Contaminant Information Sheets for the Final CCL 3 Chemicals

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Contaminant Information Sheets for the Final CCL 3 Chemicals

This File contains Contaminant Information Sheets for 106 chemical contaminants that are listed on the final third Contaminant Candidate List (CCL 3). (Note: there are 104 chemical entries listed in the Federal Register Notice for the final CCL 3; cyanotoxins are listed as a group. In this file, there are information sheets on three individual cyanotoxins that were evaluated in the CCL 3 process (Anatoxin-a, Cylindrospermopsin, and Microcystin-LR)). These sheets summarize information about the chemicals that were considered during the development of the CCL 3. The sheets are in alphabetical order. Each information sheet is two pages in length. There is an index/bookmark in this PDF file that can be used to negotiate the file. The bookmarks are hyperlinked. You can find the contaminant name in the bookmark list, click on it, and the hyperlink will take you to that file.

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Contaminant:	1,1,1,2-Tetrachloroethane
Substance Key:	9105
Contaminant ID (CASRN):	630206

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	8	3	6

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/NCOD R1 90%: 67.7 CAR HRL/NCOD R1 90%: 0.323

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	0.03	mg/kg-d	1987	Mineralization of the kidneys in males, hepatic clear cell change in females	Reference Dose; Basis LOAEL = 89.3 mg/kg-d (NTP 1983)
EPA HA RfD	0.03	mg/kg-d	2006		Reference Dose
RAISHE RfD	0.03	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	**0.1**	**mg/L**	**1989**		
RAISHE Slope Factor	0.026	$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	C		1989		
IARC Carcinogen Classification	3		1999		
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			EPA; RAIS
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL	1	mg/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	210	ug/L			
Health Reference Level (HRL)[2] cancer	1	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water	16,956	31	0.18	0.06	9.2	**0.59**	3.1	9.2	ug/L	
NCOD Round 2 finished water	24,127	51	**0.21**	0.2	18	0.5	1.55	18	ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	4,309	4	0.09	0.011	0.0644	0.0275	0.0644	0.0644	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States	2004	
TRI Release - surface water	36	lbs/yr	2	States	2004	
TRI Release - total	12,088	lbs/yr	7	States		

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (HRL/NCOD R1 90%)	Non-cancer: 67.7	Cancer: 0.323

Production	Amount Range	Units	Year			
CUSIUR Production Data	>1M - 10M	lbs/yr	1998			
	>1M - 10M	lbs/yr	2002			
Use	Chemical intermediate (NTP)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	60	days	BST	PBT; BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient	93-399	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	2.66	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	2.70E-03	atm-m^3/mol		
Water Solubility	1,100	mg/L		
% water PBT profiler	22			

Contaminant	1,1-Dichloroethane
Substance Key:	2647
Contaminant ID (CASRN):	75343

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
4	8	7	7

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/NCOD R1 90%: 250 CAR HRL/NCOD R1 90%: 1.1

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.2	mg/kg-d	2001	Decreased body weight gain	Reference Dose; basis NOAEL 714 mg/kg-d, UF = 3,000; Muralidhara, et al, 2001.
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)	**0.0057**	**$(mg/kg\text{-}d)^{-1}$**			
EPA Carcinogen classification	C		1990		
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			OEHHA
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	1,400	ug/L			
Health Reference Level (HRL)[2] cancer	6.14	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water	**20,483**	**233**	**1.14**	**0.01**	**500**	**1.2**	**5.6**	**27**	**ug/L**	
NCOD Round 2 finished water	24,808	184	0.74	0.0013	159	1	3.8	25	ug/L	
NIRS finished water									ug/L	
Ambient Water Occurrence Data										
NAWQA ambient water	4,350	135	3.103	0.008	39	0.05	0.316	5.6	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	63	lbs/yr	3	States	2004	
TRI Release - total	17,368	lbs/yr	5	States	2004	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (HRL/NCOD R1 90%)	Non-cancer: 250				Cancer: 1.1				

Production	Amount Range	Units	Year			
CUSIUR Production Data	>1M - 10M	lbs/yr	1998			
	>500K - 1M	lbs/yr	2002			
Use	Solvent (NTP)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	38	days	BSA	PBT; BSA = Biodegrades Slowly with Acclimation
K_{OC}, Organic Carbon Partition Coefficient	30	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	1.79	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	5.62E-03	atm-m3/mol		
Water Solubility	5040	mg/L		
% water PBT profiler	46			

Contaminant:	1,2,3-Trichloropropane
Substance Key:	3817
Contaminant ID (CASRN):	96184

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	8	3	6

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/NCOD R2 90%: 2.1
CAR HRL/NCOD R2 90%: 0.00025

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	0.006	mg/kg-d	1987	Alterations in clinical chemistry & reduction in RBC mass	Reference Dose; NTP, 1983 ; rats; UF = 1,000; Basis NOAEL = 8 mg/kg-d
EPA HA RfD	0.006	mg/kg-d	2006		Reference Dose; F' 89
RAISHE RfD	0.006	mg/kg-d			Reference Dose
ATSDR (ITER), MRL	0.06	mg/kg-d	1992	Hepatic	Minimal Risk Level; Int-MRL; UF = 100
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL	5.71	mg/kg-d	1987		Supplemental Data; ITER NOAEL
RTECS Lowest Oral Chronic LOAEL	22.9	mg/kg-d		Kidney, Ureter, Bladder - changes in bladder weight, Blood - changes in serum composition (e.g. TP, bilirubin, cholesterol), Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - other esterases	Lowest Observed Adverse Effect Level; 17 week oral study in rats; NTPTR National Toxicology Program Technical Report Series. (Research Triangle Park, NC 27709) No.206- Volume(issue)/page/year NTP-TR-384,1993
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor	**7**	**$(mg/kg-d)^{-1}$**			**HEAST**
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART, RAIS
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL	0.2	mg/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	42	ug/L			
Health Reference Level (HRL)[2] cancer	0.005	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water	**17,392**	**44**	**0.25**	**0.1**	**112**	**0.92**	**6**	**112**	ug/L	
NCOD Round 2 finished water	24,088	19	0.079	0.03	3,000	0.5	20	3,000	ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	4,309	43	1.0	0.05	2.92	0.4	0.97	2.92	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	282	lbs/yr	1	States	2004	
TRI Release - total	9,053	lbs/yr	2	States	2004	

Supplemental Water Data	Notes
Nominated data from NJDEP	NJ study: Detected in excess of health-based drinking water guidance value in 30 of 2,640 private wells and 11 of approximately 260 community water systems between 1999 and 2004 in NJ SOC Waiver Program sampling.

HRL Ratios (HRL/NCOD R2 90%)	Non-cancer: 2.1	Cancer: 0.00025

Production	Amount Range	Units	Year
CUSIUR Production Data	>10M - 50M	lbs/yr	1998
	>1M - 10M	lbs/yr	2002

Use	Paint ingredient (NTP)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	38	days	BSA	PBT; BSA = biodegrades slowly with acclimation
K_{OC}, Organic Carbon Partition Coefficient	77-95	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	2.27	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	3.43E-04	atm-m^3/mol		
Water Solubility	1,750	mg/L		
% water PBT profiler	25			

Contaminant:	1,3-Butadiene
Substance Key:	4578
Contaminant ID (CASRN):	106990

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	8	10	9

3-model Categorical Prediction
L
HRL Ratio(s)
No Water Data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)	**3.4**	**$(mg/kg\text{-}d)^{-1}$**			
EPA Carcinogen classification	B2				
IARC Carcinogen Classification	2A		1999		Vol. 71; 1999
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			EPA, IARC, CACART, OEHHA
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen List	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]		ug/L			
Health Reference Level (HRL)[2] cancer	0.0103	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	493	lbs/yr	8	States	2004	
TRI Release - total	**1,964,956**	**lbs/yr**	**34**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:

Production	Amount Range	Units	Year			
CUSIUR Production Data	> 1B	lbs/yr	1998			
	> 1B	lbs/yr	2002			
Use	Rubber chemical (NTP)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	7-28	days	BFA	BFA = biodegrades fast with acclimation
K_{OC}, Organic Carbon Partition Coefficient	288	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	1.99	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	7.40E-02	atm-m^3/mol		
Water Solubility	735	mg/L		
% water PBT profiler				

Contaminant:	1,3-Dinitrobenzene
Substance Key:	4045
Contaminant ID (CASRN):	99650

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	3	1	8

3-model Categorical Prediction
NL?
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	**0.0001**	**mg/kg-d**	**1988**	**Increased spleen weight**	**Reference Dose; Cody et al., 1981; Rats; UF = 3,000; Basis NOAEL = 0.4 mg/kg-d**
EPA HA RfD	0.0001	mg/kg-d	2006		Reference Dose
RAISHE RfD	0.0001	mg/kg-d			Reference Dose; IRIS
ATSDR (ITER), MRL	0.0005	mg/kg-d	1995	Hemato.	Minimal Risk Level; Int-MRL; UF = 1,000
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	1.73	mg/kg-d		Endocrine - changes in spleen weight, Blood - methemoglobinemia-carboxyhemoglobin	Lowest Observed Adverse Effect Level; 90 day oral study in rats; TOXID9 Toxicologist. (Soc. of Toxicology, Inc., 475 Wolf Ledge Parkway, Akron, OH 44311) V.1- 1981- Volume(issue)/page/year 30,200,1996
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	D		1991		Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?	Y	Y/N		male	CACART
EPAHA-DWEL	0.005	mg/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.7	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	2	lbs/yr	1	States	2004	
TRI Release - total	**528,962**	**lbs/yr**	**1**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Industrial chemical (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	38	days	BSA	PBT; BSA = biodegrades slowly with acclimation
K_{OC}, Organic Carbon Partition Coefficient	150	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	1.49	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	4.90E-08	atm-m^3/mol		
Water Solubility	533	mg/L		
% water PBT profiler	37			

Contaminant:	1,4-Dioxane
Substance Key:	5539
Contaminant ID (CASRN):	123911

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	8	9	8

3-model Categorical Prediction
L
HRL Ratio(s)
NC HRL/CAL DHS 90%: 92.1 CAR HRL/CAL DHS 90%: 0.395

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL	0.1	mg/kg-d			Minimal Risk Level; ATSDR MRL-int = 0.6 mg/kg-d
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	**0.3**	**mg/L**	**1987**		
RAISHE Slope Factor	0.011	$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)	0.027	$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	B2		1987		
IARC Carcinogen Classification	2A	1999			
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART; EPA; IARC; OEHHA; RAIS
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	700	ug/L			
Health Reference Level (HRL)[2] cancer	3	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	89,521	lbs/yr	7	States	2004	
TRI Release - total	**821,067**	**lbs/yr**	**22**	**States**	**2004**	

Supplemental water data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units	Notes
CAL DHS	869	89	10.2	0.001	46.2	2.1	7.6	ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
HRL Ratios (HRL/CAL DHS 90%)	Non-cancer: 92.1				Cancer: 0.395				

Production	Amount Range	Units	Year			
CUSIUR Production Data	>1M - 10M	lbs/yr	1998			
	>1M - 10M	lbs/yr	2002			
Use	Solvent (NTP); solvent stabilizer					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BS	BS = biodegrades slowly
K_{OC}, Organic Carbon Partition Coefficient	1	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-0.27	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	4.80E-06	atm-m^3/mol		
Water Solubility	1,000,000	mg/L		
% water PBT profiler				

Contaminant:	17 alpha-Estradiol
Substance Key:	81747
Contaminant ID (CASRN):	57910

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	6	9	3

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/Kolpin MAX: 4.7

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JECFA ADI	**0.00005**	**mg/kg-d**	**1999**	**Estrogenic hormonal response in post-menopausal women**	**Acceptable Daily Intake for E2**
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL		mg/L			Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.35	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
Kolpin, et al., 2002	**70**		**5.7**		**0.074**	**0.03**		**ug/L**	**National Surface Water Reconnaissance Kolpin, D.W., et al., 2002. Env. Sci. & Technol., 36(6), pp. 1202-1211.**

HRL Ratios (HRL/Kolpin MAX)	Non-cancer: 4.7	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Pharmaceutical, hormone

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	38	days	BSA	BSA = Biodegrades slowly with acclimation
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.94	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility	3.9	mg/L		
% water PBT profiler	11			

Contaminant	1-Butanol
Substance Key:	2563
Contaminant ID (CASRN):	71363

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
4	5	10	10

3-model Categorical Prediction
L? - L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	**0.1**	**mg/kg-d**	**1987**	**Hypoactivity, ataxia**	**Reference Dose; U.S. EPA, 1986; Basis NOAEL = 125 mg/kg-d, UF = 1,000; oral study in rats.**
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.1	mg/kg-d			Reference Dose; IRIS
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	0.2	mg/kg-d		Behavioral - somnolence (general depressed activity)	Lowest Observed Adverse Effect Level; 30 day oral study in rats; TOLED5 Toxicology Letters. (Elsevier Science Pub. B.V., POB 211, 1000 AE Amsterdam, Netherlands) V.1- 1977- Volume(issue)/page/year 135,S122,2002
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	D		1991		Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	700	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	22,011	lbs/yr	20	States	2004	
TRI Release - total	**17,648,846**	**lbs/yr**	**44**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:				Cancer:				

Production	Amount Range	Units	Year			
CUSIUR Production Data	> 1B	lbs/yr	1998			
	> 1B	lbs/yr	2002			

Use	Paint solvent; chemical intermediate; food additive (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BF	BF = Biodegrades Fast
K_{OC}, Organic Carbon Partition Coefficient	2.443	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	0.88	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	8.82E-06	atm-m3/mol		
Water Solubility	63200	mg/L		
% water PBT profiler				

Contaminant	2-Methoxyethanol
Substance Key:	4803
Contaminant ID (CASRN):	109864

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	7	9	7

3-model Categorical Prediction
L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	**0.003**	**mg/kg-d**		**Reproductive effects**	**Reference Dose; Unpublished NTP study - Gulati, et al, 1990.**
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen / developmental, male	UMD / CACART
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	21	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	14,390	lbs/yr	3	States	2004	
TRI Release - total	**153,774**	**lbs/yr**	**16**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data	>10M - 50M	lbs/yr	1998			
	>10M - 50M	lbs/yr	2002			

Use	Consumer products; synthetic Cosmetics, Perfumes, Fragrances, Hair Preparations, Skin Lotion (NTP)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BFA	BFA = Biodegrades Fast with acclimation
K_{OC}, Organic Carbon Partition Coefficient	1	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-0.77	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	3.30E-07	atm-m3/mol		
Water Solubility	1000000	mg/L		
% water PBT profiler				

Contaminant:	2-Propen-1-ol
Substance Key:	4596
Contaminant ID (CASRN):	107186

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	6	8	8

3-model Categorical Prediction
L? - L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	**0.005**	**mg/kg-d**	**1987**	**Impaired renal function & increased relative liver, spleen & kidney weights**	**Reference Dose; Carpanini et al., 1978; Rat; UF = 1,000; Basis NOAEL = 4.8 mg/kg-d**
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.005	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	2.5	mg/kg-d		Liver - liver function tests impaired, Blood - changes in serum composition (e.g. TP, bilirubin, cholesterol), Biochemical - Metabolism (Intermediary) - Plasma proteins not involving coagulation	Lowest Observed Adverse Effect Level; Rat; VCVGK "Vrednie chemichescie veshestva, galogen I kislorod sodergashie organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., Chimia, 1994. Volume(issue)/page/year -,121,1994
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	52	mg/kg		Details of toxic effects not reported other than lethal dose value	Rabbit; NTIS National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year OTS0571508
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	35	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	10,971	lbs/yr	4	States	2004	
TRI Release - total	**604,872**	**lbs/yr**	**13**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data	>100M - 500M	lbs/yr	1998			
	>100M - 500M	lbs/yr	2002			

Use	Manufacture of flavorings, perfumes; chemical intermediate (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BF	BF = biodegrades fast
K_{OC}, Organic Carbon Partition Coefficient	1.325	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	0.17	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	5.00E-06	atm-m^3/mol		
Water Solubility	1,000,000	mg/L		
% water PBT profiler				

Contaminant:	3-Hydroxycarbofuran
Substance Key:	25541
Contaminant ID (CASRN):	16655826

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	7	2	7

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/NCOD R2 90%: 0.191

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.00006**	**mg/kg-d**		**Inhibition of brain cholinesterase in pups - The RfD for the parent covers the toxicity of the metabolite**	**Reference Dose; Basis = $BMDL_{10}$ 0.03 mg/kg-d; UF = 500.**
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	7	mg/kg		Decreased body wt.	PCBPBS Pesticide Biochemistry and Physiology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1971- Volume(issue)/page/year 3,435,1973
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.42	µg/L			
Health Reference Level (HRL)[2] cancer		µg/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water	**12,700**	**18**	**0.14**	**1**	**66.3**	**2.2**	**2.2**	**66.3**	**ug/L**	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	4,539	1	0.022	0.07	0.07	0.07	0.07	0.07	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units for Mag data	Notes
PPMP ambient water		0	0		0			ug/L	
PPMP finished water		1	0.4		0.062			ug/L	
HRL Ratios (HRL/NCOD R2 90%)	Non-cancer: 0.191				Cancer:				

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Pesticide degradate					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	38	days	BSA	PBT; BSA = Biodegrades Slowly with Acclimation
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler	43			

Contaminant:	4,4'-Methylenedianiline
Substance Key:	4202
Contaminant ID (CASRN):	101779

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	8	7	7

3-model Categorical Prediction
L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL	0.08	mg/kg-d	1998	Intense liver degenerative lesions, hyperplasia of the stroma	Minimal Risk Level; MRL-Int; UF = 100
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	4.34	mg/kg-d		Liver - fatty liver degeneration, Kidney, Ureter, Bladder - interstitial nephritis, Blood - normocytic anemia	Lowest Observed Adverse Effect Level; 15 week oral study in dogs; JJATDK JAT, Journal of Applied Toxicology. (John Wiley & Sons Ltd., Baffins Lane, Chichester, W. Sussex PO19 1UD, UK) V.1- 1981- Volume(issue)/page/year 11,367,1991
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor	0.25	$(mg/kg\text{-}d)^{-1}$			Slope factor withdrawn
OEHHA Slope Factor (oral)	**1.6**	**$(mg/kg\text{-}d)^{-1}$**			
EPA Carcinogen classification					
IARC Carcinogen Classification	2B		1987		Vol. 39, Suppl. 7; 1987
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			IARC, CACART, OEHHA, RAIS
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	560	ug/L			
Health Reference Level (HRL)[2] cancer	0.022	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	96,446	lbs/yr	2	States	2004	
TRI Release - total	**168,919**	**lbs/yr**	**10**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data	>1M - 10M	lbs/yr	1998			
	>1M - 10M	lbs/yr	2002			

Use	Chemical intermediate; corrosion inhibitor; curing agent for polyurethanes (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BSA	PBT; BSA = biodegrades slowly with acclimation
K_{OC}, Organic Carbon Partition Coefficient	4,950	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	1.59	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.58E-11	atm-m^3/mol		
Water Solubility	1,000	mg/L		
% water PBT profiler				

Contaminant:	Acephate
Substance Key:	31325
Contaminant ID (CASRN):	30560191

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	5	10	7

3-model Categorical Prediction
L? - L
HRL Ratio(s)
NC HRL/SWC EEC: 1.17
CAR HRL/SWC EEC: 0.556

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.0012**	**mg/kg-d**		**Brain ChE inhibition**	**Reference Dose; Basis = NOAEL 0.12 mg/kg-d; UF = 100.**
EPA IRIS (ITER) RfD	0.004	mg/kg-d	1989		Reference Dose; Basis = LOEL females = 0.15 mg/kg-d; LOEL males = 0.12 mg/kg-d; Adjusted Basis Value = LOAEL 0.0004 mg/kg-d
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.004	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.03	mg/kg-d	1990		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	10	mg/kg-d		Brain and Coverings - other degenerative changes, Autonomic Nervous System - sympathomimetic, Biochemical - Metabolism (Intermediary) - amino acids (including renal excretion)	Lowest Observed Adverse Effect Level; ENVRAL Environmental Research. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1967- Volume(issue)/page/year 43,342,1987
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	0.4	mg/L			
RAISHE Slope Factor	0.0087	$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	C		1988	Liver	
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			EPA; RAIS
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	8.4	ug/L			
Health Reference Level (HRL)[2] cancer	4	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**2,462,354**	**lbs/yr**	**35**	**States**	**1997**	
TRI Release - surface water	0	lbs/yr	0	States	2004	
TRI Release - total	20,751	lbs/yr	5	States	2004	

Supplemental Water Data						
OPP Estimated Environmental Concentration		Surface water chronic: 7.2 ug/L			Ground water chronic: 0.02 ug/L	
HRL Ratios (HRL/SWC EEC)		Non-cancer: 1.17			Cancer: 0.556	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Insecticide (HSDB)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BF	BF = biodegrades fast
K_{OC}, Organic Carbon Partition Coefficient	21.8	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-0.85	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	5.02E-13	unitless		
Water Solubility	818,000	mg/L		
% water PBT profiler				

Contaminant	Acetaldehyde
Substance Key:	2622
Contaminant ID (CASRN):	75070

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	3	10	8

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/DBP ICR MED: 3.15

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI		mg/kg-d			Tolerable Daily Intake
Supplemental RfD-like value		mg/kg-d			Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	**10**	**mg/kg-d**		**Behavioral - changes in motor activity (specific assay)**	**Lowest Observed Adverse Effect Level; NTIS National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year PB234-882; 22-wk guinea pig study**
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Slope Factor		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	B2		1988		
IARC Carcinogen Classification	2B		1999		Vol. 36, Suppl. 7, Vol. 71; Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			IARC, EPA, CACART
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen list	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	23.3	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	Mean value of Detects	Units for Mag data	Notes
DBP ICR	**236**	**27**	**11.44**		**18.3**	**7.4**	**8.04**	**ug/L**	

Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance

	# Samples	# with Detects	% Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States	1997	
TRI Release - surface water	370,815	lbs/yr	31	States	2004	
TRI Release - total	14,683,890	lbs/yr	38	States	2004	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
CAL DHS	8	3	37.5	1	24	2	4	ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx

HRL Ratios (HRL/DBP ICR MED)	Non-cancer: 3.15	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data	>100M - 500M	lbs/yr	1998			
	>100M - 500M	lbs/yr	2002			

Use	Pesticide; food additive; chemical intermediate (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BF	BF = Biodegrades fast (BIODEG)
K_{OC}, Organic Carbon Partition Coefficient	1.498	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-0.34	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	6.68E-05	atm-m^3/mol		
Water Solubility	1,000,000	mg/L		
% water PBT profiler				

Contaminant:	Acetamide
Substance Key:	2411
Contaminant ID (CASRN):	60355

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	8	7	9

3-model Categorical Prediction
L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)	**0.07**	**$(mg/kg\text{-}d)^{-1}$**			
EPA Carcinogen classification					
IARC Carcinogen Classification	2B				
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART; OEHHA; IARC
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]		ug/L			
Health Reference Level (HRL)[2] cancer	0.5	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	2,754	lbs/yr	3	States	2004	
TRI Release - total	**1,202,667**	**lbs/yr**	**7**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:

