

# SCDM Change Control and Errata Sheet

(Changes since January 2014 publication)

## Methodology Changes

Section(s)	Summary of Change(s)	Justification	Date of Change
2.1 General Protocols for SCDM Data Collection	Added a new section (Section 2.1.5)	Address substances with unique reference hierarchy selections	June 2016
2.2.1 SF, IUR, RfD and RfC Data Collection	Added description of area correction factor and decay constant	Increase transparency	June 2016
2.4.3 Radioactive Half-Lives	Revised reference hierarchy for radionuclide half-lives	Improve consistency across EPA programs	June 2016
3.1 RfC to RfD <sub>inhal</sub>	Revised default exposure factors used in equations	EPA OSWER Directive 9200.1-120 updated guidance on default exposure factors	June 2016
3.2 IUR to Inhalation Slope Factor	Revised default exposure factors used in equations	EPA OSWER Directive 9200.1-120 updated guidance on default exposure factors	June 2016
4.0 Screening Concentration Benchmarks	Revised default exposure factors used in equations	EPA OSWER Directive 9200.1-120 updated guidance on default exposure factors	June 2016
6.0 References	Updated to include additional references	New references used for radionuclide half-lives and default exposure factors	June 2016
All	Updated URLs	Ensure accessibility	June 2016
All	Updated URLs	Provide updated accessibility	December 2015
2.1.1 Generic Values	Revised to remove language describing use of mercuric chloride oral RfD for elemental mercury	Reflect new value collected from CalEPA	December 2015
2.1.4 Substances with Unique Value Selection	Revised drinking water intake from 1 L/day to 2 L/day for copper RfD calculation	Correction	December 2015
	Added description of procedure used to determine mercuric chloride RfC	Addition of mercuric chloride to SCDM	December 2015

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	Added description of procedure used to determine vanadium pentoxide RfD	Convert RfD for specificity to vanadium pentoxide	December 2015
2.2.1 SF, IUR, RfD and RfC Data Collection	Language provided to describe the use of chronic and subchronic RfDs/RfCs	Increase transparency	December 2015
2.2.4 ED10 and Weight-of-Evidence – Oral, Inhalation	Revised to clarify conversion of potency factors to ED10	Increase transparency	December 2015
2.3.2 Henry's Law Constant	Revised to reflect removal of ChemFate reference	ChemFate reference no longer available	December 2015
2.3.3.2 Water Solubility – Metals, Metalloids and Radionuclides	Revised reference hierarchy for organic compounds	Correction	December 2015
2.3.4 Soil/Water Distribution Coefficient (Kd); Soil Organic/Carbon Partition Coefficients (Koc and Log Kow)	Revised reference hierarchy for organic compounds	Correction	December 2015
2.4.1 Hydrolysis, Biodegradation and Photolysis Half-Lives	Revised reference hierarchy and expand description of half-life data collection procedures	ChemFate reference no longer available; Increase transparency	December 2015
2.5.1 Bioconcentration	Expanded description for collection of BCF data	Increase transparency	December 2015
2.5.2 Octanol/Water Partition Coefficient (Log Kow)	Revised to reflect removal of ChemFate reference	ChemFate reference no longer available	December 2015
2.6.2 LC50 - Freshwater, Saltwater	Expanded description for collection of ecological LC50 data	Increase transparency	December 2015
2.7.3 Maximum Contaminant Levels (MCLs) and Maximum Contaminant Level Goals (MCLGs)	Expanded description for collection of MCLs and MCLGs.	Increase transparency	December 2015
2.8.1 Chemical Formula, Boiling Point and Melting Point	Revised reference hierarchy for inorganic compounds	Correction	December 2015
2.8.3 Density	Revised reference hierarchy for non-inorganic compounds	Correction	December 2015
3.5 Volatilization Half-Life	Revised equations used in calculating volatilization half-lives	Correction of error in derived equations	December 2015
3.7 Soil Water Distribution Coefficient (Kd); Soil Organic/Carbon Partition Coefficients (Koc)	Added definition of volatile compounds	Increase transparency and improve consistency across EPA programs	December 2015

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2.2.1 SF, IUR, RfD and RfC Data Collection	The reference hierarchy for collection of slope factor, inhalation unit risk, reference concentration and reference dose data was modified	Improve consistency across EPA programs	6/2/2014
	Additional language provided to describe the use of ATSDR MRLs based on intermediate exposure scenarios	Increase transparency	6/2/2014
All	Revised to reflect the comprehensive January 2014 SCDM information review and update	Comprehensive review and update to increase consistency across EPA programs	1/30/2014

**SCDM Data Changes**

Information contained in SCDM, including calculated factor values and benchmarks, was last updated globally in January, 2014. This table documents changes to values since that date.

Chemical(s)	Data Element(s)	Original Value	Revised Value	Justification	Date of Change
All radionuclides	Radio (radioactive half-life); Oral Slope, Food; Oral Slope, Soil; Oral Slope, Water; Oral Wt-of-Evid; Inhal Slope; Extern. Exp Slope; Lambda; Area Correct (and corresponding factor values and screening concentration benchmarks)		Values recollected from all relevant hierarchy references	Values updated to reflect changes in the OSTRI_PRG reference	June 2016
All	Inhal RfD calculated from RfC; inhalation slope factor calculated from IUR; all screening concentration benchmarks		Values updated to reflect changes in equations in SCDM Methodology to include most current exposure factors	EPA OSWER Directive 9200.1-120 updated guidance on default exposure factors	June 2016
All	Hydrolysis, biodegradation, and photolysis half-lives for lakes and rivers (and corresponding persistence factor values)		Values recollected for all substances	New reference hierarchy	December 2015
All	Volatility half-lives for lakes and rivers (and corresponding persistence factor values)		Values updated to reflect correction of volatility half-life equations in SCDM Methodology	Correction of a publication error	December 2015
Asbestos	Oral slope factor (and corresponding screening concentration benchmarks)	1.9E-04 (mg/kg/day)^-1	-	Correction	December 2015
	Oral Wt-of-Evid	A	-	Correction	December 2015
Substances for which MCLG is available	MCLG	-	MCLG value, where available	Correction	December 2015
Radionuclides for which Extern. Exp Slope values are listed	Extern. Exp. Slope (source updated)	-	OSTRI_PRG	Correction	December 2015

