

APPENDIX A: SUMMARY OF STATE VAPOR INTRUSION PRACTICES

The information presented in this appendix is based on a 2024–2025 survey of U.S. states conducted by the Interstate Technology & Regulatory Council (ITRC). This survey builds upon data previously published by Eklund et al. (2024). All data, when provided, are reported from the information provided by a representative of each state. Where data have not been provided, the cells have been left blank.

ITRC does not endorse or recommend specific values. Instead, it recognizes that each state and regulatory agency determines appropriate values based on their own regulatory framework and requirements.

The survey findings are summarized in the following tables:

- Table A-1. State-Identified Separation Distances
- Table A-2. Available Screening Values and Attenuation Coefficients
- Table A-3. Comparison of Residential Screening Levels for Select Vapor-Forming Chemicals (2025)

The differences observed in Table A-3 can be attributed to a variety of factors, including the following:

- Default assumptions regarding typical or representative building construction parameters used in generic conceptual site models
- Variability in toxicological data, chemical and physical properties, and exposure assumptions used in risk-based equations to derive health-based criteria
- Differences in the allowable risk levels for vapor-forming chemicals
- Consideration of whether a specific vapor-forming chemical is biodegradable

In addition to Tables A-1 through A-3, state-specific information is provided as individual pages. Users can directly access a compilation of Tables A-1 through A-3 and the state-specific information (Appendix A) by visiting <https://itrcweb.org/vapor-intrusion-toolkit/>.

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Table A-1. State-Identified Separation Distances (2024)

State	Petroleum			Chlorinated	
	Lateral (ft)	Distance Vertical (ft)	LNAPL Vertical (ft)	Lateral (ft)	Vertical (ft)
Alabama					
Alaska	30	4–10	--	100	--
Arizona					
Arkansas					
California	30 ^A	10 ^B	30	100	100
Colorado	30	5	15	100	--
Connecticut	10	10	--	100	30
Delaware	30	5	15 or 18	100	100
Florida	50	--	--	100	--
Georgia	30	5	15 or 18	100	--
Hawaii	100	15	30	100	--
Idaho	--	5	15	100	100
Illinois					
Indiana	6 (LNAPL = 15)	6	15	100	100
Iowa	500	--	--	--	--
Kansas	30	5	15 or 18	100	40
Kentucky					
Louisiana					
Maine	30	6	15	--	--
Maryland					
Massachusetts	30	15	--	30	15
Michigan	30	5	15	100	--
Minnesota	100	--	--	100	--
Mississippi					
Missouri	100	--	--	100	--
Montana	30	8	15 or 18	100	--
Nebraska	200	--	--	100	100
Nevada	--	--	--	100	100
New Hampshire	30	15	6	100	100
New Jersey	30	30	30	100	100
New Mexico			--	100	--
New York			--	100	--
North Carolina	LNAPL = 100	--	--	100	100
North Dakota			--	100	--
Ohio	30 or 100 ^C	6	15	100	--
Oklahoma					
Oregon	30 or 100 ^D	--	--	100	--
Pennsylvania	30	5	15	100	--
Rhode Island					
South Carolina	30	5	15		
South Dakota					
Tennessee					
Texas					

Table A-1. State-Identified Separation Distances (2024)

State	Petroleum			Chlorinated	
	Lateral (ft)	Distance Vertical (ft)	LNAPL Vertical (ft)	Lateral (ft)	Vertical (ft)
Utah	30	--	--	100	--
Vermont	30	6	15	100	100
Virginia					
Washington	30	6	15	100	--
West Virginia					
Wisconsin	30	5	15	100	--
Wyoming					

NOTES:

^AFor mixed petroleum/non-petroleum release sites, the 100-foot distance should be used during initial screening (California DTSC 2023)

^BTPH being under 100 mg/kg (California DTSC 2023)

^C30 (small sources) or 100

^D30 (heating oil tank) or 100

SOURCE: California DTSC. 2023. "Supplemental Guidance: Screening and Evaluating Vapor Intrusion." https://dtsc.ca.gov/wp-content/uploads/sites/31/2023/02/VI_SupGuid_Screening-Evaluating.pdf.

Table A-2. Available Screening Values and Attenuation Coefficients

State	Types of Generic Screening Values Available								Attenuation Coefficients				
	Groundwater	Soil	Deep Soil Gas	Shallow Soil Gas / Subslab	Indoor Air	NAPL	Crawl Space	Utilities / Preferential Pathways	Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Spaces	Comments
Alabama	X		X	X	X								
Alaska	X			X	X				0.001	0.1	0.1	1	
Arizona	X		X	X	X								
Arkansas													
California	X	X		X	X		X		0.001; not evaluated by OPS	--	0.03	1	
Colorado	X; none for OPS	X; none for OPS		X	X	X	X	X	0.001	0.03	0.03	1	
Connecticut	X			X	X				0.0002	--	0.0013	--	
Delaware	X	X		X					0.001	0.03	0.03	--	
Florida									--	--	0.1	--	
Georgia									0.001	--	0.03	--	Alternative attenuation values allowed
Hawaii									--	--	0.0005	1	
Idaho									0.001	0.03	0.03	--	
Illinois	X			X									
Indiana			x	X	X		X	X	--	0.03	0.03	1	
Iowa	X	X		X									
Kansas									0.001	--	0.03	1	
Kentucky	X		X	X	X								
Louisiana	X		X	X	X								

State	Types of Generic Screening Values Available								Attenuation Coefficients				
	Groundwater	Soil	Deep Soil Gas	Shallow Soil Gas / Subslab	Indoor Air	NAPL	Crawl Space	Utilities / Preferential Pathways	Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Spaces	Comments
Maine									0.001	--	0.03	1	
Maryland*	X	X		X	X				0.001	--	0.05	--	
Massachusetts	X			X	X				--	--	0.014	--	
Michigan	X	X		X			X	X	0.001	0.03	0.03	1	
Minnesota				X					--	0.03	0.03	1	
Mississippi													
Missouri	X	X		X	X		X						
Montana	X	X		X	X				0.001	0.03	0.03	1	
Nebraska	X			X	X				0.001		0.03	--	
Nevada	X								0.001				
New Hampshire	X			X	X				0.0001	0.02	0.02	1	
New Jersey	X			X	X				--	--	0.02	--	
New Mexico				X					0.001	--	0.03	--	
New York				X	X				0.001				
North Carolina	X			X	X		X		0.001	--	0.03	1	
North Dakota	X	X		X	X				0.001				
Ohio									0.001	0.03	0.03	1	
Oklahoma													
Oregon	X			X	X				0.001	0.03	0.03	1	
Pennsylvania	X	X	X	X	X				0.0009	0.005	0.026	--	
Rhode Island	X	X							0.001				
South Carolina	X	X				X			NA	NA	NA	NA	NA
South Dakota													
Tennessee	X			X									
Texas					X								
Utah	X		X	X	X								
Vermont	X	X		X	X				0.001	0.03	0.03	1	