Production	Amount Range	Units	Year			
CUSIUR Production Data	10K - 500K	lbs/yr	1998			
	10K - 500K	lbs/yr	2002			

Use	Solvent; solubilizer; plasticizer; stabilizer (HSDB)

Environmental Fate Parameters	Value	Units	Degradation code	Notes
$T_{1/2}$, Half life		length of time	BF	BF = biodegrades fast
K_{OC}, Organic Carbon Partition Coefficient	5	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-1.26	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.21E-08	atm-m^3/mol		
Water Solubility	2,250,000	mg/L		
% water PBT profiler	39			

Contaminant:	Acetochlor
Substance Key:	32393
Contaminant ID (CASRN):	34256821

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	7	1	1

3-model Categorical Prediction
NL
HRL Ratio(s)
NC HRL/NAWQ 90%: 179

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	**0.02**	**mg/kg-d**	**1993**	**Salivation, increased ALT & ornithine carbamyl transferase; increases in triglyceride & decreased blood glucose levels; histopathological changes in kidneys & testes**	**Reference Dose; Basis NOAEL 2 mg/kg-d; UF = 100. ICI, Inc., 1988a**
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.02	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic? NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	5.45	mg/kg-d		Brain and Coverings - other degenerative changes, Blood - methemoglobinemia-carboxyhemoglobin, Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - dehydrogenases	Lowest Observed Adverse Effect Level; 42-day study in rat; PRKHDK Problemi na Khigienata. Problems in Hygiene. (Durzhavno Izdatel'stvo Meditsina i Fizkultura, Pl. Slaveikov 11, Sofia, Bulgaria) V.1- 1975- Volume(issue)/page/year 15,96,1990
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	140	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water	**3,615**	**0**	**0**	**Not Detected**	**Not Detected**	**Not Detected**	**Not Detected**	**Not Detected**	**ug/L**	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	5,529	278	5.02	0.0011	30.4	0.032	0.784	8.49	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	32,591,175	lbs/yr	35	States	1997	
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units	Notes
PPMP ambient water		115	35.6		0.334		0.002	ug/L	Pesticide Pilot Montoring Program (USGS/EPA)
PPMP finished water		69	30.3		0.395		0.061	ug/L	

	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units	Notes
CAL DHS	1,872	0	0					ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
STORET	848	293	34.55	0.026	21	0.022	1.5	ug/L	

HRL Ratios (HRL/NAWQA 90%)	Non-cancer: 179			Cancer:		

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Herbicide (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	4.3	days	BF	BF = biodegrades fast (half-life is for soil)
K_{OC}, Organic Carbon Partition Coefficient	98.5-239	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.03	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	5.4E-11	atm-m^3/mol		
Water Solubility	233	mg/L		
% water PBT profiler	12			

Contaminant:	Acetochlor ethanesulfonic acid (ESA)
Substance Key:	79191
Contaminant ID (CASRN):	187022113

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	3	1	1

Scores based on parent

3-model Categorical Prediction
NL
HRL Ratio(s)
HRL/NAWQA 90%: 205 (NAWQA data for acetochlor - parent)

HEALTH EFFECTS DATA[1] - See Acetochlor Parent

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic? NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL	**23**	**mg/kg-d**		**Reduced body weights and body weight gains in both sexes**	**Supplemental Data; EPA OPP NOAEL - FOR ACETOCHLOR ESA**
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	161	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data - FOR ACETOCHLOR - PARENT										
UCMR finished water	**3,615**	**0**	**0**	**Not Detected**	**Not Detected**	**Not Detected**	**Not Detected**	**Not Detected**	**ug/L**	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data - FOR ACETOCHLOR - PARENT										
NAWQA ambient water	5,529	278	5.020	0.0011	30.4	0.032	0.784	8.49	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	32,591,175	lbs/yr	35	States	1997	**FOR ACETOCHLOR - PARENT**
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data - FOR ACETOCHLOR ESA	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units	Notes
PDP finished water	377	5	1.3	0.02	0.02			ug/L	Pesticide Data Program (USDA); 2002

FOR ACETOCHLOR - PARENT	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units	Notes
CAL DHS	1,872	0	0					ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
STORET	848	293	34.55	0.026	21	0.022	1.5	ug/L	

HRL Ratios (HRL/NAWQA 90%)	Non-cancer: 205	Cancer:	NAWQA data for acetochlor - parent

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Pesticide degradate

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time		
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler				

Contaminant:	Acetochlor oxanilic acid (OA)
Substance Key:	79193
Contaminant ID (CASRN):	194992444

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	3	1	1

Scores based on parent

3-model Categorical Prediction
NL
HRL Ratio(s)
HRL/NAWQA 90%: 205 (NAWQA data for acetochlor - parent)

HEALTH EFFECTS DATA[1] - See Acetochlor Parent

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic? NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL	**23**	**mg/kg-d**		**Reduced body weights and body weight gains in both sexes**	**Supplemental Data; EPA OPP NOAEL - FOR ACETOCHLOR OA**
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	161	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data	**FOR ACETOCHLOR - PARENT**									
UCMR finished water	**3,615**	**0**	**0**	**Not Detected**	**Not Detected**	**Not Detected**	**Not Detected**	**Not Detected**	**ug/L**	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data	**FOR ACETOCHLOR - PARENT**									
NAWQA ambient water	5,529	278	5.02	0.0011	30.4	0.032	0.784	8.49	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	32,591,175	lbs/yr	35	States	1997	**FOR ACETOCHLOR - PARENT**
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental wate data FOR ACETOCHLOR - PARENT	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units	Notes
CAL DHS	1,872	0	0					ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
STORET	848	293	34.55	0.026	21	0.022	1.5	ug/L	

HRL Ratios (HRL/NAWQA 90%)	Non-cancer: 205	Cancer:	NAWQA data for acetochlor - parent

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Pesticide degradate

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time		
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler				

Contaminant:	Acrolein
Substance Key:	4581
Contaminant ID (CASRN):	107028

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	9	3	7

3-model Categorical Prediction
L? - L
HRL Ratio(s)
NC HRL/NAWQA 90%: 1.03

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	**0.0005**	**mg/kg-d**	**2003**	**Decreased survival**	**Reference Dose; Basis = NOAEL 0.05 mg/kg-d; UF = 100. Parent, et. al, 1992a**
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.0005	mg/kg-d			Reference Dose (IRIS)
ATSDR (ITER), MRL	0.0005	mg/kg-d	12/1990	Hemato.	Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	0.5	mg/kg-d		Liver - liver function tests impaired, Kidney, Ureter, Bladder - other changes	Lowest Observed Adverse Effect Level; 26-week study in rat; VCVGK "Vrednie chemichescie veshestva, galogen I kislorod sodergashie organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., Chimia, 1994. Volume(issue)/page/year -,385,1994
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification	3		1995		Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	3.5	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	**1,108**	**2**	**0.18**	**1.3**	**3.4**	**2.35**	**3.4**	**3.4**	**ug/L**	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	1	lbs/yr	1	States	2004	
TRI Release - total	284,480	lbs/yr	16	States	2004	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (HRL/NAWQA 90%)	Non-cancer: 1.03				Cancer:				

Production	Amount Range	Units	Year			
CUSIUR Production Data	>100M - 500M	lbs/yr	1998			
	>100M - 500M	lbs/yr	2002			
Use	Aquatic herbicide; rodenticide; industrial chemical (HSDB)					

Environmental Fate Parameters	Value	Units	Degradation code	Notes
$T_{1/2}$, Half life	120-180	hours in water	BF	pH = 7; BF = biodegrades fast
K_{OC}, Organic Carbon Partition Coefficient	3	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-0.01	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.22E-04	atm-m^3/mol		
Water Solubility	212,000	mg/L		
% water PBT profiler				

Contaminant:	Alachlor ethanesulfonic acid (ESA)
Substance Key:	71246
Contaminant ID (CASRN):	142363539

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
4	3	9	3

Scores based on parent

3-model Categorical Prediction
NL
HRL Ratio(s)
NC HRL/NAWQA 90%: 4,300 (NAWQA data for alachlor - parent)

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic? NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL	**157**	**mg/kg-d**		**Increased incidence of clinical signs of toxicity in males and females and decreased body weight gains in males.**	**Supplemental Data; EPA OPP - FOR ALACHLOR ESA**
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	0.04	mg/L			FOR ALACHLOR - PARENT
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	1,100	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data - FOR ALACHLOR PARENT										
NAWQA ambient water	**7,166**	**568**	**7.9**	**0.0008**	**38.2**	**0.015**	**0.256**	**3.33**	**ug/L**	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data - FOR ALACHLOR ESA	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units for Mag data	Notes
PDP finished water	79	3	3.8	0.50	0.50			ug/L	Pesticide Data Program (USDA); 2001
PDP finished water	233	76	32.6	0.02	1.44			ug/L	2002

FOR ALACHLOR - PARENT	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
CAL DHS	8,112	3	0.0003	0.24	14	4.29	11.09	ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
STORET	2,111	361	17.1	0.0125	10.78	0.06	0.55	ug/L	

HRL Ratios (HRL/NAWQA 90%)	Non-cancer: 4,300	Cancer:	NAWQA data for alachlor - parent

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Pesticide degradate

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time		
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler				

Contaminant:	Alachlor oxanilic acid (OA)
Substance Key:	79196
Contaminant ID (CASRN):	171262172

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	8	9	3
Scores based on parent		Scores based on parent	

3-model Categorical Prediction
L?
HRL Ratio(s)
CAR HRL/NAWQA 90%: 1.56 (NAWQA data for alachlor - parent)

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic? NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	**0.04**	**mg/L**			**FOR ALACHLOR - PARENT**
RAISHE Slope Factor		$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]		ug/L			
Health Reference Level (HRL)[2] cancer	0.4	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data - FOR ALACHLOR PARENT										
NAWQA ambient water	**7,166**	**568**	**7.9**	**0.0008**	**38.2**	**0.015**	**0.256**	**3.33**	**ug/L**	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data - FOR ALACHLOR OA	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units for Mag data	Notes
PDP finished water	137	1	0.07	0.50	0.50			ug/L	Pesticide Data Program (USDA); 2001
PDP finished water	411	21	5.1	0.121	0.392			ug/L	2002

FOR ALACHLOR - PARENT	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
CAL DHS	8,112	3	0.0003	0.24	14	4.29	11.09	ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
STORET	2,111	361	17.1	0.0125	10.8	0.06	0.55	ug/L	

HRL Ratios (HRL/NAWQA 90%)	Non-cancer:	Cancer: 1.56	NAWQA data for alachlor - parent

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Pesticide degradate

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time		
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler				

Contaminant:	alpha-Hexachlorocyclohexane
Substance Key:	6535
Contaminant ID (CASRN):	319846

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	8	4	3

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/NAWQA 90%: 949 CAR HRL/NAWQA 90%: 0.102

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL	0.008	mg/kg-d	9/2003	Hepatic	Minimal Risk Level; Basis NOAEL 0.8 mg/kg-d; UF = 100.
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	1.2	mg/kg-d		Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - hepatic microsomal mixed oxidase (dealkylation, hydroxylation, etc.), Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - catalases, Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - other oxidoreductases	Lowest Observed Adverse Effect Level; 30-day study in rat; TOLED5 Toxicology Letters. (Elsevier Science Pub. B.V., POB 211, 1000 AE Amsterdam, Netherlands) V.1- 1977- Volume(issue)/page/year 56,137,1991
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	**0.0006**	**mg/L**			
RAISHE Slope Factor	6.3	$(mg/kg\text{-}d)^{-1}$			IRIS
OEHHA Slope Factor (oral)	2.7	$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	B2				
IARC Carcinogen Classification	2B				
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			EPA; RAIS; OEHHA; IARC
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	56	ug/L			
Health Reference Level (HRL)[2] cancer	0.006	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	**7,119**	**21**	**0.295**	**0.0004**	**0.21**	**0.011**	**0.059**	**0.21**	**ug/L**	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (HRL/NAWQA 90%)	Non-cancer: 949	Cancer: 0.102		

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Component of benzene hexachloride (BHC) former insecticide (HSDB)

Environmental Fate Parameters	Value	Units	Degradation code	Notes
$T_{1/2}$, Half life	1.2	years	BST	hydrolysis only, pH = 7; BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient	641-1,995	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.8	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	6.70E-06	atm-m^3/mol		
Water Solubility	2	mg/L		
% water PBT profiler				

Contaminant:	Anatoxin-a
Substance Key:	80772
Contaminant ID (CASRN):	64285069

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	9	9	8

Scores based on supplemental data

3-model Categorical Prediction
L
HRL Ratio(s)
NC HRL/Cyano HABs MAX: ~0.35

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value	**0.0005**	**mg/kg-d**	**2006**	**Mortality**	**Supplemental Data - draft RfD; Basis NOAEL 0.5 mg/kg-d. Astrachan, N.B. and B.G. Archer. 1981. Simplified monitoring of anatoxin-a by reverse-phase high performance liquid chromatography and the sub-acute effects of anatoxin-a in rats. In: The Water Environment: Algal Toxins and Health, W.W. Carmichael, Ed. Plenum Press, New York, NY. p. 437-446. Astrachan, N.B., B.G. Archer and D.R. Hilbelink. 1980. Evaluation of the subacute toxicity and teratogenicity of anatoxin-a. Toxicon. 18(5-6):684-688.**
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	3.5	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes
Prev: UCMR 1 Meeting summary; Mag: CyanoHABs - The Florida Experience			**4**		**~10**			**ug/L**	**Prev: Lake Champlain, NY study; Mag: 2000 Florida study**

HRL Ratios (HRL/CyanoHABs MAX)	Non-cancer: ~0.35	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Cyanobacterial toxin

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time		
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler				

Contaminant	Aniline
Substance Key:	2438
Contaminant ID (CASRN):	62533

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	6	9	8

3-model Categorical Prediction
L? - L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	**0.007**	**mg/kg-d**		**Blood- effects; Spleen-effects**	**Reference Dose; Provisional value; 104-week chronic study in rat for aniline hydrochloride. CIIT, 1982.**
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI	0.007	mg/kg-d	1993	spleen	Tolerable Daily Intake; CIIT,1982; Basis LOAEL 7.2 mg/kg-d; rat; UF = 1,000
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	2.5	mg/kg-d		Blood - pigmented or nucleated red blood cells, Blood - methemoglobinemia-carboxyhemoglobin, Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - other esterases	Lowest Observed Adverse Effect Level; 12 week oral study in rats; GISAAA Gigiena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year 24(7),44,1959
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	0.6	mg/L			
RAISHE Slope Factor	0.0057	$(mg/kg-d)^{-1}$			from IRIS
OEHHA Slope Factor (oral)	0.0057	$(mg/kg-d)^{-1}$			
EPA Carcinogen classification	B2			spleen	
IARC Carcinogen Classification	3		1987		Vol. 27, Suppl. 7; 1987
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			EPA, CACART, OEHHA, RAIS
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	49	ug/L			
Health Reference Level (HRL)[2] cancer	6	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water									ug/L	
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	1,903	lbs/yr	7	States	2004	
TRI Release - total	**937,263**	**lbs/yr**	**20**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:			Cancer:		
Production	**Amount Range**	**Units**	**Year**			
CUSIUR Production Data	> 1B	lbs/yr	1998			
	> 1B	lbs/yr	2002			
Use	Industrial chemical; as solvent; synthesis of explosives, rubber accelerators, isocyanates (HSDB)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BF	BF = Biodegrades Fast
K_{OC}, Organic Carbon Partition Coefficient	44.78	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	0.9	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	2.02E-06	atm-m3/mol		
Water Solubility	36000	mg/L		
% water PBT profiler				

Contaminant:	Bensulide
Substance Key:	9553
Contaminant ID (CASRN):	741582

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	5	10	6

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/SWC EEC: 0.224

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.005**	**mg/kg-d**		**Plasma & brain ChE inhibition, decreased body weight gain**	**Reference Dose; Basis = NOAEL 0.5 mg/kg-d; UF = 100.**
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	271	mg/kg		Details of toxic effects not reported other than lethal dose value	FMCHA2 Farm Chemicals Handbook. (Meister Pub., 37841 Euclid Ave., Willoughy, OH 44094) Volume(issue)/page/year -,C42,1991
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	35	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**545,406**	**lbs/yr**	**34**	**States**	**1997**	
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data						
OPP Estimated Environmental Concentration	Surface water chronic: 158 ug/L			Ground water chronic: 1 ug/L		
HRL Ratios (HRL/SWC EEC)	Non-cancer: 0.224			Cancer:		
Production	**Amount Range**	**Units**	**Year**			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Herbicide (HSDB)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BSA	PBT; BSA = Biodegrades Slowly with Acclimation
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	9.15E-09	atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler	15			

Contaminant:	Benzyl chloride
Substance Key:	4107
Contaminant ID (CASRN):	100447

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	8	7	5

3-model Categorical Prediction
L? - L
HRL Ratio(s)
No data for calculating HRL ratio

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	26.6	mg/kg-d		Cardiac - other changes, Gastrointestinal - necrotic changes, Related to Chronic Data - death	Lowest Observed Adverse Effect Level; JJIND8 JNCI, Journal of the National Cancer Institute. (Washington, DC) V.61-79, 1978-87. For publisher information, see JNCIEQ. Volume(issue)/page/year 76,1231,1986; 26 week oral study in rats
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	**0.02**	**mg/L**			
RAISHE Slope Factor	0.17	$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)	0.17	$(mg/kg\text{-}d)^{-1}$			2B from IARC
EPA Carcinogen classification	B2		1989	Thyroid	Lijinsky, 1986
IARC Carcinogen Classification	2B				
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART, EPA, RAIS, OEHHA, IARC
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	62	ug/L			
Health Reference Level (HRL)[2] cancer	0.2	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water									ug/L	
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	259	lbs/yr	3	States	2004	
TRI Release - total	**18,750**	**lbs/yr**	**10**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
Krasner, et al., 2006	12	0	0	Not Detected	Not Detected	Not Detected	Not Detected		Krasner, et al., 2006. Env. Sci. & Technol., 40(23), pp. 7175-7185.

HRL Ratios (No data for calculating HRL ratio)	Non-cancer:				Cancer:				

Production	Amount Range	Units	Year			
CUSIUR Production Data	>50M - 100M	lbs/yr	1998			
	>50M - 100M	lbs/yr	2002			
Use	Chemical intermediate (NTP)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BS	PBT; BS = biodegrades slowly
K_{OC}, Organic Carbon Partition Coefficient	517.8	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	2.3	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	4.11E-04	atm-m^3/mol		
Water Solubility	20	mg/L		
% water PBT profiler	27			

Contaminant	Butylated hydroxyanisole
Substance Key:	28160
Contaminant ID (CASRN):	25013165

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	3	8	4

3-model Categorical Prediction
NL?
HRL Ratio(s)
NC HRL/NREC NA GW MED: 0.484
CAR HRL/NREC NA GW MED: 146

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI		mg/kg-d			Tolerable Daily Intake
Supplemental RfD-like value		mg/kg-d			Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	**0.249**	**mg/kg-d**	**1959**	**Liver - changes in liver weight**	**Lowest Observed Adverse Effect Level; AJEBAK Australian Journal of Experimental Biology and Medical Science. (Adelaide, S.A., Australia) V.1-64, 1924-86. Volume(issue)/page/year 37,533,1959**
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)	0.0002	$(mg/kg\text{-}d)^{-1}$			
EPA Slope Factor		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification	2B				Vol. 40, Suppl. 7, 1987
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART; OEHHA; IARC
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.581	ug/L			
Health Reference Level (HRL)[2] cancer	175	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water	**85**	**2**	**2.4**			**0.1**			**ug/L**	**National Reconnaissance**
NREC ambient ground water									ug/L	National Reconnaissance

	# Samples	# with Detects	% Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
NREC ambient surface water			3			0.2			ug/L	National Aggregate
NREC ambient ground water			0.61			1.2			ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States	1997	
TRI Release - surface water		lbs/yr		States	2004	
TRI Release - total		lbs/yr		States	2004	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes
Kolpin, et al., 2002					0.2			ug/L	National Surface Water Reconnaissance; Kolpin, et al., 2002. Env. Sci. & Technol., 36(6), pp. 1202-1211.
Focazio, et al., 2008					Not detected			ug/L	A national reconnaissance for pharmaceuticals and other organic wastewater contaminants in the United States -- II. Untreated drinking water sources. Focazio, et al., 2008. Sci. Tot. Env., 402(2-3), pp. 201-216.

HRL Ratios (HRL/NREC NA GW MED)	Non-cancer: 0.484	Cancer: 146	

Production	Amount Range	Units	Year			
CUSIUR Production Data	>500K-1M	lbs/yr	1998			
	10K-500K	lbs/yr	2002			

Use	Food additive (antioxidant) (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	38 days	length of time	BSA	BSA = Biodegrades slow with acclimation (PBT)
K_{OC}, Organic Carbon Partition Coefficient	1,390	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.5	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.17E-06	atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler	15			

Contaminant:	Captan
Substance Key:	5825
Contaminant ID (CASRN):	133062

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
4	8	10	8

3-model Categorical Prediction
L
HRL Ratio(s)
NC HRL/SWC EEC: 84.3 **CAR HRL/SWC EEC: 1.35**

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	0.13	mg/kg-d	1999	Decreased pup body weight	Reference Dose; Basis = NOEL 12.5 mg/kg-d; UF = 100
EPA IRIS (ITER) RfD		mg/kg-d			
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.13	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.1	mg/kg-d	1995		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	19.9	mg/kg-d		Kidney, Ureter, Bladder - other changes in urine composition, Blood - pigmented or nucleated red blood cells, Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - transaminases	Lowest Observed Adverse Effect Level; GISAAA Gigiena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year 38(9),24,1973
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
OPP Slope Factor (oral)	**0.0024**	**$(mg/kg-d)^{-1}$**			
RAISHE Slope Factor	0.0035	$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)	0.0023	$(mg/kg-d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification	3		1987		
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART; EPA; OEHHA; RAIS
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	910	ug/L			
Health Reference Level (HRL)[2] cancer	14.6	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**3,992,782**	**lbs/yr**	**39**	**States**	**1997**	
TRI Release - surface water	15	lbs/yr	3	States	2004	
TRI Release - total	2,938	lbs/yr	6	States	2004	

Supplemental Water Data						
OPP Estimated Environmental Concentration	Surface water chronic: 10.8 ug/L			Ground water chronic: 0 ug/L		
HRL Ratios (HRL/SWC EEC)	Non-cancer: 84.3			Cancer: 1.35		
Production	**Amount Range**	**Units**	**Year**			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Fungicide (NTP)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BST	BST = Biodegrades Sometimes/Recalcitrant. However, hydrolysis half-life is 4.9 hrs - 18.8 hrs @ pH 7 and 5, respectively.
K_{OC}, Organic Carbon Partition Coefficient	862.2	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	2.8	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	7.01E-09	atm-m^3/mol		
Water Solubility	5.1	mg/L		
% water PBT profiler				

Contaminant:	Chlorate
Substance Key:	24376
Contaminant ID (CASRN):	14866683

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	6	10	10

3-model Categorical Prediction
L
HRL Ratio(s)
NC HRL/DBP ICR 90%: 0.656

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.03**	**mg/kg-d**		**Thyroid hypertrophy and mineralization**	**Reference Dose**
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL	5	mg/kg-d	2005	Bone marrow hyperplasia; thyroid folicular hypertrophy and mineralization	Supplemental Data - NTP Abstract for TR-517; 2-year rat study for sodium chlorate
RTECS Lowest Oral Chronic LOAEL	1.4	mg/kg-d		Blood - pigmented or nucleated red blood cells, Blood - changes in erythrocyte (RBC) count, Nutritional and Gross Metabolic - weight loss or decreased weight gain	Lowest Observed Adverse Effect Level; 1-year oral rat study fopr sodium chlorate; Journal of Environmental Pathology, Toxicology and Oncology. (Chem-Orbital, POB 134, Park Forest, IL 60466) V.5(4)- 1984- Volume(issue)/page/year
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification	Not likely to be carcinogenic at doses that do not alter thyroid				
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	210	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
	# PWSs/Sites sampled	**# with Detects**	**% PWSs/Sites with detects**	**Mean value of Detects**	**Maximum value of Detects**	**Median value of Detects**	**90% of Detects**	**99% of Detects**	**Units for Mag data**	
DBP ICR finished water	**1,719**	**1,490**	**86.7**	**172**	**2,234**	**120**	**320**		**ug/L**	
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	7,261,557	lbs/yr	16	States	1997	For sodium chlorate
TRI Release - surface water		lbs/yr		States	2004	
TRI Release - total		lbs/yr		States	2004	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Median of Detects	Maximum of Detects	Units for Mag data	Notes
CAL DHS	116	66	56.9	110	747	ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx

HRL Ratios (HRL/DBP ICR 90%)	Non-cancer: 0.656	Cancer:	

Production	Amount Range	Units	Year
CUSIUR Production Data		lbs/yr	1998
		lbs/yr	2002

Use	Agricultural defoliant or desiccant and in the production of ClO_2 (HSDB).

