### **Attachment 2**

### **State Standard Summaries**

**Questions 1-1 through 1-9** 

2006 Survey of State Experiences with Petroleum and Hazardous Substance Releases at LUST Sites, Heating Oil Tanks, and Out of Service Tanks

## 1-1a&b. Does your state have action levels, cleanup levels, or drinking water standards for MtBE?

	State	Yes	No	Don't Know		Groundwater Cleanup Level(s) (ppb)	Soil Action Level(s) (ppm)	Soil Cleanup Level(s) (ppm)	Primary (health based)	Secondary (taste & odor)	State (or other) Advisory	EPA Advisory (20-40 ppb)	Comments
. A	AK.		X										
	<b>AL</b> 	X			20	20	0.008	0.008				_	The cleanup levels are all risk-based determined on a site by site basis. The cleanup level entered is the initial screening level.
.   <i>A</i>	AR.	.	X								 	<u> </u> Г	Arizona does not have an
A	AZ:	X			20		320	320					enforceable drinking water standard. The UST program has limited authority in the UST Corrective Action Rules that allows determination of a risk-based level of contaminants that do not have a drinking water standard.
	CA.	X							13	5			
	CO	X			20	20				20			Petroleum storage tanks and cleanups from these tanks are regulated by the Dept. of Labor and Employment, Division of Oil and Public Safety (OPS). Hazardous waste cleanups are regulated by the Dept. of Public Health and Environment (CDPHE).
	CT	X	·						70				Soil cleanup levels: > direct exposure criteria, Residential = 500 ppm,

DE		180		0.13	1	0	Industrial/Commercial = 1000 ppm > pollutant mobility criteria, GA = 2 ppm, GB = 20 ppm Groundwater cleanup levels: > pollutant mobility criteria == 100 ppb  gwcl - site specific, scl - site specific
FL	X		20		0.09		There is no separate concept of an action level as distinguished from a cleanup level. If a chemical is detected above the cleanup target level it is considered contaminated and means that the contamination needs to be cleaned up.
GA.	X						MtBE is used as a leading edge indicator of plume movement and its presence in a drinking water well sometimes results in replacement of the well to prevent further contamination by benzene and other substances that have an MCL.l
НІ	X	20	20	0.005	0.005		Current HIDOH UST action levels for MtBE: non-drinking water threatened soil: 20 ppm non-drinking water threatened GW: 202,000 ppb drinking water threatened soil: 0.005 ppm drinking water threatened GW: 20 ppb

IA		X									Sites must sample for MtBE during initial investigations/assessment. If MtBE is found above the detection level (15 ppb) continued sampling for MtBE is required.
ID		X									Guidance is due to be released in late 2007-earl 2008. Cleanup levels are currently site-specific and risk based.
IL .	X		70	70	0.32	0.32	70	20	20	20	Any detection of a
IN	X		40	40	0.18	0.18				20	contaminant requires a response. Detection limits must meet the residential cleanup objective. Cleanup levels listed are for residential closure. The commercial/industrial levels are 870 (gw/) and 3.9 (s).
KS	X		20	20	2400	2400					
KY	X		50								When a release is confirmed or when gw is encountered at a UST system removal, KY requires MtBE analysis of water samples from drinking water sources (domuse wells, springs, cisterns) located within a certain distance from a UST system.
L <b>A</b> .	X		20		0.07						Cleanup levels are site- specific and based on a tiered risk-based approace and depend on source length, GW classification

MA	X	70	70	0.10	100		20	70	[ [ [	and dilution factor.  GWAL =gw1=70, gw2=1.0 Soil S1=0.1 S2=100 mg/kg  1-1b non-residental soil
MD	X	20		650						action level is 2700 ppm
ME	X	25	35			35			[ _	
MI	X	40		800		240	40			MTBE was banned effective June 1, 2003. Criteria units are in pbb. Cleanup level depends on land use. Inhalation and direct contact criteria are developed as well. Note: program does not designate health-based criteria as primary. See Opmemo No. 1 on Web at: www.michigan.gov/deqrrd
MN	X .							70	 Г	
МО	X	146		0.453					20	Cleanup levels vary depending on the risk assessment and whether a Tier 1 or Tier 2 cleanup is done.
MS	X	40		3910						The groundwater and soil levels listed are "screening levels" which, if exceeded, require further assessment and/or remediation.
МТ	X	30	30	0.10		30				Action levels for MtBE in soil vary depending on depth to groundwater and land use. 0.1 ppm is the most conservative value assigned to groundwater less than 10 feet vertical speration and residential use.

