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Groundwater Oxygenate Cleanup Levels for LUST Sites

12-Apr-2005

State	Data current as of March 2005. All values in ug/L (or ppb).									Comments:
	MTBE	Drinking water value for MTBE?	MTBE level or change in 2005?	TBA	DIPE	TAME	ETBE	EtOH	MeOH	
Alabama	20	None								As of October 2003, all corrective action levels are derived from a risk-based assessment. MTBE at 20 ppb represents the risk-based "initial screening levels".
Alaska	None	None								Staff has option to require the compounds of concern to be sampled & analyzed.
Arizona	20 / 94	13							18,000	MTBE levels under revision in 2005: 20 ppb = receptor threatened or impacted / 94 ppb = no receptor. State recommended risk-based chronic exposure level for drinking water is 13 ppb. MeOH: state recommended risk-based chronic exposure level.
Arkansas	None	None								MTBE: 20 ppb drinking water advisory. Groundwater discharge to surface water MTBE value = 7,000 ppb.
California	13 / 5	13 / 5		12						MTBE: 13 ppb / 5 ppb = Primary MCL / Secondary MCL (both enforceable); TBA: 12 ppb = Provisional Action Goal (enforceable).
Colorado	20 (effective 5/30/2005)	None	20 (effective 5/30/2005)							MTBE 20 ppb risk-based screening level (RBSL) for groundwater ingestion pathway takes effect May 30, 2005. Cleanup levels are site-specific for other ether and alcohol fuel oxygenate compounds.

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Connecticut	70	70		100;	-----Total Oxygenate Target Level-----			None	Value was expected in 2004	MTBE: 70 ppb for groundwater protection criteria and drinking water action level. TBA currently has an "Interim Drinking Water Target Level" at 100 ug/L. DEP utilizes a "total oxygenate target level" (e.g., DIPE + TAME, + TBA, + ETBE, + MTBE) that is also not to exceed 100 ug/L. Total oxygenate levels greater than or equal to 100 ug/L require an alternative drinking water supply for those well owners who are affected by the pollution. MeOH groundwater protection criterion was expected to be established in 2004.	
Delaware	180 / site-specific	10		140; possible changes in 2005	Possible changes in 2005	750; possible changes in 2005	Possible changes in 2005	None	None	MTBE: 180 ppb / site-specific = action level / risk-based cleanup level. Primary health-based drinking water standard. TBA: 140 ppb action level. TAME: 750 ppb action level.	
District of Columbia	20	None		No action, corrective action, or drinking water values							MTBE: 20 ppb cleanup level.
Florida	50 ppb until 20 ppb CTL (effective 4/16/05)	None	20 ppb CTL (effective 4/16/05)	1,400 ppb CTL (effective 4/16/05)	No CTL proposed	No CTL proposed	No CTL proposed	10,000 ppb CTL (effective 4/16/05)	5,000 current level; 3,500 ppb CTL (effective 4/16/05)	Cleanup Target Levels (CTL): MTBE: 50 ppb for groundwater. New CTLs effective 4/16/05: MTBE - 20 ppb, TBA - 1,400 ppb, MeOH - 3,500 ppb, EtOH - 10,000 ppb.	
Georgia	None	EPA Advisory (20-40 ppb)		No action, corrective action, or drinking water values							Waiting for EPA MCL.

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Hawaii	20 / 202,000	None		No action, corrective action, or drinking water values							MTBE: 20 ppb / 202,000 ppb = threatened / not-threatened drinking water, respectively. Risk-based site-specific values are determined on case-by-case basis.
Idaho	17 ppb action level / site-specific cleanup level	None		No action, corrective action, or drinking water values							MTBE: 17 ppb action level / site-specific cleanup level.
Illinois	70	70 / 20		Case-by-case basis	Case-by-case basis	Case-by-case basis	Case-by-case basis	571,000	Case-by-case basis	MTBE: 70 ppb = action/cleanup groundwater value as well as primary health-based drinking water standard. MTBE preventive notice threshold for drinking water is 20 ppb. Ethanol: 571,000 ppb groundwater cleanup value.	
Indiana	40 / 870	EPA Advisory (20-40 ppb)		Site-specific	Site-specific	Site-specific	Site-specific	Site-specific	Site-specific	MTBE cleanup levels: 40 / 870 = residential / industrial. Drinking water advisory per EPA Advisory levels (20-40 ppb). Case-by-case basis for other fuel oxygenates.	
Iowa	None	20		No action, corrective action, or drinking water values							No EPA MCL for MTBE; however, EPA's HAL/odor threshold value of 20 ppb used for drinking water supplies.
Kansas	20	Any level		43	No action, corrective action, or drinking water values						MTBE: 20 ppb = action/cleanup level. Drinking water value = method detection limit (Method 524.2 method detection limit = 0.1 ppb) / reporting limit = 0.5 ppb). TBA: 43 ppb action level (TBA method detection limit = 10 ppb / reporting limit = 20 ppb).
Kentucky	None	50		No action, corrective action, or drinking water values							Waiting for EPA MCL. Alternative drinking water source required for MTBE impacts \geq 50 ppb drinking water guideline.