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		days		
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		cm3/g		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility	1,000,000	mg/L		For sodium chlorate
% water PBT profiler				

Contaminant	Chloromethane (Methyl chloride)
Substance Key:	2605
Contaminant ID (CASRN):	74873

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	8	8	7

3-model Categorical Prediction
L? - L
HRL Ratio(s)
NC HRL/NCOD R1 90%: 2.15
CAR HRL/NCOD R1 90%: 0.207

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD	0.004	mg/kg-d	2006	Mild neurological effects in humans occupationally exposed to chloromethane	Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor	**0.013**	**$(mg/kg\text{-}d)^{-1}$**	**1981**		**CIIT, 1981**
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	D		2001		
IARC Carcinogen Classification	3		1999		Vol. 41, Suppl. 7, Vol. 71; 1999
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N		developmental	CACART, RAIS
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL	0.1	mg/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	28	ug/L			
Health Reference Level (HRL)[2] cancer	2.69	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water	20,246	248	1.22	0.01	550	**1.9**	13	120	ug/L	
NCOD Round 2 finished water	23,478	528	**2.25**	0.00073	312	1.4	5	29	ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	3,959	356	8.99	0.007	21	0.04	0.1	0.58	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	1,539	lbs/yr	10	States	2004	
TRI Release - total	1,733,197	lbs/yr	26	States	2004	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
CAL DHS	11,984	247	2.1	0.25	46	0.7	2	ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
Krasner et al., 2006	12	1	8			ND		ug/L	Krasner, et al., 2006. Env. Sci. & Technol., 40(23), pp. 7175-7185.
HRL Ratios (HRL/NCOD R1 90%)	Non-cancer: 2.15				Cancer: 0.207				

Production	Amount Range	Units	Year			
CUSIUR Production Data	> 1B	lbs/yr	1998			
	> 1B	lbs/yr	2002			
Use	Foaming agent; in organic synthesis (HSDB); naturally-occurring gas					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	15	days	BS	PBT; BS = Biodegrades Slowly
K_{OC}, Organic Carbon Partition Coefficient	14	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	0.91	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	8.82E-03	atm-m3/mol		
Water Solubility	5320	mg/L		
% water PBT profiler	43			

Contaminant:	Clethodim
Substance Key:	76719
Contaminant ID (CASRN):	110429624

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	4	10	6

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/SWC EEC: 9.21

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.01**	**mg/kg-d**		**Increased liver weights increased liver enzymes and liver histopathology**	**Reference Dose; Basis = NOEL 1 mg/kg-d; UF = 100.**
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.01	mg/kg-d	1999		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	1,360	mg/kg		Details of toxic effects not reported other than lethal dose value	Oral study in rat; FMCHA2 Farm Chemicals Handbook. (Meister Pub., 37841 Euclid Ave., Willoughy, OH 44094) Volume(issue)/page/year -,C272,1991
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	70	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**670,721**	**lbs/yr**	**39**	**States**	**1997**	
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data:						
OPP Estimated Environmental Concentration		Surface water chronic: 7.6 ug/L			Ground water chronic: 0.49 ug/L	
HRL Ratios (HRL/SWC EEC)	Non-cancer: 9.21				Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Herbicide; pesticide degradate					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time		
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler				

Contaminant:	Cobalt
Substance Key:	18870
Contaminant ID (CASRN):	7440484

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	4	4	8

3-model Categorical Prediction
NL?
HRL Ratio(s)
NC HRL/NIRS 90%: 6.67

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.02	mg/kg-d			Reference Dose
ATSDR (ITER), MRL	**0.01**	**mg/kg-d**	**2004**	**Blood-increased hemoglobin, polycythemia; respiratory-effects on lung function**	**Minimal Risk Level; MRL-Int; UF = 100**
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI	0.0014	mg/kg-d	2000	Heart	Tolerable Daily Intake; 'multiple studies as cited in ATSDR, 1992; UF = 30; human study; RIVM; Basis LOAEL = 0.04 mg/kg-d
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification	2B		1991		Vol. 52; 1991; NB: Evaluated as a group; Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			IARC, CACART
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	70	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water	**989**	**3**	**0.303**	**6.4**	**10.6**	**9.7**	**10.5**	**10.6**	**ug/L**	
Ambient Water Occurrence Data										
NAWQA ambient water	3,297	782	23.7	0.007	684	0.22	3.91	53.2	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	1,272	lbs/yr	17	States	2004	
TRI Release - total	786,491	lbs/yr	38	States	2004	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (HRL/NIRS 90%)	Non-cancer: 6.67			Cancer:		

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Use data are for cobaltous chloride: Formerly in medicines; as germicide (HSDB); naturally-occurring

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BST	assumed persistent; All use and env. fate data are for cobaltous chloride; BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		unitless		
Water Solubility	534,200	mg/L		
% water PBT profiler				

Contaminant	Cumene hydroperoxide
Substance Key:	2927
Contaminant ID (CASRN):	80159

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
4	9	8	8

3-model Categorical Prediction
L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	**32.7**	**mg/kg-d**		**Mortality**	**Lowest Observed Adverse Effect Level; AIHAAP American Industrial Hygiene Association Journal. (AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311) V.19- 1958- Volume(issue)/page/year 19,205,1958; 7 week oral study in rats**
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	382	mg/kg			Oral study in rats
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	76.4	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	96	lbs/yr	1	States	2004	
TRI Release - total	**443,772**	**lbs/yr**	**15**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:

Production	Amount Range	Units	Year			
CUSIUR Production Data	>100M - 500M	lbs/yr	1998			
	>100M - 500M	lbs/yr	2002			
Use	Industrial chemical (HSDB)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BSA	BSA = Biodegrades Slowly with Acclimation; PBT
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	2.16	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	4.71E-08	atm-m3/mol		
Water Solubility	13,900	mg/L		
% water PBT profiler	25			

Contaminant:	Cylindrospermopsin
Substance Key:	81115
Contaminant ID (CASRN):	143545908

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
8	3	5	10

Scores based on supplemental data
Default Prevalence score based on related cyanotoxin surveys

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/CyanoHABs MAX: ~0.0021

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value	**0.00003**	**mg/kg-d**	**2006**	**Increased kidney weight**	**Supplemental Data - draft RfD; Basis LOAEL 60 ug/kg-d; NOAEL 3 ug/kg-d. Humpage, A.R. and I.R. Falconer. 2003. Oral toxicity of the cyanobacterial toxin cylindrospermopsin in male Swiss albino mice: Determination of no observed adverse effect level for deriving a drinking water guideline value. Environ. Toxicol. 18(2):94-103.**
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.21	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes
CyanoHABs - The Florida Experience			**Not Available**		**~100**			**ug/L**	**2000 Florida study**
UCMR 1 Meeting summary			**Not Available**		**90**			**ug/L**	**Florida survey**

HRL Ratios (HRL/CyanoHABs MAX)	Non-cancer: ~0.0021	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Cyanobacterial toxin

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time		
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler				

Contaminant:	Dicrotophos
Substance Key:	6098
Contaminant ID (CASRN):	141662

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	5	8	6

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/SWC EEC: 2.45

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.00007**	**mg/kg-d**		**Decreased plasma, RBC & brain ChE activity**	**Reference Dose; Basis = LOAEL 0.02 mg/kg-d; UF = 300.**
EPA IRIS (ITER) RfD	0.0001	mg/kg-d	1986	Decreased body weight	Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.0001	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	11	mg/kg		Details of toxic effects not reported other than lethal dose value	GUCHAZ Guide to the Chemicals Used in Crop Protection. (Information Canada, 171 Slater St., Ottawa, Ont., Canada) Volume(issue)/page/year 6,196,1973
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	Suggestive evidence				OPP; no quantification
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.49	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**359,726**	**lbs/yr**	**13**	**States**		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units for Mag data	Notes
PPMP ambient water		0	0		0		0	ug/L	Pesticide Pilot Montoring Program (USGS/EPA); 2002
PPMP finished water		0	0		0		0	ug/L	2002

OPP Estimated Environmental Concentration	Surface water chronic: 0.2 ug/L	Ground water chronic: 0.005 ug/L	
HRL Ratios (HRL/SWC EEC)	Non-cancer: 2.45	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Insecticide (HSDB)			
Environmental Fate Parameters	**Value**	**Units**	**Degradation Code**	**Notes**
$T_{1/2}$, Half life		length of time	BS	PBT; BS = Biodegrades Slowly
K_{OC}, Organic Carbon Partition Coefficient	366.2	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-0.49	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	5.05E-11	atm-m^3/mol		
Water Solubility	1,000,000	mg/L		
% water PBT profiler	39			

Contaminant:	Dimethipin
Substance Key:	36818
Contaminant ID (CASRN):	55290647

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	6	8	5

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/GWC EEC: 1.55

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.0218**	**mg/kg-d**	**1986**	**Kidney, lungs, duodenum, liver, glandular stomach, heart, aortic artery & testes toxicity. Decreased body weight gain.**	**Reference Dose; Basis = NOEL 2.18 mg/kg-d; UF = 100.**
EPA IRIS (ITER) RfD	0.02	mg/kg-d		Increased absolute and relative liver weight	Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.02	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.02	mg/kg-d	1999		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	C		1987		Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	153	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**282,458**	**lbs/yr**	**14**	**States**	**1997**	
TRI Release - surface water	0	lbs/yr	0	States	2004	
TRI Release - total	250	lbs/yr	1	States	2004	

Supplemental Water Data						
OPP Estimated Environmental Concentration	Surface water chronic: 7.3 ug/L				Ground water chronic: 99 ug/L	
HRL Ratios (HRL/GWC EEC)	Non-cancer: 1.55				Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Herbicide; plant growth regulator (HSDB)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BSA	BSA = biodegrades slowly with acclimation; PBT
K_{OC}, Organic Carbon Partition Coefficient	27.41	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-0.17	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	2.30E-11	atm-m^3/mol		
Water Solubility	4,600	mg/L		
% water PBT profiler	46			

Contaminant:	Dimethoate
Substance Key:	2413
Contaminant ID (CASRN):	60515

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	5	10	7

3-model Categorical Prediction
L? - L
HRL Ratio(s)
NC HRL/SWC EEC: 0.655

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.0022**	**mg/kg-d**	**2007**	**Brain cholinesterase inhibition**	**Reference Dose; OPP RED**
EPA IRIS (ITER) RfD	0.0002	mg/kg-d	1988	Brain cholinesterase inhibition	Reference Dose; Basis NOEL 0.05 mg/kg-d; UF = 100. American Cyanamid Co., 1986a
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.0002	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.002	mg/kg-d	1996		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	3	mg/kg-d		Blood - other changes, Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - true cholinesterase	Lowest Observed Adverse Effect Level - 52-week study in rat; BJIMAG British Journal of Industrial Medicine. (British Medical Journal, Box 560B, Kennebunkport, ME 04046) V.1- 1944- Volume(issue)/page/year 21,52,1964
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	C		2006		OPP
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	15.4	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**1,896,947**	**lbs/yr**	**44**	**States**	**1997**	
TRI Release - surface water	2,615	lbs/yr	2	States	2004	
TRI Release - total	31,480	lbs/yr	4	States	2004	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units for Mag data	Notes
PPMP ambient water		4	1.3		0.022			ug/L	Pesticide Pilot Montoring Program (USGS/EPA)
PPMP finished water								ug/L	

	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
CAL DHS	7,238	0	0					ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
STORET	890	14	1.57	0.055	0.21	0.148	0.198	ug/L	

OPP Estimated Environmental Concentration		Surface water chronic: 23.5 ug/L			Ground water chronic: 0.044 ug/L	
HRL Ratios (HRL/SWC EEC)	Non-cancer: 0.655			Cancer:		

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Pesticide (NTP)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	8	weeks	BSA	BSA = biodegrades slowly with acclimation
K_{OC}, Organic Carbon Partition Coefficient	5.2-36	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	0.78	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	2.43E-10	atm-m^3/mol		
Water Solubility	23,800	mg/L		
% water PBT profiler	36			

Contaminant:	Disulfoton
Substance Key:	6423
Contaminant ID (CASRN):	298044

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	5	1	1

3-model Categorical Prediction
NL
HRL Ratio(s)
NC HRL/NAWQA 90%: 1.1

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.00013**	**mg/kg-d**	**2002**	**Plasma, RBC, brain & corneal ChE inhibition**	**Reference Dose; Basis = NOAEL 0.013 mg/kg-d; UF = 100.**
EPA IRIS (ITER) RfD	0.00004	mg/kg-d	1986		Reference Dose; Basis = LOAEL 0.04 mg/kg-d; UF = 1,000.
EPA HA RfD	0.0001	mg/kg-d	2006		Reference Dose
RAISHE RfD	0.00004	mg/kg-d			Reference Dose
ATSDR (ITER), MRL	0.00006	mg/kg-d	08/1995		Minimal Risk Level
JMPR, maximum ADI	0.0003	mg/kg-d	1991		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	0.06	mg/kg-d		Brain and Coverings - other degenerative changes, Blood - other changes, Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - true cholinesterase	Lowest Observed Adverse Effect Level; FAATDF Fundamental and Applied Toxicology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1-40, 1981-97. For publisher information, see TOSCF2 Volume(issue)/page/year 35,101,1997
Supplemental LOAEL		mg/kg-d			Supplemental Data, ITER
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification	E				Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL	0.0035	mg/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.91	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water	**300**	**0**	**0**	**Not Detected**	**Not Detected**	**Not Detected**	**Not Detected**	**Not Detected**	**ug/L**	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	7,118	17	0.24	0.002	3.81	0.02	0.826	3.81	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	1,196,066	lbs/yr	33	States	1997	
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units for Mag data	Notes
PPMP ambient water		0	0		Not Detected		Not Detected		Pesticide Pilot Montoring Program (USGS/EPA); 2002
PPMP finished water		0	0		Not Detected		Not Detected		2002
HRL Ratios (HRL/NAWQA 90%)	Non-cancer: 1.1				Cancer:				

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Insecticide (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	7-41	days	BS	BS = Biodegrades Slowly
K_{OC}, Organic Carbon Partition Coefficient	684-14,013	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	4.02	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	2.20E-06	atm-m^3/mol		
Water Solubility	16.3	mg/L		
% water PBT profiler	17			

Contaminant:	Diuron
Substance Key:	6583
Contaminant ID (CASRN):	330541

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	4	4	7

3-model Categorical Prediction
NL?
HRL Ratio(s)
NC HRL/UCMR 90%: 10 CAR HRL/UCMR 90%: 0.871

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.003**	**mg/kg-d**		**Hemolytic anemia & compensatory hematopotesis (decreased erythrocyte count, hemoglobin level, etc).**	**Reference Dose; du Pont, 1964a; Basis = LOAEL 1.0 mg/kg-d; UF = 300.**
EPA IRIS (ITER) RfD	0.002	mg/kg-d	1987		Reference Dose; Basis NOEL 0.625 mg/kg-d
EPA HA RfD	0.003	mg/kg-d	2006		Reference Dose
RAISHE RfD	0.002	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	1.75	mg/kg-d		Blood - changes in serum composition (e.g. TP, bilirubin, cholesterol), Liver - changes in liver weight, Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - transaminases	Lowest Observed Adverse Effect Level; 30-day study in rat; TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year 36,76,1990
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
EPA OPP Slope Factor	0.0191	$(mg/kg\text{-}d)^{-1}$	2003		
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	Known/Likely		2003		Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			EPA, CACART
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL	0.1	mg/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	21	ug/L			
Health Reference Level (HRL)[2] cancer	1.83	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water	**298**	**1**	**0.34**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**ug/L**	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	4,552	319	7.00	0.0004	23.3	0.09	0.915	8.4	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	4,370,448	lbs/yr	39	States	1997	
TRI Release - surface water	10	lbs/yr	2	States	2004	
TRI Release - total	798	lbs/yr	5	States	2004	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units	Notes
PDP finished water	270	1	0.4	0.058	0.058			ug/L	
PPMP ambient water		117	37.5		0.54		0.319	ug/L	Pesticide Data Program (USDA); 2002
PPMP finished water		13	5.8		0.079		0.079	ug/L	

HRL Ratios (HRL/UCMR 90%)	Non-cancer: 10	Cancer: 0.871	

Production	Amount Range	Units	Year			
CUSIUR Production Data	>1M - 10M	lbs/yr	1998			
		lbs/yr	2002			

Use	Herbicide (HSDB

Environmental Fate Parameters	Value	Units	Degradation code	Notes
$T_{1/2}$, Half life		months	BST	BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient	224-879	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	2.68	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	5.8E-10	atm-m^3/mol		
Water Solubility	36.4	mg/L		
% water PBT profiler	15			

Contaminant:	Equilenin
Substance Key:	81750
Contaminant ID (CASRN):	517099

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	6	9	5

3-model Categorical Prediction
L?-L
HRL Ratio(s)
NC HRL/Kolpin MAX: 1.26

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JECFA ADI	**0.00005**	**mg/kg-d**	**1999**	**Estrogenic hormonal response in post-menopausal women**	**Acceptable Daily Intake for E2**
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL		mg/L			Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.35	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
Kolpin, et al., 2002	**70**		**2.8**		**0.278**	**0.14**		**ug/L**	**National Surface Water Reconnaissance; Kolpin, et al., 2002. Env. Sci. & Technol., 36(6), pp. 1202-1211.**

HRL Ratios (HRL/Kolpin MAX)	Non-cancer: 1.26	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Pharmaceutical, hormone

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		days		
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.93	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility	1.52	mg/L		
% water PBT profiler				

Contaminant:	Equilin
Substance Key:	81748
Contaminant ID (CASRN):	474862

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	6	8	5

3-model Categorical Prediction
L?-L
HRL Ratio(s)
NC HRL/Kolpin MAX: 2.38

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JECFA ADI	**0.00005**	**mg/kg-d**	**1999**	**Estrogenic hormonal response in post-menopausal women**	**Acceptable Daily Intake for E2**
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL		mg/L			Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.35	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
Kolpin, et al., 2002	**70**		**1.4**		**0.147**	**0.147**		**ug/L**	**National Surface Water Reconnaissance; Kolpin, et al., 2002. Env. Sci. & Technol., 36(6), pp. 1202-1211.**

HRL Ratios (HRL/Kolpin MAX)	Non-cancer: 2.38	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Pharmaceutical, hormone

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	38	days	BSA	BSA = Biodegrades slowly with acclimation
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.35	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility	1.41	mg/L		
% water PBT profiler	13			

Contaminant:	Erythromycin
Substance Key:	75632
Contaminant ID (CASRN):	114078

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	3	10	4

3-model Categorical Prediction
NL?
HRL Ratio(s)
NC HRL/NREC MAX: 2.88

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JECFA ADI	**0.0007**	**mg/kg-d**	**2006**	**Inhibition of beneficial gastrointestinal bacteria**	**Acceptable Daily Intake**
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL	66.7	mg/kg-d			Supplemental Data; Maximum Recommended Daily Dose (MRDD)
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?	Y	Y/N			UMD
EPAHA-DWEL		mg/L			Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	4.9	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water	**104**	**22**	**21.5**		**1.7**	**0.1**			**ug/L**	**National Reconnaissance**
NREC ambient ground water	90	0	0.0	Not detected	Not detected	Not detected	Not detected	Not detected	ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
Focazio, et al., 2008					0.3			ug/L	Drinking water monitoring; Focazio, et al., 2008. Sci.Tot. Env. 402(2-3), pp. 201-216.