NC	X		200		0.92		200		11.60		Cleanup levels based on assigned risk of site. High - (.92 ppm/200 ppb) Intermediate - (.92 ppm/200000 ppb) Low - (156 or 4088 ppm/200000 ppb) {(soil - ppm)(GW - ppb)}
ND)		X								<u> </u>	Cleanup levels are site-
NE	X										specific levels determined using RBCA program. The following levels are the lowest RBSLs: 20 ppb for GW and 0.607 for Soil.
NH	X			13		0.13	13	20		r	
NJ	X			70		3.10	70			  -	
NM	X		100	100					100	40	Soil action and cleanup levels are risk-based and therefore variable
NV	X		20	20							Site-specific MtBE action levels are set to 20 ug/L unless the site is located greater than 500 feet from private well; 1,000 feet from a municipal well, construction dewatering, or sensitive environment; 1/2 mile from surface water intakes
NY	X			10		0.12	10				Action levels for both groundwater and soil are any amount of contamination.
OH	X		40		130						The cleanup level is site specific so I can't tell you what it is.
OK.		X									Although OK has no

OP			6.40		120		action level or cleanup level for MtBE, we have adopted EPA's "level of interest" for this contaminant in groundwater. That concentration level is 20 ug/L.
OR.	X		6.40		130		If a water supply (private
PA	X	20	20	2	2		or public) is affected by a UST petroleum release, regardless of contaminant level, the water supply must be replaced either temporary or permanently depending on long-term impact.
RI	X	20	40		0.90	40	Standards for GA areas entered in table The soil standard is a leachability standard. Standards for GB areas: Groundwater Cleanup Level 5000 ppb Leachability Cleanup Level Soil 100 ppm
SC	X	40		0.032		40	Soil action level based on EPA PRG Soil cleanup may vary depending on land use. Cleanup levels are site-specific risk-based values.
SD	X	40					*Ingestion, resident child
TN	X		20		39.60		or commercial worker-20 ppb Indoor Inhalation/vapor emissions, resident child- 175000ppb, commercial worker-1610000ppb

				_							**Indoor Inhalation/vapor emissions, resident child- 39.6ppm, commercial worker-364 ppm
	X			240	15	0.62	0.62	240	15		MtBE action levels only apply to releases reported after September 1, 2003. Cleanup levels vary depending on the potential for receptors to be exposed. The most conservative cleanup level has been provided.
UT	X			200	200	0.30	0.30			200	
VA		X									VDEQ has zero tolerance for petroleum and petroleum-related additives in private Drinking water supply wells. Cleanup is sitespecific and risk-based. Regulated water supplies follow EPA's MCLs.
VT	X			1						40	MtBE cleanup levels are determined on a site-specific basis and are risk-based.
WA	X			_	20		0.10				Washington's groundwater cleanup level is based on the federal drinking water advisory level. Our soil cleanup level is based on protection of groundwater for drinking water use.
WI	X	.			60						
WV		$ \mathbf{x} $									
WY	X			40	40						
Totals:	41	8	1								

1- 2a & b Does your state have action levels, cleanup levels, or drinking water standards for *tertiary*-butyl alcohol (TBA)?

State	Ye	s	lo l	Don't Know	Groundwater Action Level (ppb)		Soil Action Level (ppm)	Soil Cleanup Level (ppm)	Primary (health based)	Secondary (taste & odor)	State (or other) Advisory	EPA Advisory (20-40 ppb)	Comments
AK		2											
$A$ ]_		2	ζ										
AR		2	(										
AZ		2	(										
CA	X								12				
CO		2	(										
СТ	X								100				CT only has a drinking water standard expressed as a combined total concentration of TBA, MTBE, ETBE, TAME, DIPE.
DE	X				140		0.05						Action levels are draft. Cleanup levels are site-specific
FL	X					1400		5.70					The Florida petroleum cleanup program does not list TBA as a chemical of concern. so it is not normally required in groundwater analyses at petroleum contaminated sites. However there is a cleanup target level as indicated.
GA		2	ζ.										
HI		2	(										The current HIDOH UST action levels do not have an action level for TBA. However, the newly revised 2006 Environmental Action Levels adopted by the Hawaii Dept of Health HEER Office do. We are currently in the process of adopting new levels
IA.			ζ		1		İ		T				

ID		X					
IL		X					
IN		X					There are no default response standards or drinking water standards. Response decisions would be site-specific. and a default closure level would be calculated when needed.
KS	X		43	43			
KY		X					There are no cleanup levels for TBA in KUST regulations. However, the Division of Water requires analyses for many more compounds for public water systems; DOW may have some standards that are not addressed by the KY UST Branch.
LA		X					Value is not listed in RECAP but would be developed using RECAP algorithms.
MA	X		1000	100		120	GW1=1.0mg/l GW2=10mg/l S1=100mg/k S2=1000mg/kg
MD		X					
ME		X					
MI	X		3900	78000	3900		Cleanup levels depend on land use. units i ppb. See Op Memo No. 1 on Web at : www.michigan.gov/deqrrd
MN		X					
МО	X	·	286	0.563			Cleanup levels depend on risk assessment and whether a Tier 1 or Tier 2 cleanup is done.
MS		X					
MT		Х					Will consider standard based on the results of EPA fuel testing.
NC	X						Although no specific standards have been established for this chemical, a violation occurs if the constituent is even detected. Therefore, action levels, cleanup levels and drinking water standards will become the detection limit.