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Louisiana	20 (based on aesthetics)	None		Other oxygenates cleanup levels are aesthetically-based							MTBE: 20 ppb = action levels/cleanup levels based upon aesthetics (taste/odor). TBA and other oxygenates: aesthetics would address action/cleanup levels.
Maine	25 / 35	35		25	25	25	25	None	None	MTBE: 25 ppb / 35 ppb = action level / cleanup level, respectively. TBA, DIPE, TAME & ETBE analyzed at LUST sites and have 25 ppb default action level, respectively. No testing for EtOH & MeOH.	
Maryland	Site-specific	20		TBA action level on hold	No action, corrective action, or drinking water values						MTBE: site-specific cleanup values / 20 ppb drinking water value, respectively. All oxygenates sampled at least once per LUST site. TBA: action level on hold; currently sampled and tested.
Massachusetts	70	70		No action, corrective action, or drinking water values							MTBE: 70 ppb = groundwater used as drinking water cleanup value and drinking water guideline. Cleanup possible to aesthetic secondary value (20-40 ppb).
Michigan	240 / 40	240 / 40		3,900 / 11,000	30 / 86	190 / 910	49 / 49	1,900,000	3,700 / 10,000	MTBE: 240 / 40 ppb = health-based / aesthetic criteria. TBA: 3,900 / 11,000 ppb = residential drinking water / commercial-industrial land uses. DIPE: 30 / 86 ppb = residential drinking water / commercial-industrial land uses. TAME: 190 / 910 ppb = aesthetics / health-based criteria. ETBE: 49 / 49 = residential drinking water / commercial-industrial land uses. Methanol: 3,700 / 10,000 ppb = residential drinking water / commercial-industrial land uses.	

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Minnesota	70	70		No action, corrective action, or drinking water values						3,000	MTBE: 70 ppb = health-based value (HBV), generally preceding development of health risk limit (HRL). MeOH: 3,000 ppb = HRL. Both HBV and HRL can be used to set cleanup level.
Mississippi	None	None		No action, corrective action, or drinking water values							MTBE & other oxygenate data collected at Federal & Trust-Fund sites.
Missouri	146 / Tier 2&3 risk-based	None		286	677	626	15	2,260	297	MTBE: 146 ppb / Site-specific = Risk-based: Tier 1 residential groundwater domestic use default target levels. Site-specific Tier 2 & 3 target levels.	
Montana	30	None		No action, corrective action, or drinking water values							MTBE: 30 ppb = cleanup level.
Nebraska	20 / site-specific	None		No action, corrective action, or drinking water values							MTBE: 20 ppb / site-specific = Tier 1 RBSL action or cleanup level / Tier 2 drinking water level. Other oxygenate sampling at state-lead sites.
Nevada	20 / 200	EPA Advisory (20-40 ppb)		No action, corrective action, or drinking water values							MTBE: 20 ppb / 200 ppb = Risk-based action/cleanup levels for drinking water receptor / NPDES discharge or non-drinking water receptor, respectively
New Hampshire	13	13 / 20		Level possible to be adopted in 2004	Level possible to be adopted in 2004	Level possible to be adopted in 2003	Level possible to be adopted in 2004	None	None	MTBE: 13 ppb = cleanup level. TBA, ETBE, DIPE & TAME: possible Rules Making Process in 2004. Public Health recommendations for TBA, ETBE & TAME; waiting on TAME.	
New Jersey	70	70		100	20,000	None	None	None	4,000	ISM=Interim Specific Criteria for consistency with SDWA; IS=Interim Specific Criteria. MTBE: 70 ppb = ISM cleanup value & primary health-based drinking water standard. IS cleanup values: TBA: 100 ppb; DIPE: 20,000 ppb; MeOH: 4,000 ppb.	

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New Mexico	100	100		No action, corrective action, or drinking water values							MTBE: 100 ppb = regulated standard cleanup value. Petroleum Storage Tank Regulation (section 20.5.12.1233.A.2 NMAC) states "remediation shall not be considered complete until the 100 ppb MTBE groundwater standard has been achieved".
New York	10	10		50	50	50	50	50	50	MTBE: 10 ppb = enforceable NYS-DEC Ambient Water Quality Surface and Groundwater Guidance Value and also enforceable NYS-DOH Drinking Water Standard. Discovery of any levels of MTBE in groundwater will trigger an investigation of sources. Enforceable Unspecified Organic Contaminant (UOCs) regulated at 50 ppb for other fuel oxygenates: TBA, DIPE, TAME, ETBE, EtOH & MeOH	
North Carolina	200 / risked-based	EPA Advisory (20-40 ppb)	Possible changes in 2005	None	70	None	None	None	3,500	MTBE: 200 ppb / risk-based = action / cleanup level. MTBE standards proposed for 70 ppb & 11.6 ppb; possible change for 2005. DIPE cleanup value at 70 ppb.	
North Dakota	None	EPA Advisory (20-40 ppb)		No action, corrective action, or drinking water values							No cleanup or action values for any fuel oxygenates.
Ohio	40 / site-specific	EPA Advisory (20-40 ppb)		No action, corrective action, or drinking water values							MTBE: 40 ppb action level / site-specific cleanup level.
Oklahoma	20 / site-specific	None		Site-specific	Site-specific	Site-specific	Site-specific	Site-specific	Site-specific	MTBE: 20 ppb / site-specific = level of concern (further assessment and corrective action can be required) / site-specific cleanup levels. If a drinking water supply well has been identified within 330 feet of the petroleum release site, ground water must be tested for MTBE at the Point of Compliance.	