HRL Ratios (HRL/NREC MAX)	Non-cancer: 2.88	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Pharmaceutical, antibiotic			
Environmental Fate Parameters	**Value**	**Units**	**Degradation Code**	**Notes**
$T_{1/2}$, Half life	180	days	BST	BST = Biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.06	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	5.20E-29	atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler	6			

Contaminant:	Estradiol (17-beta estradiol)
Substance Key:	2130
Contaminant ID (CASRN):	50282

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
8	8	10	5

3-model Categorical Prediction
L
HRL Ratio(s)
NC HRL/Kolpin MAX: 1.75 CAR HRL/Kolpin MAX: 0.0045

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JECFA ADI	0.00005	mg/kg-d	1999	Estrogenic hormonal response in post-menopausal women	Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)	**39**	**$(mg/kg\text{-}d)^{-1}$**			
EPA Carcinogen classification					
IARC Carcinogen Classification	1				
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			IARC, CACART, OEHHA
Is the contaminant on a list of reproductive toxins?	Y	Y/N			UMD
EPAHA-DWEL		mg/L			Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.35	ug/L			
Health Reference Level (HRL)[2] cancer	0.0009	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
Snyder, et al., 2007			0.0	Not detected	Not detected	Not detected	Not detected	ug/L	Finished Drinking Water; Snyder, et al, 2007. Removal of EDCs and Pharmaceuticals in Drinking and Reuse Treatment Processes. American Water Works Association.
Snyder, et al., 2007					0.0064			ug/L	Raw Drinking Water; Snyder, et al, 2007. Removal of EDCs and Pharmaceuticals in Drinking and Reuse Treatment Processes. American Water Works Association.
Kolpin, et al., 2002	**85**		**10.6**		**0.2**	**0.16**		**ug/L**	**National Surface Water Reconnaissance; Kolpin, et al., 2002. Env. Sci. & Technol., 36(6), pp. 1202-1211.**

HRL Ratios (HRL/Kolpin MAX)	Non-cancer: 1.75	Cancer: 0.0045

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Pharmaceutical, hormone

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	38	days	BSA	BSA = Biodegrades slowly with acclimation
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	4.01	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	6.40E-11	atm-m^3/mol		
Water Solubility	3.6	mg/L		
% water PBT profiler	11			

Contaminant:	Estriol
Substance Key:	75525
Contaminant ID (CASRN):	50271

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	6	10	3

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/Kolpin MAX: 6.86

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JECFA ADI	**0.00005**	**mg/kg-d**	**1999**	**Estrogenic hormonal response in post-menopausal women**	**Acceptable Daily Intake for E2**
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?	Y	Y/N			UMD
EPAHA-DWEL		mg/L			Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.35	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
Snyder, et al., 2007			0.0	Not detected	Not detected	Not detected	Not detected	ug/L	Finished Drinking Water; Snyder, et al, 2007. Removal of EDCs and Pharmaceuticals in Drinking and Reuse Treatment Processes. American Water Works Association.
Snyder, et al., 2007			0.0	Not detected	Not detected	Not detected	Not detected	ug/L	Raw Drinking Water; Snyder, et al, 2007. Removal of EDCs and Pharmaceuticals in Drinking and Reuse Treatment Processes. American Water Works Association.
Kolpin, et al., 2002	**70**		**21.4**		**0.051**	**0.019**		**ug/L**	**National Surface Water Reconnaissance; Kolpin, et al., 2002. Env. Sci. & Technol., 36(6), pp. 1202-1211.**

HRL Ratios (HRL/Kolpin MAX)	Non-cancer: 6.86	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Pharmaceutical, hormone

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	38	days	BSA	BSA = Biodegrades slowly with acclimation
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	2.45	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.33E-12	atm-m^3/mol		
Water Solubility	441	mg/L		
% water PBT profiler	17			

Contaminant:	Estrone
Substance Key:	2210
Contaminant ID (CASRN):	53167

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	6	9	3

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/Swartz MAX: 2.92

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JECFA ADI	**0.00005**	**mg/kg-d**	**1999**	**Estrogenic hormonal response in post-menopausal women**	**Acceptable Daily Intake for E2**
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART
Is the contaminant on a list of reproductive toxins?	Y	Y/N			UMD
EPAHA-DWEL		mg/L			Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.35	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
Boyd, et al., 2003				Not detected	Not detected	Not detected	Not detected		Finished Drinking Water; Boyd, et al, 2003. Sci. Tot. Env. 311(1-3): pp. 135-149.
Snyder, 2008					0.002			ug/L	Raw Drinking Water; Snyder, et al, 2008. Removal of Endocrine Disruptors and Pharmaceuticals during Water Treatment. In: Fate of Pharmaceuticals in the Environmental and in Water Treatment Systems.
Kolpin, et al., 2002	**70**		**7.1**		**0.112**	**0.027**		**ug/L**	**National Surface Water Reconnaissance; Kolpin, et al., 2002. Env. Sci. & Technol., 36(6), pp. 1202-1211.**
Swartz, et al., 2006					0.12			ug/L	Ambient Water (SW/GW); Swartz, et al., 2006. Env. Sci. & Technol. 40(16): pp. 4894-4902.
HRL Ratios (HRL/Swartz MAX)	Non-cancer: 2.92				Cancer:				

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	**Pharmaceutical, hormone**					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	38	days	BSA	BSA = Biodegrades slowly with acclimation
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.13	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	3.80E-10	atm-m^3/mol		
Water Solubility	30	mg/L		
% water PBT profiler	13			

Contaminant:	Ethinyl Estradiol (17-alpha ethynyl estradiol)
Substance Key:	2327
Contaminant ID (CASRN):	57636

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
8	3	10	4

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/Kolpin MAX: 0.337

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value		mg/kg-d			Supplemental Data
Supplemental RfD-like value		mg/kg-d			Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOAEL	0.04	mg/kg-d	2001	Hematalogical effects	Supplemental Data; Maier and Hermann, 2001. Regulatory Toxicology and Pharmacology, 34, pp 53-61.
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL	**0.015**	**mg/kg-d**	**1981**	**Increased serum levels of alanine aminotransferase (ALT), aspartate aminotransferase (AST) and γ-glutamultransferase (GGT).**	**Supplemental Data; Tennant, et al., 1981 as cited in Maier and Hermann, 2001.**
Supplemental LOAEL	0.0005	mg/kg-d			Supplemental Data; Maximum Recommended Daily Dose (MRDD)
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART
Is the contaminant on a list of reproductive toxins?	Y	Y/N			UMD
EPAHA-DWEL		mg/L			Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.28	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects (ug/L)	Maximum value of Detects (ug/L)	Median value of Detects (ug/L)	90% of Detects (ug/L)	Units for Mag data	Notes
Snyder, et al., 2007			0.0	Not detected	Not detected	Not detected	Not detected	ug/L	Finished Drinking Water; Snyder, et al., 2007. Removal of EDCs and Pharmaceuticals in Drinking and Reuse Treatment Processes. American Water Works Association.
Snyder, et al., 2007			0.0	Not detected	Not detected	Not detected	Not detected	ug/L	Raw Drinking Water; Snyder, et al., 2007. Removal of EDCs and Pharmaceuticals in Drinking and Reuse Treatment Processes. American Water Works Association.
Kolpin, et al., 2002	**70**		**5.7**		**0.273**	**0.094**		**ug/L**	**Response to Comment on National Surface Water Reconnaissance Kolpin et al., 2002: Env. Sci. & Technol., 36(18), pp. 4007-4008.**

HRL Ratios (HRL/Kolpin MAX)	Non-cancer: 0.337	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Pharmaceutical, hormone

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	60	days	BST	BST = Biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.67	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	7.94E-12	atm-m^3/mol		
Water Solubility	11.3	mg/L		
% water PBT profiler	9			

Contaminant:	Ethoprop
Substance Key:	22682
Contaminant ID (CASRN):	13194484

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	3	7	3

3-model Categorical Prediction
NL?
HRL Ratio(s)
NC HRL/NAWQA 90%: 7.29 CAR HRL/NAWQA 90%: 13

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.0001**	**mg/kg-d**		**Plasma ChE inhibition, Q1* 0.0281 (mg/kg-day)-1 - Likely.**	**Reference Dose; Basis = NOAEL 0.01 mg/kg-d; UF = 100.**
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.0004	mg/kg-d	1999		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	33	mg/kg		Behavioral - changes in motor activity (specific assay), Behavioral - muscle contraction or spasticity	HBPTO Handbook of pesticide toxicology. Robert Krieger ed, Academic press, 2001 Volume(issue)/page/year 1,693,2001
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	0.12	mg/L			
RAISHE Slope Factor		$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Slope Factor (oral)	0.0281	$(mg/kg-d)^{-1}$			OPP RED and Ethoprop pesticide tolerances: 73 FR 53725, Spetember 17, 2008
EPA Carcinogen classification	Likely				
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.7	ug/L			
Health Reference Level (HRL)[2] cancer	1.25	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	**7,118**	**84**	**1.18**	**0.002**	**1.95**	**0.011**	**0.096**	**0.8**	**ug/L**	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	1,010,807	lbs/yr	28	States	1997	
TRI Release - surface water	0	lbs/yr	0	States	2004	
TRI Release - total	77,786	lbs/yr	4	States	2004	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units for Mag data	Notes
PPMP ambient water		0	0		Not Detected		Not Detected	ug/L	Pesticide Pilot Montoring Program (USGS/EPA); 2001
PPMP finished water		0	0		Not Detected		Not Detected	ug/L	2001

HRL Ratios (HRL/NAWQA 90%)	Non-cancer: 7.29				Cancer: 13				

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Insecticide (HSDB)			
Environmental Fate Parameters	**Value**	**Units**	**Degradation Code**	**Notes**
$T_{1/2}$, Half life	75-133	days	BST	hydrolysis only: BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient	70-120	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.59	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.70E-07	atm-m^3/mol		
Water Solubility	750	mg/L		
% water PBT profiler				

Contaminant:	Ethylene glycol
Substance Key:	4599
Contaminant ID (CASRN):	107211

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
3	9	10	10

3-model Categorical Prediction
L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	**2**	**mg/kg-d**	**1987**	**Kidney toxicity. Increased mortality, neutrophil count, kidney hemoglobin & hematocrit, chronic nephritis**	**Reference Dose; DePass et al., 1986a; UF = 100; Rat; Basis NOAEL = 200 mg/kg-d**
EPA HA RfD	2	mg/kg-d	2006		Reference Dose
RAISHE RfD	2	mg/kg-d			Reference Dose
ATSDR (ITER), MRL	0.8	mg/kg-d	2007	Increased total malformations and incidence of extra rib 14 in developmental study	Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI	0.05	mg/kg-d	2000	Kidney	Tolerable Daily Intake; Gaunt et al., 1974; UF = 1,000; Rat
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	600	mg/kg-d		Behavioral - fluid intake, Kidney, Ureter, Bladder - changes in tubules (including acute renal failure, acute tubular necrosis), Related to Chronic Data - death	Lowest Observed Adverse Effect Level; 2 year oral study in rats; FCTXAV Food and Cosmetics Toxicology. (London, UK) V.1-19, 1963-81. For publisher information, see FCTOD7. Volume(issue)/page/year 3,229,1965
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	D		1987		Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL	70	mg/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	14,000	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	576,990	lbs/yr	31	States	2004	
TRI Release - total	**10,076,483**	**lbs/yr**	**49**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes
HRL Ratios (No water data)	Non-cancer:				Cancer:				

Production	Amount Range	Units	Year			
CUSIUR Production Data	> 1B	lbs/yr	1998			
	> 1B	lbs/yr	2002			
Use	Antifreeze; cancelled pesticide; synthetic chemical used in textile manufacture (NTP)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BF	BF = biodegrades fast
K_{OC}, Organic Carbon Partition Coefficient	1	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-1.36	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	6.00E-08	atm-m^3/mol		
Water Solubility	1,000,000	mg/L		
% water PBT profiler				

Contaminant:	Ethylene Oxide
Substance Key:	2635
Contaminant ID (CASRN):	75218

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	8	10	8

3-model Categorical Prediction
L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor	1.02	$(mg/kg\text{-}d)^{-1}$			HEAST
OEHHA Slope Factor (oral)	**0.31**	**$(mg/kg\text{-}d)^{-1}$**			
EPA Carcinogen classification					
IARC Carcinogen Classification	1		1994		
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART; RAIS; OEHHA; EPA; IARC
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen; Developmental	UMD; CACART
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]		ug/L			
Health Reference Level (HRL)[2] cancer	0.113	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	4,761	lbs/yr	4	States	2004	
TRI Release - total	**374,110**	**lbs/yr**	**38**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:

Production	Amount Range	Units	Year			
CUSIUR Production Data	> 1B	lbs/yr	1998			
	> 1B	lbs/yr	2002			
Use	Fumigant (NTP); gas					

Environmental Fate Parameters	Value	Units	Degradation code	Notes
$T_{1/2}$, Half life		length of time	BS	PBT; BS = biodegrades slowly
K_{OC}, Organic Carbon Partition Coefficient	1.435	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-0.3	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.48E-04	atm-m^3/mol		
Water Solubility	1,000,000	mg/L		
% water PBT profiler	43			

Contaminant:	Ethylene thiourea
Substance Key:	3836
Contaminant ID (CASRN):	96457

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	6	4	1

3-model Categorical Prediction
NL?
HRL Ratio(s)
NC HRL/GWC EEC: 6.67 CAR HRL/GWC EEC: 0.286

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.0002**	**mg/kg-d**		**Thyroid toxicity**	**Reference Dose**
EPA IRIS (ITER) RfD	0.00008	mg/kg-d	1991	Increased incidence of thyroid hyperplasia	Reference Dose; Basis LOAEL 0.25 mg/kg-d. Graham et al., 1975
EPA HA RfD	0.00008	mg/kg-d	2006		Reference Dose
RAISHE RfD	0.00008	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.004	mg/kg-d	1993		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	1.34	mg/kg-d		Nutritional and Gross Metabolic - weight loss or decreased weight gain	Lowest Observed Adverse Effect Level; 8-week study in rat; JAFCAU Journal of Agricultural and Food Chemistry. (American Chemical Soc., Distribution Office Dept. 223, POB 57136, West End Stn., Washington, DC 20037) V.1- 1953- Volume(issue)/page/year 21,324,1973
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	0.006	mg/L			OPP
RAISHE Slope Factor	0.06	$(mg/kg\text{-}d)^{-1}$			OPP
OEHHA Slope Factor (oral)	0.045	$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	B2		1988		
IARC Carcinogen Classification	3		2001		
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			EPA; RAIS; OEHHA; IARC; CACART
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen; Developmental	UMD; CACART
EPAHA-DWEL	0.003	mg/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	1.4	µg/L			
Health Reference Level (HRL)[2] cancer	0.06	µg/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	5	lbs/yr	1	States	2004	
TRI Release - total	**299**	**lbs/yr**	**4**	**States**	**2004**	

Supplemental Water Data			
OPP Estimated Environmental Concentration	Surface water chronic: 0.1 ug/L	Ground water chronic: 0.21 ug/L	

HRL Ratios (HRL/GWC EEC)	Non-cancer: 6.67				Cancer: 0.286	
Production	**Amount Range**	**Units**	**Year**			
CUSIUR Production Data	10K - 500K	lbs/yr	1998			
	10K - 500K	lbs/yr	2002			
Use	Pesticide (NTP) Accelerator; industrial intermediate (HSDB)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	15	days	BS	PBT; BS = biodegrades slowly
K_{OC}, Organic Carbon Partition Coefficient	6.5	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-0.66	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	3.40E-07	atm-m^3/mol		
Water Solubility	20,000	mg/L		(at 30 C)
% water PBT profiler	48			

Contaminant:	Fenamiphos
Substance Key:	27401
Contaminant ID (CASRN):	22224926

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	3	8	6

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/SWC EEC: 0.051

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.0001**	**mg/kg-d**		**Plasma ChE inhibition.**	**Reference Dose; Basis = NOAEL 0.01 mg/kg-d; UF = 100.**
EPA IRIS (ITER) RfD	0.00025	mg/kg-d	1986	Cholinesterase inhibition	Reference Dose; Basis = NOEL 0.025 mg/kg-d; UF = 100.
EPA HA RfD	0.0001	mg/kg-d	2006		Reference Dose
RAISHE RfD	0.00025	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.0008	mg/kg-d	1997		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	E		1988		Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring. OPP changed cancer classification from D to E.
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL	0.0035	mg/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.7	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**726,675**	**lbs/yr**	**14**	**States**	**1997**	
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units for Mag data	Notes
PPMP ambient water		0	0		Not Detected		Not Detected	ug/L	Pesticide Pilot Montoring Program (USGS/EPA)
PPMP finished water		0	0		Not Detected		Not Detected	ug/L	

OPP Estimated Environmental Concentration	Surface water chronic: 13.7 ug/L	Ground water chronic: 0.47 ug/L	
HRL Ratios (HRL/SWC EEC)	Non-cancer: 0.051	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Insecticide (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BSA	BSA = biodegrades slowly with acclimation; PBT
K_{OC}, Organic Carbon Partition Coefficient	225.1	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.23	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.21E-09	unitless		
Water Solubility	329	mg/L		
% water PBT profiler	12			

Contaminant:	Formaldehyde
Substance Key:	2119
Contaminant ID (CASRN):	50000

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
4	6	10	8

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/DBP ICR MED: 184

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	**0.2**	**mg/kg-d**	**1990**	**Reduced weight gain, histopathology in rats. Decreased absolute heart, liver, testes & kidney weights. Increased relative brain, testes weights.**	**Reference Dose; Basis = NOAEL 15 mg/kg-d; UF = 100. Til et al., 1989**
EPA HA RfD	0.2	mg/kg-d	2006		Reference Dose
RAISHE RfD	0.2	mg/kg-d			Reference Dose
ATSDR (ITER), MRL	0.2	mg/kg-d	1999	Gastro.	Minimal Risk Level; Basis = NOAEL 15 mg/kg-d; ATSDR MRL-int = 0.3 mg/kg-d (Til et al., 1989).
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	12.5	mg/kg-d		Liver - other changes, Blood - changes in spleen	Lowest Observed Adverse Effect Level; VCVGK "Vrednie chemichescie veshestva, galogen I kislorod sodergashie organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., Chimia, 1994. Volume(issue)/page/year -,339,1994
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	B1		1993		Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
IARC Carcinogen Classification	2A		1995		
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART; EPA; IARC
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL	7	ug/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	1,400	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes
DBP ICR	**227**	**126**	**55.5**	**5**	**30.6**	**7.6**	**29.7**	**ug/L**	

Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	326,298	lbs/yr	31	States	2004	
TRI Release - total	26,992,234	lbs/yr	46	States	2004	
HRL Ratios (HRL/DBP ICR MED)	Non-cancer: 184				Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data	> 1B	lbs/yr	1998			
	> 1B	lbs/yr	2002			
Use	Naturally-occurring fungicide (NTP); Disinfection by-Product; gas					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BFA	BFA = Biodegrades Fast with Acclimation
K_{OC}, Organic Carbon Partition Coefficient	1	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	0.35	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	3.38E-07	atm-m^3/mol		
Water Solubility	400,000	mg/L		
% water PBT profiler				

Contaminant:	Germanium
Substance Key:	18876
Contaminant ID (CASRN):	7440564

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	6	4	10

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/NIRS 90%: 0.003

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	**0.318**	**mg/kg-d**		**Kidney, Ureter, Bladder - changes in tubules (including acute renal failure, acute tubular necrosis)**	**Lowest Observed Adverse Effect Level; JJMDAT Japanese Journal of Medicine. (Nankodo Co., Ltd., POB 5272, Tokyo International 100-31, Japan) V.1-30, 1962-1991. For publisher information, see IEDIEP. Volume(issue)/page/year 30,67,1991. EPA believes the RTECS LOAEL may be incorrectly cited (should be 3.18 not 0.318). Both values suggest listing germanium.**
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.744	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water	**989**	**4**	**0.40**	**26**	**230**	**220**	**220**	**230**	**ug/L**	
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (HRL/NIRS 90%)	Non-cancer: 0.003				Cancer:		
Production	**Amount Range**	**Units**	**Year**				
CUSIUR Production Data		lbs/yr	1998				
		lbs/yr	2002				
Use	Use data are for germanium dioxide: Phosphors, transistors and diodes; electroplating (HSDB); naturally-occurring						

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BST	assumed persistent; All use and env. fate data are for germanium dioxide; BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		unitless		
Water Solubility	4,470	mg/L		
% water PBT profiler				

Contaminant	Halon 1011 (bromochloromethane)
Substance Key:	2613
Contaminant ID (CASRN):	74975

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	3	5	6

3-model Categorical Prediction
NL?
HRL Ratio(s)
NC HRL/NCOD R1 90%: 7

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD	**0.01**	**mg/kg-d**		**Increased liver-to-body weight ratio. Cloudy swelling and vacuolization of hepatocytes.**	**Reference Dose**
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI		mg/kg-d			Tolerable Daily Intake
Supplemental RfD-like value		mg/kg-d			Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Slope Factor		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification	D				
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL	0.5	mg/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	70	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water	**12,881**	**65**	**0.5**	**0.05**	**210**	**1**	**10**	**210**	**ug/L**	
NCOD Round 2 finished water	22,974	106	0.461	0.0023	33.4	1	6	27.9	ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	4,238	7	0.165	0.01	0.45	0.2	0.422	0.45	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance

	# Samples	# with Detects	% Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States	1997	
TRI Release - surface water		lbs/yr		States	2004	
TRI Release - total		lbs/yr		States	2004	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes
CAL DHS			0.1			1		ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
Krasner, et al., 2006			0.0	Not detected	Not detected	Not detected	Not detected		Krasner, et al., 2006. Env. Sci. & Technol. 40 (23): pp. 7175-7185.