ND		X		_						
NE		X								
NH	X				40					Soil standards are under development.
NJ	X				100		4.10			
NM		X								
NV		X								
NY	X							50		Action levels are any amount of contamination and the cleanup levels are site-specific for both groundwater and soil. The drinking water standard for TBA is regulated as an Unspecified Organic Contaminant (UOC).
OH		X								
OK		X								
OR	X									If TBA is detected, the cleanup level is calculated at a 1 in a million cancer risk or at a hazard index of 1, whichever applies.
PA	j	X		Ė		i i		_		
RI	j	X		· i		i i				
SC	X		1	400					1400	Cleanup levels are site-specific risk-based values
SD		X								
TN		X								
TX		X								
UΤ		X								
VA		Х								VDEQ has zero tolerance for petroleum and petroleum-related additives in private Drinking water supply wells. Cleanup is site-specific and risk-based.
VΓ		Х		1						Vermont has recently begun to test for TBA. It is being detected at more and more sites. There are no standards yet for this compound.
WA		X						Γ		

WI   X			Γ		Γ	
WV   X			Γ			
WY X	2.200	2200	Γ		Γ	
Totals   15   35   0						

## 1-3a&b. Does your state have action levels, cleanup levels, or drinking water standards for Ethanol?

State	Yes	No	Don't Know	Groundwater Action Level(s) (ppb)	Groundwater Cleanup Level(s) (ppb)	Soil Action Level(s) (ppm)	Soil Cleanup Level(s) (ppm)	Primary (health based)	Secondary (taste & odor)	State (or other) Advisory	EPA Advisory (20-40 ppb)	Comments
AK.		X										
AL		X										
AR.		X										
AZ		X										
CA.		X										
CO		X										
CT		X										
DE		X										
FL	X				10000		40					
GA.		X										
HI		X										
IA		X										
ID		X										
IL .		X										
IN		X										Our Risk Program is currently developing a default cleanup levels for ethanol. Results are pending
KS		X										

KY		X				There are no cleanup levels for ethanol in KY UST regulations. However, the Division of Water requires analyses for many more compounds for public water systems; DOW may have some standards that are not addressed by the KY UST Branch.
LA		X				Value is not listed in RECAP but would be developed using RECAP algorithms.
MA	X		1000	100		GW1=1.0mg/l GW2=10mg/l S1=100mg/kg S2-1000mg/kg
MI)		$ \mathbf{X} $				
ME		$ \mathbf{X} $				
MI	X		1.90	380	1.90	cleanup levels are based on land use. units are in pbm. See Op Memo No. 1 on web at www.michigan.gov/deqrrd
MN		$ \mathbf{X} $				
MO	X		2260	3.39		Same as above.
MS		X				
МТ		X				
NC:	X					Although no specific standards have been established for this chemical, a violation occurs if the constituent is even detected. Therefore, action levels, cleanup levels and drinking water standards will become the detection limit.
ND)		X				
NE		$ \mathbf{X} $				
NH		X				
NJ		X				1-3b. Compounds (non-carcinogens) that don't have specific or interim specific Ground Water Quality Standards default to 100 ppb.
NM		X				
NV		$ \mathbf{X} $				
NY	$\mathbf{X}$				50	Action levels are any amount of

1		1 .			Г	Γ	ГГ	contamination and the cleanup levels are
								site specific for both groundwater and
								soil. The drinking water standard for
								Ethanol is regulated as an Unspecified
								Organic Contaminant (UOC).
OH		X						
OK.		X						
OR.		'	X					
PA		X						
RI		X					Γ	
SC	X			10000			10000	Cleanup Levels are site specific risk-based values
SD		X						
TN		X					Γ	
TX		X		<del></del> -				
UT		X						
VA		X						VDEQ has zero tolerance for petroleum and petroleum-related additives in private Drinking water supply wells. Cleanup is site-specific and risk-based.
VT		X		1	į į		į į	
WA	i	X		<del></del>	į į	Ī	į į	
WI		X			į į	_	Ė Ė	
WV		X				_		
WY		X						Tank program has no cleanup level for ethanol.
Totals:	7	42	1					

# 1- 4a & b. Does your state have action levels, cleanup levels, or drinking water standards for *tert*-amylmethyl ether (TAME)?