State	Types of Generic Screening Values Available								Attenuation Coefficients				
	Groundwater	Soil	Deep Soil Gas	Shallow Soil Gas / Subslab	Indoor Air	NAPL	Crawl Space	Utilities / Preferential Pathways	Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Spaces	Comments
Virginia	X	X		X	X	X			0.001	0.01	0.01	--	
Washington	X			X	X		X		0.001			1	
West Virginia	X	X											
Wisconsin	X		X	X	X	X	X	X	0.001	0.01	0.03	1	
Wyoming	X		X	X	X								

NOTES:

OPS = Colorado Division of Oil and Public Safety

Table A-3. Comparison of Residential Screening Levels for Select Vapor-Forming Chemicals (2025)

	Benzene			TCE			PCE			1,1- Dichloroethylene		
State	Groundwater (µg/l)	Soil Gas (µg/m³)	Indoor Air (µg/m³)	Groundwater (µg/l)	Soil Gas (µg/m³)	Indoor Air (µg/m³)	Groundwater (µg/l)	Soil Gas (µg/m³)	Indoor Air (µg/m³)	Groundwater (µg/l)	Soil Gas (µg/m³)	Indoor Air (µg/m³)
Alabama	16	120	3.6	5.2	70	2.1	58	1,400	42	196	7,000	210
Alaska	16	36	3.6	5	20	2	58	410	41	200	2,100	79
Arizona	1.6	12	0.36	1.2	16	0.48	15	367	11	196	7,000	210
Arkansas	1.6	12	0.36	1.2	16	0.48	15	367	11	195	7,000	210
California	0.42	3.2	0.097	1.2	16	0.48*	0.64	15	0.46	66	2,400	73
Colorado	1.6	12*	0.36	1.2	16	0.48	15	367	11	195	7,000	210
Connecticut	215	2,500	3.3	27	760	1	340	3,800	5	190	7,600	10
Delaware	1.6	12	0.36	0.52	7	0.21	5.8	140	4.2	19.5	700	21
Florida	--	3.1	0.31	--	--	--	--	--	--	--	--	--
Georgia	15.8	120	3.6	5.2	70	2.1	58	1,400	42	196	7,000	210
Hawaii	2,300	720	0.36	210	830	0.42	190	920	0.46	6,600	83,000	42
Idaho	44	12	0.36	1.2	16	0.48	15	367	11	195	7,000	210
Illinois	110	370	--	340	1,500	--	91	550	--	24,000	240,000	--
Indiana	5	40	4	5	20	2	5	400	40	7	2,000	200
Iowa	1,540	600,000	39.2	--	--	--	--	--	--	--	--	--
Kansas	1.58	120	3.6	5.2	70	2.09	58	1,400	41.7	195	7,000	209
Kentucky	1.59	12	0.36	1.19	15.9	0.478	14.9	360	10.8	195	6,950	209
Louisiana	1.6	12	0.36	1.2	16	0.48	15	367	11	195	7,000	210
Maine	--	120	3.6	--	70	2.1	--	1,400	42	--	7,000	210
Maryland	--	64	3.2	--	42	2.1	--	840	42	--	4,200	210
Massachusetts	1,000	160	2.3	5	28	0.4	20	98	1.4	80	56	0.8
Michigan	14*	110	--	6.2*	67	--	97*	1,400	--	67*	530	--
Minnesota	--	43	1.3	--	70	2.1	--	110	3.4	--	7,000	210
Mississippi	1.6	12	0.36	1.2	16	0.48	15	367	11	195	7,000	210
Missouri	1	190,000	4.98	1600	546,000	12.8	338	200,000	4.27	5,380	446,000	119
Montana	1.6	12	0.36	0.52	7	0.21	5.8	139	4.2	20	700	21
Nebraska	3.1	12	0.36	2.4	16	0.48	32	350	10	83	1,700	52
Nevada	--	--	--	5	--	2.1	50	--	32	--	--	--
New Hampshire	2,900	170	3.3	20	20	0.4	240	400	8	630	2,000	40

	Benzene			TCE			PCE			1,1- Dichloroethylene		
State	Groundwater (µg/l)	Soil Gas (µg/m³)	Indoor Air (µg/m³)	Groundwater (µg/l)	Soil Gas (µg/m³)	Indoor Air (µg/m³)	Groundwater (µg/l)	Soil Gas (µg/m³)	Indoor Air (µg/m³)	Groundwater (µg/l)	Soil Gas (µg/m³)	Indoor Air (µg/m³)
New Jersey	23	18	0.64	3	34	1.1	36	540	11	31	1,000	21
New Mexico	15.8	120	3.6	5.16	69.5	2.09	57.5	1,390	41.7	195	6,950	209
New York	--	--	--	--	6	0.2	--	100	3	--	6	0.2
North Carolina	1.6	12	0.36	1	14	0.42	12	280	8.3	39	1,400	42
North Dakota	--	--	--	--	--	--	--	--	--	--	--	--
Ohio	15.9	120	3.6	5.18	69.5	2.1	57.6	1,390	42	195	6,950	210
Oklahoma	15.8	120	3.6	5.2	70	2.1	58	1,390	42	195	7,000	210
Oregon	210	72	0.36	200	95	0.47	3,700	2,200	11	29,000	42,000	210
Pennsylvania	23	120	3.1	9	80	2.1	110	1,600	42	300	8,000	210
Rhode Island	140			540			150					
South Carolina	1.6 (5)	12 (NA)	0.36 (NA)	1.2	16	0.48	15	367	11	195	7,000	210
South Dakota	--	--	--	--	--	--	--	--	--	--	--	--
Tennessee	1.6	12	0.36	0.52	7	0.21	5.8	140	4.2	19.5	700	21
Texas	--	--	11	--	--	2.1	--	--	64	--	--	350
Utah	1.6	12	0.36	1.2	16	0.48	15	367	11	196	7,000	210
Vermont	0.92	4.3	0.13	0.82	6.7	0.2	1.5	21	0.63	270	6,700	200
Virginia	1.6	12	0.36	0.52	7	0.21	5.8	140	4.2	19.7	700	21
Washington	2.4	11	0.321	1.4	11	0.334	25	320	9.6	130	3,000	91.4
West Virginia	1.6	12	0.36	1.2	16	0.48	15	367	11	195	7,000	210
Wisconsin	16	120	3.6	5	70	2.1	5	1,400	42	200	7,000	210
Wyoming	1.6	12	0.36	1.2	16	0.48	15	367	11	196	7,000	210