HRL Ratios (HRL/NCOD R1 90%)	Non-cancer: 7	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data	>1M-10M	lbs/yr	1998			
	>1M-10M	lbs/yr	2002			

Use	Fire extinguishing fluid; chemical intermediate (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	15 days	length of time	BS	BS = Biodegrades slow (PBT)
K_{OC}, Organic Carbon Partition Coefficient	23.7	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	1.41	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	0.00146	atm-m^3/mol		
Water Solubility	16,700	mg/L		
% water PBT profiler	40			

Contaminant:	HCFC-22
Substance Key:	2654
Contaminant ID (CASRN):	75456

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	5	10	10

3-model Categorical Prediction
L? - L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	**13.5**	**mg/kg-d**	**1983**	**Brain and Coverings - other degenerative changes, Blood - changes in other cell count (unspecified), Nutritional and Gross Metabolic - weight loss or decreased weight gain**	**Lowest Observed Adverse Effect Level; 26-week study in rat; GISAAA Gigiena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.1-1936- Volume(issue)/page/year 48(8),69,1983**
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification	3		1999		Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	31.5	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	2,972	lbs/yr	1	States	2004	
TRI Release - total	**7,075,769**	**lbs/yr**	**35**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:

Production	Amount Range	Units	Year			
CUSIUR Production Data	>100M - 500M	lbs/yr	1998			
	>100M - 500M	lbs/yr	2002			
Use	Refrigerant; low-temperature solvent; fluorocarbon resins, especially tetrafluoroethylene polymers (HSDB); gas					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	15	days	BS	PBT; BS = biodegrades slowly
K_{OC}, Organic Carbon Partition Coefficient	35.04	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	1.08	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	4.07E-02	atm-m^3/mol		
Water Solubility	2,770	mg/L		
% water PBT profiler	43			

Contaminant:	Hexane
Substance Key:	4858
Contaminant ID (CASRN):	110543

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
4	3	10	10

3-model Categorical Prediction
L?
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	**0.06**	**mg/kg-d**	**1989**	**Decreased body weight gain**	**Reference Dose; Basis LOAEL = 570 mg/kg-d, UF = 10,000, oral rat study. Health and Environmental Effects Document for n-Hexane, ECAO-CIN-G076, Environmental Criteria and Assessment Office, Final Draft, September 1989.**
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	1,429	mg/kg-d		Nutritional and Gross Metabolic - weight loss or decreased weight gain	Lowest Observed Adverse Effect Level; TIHEEC Toxicology and Industrial Health. (Princeton Scientific Pub. Co., POB 2155, Princeton, NJ 08540) V.1- 1985- Volume(issue)/page/year 1(3),67,1985
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	D		1987		Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	420	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	14,489	lbs/yr	38	States	2004	
TRI Release - total	**39,844,882**	**lbs/yr**	**53**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data	>100M - 500M	lbs/yr	1998			
	> 1B	lbs/yr	2002			

Use	Naturally-occurring; solvent (NTP)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BFA	BFA = biodegrades fast with acclimation
K_{OC}, Organic Carbon Partition Coefficient	149	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.9	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.8	atm-m^3/mol		
Water Solubility	9.5	mg/L		
% water PBT profiler				

Contaminant:	Hydrazine
Substance Key:	6460
Contaminant ID (CASRN):	302012

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	8	9	7

3-model Categorical Prediction
L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	**0.001**	**mg/L**			
RAISHE Slope Factor	3	$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)	3	$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	B2				
IARC Carcinogen Classification	2B	1999			
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART; EPA; IARC; OEHHA; RAIS
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]		ug/L			
Health Reference Level (HRL)[2] cancer	0.01	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	5	lbs/yr	1	States	2004	
TRI Release - total	**165,485**	**lbs/yr**	**16**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
	>1M - 10M	lbs/yr	2002			

Use	Chemical intermediate; rocket propellant; oxygen/chlorine scavenger (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BF	BF = biodegrades fast
K_{OC}, Organic Carbon Partition Coefficient	14.3	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-2.07	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.44E-08	atm-m^3/mol		
Water Solubility	1,000,000	mg/L		
% water PBT profiler				

Contaminant:	Mestranol
Substance Key:	2581
Contaminant ID (CASRN):	72333

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
8	3	9	4

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/Kolpin MAX: 0.688

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value		mg/kg-d			Supplemental Data
Supplemental RfD-like value		mg/kg-d			Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOAEL	0.04	mg/kg-d	2001	Hematalogical effects	Supplemental Data; Maier and Hermann, 2001. Regulatory Toxicology and Pharmacology, 34, pp 53-61.
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL (for ethinyl estradiol)	**0.015**	**mg/kg-d**	**1981**	**Increased serum levels of alanine aminotransferase (ALT), aspartate aminotransferase (AST) and γ-glutamultransferase (GGT).**	**Supplemental Data; Tennant, et al., 1981 as cited in Maier and Hermann, 2001.**
Supplemental LOAEL	0.00083	mg/kg-d			Supplemental Data; Maximum Recommended Daily Dose (MRDD)
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART
Is the contaminant on a list of reproductive toxins?	Y	Y/N			UMD
EPAHA-DWEL		mg/L			Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.28	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
Kolpin, et al., 2002	**70**		**4.3**		**0.407**	**0.017**		**ug/L**	**Response to Comment on National Surface Water Reconnaissance Kolpin et al., 2002: Env. Sci. & Technol., 36(18), pp. 4007-4008.**
HRL Ratios (HRL/Kolpin MAX)	Non-cancer: 0.688				Cancer:				

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Metabolite of ethinyl estradiol					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	60	days	BST	BST = Biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	4.68	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility	Practically insoluble	mg/L		
% water PBT profiler	9			

Contaminant:	Methamidophos
Substance Key:	21025
Contaminant ID (CASRN):	10265926

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	5	10	6

3-model Categorical Prediction
L? - L
HRL Ratio(s)
NC HRL/SWC EEC: 0.304

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.0003**	**mg/kg-d**		**Brain ChE inhibition**	**Reference Dose; Basis = NOAEL 0.03 mg/kg-d; UF = 100.**
EPA IRIS (ITER) RfD	0.00005	mg/kg-d	1987	Decreased body weight	Reference Dose; Basis = LOEL 0.05 mg/kg-d
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.00005	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.004	mg/kg-d	1990		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	2.1	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**965,584**	**lbs/yr**	**39**	**States**	**1997**	
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data						
OPP Estimated Environmental Concentration	Surface water chronic: 6.9 ug/L			Ground water chronic: 3.8 ug/L		
HRL Ratios (HRL/SWC EEC)	Non-cancer: 0.304			Cancer:		
Production	**Amount Range**	**Units**	**Year**			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Insecticide (HSDB)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BS	PBT; BS = Biodegrades Slowly
K_{OC}, Organic Carbon Partition Coefficient	3.848	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-0.8	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	8.70E-10	atm-m^3/mol		
Water Solubility	1000000	mg/L		
% water PBT profiler	39			

Contaminant	Methanol
Substance Key:	2508
Contaminant ID (CASRN):	67561

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
3	6	10	10

3-model Categorical Prediction
L? - L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	**0.5**	**mg/kg-d**	**1988**	**Increased SAP & SGPT& liver weight, decreased brain weight**	**Reference Dose; U.S. EPA, 1986; Basis = NOEL 500 mg/kg-d; UF = 1,000; Rat**
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.5	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	3.13	mg/kg-d		Liver - other changes	Lowest Observed Adverse Effect Level; 200 day oral study in rats; VCVGK "Vrednie chemichescie veshestva, galogen I kislorod sodergashie organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., Chimia, 1994. Volume(issue)/page/year -,89,1994
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	5,600	mg/kg		Details of toxic effects not reported other than lethal dose value	Rats; VCVGK "Vrednie chemichescie veshestva, galogen I kislorod sodergashie organicheskie soedinenia". (Hazardous substances. Galogen and oxygen containing substances), Bandman A.L. et al., Chimia, 1994. Volume(issue)/page/year -,87,1984
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	3,500	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	10,966,234	lbs/yr	41	States	2004	
TRI Release - total	**201,697,278**	**lbs/yr**	**52**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:				Cancer:				
Production	**Amount Range**	**Units**	**Year**						
CUSIUR Production Data	> 1B	lbs/yr	1998						
	> 1B	lbs/yr	2002						
Use	Industrial solvent; gasoline additive (HSDB); anti-freeze								

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BF	BF = Biodegrades Fast
K_{OC}, Organic Carbon Partition Coefficient	1	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-0.77	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	4.56E-06	atm-m3/mol		
Water Solubility	1000000	mg/L		
% water PBT profiler				

Contaminant:	Methyl bromide (Bromomethane)
Substance Key:	2601
Contaminant ID (CASRN):	74839

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	6	6	7

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/NCOD R1 90%: 0.891

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	**0.0014**	**mg/kg-d**	**1988**	**Epithelial hyperplasia in the forestomach**	**Reference Dose; Basis = NOAEL 1.4 mg/kg-day; UF = 1,000; Rat. Danse et al., 1984**
EPA HA RfD	0.001	mg/kg-d	2006		Reference Dose
RAISHE RfD	0.0014	mg/kg-d			Reference Dose
ATSDR (ITER), MRL	0.003	mg/kg-d	9/1992	Gastro	Int-Minimal Risk Level
JMPR, maximum ADI	1	mg/kg-d	1966		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	29.9	mg/kg-d		Kidney, Ureter, Bladder - other changes in urine composition, Skin and Appendages - hair, Nutritional and Gross Metabolic - weight loss or decreased weight gain	Lowest Observed Adverse Effect Level; 2-year oral study in rat; FCTOD7 Food and Chemical Toxicology. (Pergamon Press Inc., Maxwell House, Fairview Park, Elmsford, NY 10523) V.20- 1982- Volume(issue)/page/year 28,109,1990
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	D		1989		Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
IARC Carcinogen Classification	3		1999		
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Developmental	CACART
EPAHA-DWEL	0.05	mg/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	9.8	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water	20,198	155	**0.77**	0.07	43	1	11	34	ug/L	
NCOD Round 2 finished water	23,328	175	0.75	0.09	38.1	**1.6**	8.1	27.2	ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	4,317	3	0.069	0.04	0.5	0.1	0.5	0.5	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	32,803,943	lbs/yr	29	States	1997	
TRI Release - surface water	200	lbs/yr	3	States	2004	
TRI Release - total	533,748	lbs/yr	17	States	2004	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (HRL/NCOD R1 90%)	Non-cancer: 0.891	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data	>10M - 50M	lbs/yr	1998			
	>1M - 10M	lbs/yr	2002			

Use	Cancelled fumigant (NTP); gas

Environmental Fate Parameters	Value	Units	Degradation code	Notes
$T_{1/2}$, Half life	20-26.7	days	BS	hydrolysis only; BS = biodegrades slowly
K_{OC}, Organic Carbon Partition Coefficient	9-22	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	1.19	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	7.34E-03	atm-m^3/mol		
Water Solubility	13,400	mg/L		
% water PBT profiler	42			

Contaminant:	Methyl tert-butyl ether
Substance Key:	11918
Contaminant ID (CASRN):	1634044

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
4	8	5	8

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/UCMR 90%: 58.3 CAR HRL/UCMR 90%: 0.539

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL	0.3	mg/kg-d	8/1996	Hepatic: Decreased blood urea nitrogen levels.	Int-Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI	0.01	mg/kg-d	1991		Tolerable Daily Intake; Basis NOAEL 100 mg/kg-d
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	300	mg/kg-d		Kidney, Ureter, Bladder - changes in bladder weight, Blood - changes in serum composition (e.g. TP, bilirubin, cholesterol), Nutritional and Gross Metabolic - changes in calcium	Lowest Observed Adverse Effect Level; 90-day study in rat; JACTDZ Journal of the American College of Toxicology. (Mary Ann Liebert, Inc., 1651 Third Ave., New York, NY 10128) V.1-12, 1982-1993. Discontinued. Volume(issue)/page/year 9(5),525,1990
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)	**0.0018**	**$(mg/kg\text{-}d)^{-1}$**			
EPA Carcinogen classification					
IARC Carcinogen Classification	3		1999		
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			OEHHA
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	2,100	ug/L			
Health Reference Level (HRL)[2] cancer	19.4	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water	**3,617**	**17**	**0.47**	**5**	**49**	**9.2**	**36**	**49**	**ug/L**	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	4,328	424	9.8	0.01	2,300	0.3	7.85	1,800	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	40,177	lbs/yr	17	States	2004	
TRI Release - total	2,040,906	lbs/yr	42	States	2004	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes
HRL Ratios (HRL/UCMR 90%)	Non-cancer: 58.3				Cancer: 0.539				

Production	Amount Range	Units	Year			
CUSIUR Production Data	> 1B	lbs/yr	1998			
	> 1B	lbs/yr	2002			
Use	Octane booster in gasoline; manufacture of isobutene; extraction solvent (HSDB)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	15	days	BS	PBT; BS = biodegrades slowly
K_{OC}, Organic Carbon Partition Coefficient	6	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	0.94	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	5.87E-04	atm-m^3/mol		
Water Solubility	51,000	mg/L		
% water PBT profiler	46			

Contaminant:	Metolachlor
Substance Key:	35270
Contaminant ID (CASRN):	51218452

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
4	3	6	6

3-model Categorical Prediction
NL?
HRL Ratio(s)
NC HRL/NCOD R2 90%: 321

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.1**	**mg/kg-d**	**1995**	**Decreased body weight gain**	**Reference Dose; Basis NOAEL = 9.7 mg/kg-d; UF = 100. OPP RED.**
EPA IRIS (ITER) RfD	0.15	mg/kg-d	1988	Decreased body weight gain	Reference Dose; Basis = NOEL 15 mg/kg-d; UF = 100. Ciba-Geigy, 1983
EPA HA RfD	0.1	mg/kg-d	2006		Reference Dose
RAISHE RfD	0.15	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	25	mg/kg-d		Behavioral - food intake (animal), Nutritional and Gross Metabolic - weight loss or decreased weight gain, Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - phosphatases	Lowest Observed Adverse Effect Level; NNGADV Nippon Noyaku Gakkaishi. Journal of the Pesticide Science Society of Japan. (Nippon Noyaku Gakkai, 1-43-11, Komagome, Toshima-ku, Tokyo 170, Japan) V.1- 1976- Volume(issue)/page/year 14,103,1989
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	1,150	mg/kg		Details of toxic effects not reported other than lethal dose value	NNGADV Nippon Noyaku Gakkaishi. Journal of the Pesticide Science Society of Japan. (Nippon Noyaku Gakkai, 1-43-11, Komagome, Toshima-ku, Tokyo 170, Japan) V.1- 1976- Volume(issue)/page/year 14,103,1989
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	C		1988		Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL	3.5	mg/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	700	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water	**13,007**	**116**	**0.89**	**0.01**	**13.8**	**0.57**	**2.18**	**7.1**	**ug/L**	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	7,165	1,817	25.4	0.0002	77.6	0.025	0.58	6.71	ug/L	
NREC ambient surface water			8.76			0.12			ug/L	National Reconnaissance
NREC ambient ground water			1.23			0.125			ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	67,336,211	lbs/yr	48	States	1997	
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units for Mag data	Notes
PDP finished water	203	102	50.2	0.01	0.079			ug/L	Pesticide Data Program (USDA); 2001
PDP finished water	582	233	40	0.005	0.226			ug/L	2002
PPMP ambient water		288	89.2		3.32		0.033	ug/L	Pesticide Pilot Montoring Program (USGS/EPA)
PPMP finished water		198	86.8		0.661		0.336	ug/L	

	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
CAL DHS	7,345	15	0.2	0.05	0.7	0.06	0.1	ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
STORET	2,082	676	32.5	0.00867	86	0.19	1.4	ug/L	

HRL Ratios (HRL/NCOD R2 90%)	Non-cancer: 321	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Herbicide (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	47;78	days	BSA	aerobic;anaerobic; BSA = biodegrades slow with acclimation
K_{OC}, Organic Carbon Partition Coefficient	22-310	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.13	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	9.00E-09	atm-m^3/mol		
Water Solubility	530	mg/L		
% water PBT profiler	12			

Contaminant:	Metolachlor ethanesulfonic acid (ESA)
Substance Key:	79218
Contaminant ID (CASRN):	171118095

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
2	1	6	6

Scores based on parent

3-model Categorical Prediction
NL
HRL Ratio(s)
HRL/NAWQA 90%: ≥3,210 (NAWQA data for metolachlor - parent)

HEALTH EFFECTS DATA[1] - See Metolachlor Parent

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL	**≥1000**	**mg/kg-d**		**No biologically significant effects**	**Supplemental Data; EPA OPP NOAEL - FOR METOLACHLOR ESA**
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	≥7,000	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data - FOR METOLACHLOR PARENT										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water	**13,007**	**116**	**0.89**	**0.01**	**13.8**	**0.57**	**2.18**	**7.1**	**ug/L**	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units for Mag data	Notes
PDP finished water	83	19	22.9	0.50	2.21			ug/L	Pesticide Data Program (USDA); 2001 - **FOR METOLACHLOR ESA**
PDP finished water	318	198	51.9	0.02	2.24			ug/L	2002 - **FOR METOLACHLOR ESA**

FOR METOLACHLOR - PARENT	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
CAL DHS	7,345	15	0.2	0.05	0.7	0.06	0.1	ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
STORET	2,082	676	32.5	0.00867	86	0.19	1.4	ug/L	

HRL Ratios (HRL/NCOD R290%)	Non-cancer: ≥3,210	Cancer:	NCOD data for metolachlor - parent

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Pesticide degradate

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time		
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler				

Contaminant:	Metolachlor oxanilic acid (OA)
Substance Key:	79220
Contaminant ID (CASRN):	152019733

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
2	1	6	6

Scores based on parent

3-model Categorical Prediction
NL
HRL Ratio(s)
HRL/NAWQA 90%: 3,210 (NAWQA data for metolachlor - parent)

HEALTH EFFECTS DATA[1] - See Metolachlor Parent

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL	**1,000**	**mg/kg-d**		**No biologically significant effects**	**Supplemental Data; EPA OPP NOAEL - FOR METOLACHLOR OA**
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	7,000	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data - FOR METOLACHLOR PARENT										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water	**13,007**	**116**	**0.89**	**0.01**	**13.8**	**0.57**	**2.18**	**7.1**	**ug/L**	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units for Mag data	Notes
PDP finished water	138	14	10.1	0.50	4.42			ug/L	Pesticide Data Program (USDA); 2001 - **FOR METOLACHLOR OA**
PDP finished water	404	152	37.6	0.02	1.41			ug/L	2002 - **FOR METOLACHLOR OA**

FOR METOLACHLOR - PARENT	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
CAL DHS	7,345	15	0.2	0.05	0.7	0.06	0.1	ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
STORET	2,082	676	32.47	0.00867	86	0.19	1.4	ug/L	

HRL Ratios (HRL/NCOD R290%)	Non-cancer: 3,210	Cancer:	NCOD data for metolachlor - parent

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Pesticide degradate

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time		
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler				

Contaminant:	Microcystin-LR
Substance Key:	76859
Contaminant ID (CASRN):	101043372

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
9	3	10	4

Scores based on supplemental data

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/AWWARF Typical Range MAX: 0.21

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value	**0.000003**	**mg/kg-d**	**2006**	**Liver effects**	**Supplemental Data - draft RfD; Basis NOAEL 3 ug/kg-d. Ueno, Y., Y. Makita, S. Nagata et al. 1999. No chronic oral toxicity of a low-dose of microcystin-LR, a cyanobacterial hepatoxin, in female Balb/C mice. Environ. Toxicol. 14(1):45-55.**
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.021	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes
US and Canadian drinking water (bloom area, source, finished water)	**677**	**542**	**80**		**0.1**			**ug/L**	**Maximum of typical range of detects (AWWARF, Carmichael)**
US and Canadian drinking water (bloom area, source, finished water)	677	542	80	0.002	1,200			ug/L	Maximum and minumum of detects (AWWARF, Carmichael)
HRL Ratios (HRL/AWWARF Typical Range MAX)	Non-cancer: 0.21				Cancer:				

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Cyanobacterial toxin

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time		
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler				

Contaminant:	Molinate
Substance Key:	12912
Contaminant ID (CASRN):	2212671

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	7	1	8

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/UCMR 90%: 2.46

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	0.001	mg/kg-d	2001	Degeneration/demyelination in sciatic nerve and atrophy/reserve cell hyperplasia of muscle	Reference Dose; Basis LOAEL = 0.3 mg/kg-d, UF = 300, 2-year rat study. A Determination of the Existence of a Common Mechanism of Toxicity and a Screening Level Cumulative Food Risk Assessment, December 2001. OPP issued RfD as part of health assessment not the RED; http://epa.gov/oppsrrd1/cumulative/thiocarb.pdf
EPA IRIS (ITER) RfD	**0.002**	**mg/kg-d**	**1988**	**Reproductive toxicity. Alteration in sperm morphology, reduced number of viable fetuses/litter, increased number of resorptions/litter**	**Reference Dose; Basis NOEL 0.2 mg/kg-d; UF = 100. Stauffer Chemical Co., 1981**
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.002	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	13.1	mg/kg-d		Endocrine - other changes, Blood - normocytic anemia, Nutritional and Gross Metabolic - body temperature decrease	Lowest Observed Adverse Effect Level; 43 week study in rat; GISAAA Gigiena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year 40(10),104,1975
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	14	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water	**3,621**	**1**	**0.03**	**5.7**	**5.7**	**5.7**	**5.7**	**5.7**	**ug/L**	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	7,118	120	1.68	0.001	200	0.0372	3.41	47.9	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	3,669,398	lbs/yr	6	States	1997	
TRI Release - surface water	115	lbs/yr	1	States	2004	
TRI Release - total	2,089	lbs/yr	2	States	2004	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units	Notes
PPMP ambient water		1	0.3		0.004			ug/L	Pesticide Pilot Montoring Program (USGS/EPA)
HRL Ratios (HRL/UCMR 90%)	Non-cancer: 2.46				Cancer:				

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Herbicide (HSDB)					

Environmental Fate Parameters	Value	Units	Degradation code	Notes
$T_{1/2}$, Half life	40-160	days	BST	BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient	80-120	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.21	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	4.10E-06	atm-m^3/mol		
Water Solubility	970	mg/L		
% water PBT profiler	19			

Contaminant:	Molybdenum
Substance Key:	18825
Contaminant ID (CASRN):	7439987

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	5	9	8

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/NIRS 90%: 1.17

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	**0.005**	**mg/kg-d**	**1992**	**increased uric acid levels**	**Reference Dose; Koval'skiy et al., 1961; oral study in humans; UF = 30; Basis LOAEL = 0.14 mg/kd-d**
EPA HA RfD	0.005	mg/kg-d	2006		Reference Dose
RAISHE RfD	0.005	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value	0.03	mg/kg-d		Effects on repro & fetal development (decreased gestational weight gain, prolonged estrus cycle, failure to breed). Renal failure, diuresis, proteinuria	Supplemental Data; UL; IOM
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	0.5	mg/kg-d		Liver - other changes, Kidney, Ureter, Bladder - other changes, Nutritional and Gross Metabolic - weight loss or decreased weight gain	Lowest Observed Adverse Effect Level; 19 week oral study in rabbits; VCVN5 "Vrednie chemichescie veshestva. Neorganicheskie soedinenia elementov V-VII groopp" (Hazardous substances. Inornanic substances containing V-VII group elements), Bandman A.L. et al., Chimia, 1989. Volume(issue)/page/year -,317,1989
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	D		1993		Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen List	UMD
EPAHA-DWEL	0.2	mg/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	35	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water	**989**	**77**	**7.79**	**6.1**	**180**	**10**	**30**	**110**	**ug/L**	
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (HRL/NIRS 90%)	Non-cancer: 1.17	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Use data for molybdenum trioxide: As steel alloy; chemical reagent (HSDB); naturally-occurring

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BST	assumed persistent; All use and env. fate data for molybdenum trioxide; BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		unitless		
Water Solubility	1,066	mg/L		All use and env. fate data for molybdenum trioxide
% water PBT profiler				

Contaminant:	Nitrobenzene
Substance Key:	3998
Contaminant ID (CASRN):	98953

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	3	1	10

3-model Categorical Prediction
NL?
HRL Ratio(s)
NC HRL/UCMR AM 90%: 0.14

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	**0.002**	**mg/kg-d**	**2009**	**Increased reticulocytes and methemaglobinemia**	**Reference Dose; NTP, 1983; subchronic rat study; UF = 1,000; Basis BMDL = 1.8 mg/kg-d**
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.0005	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	D		1990		Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
IARC Carcinogen Classification	2B		1996		
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART, IARC
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen List	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	14	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water	**3,064**	**2**	**0.065**	**21.6**	**100**	**60.8**	**100**	**100**	**ug/L**	**Analyzed under UCMR 1, List 1, Assessment Monitoring with detection limit of 10 ug/L.**
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water									ug/L	
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	60	lbs/yr	1	States	2004	
TRI Release - total	350,301	lbs/yr	14	States	2004	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes
UCMR finished water	338	0	0	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Analyzed under UCMR 1, List 2, Screening Survey with detection limit of 0.5 ug/L.