State   Yes   No   Don't   Groundwater   Groundwater   Soil   Soil   Primary   Secondary   State   EPA   Comments
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				Know	Action Level(s) (ppb)	Cleanup Level(s) (ppb)	Action Level(s) (ppm)	Cleanup Level(s) (ppm)	(health based)	(taste & odor)	(or other) Advisory	Advisory (20-40 ppb)	
.	ΑK		X										
	ΑĹ		X										
	AR		X										
	ΑZ		X										
	CA		X										
	CO		X										
	CT	X							100				CT only has a drinking water standard expressed as a combined total concentration of TBA, MTBE, ETBE, TAME, DIPE.
	DE	X			750		3.60						Action levels are draft numbers. Cleanup numbers are site-specific.
	FL,		X										There is no cleanup target level in Florida for TAME
	GA		X										
	HI		X										These may be in the new EALs, but my office has not approved their use. Currently in process of adopting.
	A		X	i i				[	[		Ī	[	
.	D	Ì	X	į į			İ	_	_		Ī	_	
	L.	İ	X	İ			Ī	_	Ī		Ī	Ī	
.	ΙN		X										Same answer as for TBA
.	KS		X										
	KY		X										There are no cleanup levels for TAME in KY UST regulations. However, the Division of Water requires analyses for many more compounds for public water systems; DOW may have some standards that are not addressed by the KY UST Branch.
-	LA		X										Value is not listed in RECAP but would be developed using RECAP algorithms.

MA	X						90	Cleanup levels for GW & Soil released 2/07	due to be
MD		X							
ME		X							
M.[	X		190		3900	190		Cleanup levels are based on la Op Memo No. 1 on web at www.michigan.gov/deqrrd	nd useSee
MN		X							
CM	X		626		5.11			Same as above.	
MS		X							
МΤ		X						Will consider standard based of EPA fuel testing.	on the result
NC	X							Although no specific standard established for this chemical, a occurs if the constituent is every Therefore, action levels, clean and drinking water standards of the detection limit.	a violation on detected. up levels
ND		X							
NE		X							
NH	X			140		Γ		Soil standards are under devel	opinent.
NJ		X						Compounds (non-carcinogens have specific or interim specific Water Quality Standards defauppb.	ic Ground
NM		X							
NV		X							
NY	X					50		Action levels are any amount contamination and the cleanup site-specific for both groundw soil. The drinking water stand TAME is regulated as an Unsportation Contaminant (UOC).	levels are ater and ard for
ОН		$ \mathbf{X} $				Γ			
OK		X				Γ			

OR	X						If detected, the cleanup level is established as 1 in a million cancer risk and/or a hazard index of 1.
PA		X			j j	Ī	
RI		$ \mathbf{x} $				Γ	
SC	X		128			128	Cleanup levels are site specific risk-based values
SD		$ \mathbf{x} $					
TN		$ \mathbf{X} $					
TX		$ \mathbf{x} $					
$ U\mathbb{T} $		$ \mathbf{x} $					
VA		X					VDEQ has zero tolerance for petroleum and petroleum-related additives in private Drinking water supply wells. Cleanup is site-specific and risk-based.
$\mathbf{V}^{\perp}$		$ \mathbf{X} $	1				
WA		$ \mathbf{x} $					
WI		$ \mathbf{x} $					
WV		X					
WY	X	'	130	130			
Totals	: 11	39 0	· 		· ·	 	· 

## 1-5a. Does your state have action levels, cleanup levels, or drinking water standards for ethyl *tertiary*-butyl ether (ETBE)?

State	Yes	No	Don't Know	A 4.	Groundwater Cleanup Level(s) (ppb)	Action	Soil Cleanup Level(s) (ppm)	(hoolth	Secondary (taste & odor)	State (or other) Advisory	EPA Advisory (20-40 ppb)	Comments
AK.		X										
AL		$\mathbf{X}$										
AR.		$ \mathbf{x} $										

AZ CA CO		X		.				
СТ	X					100		CT only has a drinking water standard expressed as a combined total concentration of TBA, MTBE, ETBE, TAME, DIPE.
DE		$ \mathbf{X} $						
FL		$ \mathbf{x} $						
GA.		$ \mathbf{x} $						
HI		X		.	•			
IA		$ \mathbf{x} $						
ID		$ \mathbf{x} $						
IL		X		.	•			
IN		$ \mathbf{x} $						Same answer as for TBA
KS		$ \mathbf{x} $						
KY		X						There are no cleanup levels for EtBE in KY UST regulations. However, the Division of Water requires analyses for many more compounds for public water systems; DOW may have some standards that are not addressed by the KY UST Branch.
LA		X						Value is not listed in RECAP but would be developed using RECAP algorithms.
MA	X							Cleanup levels for GW & Soil due to be released 2/07

MD		X					
ME		X					
MI	X		49		980	49	Cleanup levels are based on land use. Units in ppb. ETBE is subject to an aesthetic criterion, however a specific number has not been developed. See Op Memo No. 1 on the web at www.michigan.gcv/deqrrd
MN		$ \mathbf{x} $					
MO	X		15		0.11		Same as above.
MS		X					
МТ		X					Will consider standard based on the result of EPA fuel testing.
NC	X						Although no specific standards have been established for this chemical, a violation occurs if the constituent is even detected. Therefore, action levels, cleanup levels and drinking water standards will become the detection limit.
ND)		X					
NE		X					
NH	X			40			Soil standards are under development.
NJ		X					Compounds (non-carcinogens) that don't have specific or interim specific Ground Water Quality Standards default to 100 ppb.