NOTES: OPS = Colorado Division of Oil and Public Safety

SOURCES: California DTSC. 2014. “Human Health Risk Assessment (HHRA) Note Number 5: Health-Based Indoor Air Screening Criteria for Trichloroethylene (TCE).” <https://dtsc.ca.gov/wp-content/uploads/sites/31/2021/07/HHRA-Note-5-23-Aug-2014-2021-A.pdf>. CalEPA OEHHA. 2018. “Trichloroethylene (TCE) in Indoor Air.” November. <https://oehha.ca.gov/sites/default/files/media/downloads/risk-assessment/fact-sheet-california-human-health-screening-levels-chhsls/tceindoorairfactsheet.pdf>.

Table A-3. Comparison of Residential Screening Levels for Select Vapor-Forming Chemicals (2025)

	1,1,1- Trichloroethane			
State	Groundwater (µg/l)	Soil Gas (µg/m³)	Indoor Air (µg/m³)	Criteria Notes
Alabama	7,400	174,000	5,200	
Alaska	7,400	52,000	3,800	
Arizona	7,400	174,000	5,200	
Arkansas	7,400	174,000	5,200	
California	1,500	35,000	1,000	*In accordance with CalEPA/DTSC’s HERO Note 5, rapid response concentrations have been established for TCE, including accelerated and urgent action levels of 2 and 6 µg/m³, respectively (California DTSC 2014; CalEPA/OEHHA 2018)
Colorado	7,400	174,000	5,200	*OPS allows 213,000 ug/m³ for soil gas at 3 feet below floor and within 10 feet of structure, toward source
Connecticut	6,500	380,000	500	
Delaware	740	17,000	520	
Florida	--	--	--	
Georgia	7,400	174,000	5,200	
Hawaii	340,000	2,100,000	1,000	
Idaho	7,400	174,000	5,200	
Illinois	1,000,000	6,600,000	--	
Indiana	200	50,000	5,000	
Iowa	--	--	--	
Kansas	7,400	174,000	5,210	
Kentucky	7,420	174,000	5,210	
Louisiana	7,400	174,000	5,200	
Maine	--	173,333	5,200	
Maryland	--	106,000	5,300	
Massachusetts	4,000	210	3	
Michigan	8,700*	450	--	*Values do not address groundwater in contact
Minnesota	--	7,000	210	
Mississippi	7,400	174,000	5,200	
Missouri	102,000	56,600,000	1,131	
Montana	740	17,000	520	
Nebraska	3,600	43,000	1,300	
Nevada	--	--	--	
New Hampshire	27,000	50,000	1,000	

	1,1,1- Trichloroethane			
State	Groundwater (µg/l)	Soil Gas (µg/m³)	Indoor Air (µg/m³)	Criteria Notes
New Jersey	13,000	260,000	5,200	
New Mexico	7,390	174,000	5,210	
New York	--	100	3	
North Carolina	1,500	35,000	1,000	
North Dakota	--	--	--	
Ohio	7,420	174,000	5,200	
Oklahoma	7,400	174,000	5,200	
Oregon	1,290,000	1,000,000	5,200	
Pennsylvania	12,000	200,000	5,200	
Rhode Island	3,100			The residential screening levels are what is currently on the books. New numbers are in draft and in the rule-making process.
South Carolina	7,400	174,000	5,200	Values in "(" are for PVI
South Dakota	--	--	--	
Tennessee	740	17,400	520	
Texas	--	--	5,300	
Utah	7,400	174,000	5,200	
Vermont	7,420	174,000	5,200	
Virginia	739	17,300	520	
Washington	5,400	76,000	2,290	
West Virginia	7,400	174,000	5,200	
Wisconsin	7,400	170,000	5,200	
Wyoming	7,400	174,000	5,200	

NOTES: OPS = Colorado Division of Oil and Public Safety

SOURCES: California DTSC. 2014. “Human Health Risk Assessment (HHRA) Note Number 5: Health-Based Indoor Air Screening Criteria for Trichloroethylene (TCE).” <https://dtsc.ca.gov/wp-content/uploads/sites/31/2021/07/HHRA-Note-5-23-Aug-2014-2021-A.pdf>. CalEPA OEHHA. 2018. “Trichloroethylene (TCE) in Indoor Air.” November. <https://oehha.ca.gov/sites/default/files/media/downloads/risk-assessment/fact-sheet-californiahuman-health-screening-levels-chhsls/tceindoorairfactsheet.pdf>.

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Alabama	Last Updated:	8/27/2025
Agency	Alabama Department of Environmental Management	Abbreviation:	ADEM
Main Webpage	https://adem.alabama.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
<input checked="" type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical

Published risk-based target/screening levels for VI in various media available?					
<input checked="" type="checkbox"/>	Groundwater	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Indoor air	<input type="checkbox"/>
<input type="checkbox"/>	Soil	<input type="checkbox"/>	<input type="checkbox"/>	NAPL	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	<input type="checkbox"/>	Crawl space	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	<input type="checkbox"/>	Utilities/conduits	<input type="checkbox"/>

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	VISLs
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Alaska	Last Updated:	8/27/2025
Agency	Alaska Department of Environmental Conservation	Abbreviation:	ADEC
Main Webpage	https://dec.alaska.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
<input checked="" type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation
<input checked="" type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	0–1 Years
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	4–10	--	100	--

Published risk-based target/screening levels for VI in various media available?