HRL Ratios (HRL/UCMR AM 90%)	Non-cancer: 0.14				Cancer:				

Production	Amount Range	Units	Year			
CUSIUR Production Data	> 1B	lbs/yr	1998			
	> 1B	lbs/yr	2002			
Use	Solvent (NTP)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	15	days	BS	BS = biodegrades slowly
K_{OC}, Organic Carbon Partition Coefficient	30.6-370	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	1.85	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	2.40E-05	atm-m^3/mol		
Water Solubility	1,800	mg/L		
% water PBT profiler	31			

Contaminant	Nitroglycerin
Substance Key:	2252
Contaminant ID (CASRN):	55630

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	6	7	6

3-model Categorical Prediction
L? - L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	**0.125**	**mg/kg-d**		**Cardiac - cardiomyopathy including infarction, Cardiac - EKG changes not diagnostic of specified effects, Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - multiple enzyme effects**	**Lowest Observed Adverse Effect Level; 26 week oral study in rats; FATOAO Farmakologiya i Toksikologiya (Moscow). For English translation, see PHTXA6 and RPTOAN. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.2- 1939- Volume(issue)/page/year 48,76,1985**
Supplemental LOAEL	0.008	mg/kg-d			Supplemental Data; RTECS LOAEL, acute human study
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	105	mg/kg		Behavioral - somnolence (general depressed activity)	Oral study in rats; YACHDS Yakuri to Chiryo. Pharmacology and Therapeutics. (Raifu Saiensu Shuppan K.K., 2-5-13, Yaesu, Chuo-ku, Tokyo 104, Japan) V.1- 1972- Volume(issue)/page/year 13,3649,1985
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	0.2	mg/L	1987		
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			EPA
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.292	ug/L			
Health Reference Level (HRL)[2] cancer	2	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	0.2	lbs/yr	1	States	2004	
TRI Release - total	**55,979**	**lbs/yr**	**9**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:

Production	Amount Range	Units	Year			
CUSIUR Production Data	>1M - 10M	lbs/yr	1998			
	>1M - 10M	lbs/yr	2002			

Use	Pharmaceutical/medication; production of explosives; Rocket propellants; (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BF	BF = Biodegrades Fast
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	1.62	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	9.87E-08	atm-m3/mol		
Water Solubility	1,380	mg/L		
% water PBT profiler	32			

Contaminant:	N-Methyl-2-pyrrolidone
Substance Key:	9980
Contaminant ID (CASRN):	872504

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
3	5	10	10

3-model Categorical Prediction
L?
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI		mg/kg-d			Tolerable Daily Intake
Supplemental RfD-like value	**0.6**	**mg/kg-d**	**2001**	**Decreased weight gain, neurobehavioral effects, sedative effects**	**Tolerable Daily Intake; Basis NOAEL = 169 mg/kg-d, UF = 300, 90-day rat study, WHO/UNEP CICAD TDI Study #35**
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	120	mg/kg-d		Endocrine - changes in spleen weight	Lowest Observed Adverse Effect Level; NTIS National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year OTS0528073
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	3,914	mg/kg		Details of toxic effects not reported other than lethal dose value	ARZNAD Arzneimittel-Forschung. Drug Research. (Editio Cantor Verlag, Postfach 1255, W-7960 Aulendorf, Fed. Rep. Ger.) V.1- 1951- Volume(issue)/page/year 26,1581,1976
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD; CACART
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	4,200	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	17,972	lbs/yr	13	States	2004	
TRI Release - total	**6,311,503**	**lbs/yr**	**42**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data	>100M - 500M	lbs/yr	1998			
	>100M - 500M	lbs/yr	2002			

Use	Chemical industry solvent; solvent for pesticide application for food packing materials (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BF	BF = Biodegrades Fast
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-0.38	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	3.20E-09	atm-m^3/mol		
Water Solubility	1,000,000	mg/L		
% water PBT profiler	42			

Contaminant:	N-Nitrosodiethylamine (NDEA)
Substance Key:	2243
Contaminant ID (CASRN):	55185

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
9	8	1	2

3-model Categorical Prediction
L?
HRL Ratio(s)
No data for calculating HRL ratio

HEALTH EFFECTS DATA[1]

See also supplemental water data

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	**0.00002**	**mg/L**			
RAISHE Slope Factor	150	$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)	36	$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	B2				
IARC Carcinogen Classification	2A		1987		
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART; EPA; OEHHA; IARC; RAIS
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]		ug/L			
Health Reference Level (HRL)[2] cancer	0.0002	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	0	lbs/yr	0	States	2004	
TRI Release - total	**1,000**	**lbs/yr**	**1**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
CAL DHS	26	0	0	Not Detected	Not Detected	Not Detected	Not Detected	ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
STORET	26	0	0	Not Detected	Not Detected	Not Detected	Not Detected	ug/L	
HRL Ratios (No data for calculating HRL ratio)	Non-cancer:				Cancer:				

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Gasoline and lubricant additive; antioxidant; stabilizer in plastics (HSDB); Disinfection by-Product

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	38	days	BS/BSA	BS = Biodegrades Slowly; BSA = Biodegrades Slowly with Acclimation
K_{OC}, Organic Carbon Partition Coefficient	142.7	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	0.48	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	3.63E-06	atm-m^3/mol		
Water Solubility	106,000	mg/L		
% water PBT profiler	53			

Contaminant:	N-Nitrosodimethylamine (NDMA)
Substance Key:	2446
Contaminant ID (CASRN):	62759

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
8	8	10	2

Scores based on supplemental data

3-model Categorical Prediction
L? - L
HRL Ratio(s)
NC HRL/CAL DHS 90%: 0.329
CAR HRL/CAL DHS 90%: 0.004

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.000008	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	0.2	mg/kg-d		Immunological Including Allergic - decrease in cellular immune response, Immunological Including Allergic - decrease in humoral immune response, Related to Chronic Data - death	Lowest Observed Adverse Effect Level; JTEHD6 Journal of Toxicology and Environmental Health. (Hemisphere Pub., 1025 Vermont Ave., NW, Washington, DC 20005) V.1- 1975/76- Volume(issue)/page/year 37,351,1992
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	**0.00007**	**mg/L**			**IRIS**
RAISHE Slope Factor	51	$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)	16	$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	B2		1986	Liver	
IARC Carcinogen Classification	2A		1987		(Vol. 17, Suppl. 7; 1987)
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART; RAIS; EPA; OEHHA; IARC
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.056	ug/L			
Health Reference Level (HRL)[2] cancer	0.00069	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
CAL DHS	**409**	**87**	**21.3**	**0.001**	**440**	**0.009**	**0.17**	**ug/L**	**Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx**
STORET	585	0	0	Not Detected	Not Detected	Not Detected	Not Detected	ug/L	

HRL Ratios (HRL/CAL DHS 90%)	Non-cancer: 0.329	Cancer: 0.004

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Industrial solvent; antioxidant; formerly in the production of rocket fuel (HSDB); Disinfection by-Product

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	38	days	BSA	PBT; BSA = Biodegrades Slowly with Acclimation
K_{OC}, Organic Carbon Partition Coefficient	12	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-0.57	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.82E-06	atm-m^3/mol		@37°C
Water Solubility	Soluble	mg/L		
% water PBT profiler	52			

Contaminant:	N-Nitroso-di-n-propylamine (NDPA)
Substance Key:	8798
Contaminant ID (CASRN):	621647

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	8	2	2

3-model Categorical Prediction
NL? - L?
HRL Ratio(s)
CAR HRL/STORET 90%: 0.00049

HEALTH EFFECTS DATA[1]

See also supplemental water data

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	**0.0005**	**mg/L**			**IRIS**
RAISHE Slope Factor	7	$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)	7	$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	B2		1987	Liver	
IARC Carcinogen Classification	2B		1987		
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART; EPA; RAIS; OEHHA; IARC
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]		ug/L			
Health Reference Level (HRL)[2] cancer	0.005	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	0	lbs/yr	0	States	2004	
TRI Release - total	**506**	**lbs/yr**	**2**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units	Notes
CAL DHS	127	0	0	Not Detected	Not Detected	Not Detected	Not Detected	ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
STORET	1,309	22	1.68	0.19	20	10	10.24	ug/L	
HRL Ratios (HRL/STORET 90%)	Non-cancer:				Cancer: 0.00049				

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Research chemical (HSDB); Disinfection by-Product?					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	38	days	BSA	BSA = Biodegrades Slowly with Acclimation
K_{OC}, Organic Carbon Partition Coefficient	130	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	1.36	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	5.38E-06	atm-m^3/mol		@37°C
Water Solubility	10,000	mg/L		
% water PBT profiler	44			

Contaminant	N-Nitrosodiphenylamine
Substance Key:	3193
Contaminant ID (CASRN):	86306

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	6	2	1

3-model Categorical Prediction
NL
HRL Ratio(s)
NC HRL/CAL DHS 90%: 1.84
CAR HRL/CAL DHS 90%: 0.0932

HEALTH EFFECTS DATA[1]

See also supplemental water data

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	**0.02**	**mg/kg-d**		**Corneal opacities, epithelial hyperplasia of the bladder and decreased weight gain**	**Reference Dose; NCI 1979; Basis LOAEL, rat, UF=3000**
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI		mg/kg-d			Tolerable Daily Intake
Supplemental RfD-like value		mg/kg-d			Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	20.5	mg/kg-d	1966	Nutritional and Gross Metabolic - weight loss or decreased weight gain	Lowest Observed Adverse Effect Level; 17-week oral study in rabbit; GTPZAB Gigiena Truda i Professional'nye Zabolevaniya. Labor Hygiene and Occupational Diseases. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.1-36, 1957-1992. For publisher information, see MTPEEI Volume(issue)/page/year 10(4),60,1966
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor	0.0049	$(mg/kg\text{-}d)^{-1}$			IRIS
OEHHA Slope Factor (oral)	0.009	$(mg/kg\text{-}d)^{-1}$			
EPA Slope Factor		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	B2				Cited by OEHHA
IARC Carcinogen Classification	3		1987		Vol. 27, Suppl. 7
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART; EPA; OEHHA; RAIS
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	140	ug/L			
Health Reference Level (HRL)[2] cancer	7.1	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
	# Samples	**# with Detects**	**% Samples with detects**	**Minimum value of Detects**	**Maximum value of Detects**	**Median value of Detects**	**90% of Detects**	**99% of Detects**	**Units for Mag data**	**Notes**
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States	1997	
TRI Release - surface water	0	lbs/yr	0	States	2004	
TRI Release - total	**14**	**lbs/yr**	**2**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
CAL DHS	133	1	0.75	76.2	76.2	76.2	76.2	ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
HRL Ratios (HRL/CAL DHS 90%)	Non-cancer: 1.84				Cancer: 0.0932				

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
	10K-500K	lbs/yr	2002			

Use	Rubber and polymer additive; chemical reagent (HSDB); DBP

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BFA	BFA = Biodegrades fast with acclimation (BIODEG)
K_{OC}, Organic Carbon Partition Coefficient	6,154	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.13	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.21E-06	atm-m^3/mol		
Water Solubility	35	mg/L		
% water PBT profiler				

Contaminant:	N-Nitrosopyrrolidine (NPYR)
Substance Key:	10160
Contaminant ID (CASRN):	930552

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	8		

3-model Categorical Prediction
HRL Ratio(s)
No data for calculating HRL ratio

HEALTH EFFECTS DATA[1]

See also supplemental water data

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	**0.002**	**mg/L**			**IRIS**
RAISHE Slope Factor	2.1	$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)	2.1	$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	B2		1986	Liver	
IARC Carcinogen Classification	2B		1987		
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART; EPA; OEHHA; RAIS; IARC
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]		ug/L			
Health Reference Level (HRL)[2] cancer	0.02	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units	Notes
STORET	27	0	0	Not Detected	Not Detected	Not Detected	Not Detected	ug/L	

HRL Ratios (No data for calculating HRL ratio)	Non-cancer:				Cancer:				

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Research chemical (HSDB)			
Environmental Fate Parameters	**Value**	**Units**	**Degradation Code**	**Notes**
$T_{1/2}$, Half life	38	days	BSA	BSA = Biodegrades Slowly with Acclimation
K_{OC}, Organic Carbon Partition Coefficient	19	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-0.19	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	4.89E-08	atm-m^3/mol		@37°C
Water Solubility	1,000,000	mg/L		
% water PBT profiler	48			

Contaminant:	Norethindrone (19-Norethisterone)
Substance Key:	2525
Contaminant ID (CASRN):	68224

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
8	7	10	4

3-model Categorical Prediction
L
HRL Ratio(s)
NC HRL/Kolpin MAX: 0.0459

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value		mg/kg-d			Supplemental Data
Supplemental RfD-like value		mg/kg-d			Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL	**0.0167**	**mg/kg-d**		**The norethindrone label indicates that if the drug is taken during the first trimester of pregnancy that the risk for hypospadia in male offspring doubles.**	**Supplemental Data; Maximum Recommended Daily Dose (MRDD)**
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
NTP Carcinogen Classification	Reasonably anticipated to be carcinogenic				NTP 11th Report on Carcinogens; no quantificatio of dose-response
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART
Is the contaminant on a list of reproductive toxins?	Y	Y/N			UMD, CACART
EPAHA-DWEL		mg/L			Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.04	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
Kolpin, et al., 2002	**70**		**12.8**		**0.872**	**0.048**		**ug/L**	**National Surface Water Reconnaissance; Kolpin, et al., 2002. Env. Sci. & Technol., 36(6), pp. 1202-1211.**

HRL Ratios (HRL/Kolpin MAX)	Non-cancer: 0.0459	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use						

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	60	days	BST	BST = Biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	2.97	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	5.80E-10	atm-m^3/mol		
Water Solubility	7.04	mg/L		
% water PBT profiler	12			

Contaminant:	n-Propylbenzene
Substance Key:	4328
Contaminant ID (CASRN):	103651

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	3	4	6

3-model Categorical Prediction
NL?
HRL Ratio(s)
NC HRL/NCOD R1 90%: 1.21

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	**2.5**	**mg/kg-d**		**Blood - changes in spleen**	**Lowest Observed Adverse Effect Level; VCVGH "Vrednie chemichescie veshestva, galogenproisvodnie uglevodorodov". (Hazardous substances Galogenated hydrocarbons) Bandman A.L. et al., Chimia, 1990. Volume(issue)/page/year -,167,1990; 24 week oral study in rat**
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	6,040	mg/kg		Behavioral - somnolence (general depressed activity)	Rats; FCTXAV Food and Cosmetics Toxicology. (London, UK) V.1-19, 1963-81. For publisher information, see FCTOD7. Volume(issue)/page/year 2,327,1964
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	5.83	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water	**12,724**	**42**	**0.33**	**0.03**	**34**	**0.7**	**4.8**	**34**	**ug/L**	
NCOD Round 2 finished water	22,970	54	0.24	0.1	21	0.6	4	21	ug/L	
NIRS finished water									ug/L	
Ambient Water Occurrence Data										
NAWQA ambient water	4,309	53	1.23	0.004	47	0.024	5	47	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (HRL/NCOD R1 90%)	Non-cancer: 1.21				Cancer:				

Production	Amount Range	Units	Year			
CUSIUR Production Data	10K - 500K	lbs/yr	1998			
	10K - 500K	lbs/yr	2002			

Use	Manufacture of methylstyrene; textile dyeing; printing solvent; asphalt and naphtha constituent (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	15	days	BS	PBT; BS = biodegrades slowly
K_{OC}, Organic Carbon Partition Coefficient	495-955	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.69	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.05E-02	atm-m^3/mol		
Water Solubility	23.4	mg/L		
% water PBT profiler	22			

Contaminant:	o-Toluidine
Substance Key:	3768
Contaminant ID (CASRN):	95534

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	8	7	5

3-model Categorical Prediction
L? - L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	340	mg/kg-d		Kidney, Ureter, Bladder - proteinuria, Blood - normocytic anemia, Nutritional and Gross Metabolic - weight loss or decreased weight gain.	Lowest Observed Adverse Effect Level; VINIT Vsesoyuznyi Institut Nauchnoi i Tekhnicheskoi Informatsii (VINITI). All-Union Institute of Scientific and Technical Information. (Moscow, USSR) Use information broker to obtain publications. Volume(issue)/page
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor	0.24	$(mg/kg\text{-}d)^{-1}$			HEAST
OEHHA Slope Factor (oral)	**0.18**	**$(mg/kg\text{-}d)^{-1}$**			
EPA Carcinogen classification					
IARC Carcinogen Classification	2A	2000			Vol. 77; 2000
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			IARC, RAIS, OEHHA
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen list	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	793	ug/L			
Health Reference Level (HRL)[2] cancer	0.194	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	5	lbs/yr	1	States	2004	
TRI Release - total	**10,774**	**lbs/yr**	**9**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes
HRL Ratios (No water data)	Non-cancer:				Cancer:				

Production	Amount Range	Units	Year			
CUSIUR Production Data	>50M - 100M	lbs/yr	1998			
	>10M - 50M	lbs/yr	2002			
Use	Intermediate in the manufacture of dyes, rubber, pharmaceuticals and pesticides (HSDB)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BF	BF = biodegrades fast
K_{OC}, Organic Carbon Partition Coefficient	74.04	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	1.32	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.98E-06	atm-m^3/mol		
Water Solubility	16,600	mg/L		
% water PBT profiler				

Contaminant:	Oxirane, methyl-
Substance Key:	2661
Contaminant ID (CASRN):	75569

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	8	10	8

3-model Categorical Prediction
L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	0.001	mg/kg-d	1981	Increased combined incidence of hyperkeratosis, hyperplasia and papillomas.	Reference Dose; Basis = $BMDL_{10}$ 1.4 mg/kg-d; UF = 1000.
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	26	mg/kg-d		Brain and Coverings - other degenerative changes, Liver - other changes, Blood - other changes	Lowest Observed Adverse Effect Level; 45-day study in rat; GISAAA Gigiena i Sanitariya. For English translation, see HYSAAV. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.1- 1936- Volume(issue)/page/year 46(7),76,1981
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
OPP Slope Factor (oral)	**0.15**	**$(mg/kg-d)^{-1}$**			
RAISHE Slope Factor	0.24	$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)	0.24	$(mg/kg-d)^{-1}$			
EPA Carcinogen classification	B2	1990			
IARC Carcinogen Classification	2B		1994		
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART; RAIS; OEHHA; EPA; IARC
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	60.7	ug/L			
Health Reference Level (HRL)[2] cancer	0.233	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	28,761	lbs/yr	5	States	2004	
TRI Release - total	**433,536**	**lbs/yr**	**28**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:

Production	Amount Range	Units	Year			
CUSIUR Production Data	> 1B	lbs/yr	1998			
	> 1B	lbs/yr	2002			
Use	Chemical intermediate (NTP)					

Environmental Fate Parameters	Value	Units	Degradation code	Notes
$T_{1/2}$, Half life		length of time	BS	PBT; BS = biodegrades slow
K_{OC}, Organic Carbon Partition Coefficient	2.324	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	0.03	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	6.98E-05	atm-m^3/mol		
Water Solubility	590,000	mg/L		
% water PBT profiler	44			

Contaminant:	Oxydemeton-methyl
Substance Key:	6458
Contaminant ID (CASRN):	301122

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	5	9	5

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/SWC EEC: 1.01

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.00013**	**mg/kg-d**		**Decreased erythrocyte & brain ChE**	**Reference Dose; Basis = NOAEL 0.013 mg/kg-d; UF = 100.**
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.0025	mg/kg-d	1967	Decreased body weight	Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	10	mg/kg		Details of toxic effects not reported other than lethal dose value	85JDAH "Organophosphorus Pesticides Organic and Biological Chemistry," Eto, M., Cleveland, OH, CRC Press, Inc., 1974 Volume(issue)/page/year -,197,1974
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?	Y	Y/N		male, female	CACART
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.91	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**154,227**	**lbs/yr**	**19**	**States**	**1997**	
TRI Release - surface water	0	lbs/yr	0	States	2004	
TRI Release - total	0	lbs/yr	0	States	2004	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units	Notes
PPMP ambient water		0	0					ug/L	Pesticide Pilot Montoring Program (USGS/EPA)
PPMP finished water		0	0					ug/L	

OPP Estimated Environmental Concentration	Surface water chronic: 0.9 ug/L	Ground water chronic: 0.006 ug/L	
HRL Ratios (HRL/SWC EEC)	Non-cancer: 1.01	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Insecticide (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BS	PBT; BS =Biodegrades Slowly
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-0.74	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.62E-13	atm-m^3/mol		
Water Solubility	1,000,000	mg/L		
% water PBT profiler	39			

Contaminant:	Oxyfluorfen
Substance Key:	34731
Contaminant ID (CASRN):	42874033

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	8	10	6

3-model Categorical Prediction
L? - L
HRL Ratio(s)
NC HRL/SWC EEC: 3.0 CAR HRL/SWC EEC: 0.067

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	0.003	mg/kg-d	1986	Incr. abs. liver weight; nonneoplastic lesions	Reference Dose; Basis = NOEL 0.3 mg/kg-d; UF = 100.
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.003	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	5	mg/kg		Details of toxic effects not reported other than lethal dose value	PEMNDP Pesticide Manual. (The British Crop Protection Council, 20 Bridport Rd., Thornton Heath CR4 7QG, UK) V.1- 1968- Volume(issue)/page/year 9,643,1991
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
OPP Slope Factor (oral)	**0.0732**	**$(mg/kg-d)^{-1}$**			
RAISHE Slope Factor		$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification	C				
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			EPA
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	21	ug/L			
Health Reference Level (HRL)[2] cancer	0.478	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**705,255**	**lbs/yr**	**37**	**States**	**1997**	
TRI Release - surface water	0	lbs/yr	0	States	2004	
TRI Release - total	5	lbs/yr	2	States	2004	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units for Mag data	Notes
PPMP ambient water		0	0		Not Detected		Not Detected	ug/L	Pesticide Pilot Montoring Program (USGS/EPA)
PPMP finished water		0	0		Not Detected		Not Detected	ug/L	

OPP Estimated Environmental Concentration		Surface water chronic: 7.1 ug/L				Ground water chronic: 0.08 ug/L			
HRL Ratios (HRL/SWC EEC)	Non-cancer: 3.0				Cancer: 0.067				

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Pesticide; herbicide

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BST	BST = biodegrades sometimes/recalcitrant; PBT
K_{OC}, Organic Carbon Partition Coefficient	46,800	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	4.73	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	8.23E-07	atm-m^3/mol		
Water Solubility	0.116	mg/L		
% water PBT profiler	5			

Contaminant:	Perchlorate
Substance Key:	24310
Contaminant ID (CASRN):	14797730

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	1	9	8

3-model Categorical Prediction
NL? - L?
HRL Ratio(s)
NC HRL/UCMR 90%: 0.35

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	**0.0007**	**mg/kg-d**	**2005**	**Radioactive iodide uptake inhibition (RAIU) in the thyroid**	**Reference Dose; Basis NOEL 0.007mg/kg-d**
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value	6	ug/L	2000	Decreased newborn TSH	Supplemental Data; Brechner et al. 2000
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	See notes				Not likely to pose a risk of thyroid cancer in humans, at least at doses below those necessary to alter thyroid hormone homeostasis, based on the hormonally-mediated mode of action in rodent studies and species differences in thyroid function (IRIS).
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-Interim HA	15	ug/L			Interim Health Advisory; EPA is revisiting the intermin hHealth Advisory for perchlorate.
Health Reference Level (HRL)[2]	4.9	ug/L			The HRL for the CCL differs from the Interim HA based on the RSC used in the health advisory (0.62) and the default RSC (0.2) used for the CCL process.
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water	**3,554**	**147**	**4.14**	**4**	**420**	**6.5**	**14**	**59**	**ug/L**	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (HRL/UCMR 90%)	Non-cancer: 0.35	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data	10K - 500K	lbs/yr	1998			
		lbs/yr	2002			

Use	Smokeless rocket and jet propellant; explosives; analytical chemistry, etching and engraving agent (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time		
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility	200,000	mg/L		All use and env. fate data are for ammonium perchlorate.
% water PBT profiler				

Contaminant:	Perfluorooctane sulfonic acid (PFOS)
Substance Key:	12176
Contaminant ID (CASRN):	1763231

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
8	3	10	7

3-model Categorical Prediction
L?-L
HRL Ratio(s)
NC HRL/MN MW MAX: 0.143

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
EPA/FR NOAEL	0.1	mg/kg-d		Reduced F2 Body Weight	No Observed Adverse Effect Level in 2 generation reproductive study in rats. Supplemental Data - FR October 18, 2000 (Volume 65, Number 202)] Perfluorooctyl Sulfonates; Proposed Significant New Use Rule [Page 62319-62333]
Supplemental NOAEL	**0.03**	**mg/kg-d**		**Decreased body weights, increased liver weights, lowered serum total cholesterol, lowered triiodothyronine (T3) concentration, and lowered estradiol levels**	**Supplemental Data - Seacat et al., 2002, Toxicol. Sci. 68, 249-264. EPA Provisional HA: http://www.epa.gov/waterscience/criteria/drinking/pha-PFOA_PFOS.pdf**
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			
HSDB Lowest Oral LD50	251	mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-Provisional HA	0.2	ug/L	January 2008		Provisional Health Advisory: http://www.epa.gov/waterscience/criteria/drinking/pha-PFOA_PFOS.pdf
Health Reference Level (HRL)[2]	0.2	ug/L			Note: HRL is based on adult exposure factors (70 kg body weight and 2 L/d ingestion). The HRL was calculated in a different manner than EPA's provisional HA because child exposure factors and toxicokinetic adjustments were used to derive the provisional HA.
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Range of Detects (ug/L)	Notes
Select New Jersey Water Systems	23	13	57%	0.0042-0.019	Targeted Sampling 2006 - Targeted study "Determination of Perfluorooctanoic Acid (PFOA) in Aqueous Samples, Final Report." Jan 2007, NJDEP, Division of Water Supply.
Select Minnesota municipal wells	**37**	**6**	**16.2%**	**ND-1.4**	**Targeted Sampling 2004-2005 - H. Goeden and J. Kelly. Perfluorochemicals in Minnesota, MN DOH, 2/27/06.**
Select Minnesota non-community wells	22	0	0%	ND	Targeted Sampling 2004-2005 - H. Goeden and J. Kelly. Perfluorochemicals in Minnesota, MN DOH, 2/27/06.
Select Minnesota private wells	26	0	0%	ND	Targeted Sampling 2004-2005 - H. Goeden and J. Kelly. Perfluorochemicals in Minnesota, MN DOH, 2/27/06.
Aggregate of above Minnesota wells	85	6	7.1%	ND-1.4	Targeted Sampling 2004-2005 - H. Goeden and J. Kelly. Perfluorochemicals in Minnesota, MN DOH, 2/27/06.