NM		$ \mathbf{x} $		_	.				Γ		
NV		$ \mathbf{x} $		_	.				Ī		
NY	X			_			50				Action levels are any amount of contamination and the cleanup levels are site specific for both groundwater and soil. The drinking water standard for ETBE is regulated as an Unspecified Organic Contaminant (UOC).
OH	•	$ \mathbf{x} $		_	· j			<u> </u>			
OK.		X		_	.		j				-
OR.	X			_							If detected, the cleanup level is established as 1 in a million cancer risk and/or a hazard index of 1.
PA		X		_							
RI		X		_		•					
SC	X			47					47		Cleanup Levels are site- specific risk-based values
SD		$ \mathbf{x} $		_							
TN	İ	X    X		_	Ì						
TX	j	X		_	· j		j		Ī		
UT	İ	X		_	·		j				
VA		X		_							VDEQ has zero tolerance for petroleum and petroleum-related additives in private Drinking water supply wells. Cleanup is site-specific and risk-based.
VT		X		1	·						
WA	j	X		_	·		j		Ī		
WI	•	X		_	·		j				
WV	•	X	·	_	· j		j	_	Ī	_	

WY X	190	190			
Totals:  10  40  0					

## 1-6a&b. Does your state have action levels, cleanup levels, or drinking water standards for diisopropyl ether (DIPE)?

State	Yes	No	Don't Know	Groundwater Action Level (ppb)	Groundwater Cleanup Level(s) (ppb)	Soil Action Level(s) (ppm)	Soil Cleanup Level(s) (ppm)	Primary (health based)	Secondary (taste & odor)	State (or other) Advisory	EPA Advisory (20-40 ppb)	Comments
AK.		X										
AL		X										
AR.		X										
AZ		X										
CA.		X										
CC		X										
СТ	X							100				CT only has a drinking water standard expressed as a combined total concentration of TBA, MTBE, ETBE, TAME, DIPE. If DIPE's concentration alone, or the sum of all oxygenates in the drinking water sample equals 100 ppb, additional action is recommend
DE		X										
FL		X										
GA.		X										
HI		X										
IA		X										
ID		X										
IL		X										
IN		X										Same answer as for TBA

KS		X			Γ	
KY		X				There are no cleanup levels for DIPE in KY UST regulations. However, the Division of Water requires analyses for many more compounds for public water systems; DOW may have some standards that are not addressed by the KY UST Branch.
LA		X				Value is not listed in RECAP but would be developed using RECAP algorithms.
MA	X		1000	100		AL GW1 = 1.0mg/l AL GW2 = 10.0 mg/l AL S1=100mg/kg AL S2=1000mg/kg Cleanup levels for GW & Soil due to be released 2/07
MD		$ \mathbf{X} $		_		
ME		$ \mathbf{X} $		_		
MI	X		30	600	30	Cleanup levels are based on land use. Units are pbb. See Op Memo No. 1 on Web at www.michigan.gov/deqrrd
MN	· j	X		_	Ė	
MO	X	j · j	677	7.96	Ī	Same as above.
MS		X				
MT		X				Will consider standard based on the result of EPA fuel testing.
NC!	X		70	0.37		Cleanup levels based on assigned risk of site: High - (.37 ppm/70 ppb) Intermediate - (.37 ppm/70000 ppb) Low - (156 or 4088 ppm/70000 ppb) {(soil - ppm)(GW - ppb)}
ND		$ \mathbf{X} $			Γ	
NE		X				
NH	X			120	Ī	Soil standards are under development.
NJ	X			20000	Γ	
NM		X				
NV	i	X		_	<u> </u>	

Totals	:  11	39 0						
WY	X		1200	1200				
WV		X						
WI		$ \mathbf{X} $					Γ	
WA		$ \mathbf{X} $						
VT		X	1					Special and title custon
VA.		X						VDEQ has zero tolerance for petroleum and petroleum-related additives in privat Drinking water supply wells. Cleanup is site-specific and risk-based.
UT		X						
TX		$ \mathbf{X} $					Γ	
TN		X						
SD		X						
SC	X		150				150	Cleanup Levels are site-specific risk-based values
RI		X				<u> </u>	į į	
PA		X	I					
OR.	X							If detected, the cleanup level is established as 1 in a million cancer risk and/or a hazard index of 1.
OK.	i	X			_	i i	į į	
OH								Organic Contaminant (UOC).
NY	X					50		Action levels are any amount of contamination and the cleanup levels are site-specific for both groundwater and soil. The drinking water standard for DIPE is regulated as an Unspecified

## 1- 7 a & b. Please indicate below whether your state enforces the federal MCL for ethylene dibromide (EDB) (0.05 pbb) or has separate action levels, cleanup levels, or drinking water standards.