<input checked="" type="checkbox"/>	Groundwater	<input checked="" type="checkbox"/>	Indoor air
<input type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL
<input checked="" type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input checked="" type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	105
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	0.1	0.1	1	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	Vapor barrier should be impermeable to the contaminants of concern
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Arizona	Last Updated:	8/27/2025
Agency	Arizona Department of Environmental Quality	Abbreviation:	ADEQ
Main Webpage	https://www.azdeq.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
<input checked="" type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation
<input checked="" type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	Date not set
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical

Published risk-based target/screening levels for VI in various media available?

<input checked="" type="checkbox"/>	Groundwater	<input checked="" type="checkbox"/>	Indoor air
<input type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL
<input checked="" type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input checked="" type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only site-specific
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Number of VOC screening levels available:	VISLs
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits

Notes:	
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Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Arkansas	Last Updated:	8/27/2025
Agency	Arkansas Department of Energy & Environment	Abbreviation:	E&E
Main Webpage	https://ee.arkansas.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
<input type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical

Published risk-based target/screening levels for VI in various media available?					
		Groundwater			Indoor air
		Soil			NAPL
		Deep soil gas			Crawl space
		Shallow soil gas			Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only lookup tables
--	--------------------

Number of VOC screening levels available:	RSLs
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	No
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	California	Last Updated:	8/27/2025
Agency	California Environmental Protection Agency's (Cal/EPA's) Department of Toxic Substances Control (DTSC), State Water Resources Control Board (SWRCB) or the San Francisco or Los Angeles Regional Water Quality Control Boards (SFRWQCB or LARWQCB)	Abbreviation:	DTSC & State Waterboard or Regional Waterboards
Main Webpage	https://dtsc.ca.gov/vapor-intrusion/ ; https://www.waterboards.ca.gov/water_issues/programs/site_cleanup_program/vapor_intrusion/		

Guidance Document (if available) Year:		2025
Specific Guidance Type	Specific Guidance Type	
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	NA
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	10	30	100	100

Published risk-based target/screening levels for VI in various media available?					
	X	Groundwater		X	Indoor air
	X	Soil			NAPL
	X	Deep soil gas		X	Crawl space
	X	Shallow soil gas			Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
---	------------------------------

Number of VOC screening levels available:	69–152
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.01; not evaluated by OP	--	0.03	1	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	No*
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

*see https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/sitecleanup/2022_VIM_Guidance.pdf

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Colorado	Last Updated:	8/27/2025
Agency	Colorado Department of Public Health and Environment; Colorado Division of Oil & Public Safety	Abbreviation:	CDPHE; OPS
Main Webpage	https://cdphe.colorado.gov/ ; https://ops.colorado.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No; (pending 2025 for OPS)
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	5	15	100	--

Published risk-based target/screening levels for VI in various media available?

X; none for OPS	Groundwater	X	Indoor air
X; none for OPS	Soil	X	NAPL
X	Deep soil gas	X	Crawl space
X	Shallow soil gas	X	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both; OPS uses soil gas if screening distance/factors violated, then sub-slab results, then indoor air as last resort.
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Number of VOC screening levels available:	RSLs; OPS: 7
Non-residential criteria available:	No
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	0.03	0.03	1	

Notes:	
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Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	No
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	15–30 depending on sub-slab VOC
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Connecticut	Last Updated:	8/27/2025
Agency	Department of Energy and Environmental Protection	Abbreviation:	DEEP
Main Webpage	https://portal.ct.gov/deep		

Guidance Document (if available) Year:			2025
Specific Guidance Type		Specific Guidance Type	
<input checked="" type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/>	Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/>	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
10	10	--	100	30

Published risk-based target/screening levels for VI in various media available?

<input checked="" type="checkbox"/>	Groundwater	<input checked="" type="checkbox"/>	Indoor air
<input type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL
<input checked="" type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input checked="" type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
--	------------------------------

Number of VOC screening levels available:	73
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.0002	--	0.0013	--	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Delaware	Last Updated:	8/27/2025
Agency	Department of Natural Resources and Environmental Control	Abbreviation:	DNREC
Main Webpage	https://dnrec.delaware.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	5	15 or 18	100	100

Published risk-based target/screening levels for VI in various media available?

X	Groundwater			Indoor air	
X	Soil			NAPL	
X	Deep soil gas			Crawl space	
X	Shallow soil gas			Utilities/conduits	

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	>190
Non-residential criteria available:	No
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	0.03	0.03	--	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Florida	Last Updated:	8/27/2025
Agency	Florida Department of Health	Abbreviation:	
Main Webpage	https://www.floridahealth.gov		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
<input type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
50	--	--	100	--

Published risk-based target/screening levels for VI in various media available?

<input type="checkbox"/>	Groundwater	<input type="checkbox"/>	Indoor air
<input type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL
<input type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only site-specific
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Number of VOC screening levels available:	8
Non-residential criteria available:	No
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
--	--	0.1	--	

Notes:	
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Additional Key Questions

Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	No
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Georgia	Last Updated:	8/27/2025
Agency	Georgia Environmental Protection Division	Abbreviation:	EPD
Main Webpage	https://epd.georgia.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?

Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	5	15 or 18	100	--

Published risk-based target/screening levels for VI in various media available?

	Groundwater		Indoor air	
	Soil		NAPL	
	Deep soil gas		Crawl space	
	Shallow soil gas		Utilities/conduits	

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only site-specific
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Number of VOC screening levels available:	RSLs
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	--	0.03	--	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	30
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Hawaii	Last Updated:	8/27/2025
Agency	Hawaii Department of Health	Abbreviation:	DOH
Main Webpage	https://health.hawaii.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
<input type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
100	15	30	100	--

Published risk-based target/screening levels for VI in various media available?

<input type="checkbox"/>	Groundwater	<input type="checkbox"/>	Indoor air
<input type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL
<input type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	
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Number of VOC screening levels available:	72
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
--	--	0.0005	1	

Notes:	
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Additional Key Questions

Recommend number of sampling events in guidance?	
Recommend number of sampling points in guidance?	
Does your state have a mechanism for long-term monitoring?	
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Idaho	Last Updated:	8/27/2025
Agency	Idaho Department of Environmental Quality	Abbreviation:	IDEQ
Main Webpage	https://www.deq.idaho.gov/		

Guidance Document (if available) Year:			2025
Specific Guidance Type		Specific Guidance Type	
<input type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/>	Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/>	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
--	5	15	100	100

Published risk-based target/screening levels for VI in various media available?

