NV	NA
Fluorene	2,000	50	ID	NA	5.80E+08	4.90E+05	NA	NA	4,900	5,000	NA
Indeno(1,2,3-cd)pyrene (Q, MM)	NLV	NV	ID	NA	NLV	NV	NA	NA		NV	NA
2-Methylnaphthalene	25,000	5.0	ID	NA	2.70E+06	1,600	NA	NA	350	330	NA
Naphthalene	31,000	5.0	NA	NA	2.50E+05	330	NA	NA	75	25	0.9
Phenanthrene	1,000	2.0	ID	NA	2.80E+06	NA	NA	NA	3.5	3.3	NA
Pyrene	140	140	ID	NA	1.00E+09	2.40E+07	NA	NA	3,500	3,330	NA
<b>MI 10 Metals</b>											
Arsenic (B, KK)	NLV	NA	ID	NA	NLV	NA	NA	NA		NA	5.1
Barium (B, KK)	NLV	NA	ID	NA	NLV	NA	NA	NA		NA	NA
Cadmium (B, KK)	NLV	NA	ID	NA	NLV	NA	NA	NA		NA	NA
Chromium (III) (B, H, KK)	NLV	NA	ID	NA	NLV	NA	NA	NA		NA	NA
Chromium (VI) (H, KK, MM)	NLV	NA	ID	NA	NLV	NA	NA	NA		NA	NA
Copper (B)	NLV	NA	ID	NA	NLV	NA	NA	NA		NA	NA
Lead (B, L, DD, KK)	NLV	NA	ID	NA	NLV	NA	NA	NA		NA	NA
Selenium (B, KK)	NLV	NA	ID	NA	NLV	NA	NA	NA		NA	NA
Silver (KK)	NLV	NA	ID	NA	NLV	NA	NA	NA		NA	NA
Zinc (B)	NLV	NA	ID	NA	NLV	NA	NA	NA		NA	NA
Mercury (Total) (Z, DD, KK)	56	0.00580	ID	NA	48	0.02700	NA	NA	ID	10	NA

Key

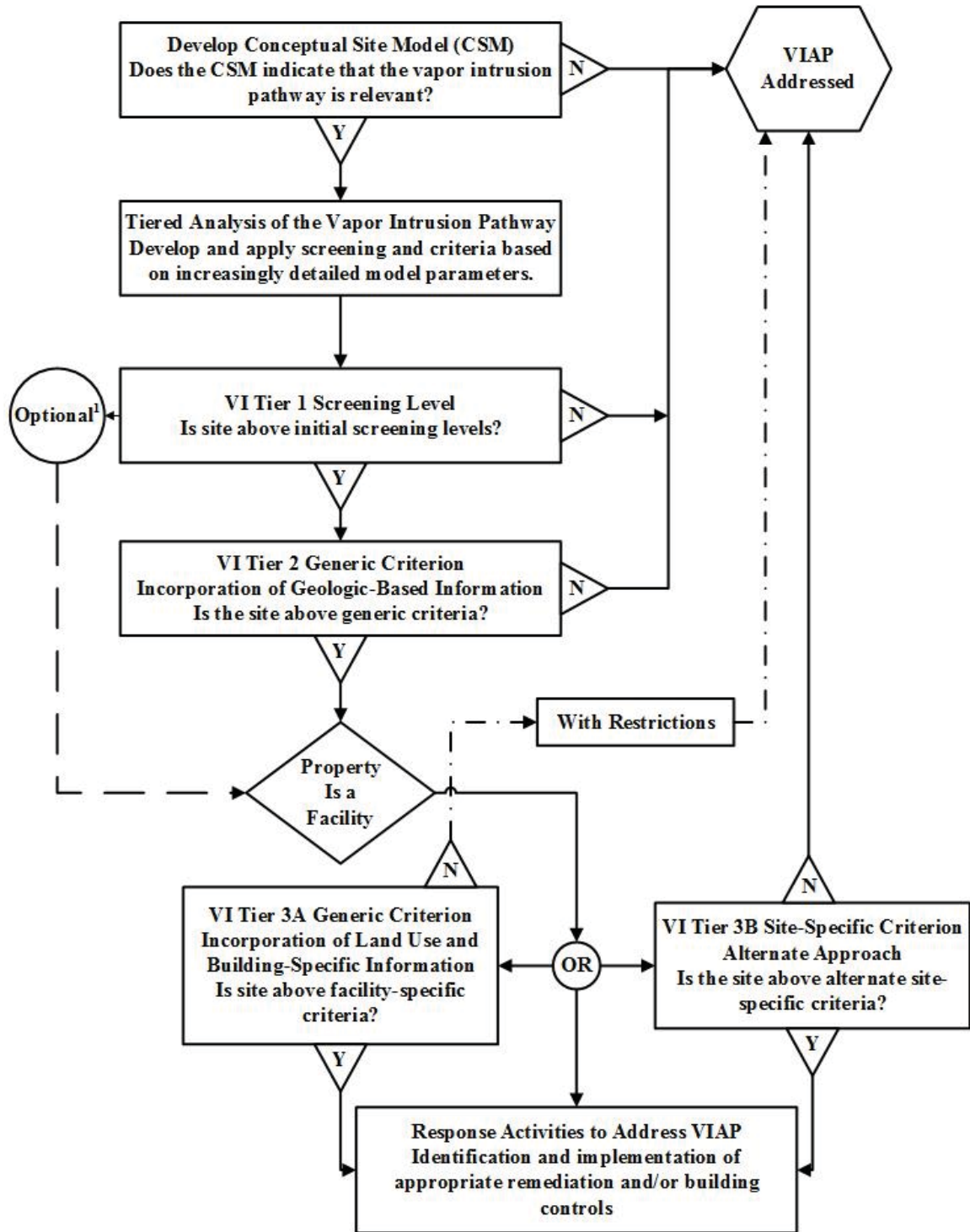
Unchanged

Proposed Criteria Increase

Proposed Criteria Decrease

New Criteria

**FIGURE 1:  
VI Tier Process**



1. R 299.27(3)(a)(i)