State	Yes	No	Don't Know	Groundwater Action Level(s) (ppb)	Groundwater Cleanup Level(s) (ppb)	Soil Action Level(s) (ppm)	Soil Cleanup Level(s) (ppm)	Primary (health based)	Secondary (taste & odor)	State (or other) Advisory	EPA Advisory (20-40 ppb)	Comments
AK.		X										We will be adopting the federal MCL in the near future.
AL	X							0.05				The state drinking water program has an MCL for EDB of 0.00005 mg/l. This value is used as our reporting limit and initial screening level. A site specific value could be developed through a risk assessment to determine actual cleanup values.
AR.	X							0.05				MCL is used a a screening level for human health exposure. Clean-up level is usually not as stringent as MCL.
AZ	X							0.05				Yes
CA.	X											
CC	X			0.05	0.05			0.05				Colorado standard = 0.05ppb
СТ	X							0.05				The current detection limit is 0.02 ppb. Detections between 0.02 and 0.05 ppb should receive follow-up monitoring and can be referred to DPH for site-specific bottled water determination.
DE	X			0.05		0.01		0.05				Cleanup levels are site-specific. DW standard is enforceable for public wells.
FL		X			0.02		0.02					We have our own lower cleanup target level (of .02) than the federal MCL. We do not routinely analyze for EDB in soil
GA.	X											
HI			X									The newly revised 2006 EALs do have action levels for EDB and I think they also have action levels for the previously mentioned contaminants like TAME. So

							-			certain depts in Hawaii Dept of Health do have action levels for EDB, but my office does not.
IA		X								
ID	X	.		0.05		0.0001	_	0.05		
IL		X					_			
IN								0.05		Same answer as for TBA. However, IDEM uses the EPA SDWA MCL for drinking water.
KS	X						-			
KY			X				_			There are no cleanup levels for EDB in KY UST regulations. However, the Division of Water requires analyses for many more compounds for public water systems; DOW may have some standards that are not addressed by the KY UST Branch.
LA	X						_			Standard is not listed in RECAP but federal MCL would be used for GW-1 sites. GW-2 and GW-3 sites would have standards developed using RECAP.
MA	X			0.02	0.02	0.10	0.10	0.02		MMCL for this chemical is more stringent than the federal MCL CL gw1 = 0.02mg/l CL GW2=2.0mg/l CL Soil =0.1mg/kg
MD	X	.					_			
ME		X		0.10	0.10		_	0.20	0.20	The Maine maximum exposure guideline (drinking water) for EDB is 0.2 ppb: this is higher than the 0.05 ppb federal standard.
MI	X			0.05	0.05	1.00	20.00	0.05		Units in pbb. Calculated soil criterion defaults to target detection limit of 20 ppb. See Op Memo No. 1 on web at www.michigan.gov/deqrrd
MN		X					_			
MO	X			0.05		0.00047	_	0.05		Same as above.
MS	X			0.05		0.751	-			Levels are "screening levels" requiring

						-		further assessment and/or remediation.
MT	X		0.004	0.004		_	0.004	Currently evaluating data from EPA EDB sampling survey.
NC!	X		0.0004		0.000002	_	0.05	Action Level - Soil (ppm): 0.000002 Drinking Water Standards - Primary: 0.05 Cleanup levels based on assigned risk of site: High - (0.000002 ppm/0.0004 ppb) Intermediate - (0.000002 ppm/50 ppb) Low - (0
ND	X					-	0.05	
NE	X					_		EDB with the federal MCL is included as a numerical standard in our Ground Water Standards. However, it is not included as a chemical of concern for petroleum, is not included in our RBCA guidelines, and is not normally monitored at LUST sites.
NH	X			0.05		0.10	0.05	
NJ	X			0.03		_	0.05	
NM	X		0.10	0.10			0.05	1-7 EDB action levels in soil are risk based and therefore variable
NV	$ \mathbf{X} $		0.05	0.05		_	0.05	Federal MCL
NY	X			0.0006		_	50.00	The action level for groundwater and soil is any amount of contamination. The cleanup level for soil is site specific. The drinking water standard for EDB is regulated as an Unspecified Organic Contaminant (UOC).
OH		$ \mathbf{x} $				_		
OK.		$ \mathbf{X} $				_		
OR.		X		0.00064		0.0074		Cleanup levels are from the most conservative RBDM pathway
PA	X					_		
RI	X		0.025	0.05		0.0005	0.05	1-7 Standards are for GA groundwater areas Reporting limit of analysis normally conducted is higher than standards