<input type="checkbox"/>	Groundwater	<input type="checkbox"/>	Indoor air
<input type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL
<input type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	
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Number of VOC screening levels available:	RSLs
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	0.03	0.03	--	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	
Recommend number of sampling points in guidance?	
Does your state have a mechanism for long-term monitoring?	
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Illinois	Last Updated:	8/27/2025
Agency	Illinois Environmental Protection Agency	Abbreviation:	IEPA
Main Webpage	https://epa.illinois.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
<input checked="" type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical

Published risk-based target/screening levels for VI in various media available?					
<input checked="" type="checkbox"/>	Groundwater	<input type="checkbox"/>	Indoor air	<input type="checkbox"/>	
<input type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits	<input type="checkbox"/>	

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
--	------------------------------

Number of VOC screening levels available:	59
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Indiana	Last Updated:	8/27/2025
Agency	Indiana Department of Environmental Management	Abbreviation:	IDEM
Main Webpage	https://www.in.gov/idem/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
6 (LNAPL = 15)	6	15	100	100

Published risk-based target/screening levels for VI in various media available?					
		Groundwater		X	Indoor air
	0	Soil			NAPL
	X	Deep soil gas		X	Crawl space
	X	Shallow soil gas		X	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
--	------------------------------

Number of VOC screening levels available:	148
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
--	0.03	0.03	1	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Iowa	Last Updated:	8/27/2025
Agency	Department of Natural Resources	Abbreviation:	Iowa DNR
Main Webpage	https://www.iowadnr.gov/		

Guidance Document (if available) Year:			2025
Specific Guidance Type		Specific Guidance Type	
<input checked="" type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/>	Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/>	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
500	--	--	--	--

Published risk-based target/screening levels for VI in various media available?

<input checked="" type="checkbox"/>	Groundwater	<input type="checkbox"/>	Indoor air
<input checked="" type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL
<input checked="" type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input checked="" type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
--	------------------------------

Number of VOC screening levels available:	4
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits

Notes:	
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Additional Key Questions

Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	No
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Kansas	Last Updated:	8/27/2025
Agency	Kansas Department of Health and Environment	Abbreviation:	KDHE
Main Webpage	https://www.kdhe.ks.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?

Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	5	15 or 18	100	40

Published risk-based target/screening levels for VI in various media available?

	Groundwater		Indoor air	
	Soil		NAPL	
	Deep soil gas		Crawl space	
	Shallow soil gas		Utilities/conduits	

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Lookup tables
--	---------------

Number of VOC screening levels available:	73
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	--	0.03	1	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Kentucky	Last Updated:	8/27/2025
Agency	Kentucky Department for Environmental Protection	Abbreviation:	KYDEP
Main Webpage	https://eec.ky.gov		

Guidance Document (if available) Year:			2025
Specific Guidance Type		Specific Guidance Type	
<input checked="" type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/>	Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/>	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical

Published risk-based target/screening levels for VI in various media available?					
<input checked="" type="checkbox"/>	Groundwater	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Indoor air	<input type="checkbox"/>
<input type="checkbox"/>	Soil	<input type="checkbox"/>	<input type="checkbox"/>	NAPL	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	<input type="checkbox"/>	Crawl space	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	<input type="checkbox"/>	Utilities/conduits	<input type="checkbox"/>

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only lookup tables
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Number of VOC screening levels available:	VISLs
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Louisiana	Last Updated:	8/27/2025
Agency	Louisiana Department of Environmental Quality	Abbreviation:	Louisiana DEQ
Main Webpage	https://deq.louisiana.gov/		

Guidance Document (if available) Year:			2025
Specific Guidance Type		Specific Guidance Type	
<input checked="" type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/>	Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/>	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	Date not set
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical

Published risk-based target/screening levels for VI in various media available?

<input checked="" type="checkbox"/>	Groundwater	<input checked="" type="checkbox"/>	Indoor air
<input type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL
<input checked="" type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input checked="" type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only site-specific
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Number of VOC screening levels available:	VISLs
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits

Notes:	
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Additional Key Questions

Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	No
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Maine	Last Updated:	8/27/2025
Agency	Maine Department of Environmental Protection	Abbreviation:	Maine DEP
Main Webpage	https://www.maine.gov/dep/		

Guidance Document (if available) Year:			2025
Specific Guidance Type		Specific Guidance Type	
<input type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/>	Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/>	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	6	15	--	--

Published risk-based target/screening levels for VI in various media available?

<input type="checkbox"/>	Groundwater	<input type="checkbox"/>	Indoor air
<input type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL
<input type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	
--	--

Number of VOC screening levels available:	100
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	--	0.03	1	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	
Recommend number of sampling points in guidance?	
Does your state have a mechanism for long-term monitoring?	
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Maryland*	Last Updated:	8/27/2025
Agency	Maryland Department of the Environment	Abbreviation:	MDE
Main Webpage	https://mde.maryland.gov		

Guidance Document (if available) Year:		2025
Specific Guidance Type	Specific Guidance Type	
<input checked="" type="checkbox"/> Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation	
<input type="checkbox"/> Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document	

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical

Published risk-based target/screening levels for VI in various media available?

<input checked="" type="checkbox"/> Groundwater	<input checked="" type="checkbox"/> Indoor air
<input checked="" type="checkbox"/> Soil	<input type="checkbox"/> NAPL
<input checked="" type="checkbox"/> Deep soil gas	<input type="checkbox"/> Crawl space
<input checked="" type="checkbox"/> Shallow soil gas	<input type="checkbox"/> Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	RSLs
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	--	0.05	--	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Massachusetts	Last Updated:	8/27/2025
Agency	Massachusetts Department of Environmental Protection	Abbreviation:	MassDEP
Main Webpage	https://www.mass.gov/orgs/massachusetts-department-of-environmental-protection		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
<input type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	15	--	100	100

Published risk-based target/screening levels for VI in various media available?					
		Groundwater			Indoor air
		Soil			NAPL
		Deep soil gas			Crawl space
		Shallow soil gas			Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	
--	--

Number of VOC screening levels available:	42
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
--	--	0.014	--	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	
Recommend number of sampling points in guidance?	
Does your state have a mechanism for long-term monitoring?	
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Michigan	Last Updated:	8/27/2025
Agency	Environment, Great Lakes, and Energy	Abbreviation:	EGLE
Main Webpage	https://www.michigan.gov/egle/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	0-1 years
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	5	15	100	--

Published risk-based target/screening levels for VI in various media available?