HRL Ratios (HRL/MN MW MAX)	Non-cancer: 0.143	Cancer:	

Production	Amount Range	Units	Year		
CUSIUR Production Data	10-500K	lbs/yr	2002		
	0	lbs/yr	2003 (EPA est.)	Estimate of zero as phased out.	

Use	Surface-active agents in aqueous media; chemical intermediate; in fire-fighting applications, floor polish; metal plating baths; pesticide active ingredient for ant bait traps. (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BST	BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient	100,000	L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		cm3/g		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility	370	mg/L		
% water PBT profiler				

Contaminant:	Perfluorooctanoic acid (PFOA)
Substance Key:	6614
Contaminant ID (CASRN):	335671

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	3	10	6

Scores based on supplemental data

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/MN MW MAX: 1.22

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL	**0.46**	**mg/kg-d**	**2006**	**Increased maternal liver weight at term**	**Supplemental Data (BMDL10), Lau, 2006. Tox. Sci., 90, 2, pp. 510-518. EPA Provisional HA: http://www.epa.gov/waterscience/criteria/drinking/pha-PFOA_PFOS.pdf**
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-Provisional HA	0.4	ug/L	January 2008		Provisional Health Advisory: http://www.epa.gov/waterscience/criteria/drinking/pha-PFOA_PFOS.pdf
Health Reference Level (HRL)[2]	1.1	ug/L			Note: HRL is based on adult exposure factors (70 kg body weight and 2 L/d ingestion). This value differs from EPA's provisional HA because child exposure factors and toxicokinetic adjustments were used to derive the provisional HA.
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Range of Detects (ug/L)	Notes
NJDEP - Jan 2007	23	18	78	<0.004 - 0.039	Targeted study "Determination of Perfluorooctanoic Acid (PFOA) in Aqueous Samples, Final Report." Jan 2007, NJDEP, Division of Water Supply.
Little Hocking, OH Municipal Wells (FW)	No data			1.5-7.2	Emmett, et al., 2006. J. Occ. Env. Med. Little Hocking, OH; data from 2002-2005.
Select Minnesota municipal wells	**37**	**6**	**16.2%**	**ND-0.9**	**Targeted Sampling 2004-2005 - H. Goeden and J. Kelly. Perfluorochemicals in Minnesota, MN DOH, 2/27/06.**
Select Minnesota non-community wells	22	0	0%	ND	Targeted Sampling 2004-2005 - H. Goeden and J. Kelly. Perfluorochemicals in Minnesota, MN DOH, 2/27/06.
Select Minnesota private wells	26	1	3.8%	ND-0.67	Targeted Sampling 2004-2005 - H. Goeden and J. Kelly. Perfluorochemicals in Minnesota, MN DOH, 2/27/06.
Aggregate of above Minnesota wells	85	7	8.2%	ND-0.9	Targeted Sampling 2004-2005 - H. Goeden and J. Kelly. Perfluorochemicals in Minnesota, MN DOH, 2/27/06.

HRL Ratios (HRL/MN MW MAX)	Non-cancer: 1.22	Cancer:

Production	Amount Range	Units	Year		
CUSIUR Production Data	10K - 500K	lbs/yr	1998		
	10K - 500K	lbs/yr	2002		

Use	Production of fluoropolymers (e.g., Teflon) and fluoroelastomers; in fire-fighting applications, cosmetics, greases and lubricants, paints, polishes and adhesives (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	180	days	BST	PBT; BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient	27,000	L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	9.10E-02	atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler	1			

Contaminant:	Permethrin
Substance Key:	35815
Contaminant ID (CASRN):	52645531

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
4	8	10	7

3-model Categorical Prediction
L? - L
HRL Ratio(s)
NC HRL/SWC EEC: 1,944 CAR HRL/SWC EEC: 4.05

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	0.25	mg/kg-d		Neurotox (aggression, abnormal/ decreased movement), increased body temperature. Q1* 0.0096 (mg/kg/day)-1. See CAR	Reference Dose; Basis = NOAEL 25 mg/kg-d; UF = 100.
EPA IRIS (ITER) RfD	0.05	mg/kg-d	1986	Increased liver weight	Reference Dose; Basis = NOEL 5 mg/kd-d; UF = 100.
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.05	mg/kg-d			Reference Dose
ATSDR (ITER), MRL	0.2	mg/kg-d		Neurol.	Minimal Risk Level; ATSDR MRL-int.
JMPR, maximum ADI	0.05	mg/kg-d	1999		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
OPP Slope Factor (oral)	**0.0096**	**$(mg/kg\text{-}d)^{-1}$**			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification	3		1991		
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			EPA
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	1,750	ug/L			
Health Reference Level (HRL)[2] cancer	3.65	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**1,066,056**	**lbs/yr**	**48**	**States**	**1997**	
TRI Release - surface water	0	lbs/yr	0	States	2004	
TRI Release - total	17,979	lbs/yr	7	States	2004	

Supplemental Water Data			
OPP Estimated Environmental Concentration	Surface water chronic: 0.9 ug/L	Ground water chronic: 0 ug/L	

HRL Ratios (HRL/SWC EEC)	Non-cancer: 1,944				Cancer: 4.05		
Production	**Amount Range**	**Units**	**Year**				
CUSIUR Production Data		lbs/yr	1998				
		lbs/yr	2002				
Use	Insecticide (HSDB)						

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BF/BST	BF = biodegrades fast; BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient	178,000	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	6.5	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.87E-06	atm-m^3/mol		
Water Solubility	0.006	mg/L		
% water PBT profiler				

Contaminant:	Profenofos
Substance Key:	34318
Contaminant ID (CASRN):	41198087

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	3	8	6

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/SWC EEC: 3.5

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.00005**	**mg/kg-d**		**Inhibition of plasma & RBC ChE activity**	**Reference Dose; Basis = NOEL 0.005 mg/kg-d; UF = 100.**
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.0004	mg/kg-d	1990		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	0.05	mg/kg-d		Blood - other changes, Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - true cholinesterase	Lowest Observed Adverse Effect Level; NNGADV Nippon Noyaku Gakkaishi. Journal of the Pesticide Science Society of Japan. (Nippon Noyaku Gakkai, 1-43-11, Komagome, Toshima-ku, Tokyo 170, Japan) V.1- 1976- Volume(issue)/page/year 12,781,1987
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	162	mg/kg		Behavioral - somnolence (general depressed activity), Behavioral - tremor, Gastrointestinal - changes in structure or function of salivary glands	TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year 73,16,1984
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.35	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**879,776**	**lbs/yr**	**14**	**States**	**1997**	
TRI Release - surface water	0	lbs/yr	0	States	2004	
TRI Release - total	255	lbs/yr	1	States	2004	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units for Mag data	Notes
PPMP ambient water		0	0		Not Detected		Not Detected	ug/L	Pesticide Pilot Montoring Program (USGS/EPA)
PPMP finished water		0	0		Not Detected		Not Detected	ug/L	

OPP Estimated Environmental Concentration	Surface water chronic: 0.1 ug/L	Ground water chronic: 0.03 ug/L	
HRL Ratios (HRL/SWC EEC)	Non-cancer: 3.5	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Pesticide, insecticide, acaricide (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BST	BST = biodegrades sometimes/recalcitrant; PBT
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	4.68	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	2.21E-08	atm-m^3/mol		
Water Solubility	28	mg/L		
% water PBT profiler	9			

Contaminant	Quinoline
Substance Key:	3467
Contaminant ID (CASRN):	91225

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	8	7	5

3-model Categorical Prediction
L? - L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	**0.001**	**mg/L**	**2001**		**IRIS**
RAISHE Slope Factor	3	$(mg/kg-d)^{-1}$			IRIS
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification	B2		2001		Hirao et al., 1976; oral study in rats
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART, EPA, RAIS
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]		ug/L			
Health Reference Level (HRL)[2] cancer	0.01	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	62	lbs/yr	1	States	2004	
TRI Release - total	**28,629**	**lbs/yr**	**8**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:

Production	Amount Range	Units	Year			
CUSIUR Production Data	10K - 500K	lbs/yr	1998			
	10K - 500K	lbs/yr	2002			

Use	Chemical intermediate; pharmaceutical (anti-malarial); flavoring (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BFA	BFA = Biodegrades Fast with Acclimation
K_{OC}, Organic Carbon Partition Coefficient	1,837	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	2.03	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.67E-06	atm-m3/mol		
Water Solubility	6,110	mg/L		
% water PBT profiler				

Contaminant:	RDX
Substance Key:	5404
Contaminant ID (CASRN):	121824

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	8	5	5

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/STORET 90%: 0.092
CAR HRL/STORET 90%: 0.0013

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	0.003	mg/kg-d	1988	Inflammation of the prostate.	Reference Dose; Basis NOEL 0.3 mg/kg-d. U.S. DOD, 1983
EPA HA RfD	0.003	mg/kg-d	2006		Reference Dose
RAISHE RfD	0.003	mg/kg-d			Reference Dose
ATSDR (ITER), MRL	0.03	mg/kg-d	6/1995		Int-Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	40	mg/kg-d		Cardiac - other changes, Blood - pigmented or nucleated red blood cells, Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - transaminases	Lowest Observed Adverse Effect Level; 90-day study in rat; NTIS National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year AD-A092-531
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}	**0.03**	**mg/L**	**1988**		**EPAHA**
RAISHE Slope Factor	0.11	$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	C		1988		
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			EPA; RAIS
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL	0.1	mg/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	21	ug/L			
Health Reference Level (HRL)[2] cancer	0.3	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental water data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units	Notes
STORET	23	23	100	15	270	140	229	ug/L	
HRL Ratios (HRL/STORET 90%)	Non-cancer: 0.092				Cancer: 0.0013				

Production	Amount Range	Units	Year			
CUSIUR Production Data	>500K - 1M	lbs/yr	1998			
	>1M-10M	**lbs/yr**	**2002**			

Use	High explosive			
Environmental Fate Parameters	**Value**	**Units**	**Degradation Code**	**Notes**
$T_{1/2}$, Half life		**length of time**	**BFA**	**BFA = biodegrades fast with acclimation**
K_{OC}, Organic Carbon Partition Coefficient	**195.4**	**L/kg**		
log K_{OW}, Octanol Water Partition Coeff.	0.87	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	6.30E-08	atm-m^3/mol		
Water Solubility	59.7	mg/L		
% water PBT profiler				

Contaminant:	sec-Butylbenzene
Substance Key:	5904
Contaminant ID (CASRN):	135988

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	5	3	6

3-model Categorical Prediction
NL?
HRL Ratio(s)
NC HRL/NCOD R1 90%: 1.03

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	**4.42**	**mg/kg-d**		**Behavioral - alteration of classical conditioning**	**Lowest Observed Adverse Effect Level; 24-week oral rat study; VCVGH "Vrednie chemichescie veshestva, galogenproisvodnie uglevodorodov". (Hazardous substances Galogenated hydrocarbons) Bandman A.L. et al., Chimia, 1990. Volume(issue)/page/year -,179,1990**
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50	2,240	mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	10.3	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water	**12,343**	**28**	**0.227**	**0.03**	**19.8**	**0.7**	**10**	**19.8**	**ug/L**	
NCOD Round 2 finished water	22,974	34	0.148	0.1	22	0.6	4.6	22	ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	4,309	25	0.58	0.005	11	0.39	2.81	11	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (HRL/NCOD R1 90%)	Non-cancer: 1.03				Cancer:				

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Solvent for coating compositions, organic synthesis, plasticizer, and surface active agents (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	15	days	BS	PBT; BS = biodegrades slowly
K_{OC}, Organic Carbon Partition Coefficient	7,200	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	4.57	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.80E-02	atm-m^3/mol		
Water Solubility	17.6	mg/L		
% water PBT profiler	15			

Contaminant:	Strontium
Substance Key:	18848
Contaminant ID (CASRN):	7440246

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
3	5	10	10

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/NIRS 90%: 3.88

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD	**0.6**	**mg/kg-d**	**1992**	**Rachitic bone**	**Reference Dose; Storey, 1961; Marie et al., 1985; Skoryna, 1981; UF = 300; Rat; Basis NOAEL = 190 mg/kg-d**
EPA HA RfD	0.6	mg/kg-d	2006		Reference Dose
RAISHE RfD	0.6	mg/kg-d			Reference Dose; IRIS
ATSDR (ITER), MRL	2	mg/kg-d	2004	Musculo-skeletal effects	Minimal Risk Level; UF = 30; MRL-Int
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	D		1993		Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL	20	mg/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	4,200	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water	**989**	**980**	**99.1**	**1.5**	**43,550**	**178**	**1,080**	**7,340**	**ug/L**	
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (HRL/NIRS 90%)	Non-cancer: 3.88	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Use data are for strontium carbonate: In pyrotechnics; steel production; catalyst; lead scavenger (HSDB); naturally-occurring

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BST	assumed persistent; All use and env. fate data are for strontium carbonate; BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		unitless		
Water Solubility	11	mg/L		
% water PBT profiler				

Contaminant:	Tebuconazole
Substance Key:	69191
Contaminant ID (CASRN):	107534963

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	7	9	6

3-model Categorical Prediction
L?-L
HRL Ratio(s)
NC HRL/GWC EEC: 9.09

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.029**	**mg/kg-d**	**2008**	**Decreased body weights, absolute brain weights, brain measurements and motor activity in offspring**	**Reference Dose; Basis = LOAEL 8.8 mg/kg-d; UF = 300. Federal Register: May 14, 2008 (Volume 74, Number 94), pp 27748-27756.**
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.03	mg/kg-d	1994		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	1,000	mg/kg		Behavioral - food intake (animal)	Oral study - rabbit; NTIS National Technical Information Service. (Springfield, VA 22161) Formerly U.S. Clearinghouse for Scientific & Technical Information. Volume(issue)/page/year OTS0545183
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification	C		2008		OPP; 73 FR No. 94, pp 27748-27756.
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	210	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**478,568**	**lbs/yr**	**16**	**States**	**1997**	
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data				
OPP Estimated Environmental Concentration	Surface water chronic: 14 ug/L		Ground water chronic: 23.1 ug/L	
HRL Ratios (HRL/GWC EEC)	Non-cancer: 9.09		Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Fungicide (HSDB)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BST	PBT; BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.7	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.45E-10	atm-m^3/mol		
Water Solubility	36	mg/L		
% water PBT profiler	9			

Contaminant:	Tebufenozide
Substance Key:	69514
Contaminant ID (CASRN):	112410238

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	6	9	5

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/SWC EEC: 8.4

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.018**	**mg/kg-d**	**1999**	**Growth retardation, alterations in hematology parameters, changes in organ weights, and histopathological lesions in the bone, spleen and liver**	**Reference Dose; Basis NOAEL = 1.8 mg/kg-d, UF = 100. Federal Register: 64 FR, No. 203, pp 56690-56697, October 21, 1999.**
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.02	mg/kg-d	2003	Effect on erythrocytes, periferal hemolytic anaemia. Gross and histopathological lesions in the spleen (congestion, pigment, and extra-medullary haematopoiesis)	Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	8.7	mg/kg-d		Blood - normocytic anemia, Blood - thrombocytopenia	Lowest Observed Adverse Effect Level; 1-year study in dog; FEREAC Federal Register. (U.S. Government Printing Office, Supt. of Documents, Washington, DC 20402) V.1- 1936- Volume(issue)/page/year 64,16851,1999
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	126	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**104,413**	**lbs/yr**	**17**	**States**	**1997**	
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data						
OPP Estimated Environmental Concentration		Surface water chronic: 15 ug/L			Ground water chronic: 1.19 ug/L	
HRL Ratios (HRL/SWC EEC)		Non-cancer: 8.4			Cancer:	
Production	**Amount Range**	**Units**	**Year**			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Insecticide (HSDB)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BST	PBT; BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	4.25	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.26E-08	atm-m^3/mol		
Water Solubility	0.83	mg/L		
% water PBT profiler	11			

Contaminant:	Tellurium
Substance Key:	23035
Contaminant ID (CASRN):	13494809

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	7	4	9

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/NIRS 90%: 0.673

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL	**25**	**mg/kg-d**		**Maternal toxicity**	**Supplemental Data; No Observed Effect Level; Johnson et al., 1988**
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	20	mg/kg		Details of toxic effects not reported other than lethal dose value	Mouse; 85GMAT "Toxicometric Parameters of Industrial Toxic Chemicals Under Single Exposure," Izmerov, N.F., et al., Moscow, Centre of International Projects, GKNT, 1982 Volume(issue)/page/year -,107,1982
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	175	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water	**989**	**4**	**0.4**	**15**	**370**	**22**	**260**	**360**	**ug/L**	
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (HRL/NIRS 90%)	Non-cancer: 0.673			Cancer:		
Production	**Amount Range**	**Units**	**Year**			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Use data are for sodium tellurite: Bacteriology, medicine (HSDB); naturally-occurring					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BST	assume persistent; All use and env. fate data are for sodium tellurite; BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		unitless		
Water Solubility		mg/L		
% water PBT profiler				

Contaminant:	Terbufos
Substance Key:	22585
Contaminant ID (CASRN):	13071799

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	3	1	1

3-model Categorical Prediction
NL
HRL Ratio(s)
NC HRL/NAWQA 90%: 1.67

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.00005**	**mg/kg-d**		**Plasma ChE inhibition**	**Reference Dose; Basis = NOAEL 0.005 mg/kg-d; UF = 100.**
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD	0.00005	mg/kg-d	2006		Reference Dose
RAISHE RfD	0.000025	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.0002	mg/kg-d	1989		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic? NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	D		1988		Cancer classifications were used for screening, but no related quantitative cancer risk data were identified for potency scoring.
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL	0.002	mg/L	2006		Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.35	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water	**300**	**0**	**0**	**Not Detected**	**Not Detected**	**Not Detected**	**Not Detected**	**Not Detected**	**ug/L**	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water	7,118	22	0.31	0.0021	0.56	0.017	0.21	0.56	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	6,515,603	lbs/yr	37	States	1997	
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Notes	
PPMP ambient water		0	0		Not Detected		Not Detected	ug/L	Pesticide Pilot Montoring Program (USGS/EPA)
PPMP finished water		0	0		Not Detected		Not Detected	ug/L	

	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
CAL DHS	61	0	0					ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
STORET	915	11	1.2	0.1	3.2	0.185	0.202	ug/L	

HRL Ratios (HRL/NAWQA 90%)	Non-cancer: 1.67	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Insecticide (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	38	days	BSA	BSA = biodegrades slowly with acclimation
K_{OC}, Organic Carbon Partition Coefficient	500-5,000	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	4.48	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	2.40E-05	atm-m^3/mol		
Water Solubility	5.07	mg/L		
% water PBT profiler	14			

Contaminant:	Terbufos sulfone
Substance Key:	37071
Contaminant ID (CASRN):	5607016

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
7	3	1	1
Scores based on parent		Scores based on parent	

3-model Categorical Prediction
NL
HRL Ratio(s)
NC HRL/NAWQA 90%: 1.67 (NAWQA data and HRL for parent terbufos)