SC	X			0.05			0.05		Cleanup Levels are site specific risk-based values
SD		$ \mathbf{X} $				Γ			
TN	X								Ingestion, resident child or commercial worker05 ppb Indoor Inhalation/vapor emissions, (gw) resident child0855ppm, commercial worker499ppm Indoor inhalation/vapor emissions, (soil), resident child18ppm, commercial worker-1.05ppm
TX		X							1-7. The LUST program does not analyze for EDB
UT		$ \mathbf{X} $				Γ			
VA	X	·							Virginia standards are the same as the EPA standards. Virginia Department of Health enforces the primary and secondary standards (MCLs).
VT	X			0.05	0.05	Γ	0.05	0.05	Soil is site-specific
WA	X				0.01	0.005	0.05		Groundwater cleanup level based on concentration derived using carcinogenic risk equation and adjusted for the practical quantitation limit (PQL). Soil cleanup level based on protection of groundwater for drinking water use and adjusted for the PQL.
WI	X				0.05				
WV			$ \mathbf{X} $			Γ		Γ	
WY		X							Tank program has no cleanup levels for EDB.
Totals:	33	13	3						

1-8. Please indicate below whether your state enforces the federal MCL for 1,2 dichloroethane (1,2 DCA) (5 pbb) or has separate action levels, cleanup levels, or drinking water standards.

State	Yes	No	Don't Know	Groundwater Action Level(s) (ppb)	Groundwater Cleanup Level(s) (ppb)	Soil Action Level(s) (ppm)	Soil Cleanup Level(s) (ppm)	Primary (health based)	Secondary (taste & odor)	State (or other) Advisory	EPA Advisory (20-40 ppb)	Comments
AK.	X				5		0.01	5				This is the most restrictive of multiple soil cleanup levels (ingestion, inhalation, migration to groundwater) and reflects the migration to groundwater pathway.
AL	X			5	5			5				Site-specific LUST cleanup levels would be developed using a risk-based process.
AR.	X							5				MCL is used as a human health screening level. Cleanup level is usually not as stringent as MCL.
AZ	X					2.50	2.50	5				Yes
CA.			X									
CC	X			0.38	0.38			0.38			_	
CT	X				1			1				
DE	X			9.40		0.40		5				Cleanup levels are site-specific. DW standard is enforceable for public wells.
FL		X			3		0.01					Our state has a lower cleanup target level than the federal MCL
GA.	X											
HI			X									
IA		X										
ID	X			5		0.008		5				
IL	X									_		
IN	X			5	5	0.024	0.024	5				IDEM also has default closure levels for commercial/industrial land use of 31 (gw) and 0.15 (s)
KS	X											
KY		X										There are no cleanup levels for this contaminant in KY UST regulations. However, the Division of Water requires analyses for many more compounds for public water systems; DOW may have

							_	some standards that are not addressed by the KY UST Branch.
LA	X					_	-	Federal MCL used for GW1 sites. GW-2 and GW3 sites would have standards developed in accordance with RECAP
MA	X		5	5	0.10	10	5	AL Soil = 0.1mg/kg CL S1 = 10 mg/kg CL S2 = 90.0mg.kg
MD	X							
ME		X	2	4			4	
MI	X		5	5	15000	15000	5	Units are pbb. See Op Memo No. 1 on web at www.michigan.gov/deqrrd
MN	X					_	4	
MO		$ \mathbf{X} $				_	5	
MS	$ \mathbf{X} $						-	
МТ	X		4	4			4	Evaluating data from state samplings efforts at historic petroleum release sites.
NC	X		0.38		0.0018		5	Action Level - Groundwater (ppb): 0.38 Cleanup levels based on assigned risk of site: High - (0.00180 ppm/0.38 ppb) Intermediate - (0.00180 ppm/380 ppb) Low - (7 or 63 ppm/380 ppb) {(soil - ppm)(GW - ppb)}
ND	X						5	
NE	X						_	1,2 DCA with the federal MCL is included as a numerical standard in our Ground Water Standards. However, it is not included as a chemical of concern for petroleum, is not included in our RBCA guidelines, and is not normally monitored at LUST sites.
NH	X			5	ſ	0.08	5	
NJ		X		2	ſ	1	2	
NM	X		10	10		_	_ 5	
NV	X		5	5		_	5	Federal MCL
NY	X			0.60		0.10	5	The action levels are any amount of contamination in the groundwater and/or

							the soil.
OH		X					
OR. PA	X	X					If detected, the cleanup level is established as 1 in a million cancer risk and/or a hazard index of 1.
RI	X		2	5	0.10	5	Responses in table are for GA areas GB areas: groundwater cleanup level 110 pp leachability cleanup level soil 2.3 ppm
SC	X		5			5	Cleanup Levels are site-specific risk-based values
SD TN	X	X		0.005			.0076 for resident child soil vapor .0166 for commercial worker soil vapor
TX		X					The LUST program does not analyze for 1,2 DCA
UT	X						Division of Drinking Water enforces all MCLs for drinking water sources, but w do not regulate this under the tank program
VA	X						Virginia standards are the same as the EPA standards. Virginia Department of Health enforces the primary and secondary standards (MCLs).
VT	X		1			5	
WA	X			5	11	0.481	Groundwater cleanup level based on applicable state and federal law.
WI	X			5			
WV	X					5	
WY		X					Tank program has no cleanup levels for 1,2 DCA, but if found, would remediate to federal MCL.