X	Groundwater			Indoor air	
X	Soil			NAPL	
X	Deep soil gas		X	Crawl space	
X	Shallow soil gas		X	Utilities/conduits	

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	141
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	0.03	0.03	1	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	No
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	Depends on liner diffusion coefficient for contaminant
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Minnesota	Last Updated:	8/27/2025
Agency	Minnesota Pollution Control Agency	Abbreviation:	MPCA
Main Webpage	https://www.pca.state.mn.us/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
100	--	--	100	--

Published risk-based target/screening levels for VI in various media available?

	Groundwater		Indoor air	
	Soil		NAPL	
X	Deep soil gas		Crawl space	
X	Shallow soil gas		Utilities/conduits	

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only lookup tables
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Number of VOC screening levels available:	62
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
--	0.03	0.03	1	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Mississippi	Last Updated:	8/27/2025
Agency	Mississippi Department of Environmental Quality	Abbreviation:	MDEQ
Main Webpage	https://www.mdeq.ms.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
<input type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical

Published risk-based target/screening levels for VI in various media available?	
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<input type="checkbox"/>	Groundwater	<input type="checkbox"/>	Indoor air
<input type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL
<input type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	
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Number of VOC screening levels available:	RSLs
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits

Notes:	
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Additional Key Questions	
Recommend number of sampling events in guidance?	
Recommend number of sampling points in guidance?	
Does your state have a mechanism for long-term monitoring?	
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Missouri	Last Updated:	8/27/2025
Agency	Department of Natural Resources, Division of Environmental Quality	Abbreviation:	DNR/DEQ
Main Webpage	https://dnr.mo.gov/about-us/division-environmental-quality		

Guidance Document (if available) Year:			2025
Specific Guidance Type		Specific Guidance Type	
<input checked="" type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/>	Mitigation
<input checked="" type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/>	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	0–1 years
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
100	--	--	100	--

Published risk-based target/screening levels for VI in various media available?

<input checked="" type="checkbox"/>	Groundwater	<input checked="" type="checkbox"/>	Indoor air
<input checked="" type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL
<input checked="" type="checkbox"/>	Deep soil gas	<input checked="" type="checkbox"/>	Crawl space
<input checked="" type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	40
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Montana	Last Updated:	8/27/2025
Agency	Montana Department of Environmental Quality	Abbreviation:	DEQ
Main Webpage	https://deq.mt.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	8	15 or 18	100	--

Published risk-based target/screening levels for VI in various media available?

X	Groundwater	X	Indoor air
X	Soil		NAPL
X	Deep soil gas		Crawl space
X	Shallow soil gas		Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	RSLs
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	0.03	0.03	1	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Nebraska	Last Updated:	8/27/2025
Agency	Nebraska Department of Environment and Energy	Abbreviation:	NDEE
Main Webpage	http://dee.ne.gov/		

Guidance Document (if available) Year:			2025
Specific Guidance Type		Specific Guidance Type	
<input checked="" type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/>	Mitigation
<input checked="" type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/>	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	Date not set
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
200	--	--	100	100

Published risk-based target/screening levels for VI in various media available?

<input checked="" type="checkbox"/>	Groundwater	<input checked="" type="checkbox"/>	Indoor air
<input type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL
<input checked="" type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input checked="" type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only lookup tables
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Number of VOC screening levels available:	>200
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001		0.03	--	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Nevada	Last Updated:	8/27/2025
Agency	Nevada Division of Environmental Protection	Abbreviation:	NDEP
Main Webpage	https://ndep.nv.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	1–2 years
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
--	--	--	100	100

Published risk-based target/screening levels for VI in various media available?

X	Groundwater			Indoor air	
	Soil			NAPL	
	Deep soil gas			Crawl space	
	Shallow soil gas			Utilities/conduits	

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only lookup tables
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Number of VOC screening levels available:	2
Non-residential criteria available:	No
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001				
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	New Hampshire	Last Updated:	8/27/2025
Agency	New Hampshire Department of Environmental Services	Abbreviation:	NHDES
Main Webpage	https://www.des.nh.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	2026
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	30	--	100	100

Published risk-based target/screening levels for VI in various media available?

X	Groundwater	X	Indoor air
	Soil		NAPL
X	Deep soil gas		Crawl space
X	Shallow soil gas		Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	31
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.0001	0.02	0.02	1	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	New Jersey	Last Updated:	8/27/2025
Agency	Department of Environmental Protection	Abbreviation:	NJDEP
Main Webpage	https://dep.nj.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type	Specific Guidance Type	
<input checked="" type="checkbox"/> Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation	
<input type="checkbox"/> Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document	

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	30	30	100	100

Published risk-based target/screening levels for VI in various media available?

<input checked="" type="checkbox"/> Groundwater	<input checked="" type="checkbox"/> Indoor air
<input type="checkbox"/> Soil	<input type="checkbox"/> NAPL
<input checked="" type="checkbox"/> Deep soil gas	<input type="checkbox"/> Crawl space
<input checked="" type="checkbox"/> Shallow soil gas	<input type="checkbox"/> Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only lookup tables
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Number of VOC screening levels available:	45
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
--	--	0.02	--	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	New Mexico	Last Updated:	8/27/2025
Agency	New Mexico Environmental Department	Abbreviation:	NMED
Main Webpage	https://www.env.nm.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type	Specific Guidance Type	
<input type="checkbox"/> Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> X	Mitigation
<input type="checkbox"/> Petroleum Vapor Intrusion Guidance		Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	Date not set
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
		--	100	--

Published risk-based target/screening levels for VI in various media available?

		Groundwater			Indoor air	
		Soil			NAPL	
	X	Deep soil gas			Crawl space	
	X	Shallow soil gas			Utilities/conduits	

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only lookup tables
--	--------------------

Number of VOC screening levels available:	118
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	--	0.03	--	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	No
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	New York	Last Updated:	8/27/2025
Agency	Department of Environmental Conservation	Abbreviation:	DEC
Main Webpage	https://dec.ny.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
		--	100	--

Published risk-based target/screening levels for VI in various media available?