HEALTH EFFECTS DATA[1] - See parent Terbufos

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.00005**	**mg/kg-d**		**Plasma ChE inhibition**	**Reference Dose - FOR PARENT TERBUFOS**
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	0.35	ug/L			**Based on data for parent terbufos**
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data	**FOR TERBUFOS - PARENT**									
UCMR finished water	**300**	**0**	**0**	**Not Detected**	**Not Detected**	**Not Detected**	**Not Detected**	**Not Detected**	**ug/L**	
NCOD Round 1 finished water		0							mg/L	
NCOD Round 2 finished water		0							mg/L	
NIRS finished water										
Ambient Water Occurrence Data	**FOR TERBUFOS - PARENT**									
NAWQA ambient water	7,118	22	0.31	0.0021	0.56	0.017	0.21	0.56	ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data FOR TERBUFOS - PARENT	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	Units for Mag data	Notes
CAL DHS	61	0	0					ug/L	Drinking water monitoring; http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx
STORET	915	11	1.2	0.1	3.2	0.185	0.202	ug/L	
PPMP finished water		2	0.9		0.016			ug/L	Pesticide Pilot Montoring Program (USGS/EPA) **FROM TERBUFOS O-ANALOGUE SULFONE**
PPMP ambient water		0	0					ug/L	Pesticide Pilot Montoring Program (USGS/EPA) **FROM TERBUFOS O-ANALOGUE SULFONE**
HRL Ratios (HRL/NAWQA 90%)	Non-cancer: 1.67			Cancer:					**NAWQA data and HRL for Parent Terbufos**

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Pesticide degradate					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life	38	length of time	BSA	PBT; BSA = biodegrades slowly with acclimation
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	2.21E-08	atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler	21			

Contaminant:	Thiodicarb
Substance Key:	38116
Contaminant ID (CASRN):	59669260

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	8	10	6

3-model Categorical Prediction
L? - L
HRL Ratio(s)
NC HRL/SWC EEC: 8.1 CAR HRL/SWC EEC: 0.07

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	0.03	mg/kg-d	1998	Extramedulary hematapoesis and decreased red blood cell cholinesterase activity	Reference Dose; Basis NOEL = 3.3 mg/kg-d (males) and 4.5 mg/kg-d (females); UF = 100; chronic rat study.
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.03	mg/kg-d	2000		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
OPP Slope Factor (oral)	**0.0188**	**$(mg/kg\text{-}d)^{-1}$**			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	B2				
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART; EPA
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	210	ug/L			
Health Reference Level (HRL)[2] cancer	1.86	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**821,267**	**lbs/yr**	**27**	**States**	**1997**	
TRI Release - surface water	0.05	lbs/yr	1	States	2004	
TRI Release - total	1,430	lbs/yr	3	States	2004	

Supplemental Water Data

OPP Estimated Environmental Concentration	Surface water chronic: 26 ug/L	Ground water chronic: 0 ug/L

HRL Ratios (HRL/SWC EEC)	Non-cancer: 8.1	Cancer: 0.07	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Insecticide (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BSA	PBT; BSA = biodegrades slowly with acclimation
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	1.7	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	9.33E-07	atm-m^3/mol		
Water Solubility	35	mg/L		
% water PBT profiler	36			

Contaminant:	Thiophanate-methyl
Substance Key:	27753
Contaminant ID (CASRN):	23564058

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	8	10	6

3-model Categorical Prediction
L? - L
HRL Ratio(s)
NC HRL/SWC EEC: 45.9
CAR HRL/SWC EEC: 0.248

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	0.08	mg/kg-d	2004	Thyroid and liver effects and decreased body weight	Reference Dose; Basis NOEL = 8 mg/kg-d; UF = 100; chronic dog study.
EPA IRIS (ITER) RfD	0.08	mg/kg-d	1986	Decreased body weight, decreased spermatogenesis and histological evidence of hyperthyroidism	Reference Dose; Basis = NOEL 8 mg/kg-d; UF = 100.
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.08	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.08	mg/kg-d	1998		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	1.2	mg/kg-d		Endocrine - evidence of thyroid hypofunction, Endocrine - changes in thyroid weight, Nutritional and Gross Metabolic - weight loss or decreased weight gain	Lowest Observed Adverse Effect Level; FEREAC Federal Register. (U.S. Government Printing Office, Supt. of Documents, Washington, DC 20402) V.1- 1936- Volume(issue)/page/year 67,14944,2002
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	2,270	mg/kg		Sense Organs and Special Senses (Eye) - mydriasis (pupillary dilation), Behavioral - somnolence (general depressed activity), Behavioral - convulsions or effect on seizure threshold	TXAPA9 Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1959- Volume(issue)/page/year 23,606,1972
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
OPP Slope Factor (oral)	**0.0116**	**$(mg/kg\text{-}d)^{-1}$**			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	C				OPP
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			EPA
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Female & male reproductive toxicity	CACART
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	560	ug/L			
Health Reference Level (HRL)[2] cancer	3.02	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**453,792**	**lbs/yr**	**40**	**States**	**1997**	
TRI Release - surface water	0	lbs/yr	0	States	2004	
TRI Release - total	92	lbs/yr	3	States	2004	

Supplemental Water Data						
OPP Estimated Environmental Concentration	Surface water chronic: 12.2 ug/L				Ground water chronic: 3.03 ug/L	
HRL Ratios (HRL/SWC EEC)	Non-cancer: 45.9				Cancer: 0.248	
Production	**Amount Range**	**Units**	**Year**			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Fungicide (HSDB)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BF	BF = biodegrades fast
K_{OC}, Organic Carbon Partition Coefficient	14.32	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	1.4	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	2.94E-13	atm-m^3/mol		
Water Solubility	438.9	mg/L		
% water PBT profiler				

Contaminant:	Toluene diisocyanate
Substance Key:	29421
Contaminant ID (CASRN):	26471625

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	8	10	7

3-model Categorical Prediction
L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL	30	mg/kg-d		Burns throat immediately.	No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	85.7	mg/kg-d		Related to Chronic Data - death	Lowest Observed Adverse Effect Level; NTPTR National Toxicology Program Technical Report Series. (Research Triangle Park, NC 27709) No.206- Volume(issue)/page/year NTP-TR-251,1986
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50[1]		mg/kg			
CTDJPN Lowest Oral LD50[1]		mg/kg			
RTECS Lowest Oral LD50[1]		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)	**0.039**	**$(mg/kg\text{-}d)^{-1}$**			**Applies to mixture of 2,4- and 2,6- isomers.**
EPA Carcinogen classification					
IARC Carcinogen Classification	2B		1999		
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			CACART; IARC; OEHHA
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	210	ug/L			
Health Reference Level (HRL)[2] cancer	0.9	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	1	lbs/yr	1	States		
TRI Release - total	**129,143**	**lbs/yr**	**31**	**States**		

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data	>500M - 1B	lbs/yr	1998			
	>500M - 1B	lbs/yr	2002			
Use	In plastics manufacture (NTP)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BSA	PBT; BSA = biodegrades slowly with acclimation
K_{OC}, Organic Carbon Partition Coefficient	9,114	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.74	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.11E-05	atm-m^3/mol		
Water Solubility	37.57	mg/L		
% water PBT profiler	17			

Contaminant:	Tribufos
Substance Key:	2814
Contaminant ID (CASRN):	78488

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	3	9	8

3-model Categorical Prediction
L?
HRL Ratio(s)
NC HRL/SWC EEC: 3.89

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	**0.001**	**mg/kg-d**		**Plasma ChE inhibition**	**Reference Dose; Basis = NOAEL 0.1 mg/kg-d; UF = 100.**
EPA IRIS (ITER) RfD	0.00003	mg/kg-d	1988		Reference Dose; Basis NOAEL 0.1 mg/kg-d; Abou-Donia et al., 1979
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.00003	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	4.08	mg/kg-d		Gastrointestinal - other changes, Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - other hydrolases, Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - peptidases	Lowest Observed Adverse Effect Level; 43 week study in rodent; FATOAO Farmakologiya i Toksikologiya (Moscow). For English translation, see PHTXA6 and RPTOAN. (V/O Mezhdunarodnaya Kniga, 113095 Moscow, USSR) V.2- 1939- Volume(issue)/page/year 38,96,1975
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	77	mg/kg		Details of toxic effects not reported other than lethal dose value	85JCAE "Prehled Prumyslove Toxikologie; Organicke Latky," Marhold, J., Prague, Czechoslovakia, Avicenum, 1986 Volume(issue)/page/year -,1188,1986
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	7	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**4,918,265**	**lbs/yr**	**16**	**States**	**1997**	
TRI Release - surface water	4	lbs/yr	1	States	2004	
TRI Release - total	7	lbs/yr	1	States	2004	

Supplemental Water Data	# PWSs/Sites/Samples	# with Detects	% PWSs/Sites/Samples with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	95% of Detects	Units for Mag data	Notes
PPMP ambient water		0	0					ug/L	Pesticide Pilot Montoring Program (USGS/EPA)
PPMP finished water		0	0					ug/L	
OPP Estimated Environmental Concentration		Surface water chronic 1.8 ug/L				Ground water chronic 0 ug/L			

HRL Ratios (HRL/SWC EEC)	Non-cancer: 3.89				Cancer:	
Production	**Amount Range**	**Units**	**Year**			
CUSIUR Production Data	10K - 500K	lbs/yr	1998			
	10K - 500K	lbs/yr	2002			
Use	Insecticide; cotton defoliant (HSDB)					

Environmental Fate Parameters	Value	Units	Degradation code	Notes
$T_{1/2}$, Half life		length of time	BF	BF = biodegrades fast
K_{OC}, Organic Carbon Partition Coefficient	1,888	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	5.7	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	2.94E-07	atm-m^3/mol		
Water Solubility	2.3	mg/L		
% water PBT profiler				

Contaminant:	Triethylamine
Substance Key:	5379
Contaminant ID (CASRN):	121448

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	5	10	9

3-model Categorical Prediction
L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	**1**	**mg/kg-d**		**Brain and Coverings - other degenerative changes**	**Lowest Observed Adverse Effect Level; 30-week oral rat study; WDZAEK Weisheng Dulixue Zazhi. Journal of Health Toxicology. (Weisheng Dulixue Zazhi Bianjibu, Dongdaqiao, Chaoyang Menwai, Beijing, Peop. Rep. China) V.1- 1987 Volume(issue)/page/year 4,45,1990**
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50	460	mg/kg		Details of toxic effects not reported other than lethal dose value	AMIHBC AMA Archives of Industrial Hygiene and Occupational Medicine. (Chicago, IL) V.2-10, 1950-54. For publisher information, see AEHLAU. Volume(issue)/page/year 4,119,1951
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	2.33	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	12,000	lbs/yr	14	States	2004	
TRI Release - total	**1,167,219**	**lbs/yr**	**35**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:	

Production	Amount Range	Units	Year			
CUSIUR Production Data	>10M - 50M	lbs/yr	1998			
	>10M - 50M	lbs/yr	2002			

Use	Chemical intermediate; stabilizer; in herbicides/pesticides; in consumer products; food additive; photographic chemical; in carpet cleaners (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BSA	PBT; BSA = biodegrades slowly with acclimation
K_{OC}, Organic Carbon Partition Coefficient	107.2	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	1.45	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.49E-04	atm-m^3/mol		
Water Solubility	73,700	mg/L		
% water PBT profiler	46			

Contaminant:	Triphenyltin hydroxide (TPTH)
Substance Key:	2738
Contaminant ID (CASRN):	76879

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
8	8	10	6

3-model Categorical Prediction
L
HRL Ratio(s)
NC HRL/SWC EEC: 0.33
CAR HRL/SWC EEC: 0.0003

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	0.0003	mg/kg-d	1999	Decreased white blood cells	Reference Dose; OPP RED
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.0005	mg/kg-d	1970		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	0.15	mg/kg-d		Blood - changes in other cell count (unspecified), Blood - changes in leukocyte (WBC) count	Lowest Observed Adverse Effect Level; 90-day study in guinea pig; FCTXAV Food and Cosmetics Toxicology. (London, UK) V.1-19, 1963-81. For publisher information, see FCTOD7. Volume(issue)/page/year 4,35,1966
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
OPP Slope Factor (oral)	**18.3**	**$(mg/kg-d)^{-1}$**			
RAISHE Slope Factor		$(mg/kg-d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg-d)^{-1}$			
EPA Carcinogen classification	B2				
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			EPA; CACART
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen; Developmental	UMD; CACART
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	2.1	ug/L			
Health Reference Level (HRL)[2] cancer	0.0019	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**660,971**	**lbs/yr**	**26**	**States**	**1997**	
TRI Release - surface water	0	lbs/yr	0	States	2004	
TRI Release - total	0	lbs/yr	0	States	2004	

Supplemental Water Data			**Notes**
OPP Estimated Environmental Concentration	Surface water chronic 6.4 ug/L	Ground water chronic 0 ug/L	

HRL Ratios (HRL/SWC EEC)	Non-cancer: 0.33				Cancer: 0.0003	
Production	**Amount Range**	**Units**	**Year**			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Pesticide (NTP)					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time		
K_{OC}, Organic Carbon Partition Coefficient	2,000	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.53	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	4.26E-07	atm-m^3/mol		
Water Solubility	0.4	mg/L		
% water PBT profiler				

Contaminant	Urethane
Substance Key:	2189
Contaminant ID (CASRN):	51796

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	9	7	6

3-model Categorical Prediction
L
HRL Ratio(s)
No water data

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL	**0.9**	**mg/kg-d**	**2005**	**Decreased survival**	**Supplemental Data; Food and Chemical Toxicology 43 (2005) 1-19**
RTECS Lowest Oral Chronic LOAEL	78	mg/kg-d		Liver - changes in liver weight, Kidney, Ureter, Bladder - changes in bladder weight, Blood - changes in leukocyte (WBC) count	Lowest Observed Adverse Effect Level; 13 week oral study in rats; NTPTR National Toxicology Program Technical Report Series. (Research Triangle Park, NC 27709) No.206- Volume(issue)/page/year NIH-96-3937
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)	1	$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification	2B		1987		Vol. 7, Suppl. 7; 1987
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N		Developmental	IARC; CACART; OEHHA
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Teratogen	UMD
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	6.3	ug/L			
Health Reference Level (HRL)[2] cancer	0.035	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water	0	lbs/yr	0	States	2004	
TRI Release - total	**96,050**	**lbs/yr**	**7**	**States**	**2004**	

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (No water data)	Non-cancer:	Cancer:

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Paint ingredient (NTP)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BS	PBT; BS = Biodegrades Slowly
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.	-0.15	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	6.40E-08	atm-m^3/mol		
Water Solubility	480,000	mg/L		
% water PBT profiler	40			

Contaminant:	Vanadium
Substance Key:	18882
Contaminant ID (CASRN):	7440622

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
6	5	10	8

3-model Categorical Prediction
L? - L
HRL Ratio(s)
NC HRL/NIRS 90%: 0.913

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD		mg/kg-d			Reference Dose
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.007	mg/kg-d			Reference Dose; HEAST
ATSDR (ITER), MRL	**0.003**	**mg/kg-d**	**1992**	**Minor renal effects (altered renal function as indicated by increased plasma urea, and mild histological changes).**	**Minimal Risk Level; MRL-Int; UF = 100**
JMPR, maximum ADI		mg/kg-d			Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value	1.8	mg/kg-d	2001	Kidney lesions and increases in plasma urea and uric acid	Supplemental Data; IOM 2001 Dietary Reference Intakes
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL	960	mg/kg-d			Lowest Observed Adverse Effect Level; Domestic mammal
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	21	ug/L			
Health Reference Level (HRL)[2] cancer		ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water	**989**	**146**	**14.76**	**3.1**	**70.4**	**7.27**	**23**	**45**	**ug/L**	
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total		lbs/yr		States		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	99% of Detects	Units for Mag data	Notes

HRL Ratios (HRL/NIRS 90%)	Non-cancer: 0.913			Cancer:		
Production	**Amount Range**	**Units**	**Year**			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			
Use	Use data are for vanadium pentoxide: Chemical intermediate; catalyst; (HSDB); naturally-occurring					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BST	assumed persistent; All use and env. fate data are for vanadium pentoxide; BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant		atm-m^3/mol		
Water Solubility	8,000	mg/L		
% water PBT profiler				

Contaminant:	Vinclozolin
Substance Key:	35005
Contaminant ID (CASRN):	50471448

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	8	10	5

3-model Categorical Prediction
L? - L
HRL Ratio(s)
NC HRL/SWC EEC: 8.94
CAR HRL/SWC EEC: 0.058

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	0.012	mg/kg-d		Histopathological lesions in the lungs, liver, ovaries & eyes. Q1* 0.0638 (mg/kg-day)-1. Group C. See CAR	Reference Dose; Basis = NOAEL 1.2 mg/kg-d; UF = 100.
EPA IRIS (ITER) RfD	0.025	mg/kg-d	1986		Reference Dose; Basis = NOEL 2.5 mg/kg-d; UF = 100.
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD	0.025	mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.01	mg/kg-d	1995		Acceptable Daily Intake
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
Supplemental NOEL		mg/kg-d			Supplemental Data
RTECS Lowest Oral Chronic LOAEL		mg/kg-d			Lowest Observed Adverse Effect Level
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
OPP Slope Factor (oral)	**0.0638**	**$(mg/kg\text{-}d)^{-1}$**			
RAISHE Slope Factor		$(mg/kg\text{-}d)^{-1}$			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification					
IARC Carcinogen Classification					
Other Supporting Data					
Is contaminant on list of carcinogens?	Y	Y/N			EPA
Is the contaminant on a list of reproductive toxins?	Y	Y/N		Developmental	CACART
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	84	ug/L			
Health Reference Level (HRL)[2] cancer	0.549	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**121,959**	**lbs/yr**	**26**	**States**	**1997**	
TRI Release - surface water	0	lbs/yr	0	States	2004	
TRI Release - total	0	lbs/yr	0	States	2004	

Supplemental Water Data

OPP Estimated Environmental Concentration	Surface water chronic: 9.4 ug/L	Ground water chronic: 0 ug/L

HRL Ratios (HRL/SWC EEC)	Non-cancer: 8.94	Cancer: 0.058	

Production	Amount Range	Units	Year			
CUSIUR Production Data		lbs/yr	1998			
		lbs/yr	2002			

Use	Fungicide (HSDB)

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BST	BST = biodegrades sometimes/recalcitrant
K_{OC}, Organic Carbon Partition Coefficient	289	L/kg		
log K_{OW}, Octanol Water Partition Coeff.	3.1	unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	1.33E-08	atm-m^3/mol		
Water Solubility	2.6	mg/L		
% water PBT profiler				

Contaminant:	Ziram
Substance Key:	5947
Contaminant ID (CASRN):	137304

Attribute Scores			
Potency	Severity	Prevalence	Magnitude
5	8	10	7

3-model Categorical Prediction
L
HRL Ratio(s)
NC HRL/SWC EEC: 56.6 **CAR HRL/SWC EEC: 0.288**

HEALTH EFFECTS DATA[1]

Non-cancer data	Value	Units	Date	Critical Effect	Notes
EPA OPP RfD	0.016	mg/kg-d		Decreased body weight gain	Reference Dose; Basis = NOAEL 1.6 mg/kg-d; UF = 100.
EPA IRIS (ITER) RfD		mg/kg-d			Reference Dose
EPA HA RfD		mg/kg-d			Reference Dose
RAISHE RfD		mg/kg-d			Reference Dose
ATSDR (ITER), MRL		mg/kg-d			Minimal Risk Level
JMPR, maximum ADI	0.003	mg/kg-d	1996	Decreased body weight	Acceptable Daily Intake; Group ADI for Ferbam and Ziram
CEDIADI, ADI		mg/kg-d			Acceptable Daily Intake
ITER, TDI					Tolerable Daily Intake
Supplemental RfD-like value					Supplemental Data
CTDJPN Highest Chronic NOEL		mg/kg-d			No Observed Effect Level
NOAEL	1.6	mg/kg-d			OPP
RTECS Lowest Oral Chronic LOAEL	1	mg/kg-d		Gastrointestinal - hypermotility, diarrhea	Lowest Observed Adverse Effect Level; NNGADV Nippon Noyaku Gakkaishi. Journal of the Pesticide Science Society of Japan. (Nippon Noyaku Gakkai, 1-43-11, Komagome, Toshima-ku, Tokyo 170, Japan) V.1- 1976- Volume(issue)/page/year 17,S155,1992
Supplemental LOAEL		mg/kg-d			Supplemental Data
HSDB Lowest Oral LD50		mg/kg			
CTDJPN Lowest Oral LD50		mg/kg			
RTECS Lowest Oral LD50		mg/kg			
Cancer Data					
EPA Lifetime Cancer Risk, 10^{-4}		mg/L			
OPP Slope Factor	**0.0611**	**$(mg/kg\text{-}d)^{-1}$**			
OEHHA Slope Factor (oral)		$(mg/kg\text{-}d)^{-1}$			
EPA Carcinogen classification	Suggestive (not quantified)				
IARC Carcinogen Classification	3				
Other Supporting Data					
Is contaminant on list of carcinogens?		Y/N			
Is the contaminant on a list of reproductive toxins?		Y/N			
EPAHA-DWEL					Drinking Water Equivalent Level
Health Reference Level (HRL)[2]	112	ug/L			
Health Reference Level (HRL)[2] cancer	0.57	ug/L			

[1] Bolded data indicate value was used in attribute scoring

[2] For the CCL process HRLs were calculated by converting the RfD or other dose to ug/L, assuming 2 L/day of water consumed by a 70 Kg adult, and a Relative Source Contribution of 20%. For carcinogens, the concentration at the 10^{-6} cancer risk was used.

OCCURRENCE DATA[1]

	# PWSs/Sites sampled	# with Detects	% PWSs/Sites with detects	Minimum value of Detects	Maximum value of Detects	Median value of Detects	90% of Detects	99% of Detects	Units for Mag data	Notes
Finished Water Occurrence Data										
UCMR finished water									ug/L	
NCOD Round 1 finished water									ug/L	
NCOD Round 2 finished water									ug/L	
NIRS finished water										
Ambient Water Occurrence Data										
NAWQA ambient water									ug/L	
NREC ambient surface water									ug/L	National Reconnaissance
NREC ambient ground water									ug/L	National Reconnaissance
NREC ambient surface water									ug/L	National Aggregate
NREC ambient ground water									ug/L	National Aggregate

Application/Release	Amount Released	Units	Number of States	Units	Year	Notes
NCFAP Pesticide Application - total	**1,992,552**	**lbs/yr**	**29**	**States**		
TRI Release - surface water		lbs/yr		States		
TRI Release - total		lbs/yr		States		

Supplemental Water Data						
OPP Estimated Environmental Concentration		Surface water chronic: 1.98 ug/L			Ground water chronic: 0.03 ug/L	
HRL Ratios (HRL/SWC EEC)		Non-cancer: 56.6			Cancer: 0.288	
Production	**Amount Range**	**Units**	**Year**			
CUSIUR Production Data	>500K - 1M	lbs/yr	1998			
	>500K - 1M	lbs/yr	2002			
Use	Synthetic rubber chemical (NTP); fungicide					

Environmental Fate Parameters	Value	Units	Degradation Code	Notes
$T_{1/2}$, Half life		length of time	BFA	BFA = Biodegrades Fast with Acclimation
K_{OC}, Organic Carbon Partition Coefficient		L/kg		
log K_{OW}, Octanol Water Partition Coeff.		unitless		
Kd, Distribution coefficient		L/kg		
HLC, Henry's Law Constant	6.20E-10	atm-m^3/mol		
Water Solubility		mg/L		
% water PBT profiler				