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Oregon	6.4 / 13 / 38	EPA Advisory (20-40 ppb)		No action, corrective action, or drinking water values							MTBE: 6.4 / 13 / 38 ppb = tap water standards for residential, urban-residential, and occupational uses, respectively. OR-DEQ adopted Cal-EPA's MTBE slope factor to determine MTBE values.
Pennsylvania	20	EPA Advisory (20-40 ppb)		No action, corrective action, or drinking water values						4,900	MTBE: 20 ppb = residential cleanup standard. MeOH: 4,900 ppb = cleanup or action value.
Rhode Island	20 / 40 / 5,000	40		No action, corrective action, or drinking water values							MTBE: 20 / 40 / 5,000 ppb = Groundwater action level / state health advisory for public water systems & GA/GAA groundwater cleanup value (based on odor and taste thresholds) / cleanup value for groundwater not suitable for drinking water without treatment.
South Carolina	40	None		No action, corrective action, or drinking water values							MTBE: 40 ppb = health-based cleanup or action value. SC has sampled & tested other fuel oxygenates at about 100 sites over the past few years. Also, SC has assessed other oxygenates within 1,000-1,500 feet from release sites.
South Dakota	None	EPA Advisory (20-40 ppb)		No action, corrective action, or drinking water values							BTEX remediation also cleaning up any oxygenates that are present.
Tennessee	Site-specific	None		No action, corrective action, or drinking water values							MTBE: TN has MTBE on its Chemicals of Concern list for Products Released (gasoline, diesel, jet fuel, kerosene). A ground water site-specific cleanup level is established based on whether the ground water is drinking or non-drinking water. TN implemented a state-specific RBCA program in January 2005.

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Texas	240 / 15	15		2,200	2,400	980	24	806	12,000	The Petroleum Storage Tank (PST) program joined the Texas Risk Reduction Program (TRRP) in September 2003, at which time all fuel oxygenate cleanup levels become valid for PST sites. Action levels for MTBE are the Tier 1 residential PCLs (240 ppb for groundwater). Cleanup levels can be Tier 1 values (either residential or commercial/industrial as appropriate, but site-specific Tier 2 or 3 options are available. The secondary drinking water standard of 15 ppb applies if a drinking water well is impacted. PST program typically does not request analyses for oxygenates other than MTBE, but if oxygenates are found, then development of cleanup levels may be required.
Utah	70 / site-specific	None		No action, corrective action, or drinking water values						MTBE: 70 ppb / site-specific = recommended cleanup level (RCL) / UT-DEQ RBCA site-specific cleanup level (SSLC).
Vermont	40	40		No action, corrective action, or drinking water values						MTBE: 40 ppb = cleanup level and primary health-based drinking water level.
Virginia	Site-specific	None		No action, corrective action, or drinking water values						MTBE: site-specific = risk-based site-by-site consideration of MTBE cleanup levels. Drinking water wells impacted with fuel oxygenates participate in the "Alternative Water Supply Program".
Washington	20	None		No action, corrective action, or drinking water values						MTBE: 20 ppb = Method A cleanup level. WA-DOE Table 830-1, Required Testing for Petroleum Releases, specifies that "other additives and blending components of potential environmental significance may need to be considered for testing, including: TBA, TAME, ETBE, EtOH & MeOH".

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West Virginia	[20-40]	None		No action, corrective action, or drinking water values							MTBE: [20-40 ppb] = site-specific values in the EPA DW Advisory range applied. 20 ppb MTBE action level associated with Voluntary Remediation (risk-based) program and not the standard enforcement program.
Wisconsin	60 / 12	None		No action, corrective action, or drinking water values						5,000 / 1,000	MTBE: 60 ppb / 12 ppb and Methanol: 5,000 / 1,000 = Enforcement Standard (ES) / Preventive Action Limit (PAL) goal.
Wyoming	40	None	Proposed change to 30 ppb for 2005	3,200 currently / 220 proposed for 2005	1,200 proposed for 2005	130 proposed for 2005	190 proposed for 2005	None	16,000 currently	MTBE: 40 ppb = current action or cleanup goal. TBA: 3,200 ppb = current action or cleanup goal / proposed change for 2005. Proposed Groundwater Standards/Action Levels under consideration: MTBE (30 ppb), TBA (220 ppb), DIPE (1,200 ppb), TAME (130 ppb), ETBE (190 ppb) & Methanol (18,000 ppb).	