	Groundwater	X	Indoor air
	Soil		NAPL
X	Deep soil gas		Crawl space
X	Shallow soil gas		Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	8
Non-residential criteria available:	No
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001				
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	North Carolina	Last Updated:	8/27/2025
Agency	North Carolina Department of Environmental Quality	Abbreviation:	NCDEQ
Main Webpage	https://www.deq.nc.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	2+ years
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
LNAPL = 100	--	--	100	100

Published risk-based target/screening levels for VI in various media available?

X	Groundwater	X	Indoor air
	Soil		NAPL
X	Deep soil gas	X	Crawl space
X	Shallow soil gas		Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	355
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	--	0.03	1	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	North Dakota	Last Updated:	8/27/2025
Agency	North Dakota Department of Environmental Quality	Abbreviation:	NDDEQ
Main Webpage	https://deq.nd.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type	Specific Guidance Type	
<input checked="" type="checkbox"/> Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation	
<input type="checkbox"/> Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document	

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	1–2 years
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
		--	100	--

Published risk-based target/screening levels for VI in various media available?

<input checked="" type="checkbox"/> Groundwater	<input checked="" type="checkbox"/> Indoor air
<input checked="" type="checkbox"/> Soil	<input type="checkbox"/> NAPL
<input checked="" type="checkbox"/> Deep soil gas	<input type="checkbox"/> Crawl space
<input checked="" type="checkbox"/> Shallow soil gas	<input type="checkbox"/> Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only lookup tables
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Number of VOC screening levels available:	0
Non-residential criteria available:	No
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001				
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Ohio	Last Updated:	8/27/2025
Agency	Ohio Environmental Protection Agency	Abbreviation:	Ohio EPA
Main Webpage	https://epa.ohio.gov/home		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30 (small sources) or 100	6	15	100	--

Published risk-based target/screening levels for VI in various media available?

	Groundwater		Indoor air	
	Soil		NAPL	
	Deep soil gas		Crawl space	
	Shallow soil gas		Utilities/conduits	

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	83
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	0.03	0.03	1	

Notes:	
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Additional Key Questions

Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Oklahoma	Last Updated:	8/27/2025
Agency	Oklahoma Department of Environmental Quality	Abbreviation:	OKDEQ
Main Webpage	https://www.deq.ok.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
<input type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical

Published risk-based target/screening levels for VI in various media available?					
		Groundwater			Indoor air
		Soil			NAPL
		Deep soil gas			Crawl space
		Shallow soil gas			Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	RSLs
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits

Notes:	
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Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Oregon	Last Updated:	8/27/2025
Agency	Department of Environmental Quality	Abbreviation:	DEQ
Main Webpage	https://www.oregon.gov/DEQ/Pages/index.aspx		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	X Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	Yes, March 2025
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	5	15	100	--

Published risk-based target/screening levels for VI in various media available?

X	Groundwater	X	Indoor air
	Soil		NAPL
X	Deep soil gas		Crawl space
X	Shallow soil gas		Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Lookup tables
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Number of VOC screening levels available:	>350
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	0.03	0.03	1	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	Minimum 30 mil (and adequate composition: low permeability, durable, chemical resistance)
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Pennsylvania	Last Updated:	8/27/2025
Agency	Department of Environmental Protection	Abbreviation:	DEP
Main Webpage	https://www.dep.pa.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	5	15	100	--

Published risk-based target/screening levels for VI in various media available?

X	Groundwater	X	Indoor air
X	Soil		NAPL
X	Deep soil gas		Crawl space
X	Shallow soil gas		Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only lookup tables
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Number of VOC screening levels available:	119
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.0009	0.005	0.026	--	

Notes:	
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Additional Key Questions	
Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	Vapor barriers should be chemically resistant to the COCs present and installed to the manufacturer recommendations
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Rhode Island	Last Updated:	8/27/2025
Agency	Rhode Island, Department of Environmental Management	Abbreviation:	RIDEM
Main Webpage	https://dem.ri.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
<input checked="" type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	1–2 years
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical

Published risk-based target/screening levels for VI in various media available?

<input checked="" type="checkbox"/>	Groundwater	<input type="checkbox"/>	Indoor air
<input checked="" type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL
<input type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only lookup tables (in draft)
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Number of VOC screening levels available:	43
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001				
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	South Carolina	Last Updated:	8/27/2025
Agency	South Carolina Department of Environmental Services	Abbreviation:	SCDES
Main Webpage	https://des.sc.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
<input checked="" type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	Date not set
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	5	15		

Published risk-based target/screening levels for VI in various media available?

<input checked="" type="checkbox"/>	Groundwater	<input type="checkbox"/>	Indoor air
<input checked="" type="checkbox"/>	Soil	<input checked="" type="checkbox"/>	NAPL
<input type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	RSLs (8)
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
NA	NA	NA	NA	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	Yes (NA)
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	NA
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	South Dakota	Last Updated:	8/27/2025
Agency	South Dakota Department of Agriculture & Natural Resources	Abbreviation:	DANR
Main Webpage	https://danr.sd.gov/		

Guidance Document (if available) Year:			2025
Specific Guidance Type		Specific Guidance Type	
<input type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/>	Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/>	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical

Published risk-based target/screening levels for VI in various media available?	
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<input type="checkbox"/>	Groundwater	<input type="checkbox"/>	Indoor air
<input type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL
<input type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	
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Number of VOC screening levels available:	6
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits

Notes:	
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Additional Key Questions	
Recommend number of sampling events in guidance?	
Recommend number of sampling points in guidance?	
Does your state have a mechanism for long-term monitoring?	
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Tennessee	Last Updated:	8/27/2025
Agency	Tennessee Department of Environment & Conservation	Abbreviation:	TDEC
Main Webpage	https://www.tn.gov/environment.html		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical

Published risk-based target/screening levels for VI in various media available?					
	X	Groundwater			Indoor air
	X	Soil			NAPL
	X	Deep soil gas			Crawl space
	X	Shallow soil gas			Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	VISLs
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Texas	Last Updated:	8/27/2025
Agency	Texas Commission on Environmental Quality	Abbreviation:	TCEQ
Main Webpage	https://www.tceq.texas.gov/		

Guidance Document (if available) Year:			2025
Specific Guidance Type		Specific Guidance Type	
<input type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/>	Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/>	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical

Published risk-based target/screening levels for VI in various media available?					
		Groundwater		<input checked="" type="checkbox"/>	Indoor air
		Soil		<input type="checkbox"/>	NAPL
		Deep soil gas		<input type="checkbox"/>	Crawl space
		Shallow soil gas		<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only lookup tables
--	--------------------

Number of VOC screening levels available:	>300
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Utah	Last Updated:	8/27/2025
Agency	Utah Department of Environmental Quality	Abbreviation:	Utah DEQ
Main Webpage	https://deq.utah.gov/		

Guidance Document (if available) Year:			2025
Specific Guidance Type		Specific Guidance Type	
<input checked="" type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/>	Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/>	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	--	--	100	--

Published risk-based target/screening levels for VI in various media available?