# 1-9. Please indicate below whether your state enforces the federal MCL for lead (15 pbb) or has separate action levels, cleanup levels, or drinking water standards.

State	Yes	No	Don't Know	Groundwater Action Level(s) (ppb)	Groundwater Cleanup Level(s) (ppb)	Soil Action Level(s) (ppm)	Soil Cleanup Level(s) (ppm)	Primary (health based)	Secondary (taste & odor)	State (or other) Advisory	EPA Advisory (20-40 ppb)	Comments
AK.	X				15		400	15				
AL	X				15	4.43	4.43	15				Lead cleanup levels are risk-based. Each site may have a different cleanup level. The levels quoted are the initial screening levels.
AR.		X										
AZ	X					400	400	50				Yes
CA.			X									
CC	X	ļ .		50	50			50				
СТ	X				15			15				Soil cleanup levels: Residential direct exposure = 500 ppm, Industrial/commercial = 1000 ppm, GA pollutant mobility = 0.015 ppm, GB pollutant mobility = 0.15 ppm
DE	X			15	15	400	400	15				
FL		Х			15							We have our own cleanup target level for lead, which happens to be the same as the federal MCL The level for soil would be site- specific based on SPLP or TCLP
GA.	$ \mathbf{X} $											
НІ	X			5.60	5.60	400	400					Our 400 ppm level for soil is based on direct

			-								exposure concerns, and the relatively high levels of lead in our geologically young volcanic soils.
IA ID	  X	X	15			50	]	15			
IL.		X	7.50	7	.50	0.0075	0.0075	7.50	100	7.50	
IN	X		15		15	81	81	15			The default closure levels for commercial/industrial are 42 (gw) and 230 (s)
KS	X		_				1				
KY	X				15						UST regulations use a cleanup level of 0.015 mg/L for lead in groundwater.
LA	X		-								Federal MCL's used for GW1 sites. GW2 and GW3 sites would have standards developed using RECAP
MA	X		20		15	300	300	15			AL GW1 = .02mg/l AL GW2 = .01mg/l AL Soil = 300mg/kg CL soil 300 ppm
MD	X		_								
ME	X		4			400		4			Criteria for lead are derived using a biologically based model & is linked to residential soil direct contact contact criterion. State action level max is 15ppb. Units are pbb. See Op Memo No. 1 on web at www.michigan.gov/deqrrd
MN	X		_			300	]				

MO	$\mathbf{X}$		15		260		15	Same as above.
MS	$ \mathbf{X} $				]	]		
МТ	X		0.10	15			15	
NC	X		15		270		15	Cleanup levels based on assigned risk of site. High - (270 ppm/15 ppb) Intermediate - (270 ppm/15000 ppb) Low - (400 ppm/15000 ppb) {(soil - ppm)(GW - ppb)}
ND)	X						15	
NE	X							Lead with the federal MCL is included as a numerical standard in our Ground Water Standards. However, it is not included as a chemical of concern for petroleum, is not included in our RBCA guidelines, and is not normally monitored at LUST sites.
NH	$\mathbf{X}$			15		400	15	
NJ	X		15	5				15 ppb is an action level (not a MCL) under the Safe Drinking Water Act and takes into account tha some plumbing and water distribution systems have lead components. 5 ppb is the Ground Water Quality Standard.
NM	X		50	50			15	
NV	X		15	15			15	Your question includes two mutually exclusive responses.
NY	X			25			50	The action levels are above site background and

				<u> </u>						the cleanup levels are site-specific for soil.
OH		X								
OK.			X							Our agency does not enforce federal MCL for Pb. However, Oklahoma Department of Environmental Quality, I believe, does enforce Pb drinking water standards.
OR.	$ \mathbf{X} $				15		400		_	
PA		$ \mathbf{X} $		5	5	450	450		_	
RI	X			7.50	15		0.04	15		Standards in table are for GA areas. Soil cleanup level is by a leachability procedure (TCLP or SPLP) and the units are mg/l These are RIDEM standards but are rarely required for LUST investigations. There are no standards for GB areas.
SC	X			15				15		Must first determine if lead is naturally occuring or organic. If lead is organic, cleanup levels are site-specific risk-based values.
SD		Х					1		_	
TN	X				15		1		_	
TX		Х								The LUST program does not analyze for lead in groundwater
UT	X	.						Ī		Federal MCls
VA	X									Virginia standards are the same as the EPA standards. Virginia Department of Health

								enforces the primary and secondary standards (MCLs).
VT	X	1.50		400		15		
WA	X		15		250			The 15 ppb level is based on an MCL Treatment Technique Action Level.
WI			15		50			
WV	X				]	15		
WY	X	15	15					Site-specific soil cleanup levels for metals are determined from an environmental fate-and- transport risk-assessment model.
Totals	: 38 8	2		1	ı	I	1 1	1 1