<input checked="" type="checkbox"/>	Groundwater	<input checked="" type="checkbox"/>	Indoor air
<input type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL
<input checked="" type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input checked="" type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	
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Number of VOC screening levels available:	VISLs
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits

Notes:	
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Additional Key Questions

Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	No
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Vermont	Last Updated:	8/27/2025
Agency	Agency of Natural Resources Department of Environmental Conservation	Abbreviation:	DEC
Main Webpage	https://dec.vermont.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	6	15	100	100

Published risk-based target/screening levels for VI in various media available?

X	Groundwater	X	Indoor air
X	Soil		NAPL
X	Deep soil gas		Crawl space
X	Shallow soil gas		Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only lookup tables
--	--------------------

Number of VOC screening levels available:	16
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	0.03	0.03	1	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Virginia	Last Updated:	8/27/2025
Agency	Virginia Department Environmental Quality	Abbreviation:	VADEQ
Main Webpage	https://www.deq.virginia.gov/		

Guidance Document (if available) Year:			2025
Specific Guidance Type		Specific Guidance Type	
<input checked="" type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/>	Mitigation
<input checked="" type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/>	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical

Published risk-based target/screening levels for VI in various media available?

<input checked="" type="checkbox"/>	Groundwater	<input checked="" type="checkbox"/>	Indoor air
<input checked="" type="checkbox"/>	Soil	<input checked="" type="checkbox"/>	NAPL
<input checked="" type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input checked="" type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	>300
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	0.01	0.01	--	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	No
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Washington	Last Updated:	8/27/2025
Agency	Washington State Department of Ecology	Abbreviation:	Ecology
Main Webpage	https://ecology.wa.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	6	15	100	--

Published risk-based target/screening levels for VI in various media available?

X	Groundwater	X	Indoor air
	Soil		NAPL
X	Deep soil gas	X	Crawl space
X	Shallow soil gas		Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only lookup tables
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Number of VOC screening levels available:	88
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001			1	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	West Virginia	Last Updated:	8/27/2025
Agency	West Virginia Department of Environmental Protection	Abbreviation:	DEP
Main Webpage	https://dep.wv.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
<input checked="" type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	No
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical

Published risk-based target/screening levels for VI in various media available?					
<input checked="" type="checkbox"/>	Groundwater	<input type="checkbox"/>	Indoor air	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL	<input type="checkbox"/>	
<input type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space	<input type="checkbox"/>	
<input type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits	<input type="checkbox"/>	

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	RSLs
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Wisconsin	Last Updated:	8/27/2025
Agency	Wisconsin Department of Natural Resources	Abbreviation:	WI DNR
Main Webpage	https://dnr.wisconsin.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
X	Chlorinated Vapor Intrusion Guidance	X Mitigation
X	Petroleum Vapor Intrusion Guidance	Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	0–1 years
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical
30	5	15	100	--

Published risk-based target/screening levels for VI in various media available?

X	Groundwater	X	Indoor air
	Soil	X	NAPL
X	Deep soil gas	X	Crawl space
X	Shallow soil gas	X	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Only lookup tables
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Number of VOC screening levels available:	VISLs
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	Yes
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits
0.001	0.01	0.03	1	
Notes:				

Additional Key Questions	
Recommend number of sampling events in guidance?	Yes
Recommend number of sampling points in guidance?	Yes
Does your state have a mechanism for long-term monitoring?	No
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	no specific thickness; use vapor barrier designed for COCs and tested for concentrations at site
Designer qualification necessary to be met?	

ITRC Vapor Intrusion Technical and Regulatory Guidance

State	Wyoming	Last Updated:	8/27/2025
Agency	Wyoming Department of Environmental Quality	Abbreviation:	Wyoming DEQ
Main Webpage	https://deq.wyoming.gov/		

Guidance Document (if available) Year:		2025
Specific Guidance Type		Specific Guidance Type
<input checked="" type="checkbox"/>	Chlorinated Vapor Intrusion Guidance	<input checked="" type="checkbox"/> Mitigation
<input type="checkbox"/>	Petroleum Vapor Intrusion Guidance	<input type="checkbox"/> Public Stakeholder Document

If your state is considering the development or revision of vapor intrusion guidance, what is the timeline for its publication?	1–2 years
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Identified Separation Distances (in ft)				
Petroleum			Chlorinated or Other	
Lateral	Dissolved Groundwater Vertical	Nonaqueous Phase Liquid	Lateral	Vertical

Published risk-based target/screening levels for VI in various media available?

<input checked="" type="checkbox"/>	Groundwater	<input checked="" type="checkbox"/>	Indoor air
<input type="checkbox"/>	Soil	<input type="checkbox"/>	NAPL
<input checked="" type="checkbox"/>	Deep soil gas	<input type="checkbox"/>	Crawl space
<input checked="" type="checkbox"/>	Shallow soil gas	<input type="checkbox"/>	Utilities/conduits

Do you have criteria that are generically used (e.g., lookup tables) or is every site site-specific?	Stepwise approach using both
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Number of VOC screening levels available:	VISLs
Non-residential criteria available:	Yes
Option available for site-specific attenuation factors:	No
Target cancer risk level:	
Target hazard quotient for potential non-cancer effects:	

Attenuation Values used in Guidance				
Groundwater	Deep Soil Gas	Shallow Soil Gas	Crawl Space	Utilities/Conduits

Notes:	
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Additional Key Questions

Recommend number of sampling events in guidance?	No
Recommend number of sampling points in guidance?	No
Does your state have a mechanism for long-term monitoring?	Yes
Recommended differential pressure target for active mitigation systems (range or minimum) (Pa)	
Recommended vapor membrane thickness for passive mitigation systems (range or minimum) (mil)	
Designer qualification necessary to be met?	