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Benzo(j,k)fluorene (Fluoranthene)	Oral RfD (source updated)	ATSDR	IRIS	Correction	December 2015
Beryllium	NESHAPS	-	2.8E+04 µg/m <sup>3</sup>	Present NESHAPS values	December 2015
Bromodichloromethane	RfC (and corresponding Inhal RfD and screening concentration benchmark)	-	2E-02 mg/m <sup>3</sup>	Value updated to reflect available data	December 2015
Carbazole	Oral Slope (and corresponding screening concentration benchmarks)	2.0E-02 (mg/kg/day) <sup>-1</sup>	-	Value updated to reflect available data	
Chlordane, alpha-	Melting Point	1.7E+02 °C	1.0E+02 °C	Correction	December 2015
Chloroform	RfC (and corresponding Inhal RfD and screening concentration benchmark)	9.0E-02 mg/m <sup>3</sup>	9.7E-02 mg/m <sup>3</sup>	Correction	December 2015
Chromium(VI)	Oral ED10 Wgt	A	-	Correction	December 2015
Chromium(VI)	Inhal ED10 Wgt (source updated)	EPA_ED10	SPHEM	Correction	December 2015
Chromium(VI)	Oral Wt-of-Evid	-	B2	Correction	December 2015
Dichloroethylene, 1,2- (Mixed Isomers)	Oral RfD (source updated)	HEAST	HEAST_Sub	Clarification	December 2015
Hexachloroethane	All		Values collected for all data elements	Substance added to SCDM	December 2015

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Hydrazine	Oral RfD (and corresponding screening concentration benchmarks)	-	9E-04 mg/kg/day	Value updated to reflect available data	December 2015
Lead chromate	All		All values deleted	Substance deleted from SCDM	December 2015
Mercuric chloride	All		Values collected for all data elements	Substance added to SCDM	December 2015
Mercury (elemental)	Oral RfD (and corresponding screening concentration benchmarks)	3.0E-04 mg/kg/day	1.6E-04 mg/kg/day	Use values specific to elemental mercury, where available	December 2015
	Fresh Ecol LC50	4.7E+00 µg/L	4.0E+00 µg/L	Use values specific to elemental mercury, where available	December 2015
	Geo Mean Sol	4.8+03 mg/L	3.9E+03 mg/L	Correction	December 2015
Methyl isobutyl ketone	Oral RfD (and corresponding screening concentration benchmarks)	8.0E-02 mg/kg/day	8.0E-01 mg/kg/day	Value updated to reflect availability of data	December 2015
Methylmercury	All		Values collected for all data elements	Substance added to SCDM	December 2015
Nickel	Oral ED10 Wgt	A	-	Correction	December 2015
Nickel	Inhal ED10 Wgt (source updated)	EPA_ED10	SPHEM	Correction	December 2015

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Nickel 59	Parent Substance	-	Nickel	Clarification	December 2015
Trichlorofluoromethane	RfC (and corresponding Inhal RfD, screening concentration benchmarks)	7.0E-01 mg/m <sup>3</sup>	1.0E+00 mg/m <sup>3</sup>	Value updated to reflect availability of data	December 2015
Uranium 238(+D) (radionuclide)	CASRN	024678-82-8	E1734789	CASRN replaced with EPA ID	December 2015
Vanadium	Oral RfD (and corresponding screening concentration benchmarks)	9.0E-03 mg/kg/day	5.0E-03 mg/kg/day		December 2015
Vinyl chloride	NESHAPS	-	1.0E-02 µg/m <sup>3</sup>	Present NESHAPS values	December 2015
Dichloroethylene, 1,2-trans-	RfC	6.0E-02 mg/m <sup>3</sup>	7.9E-01 mg/m <sup>3</sup>	Value updated to reflect a change in the reference	6/2/2014
	RfC Source	PPRTV	ATSDR-Int	Value updated to reflect a change in the reference	6/2/2014
	Inhal RfD	1.7E-02 mg/kg/day	2.2E-01 mg/kg/day	Value is based on the updated RfC value for this substance	6/2/2014
	Inhal RfD Source	PPRTV	ATSDR-Int	Value is based on the updated RfC source value for this substance	6/2/2014

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	Air Pathway Non Cancer Risk	6E-02 mg/m^3	8E-01 mg/m^3	Value is based on the updated RfC value for this substance	6/2/2014
Dimethyl phenol, 2,4-	Oral RfD	-	2E-02 mg/kg/day	Correction of a publication error	3/14/2014
	Toxicity (Factor Value)	10	100	Correction of a publication error	3/14/2014
	Ground Water Pathway Non Cancer Risk	-	3E-01 mg/L	Correction of a publication error	3/14/2014
	Soil Exposure Pathway Non Cancer Risk	-	1E+03 mg/kg	Correction of a publication error	3/14/2014
	Surface Water Pathway Drinking Water Non Cancer Risk	-	3E-01 mg/L	Correction of a publication error	3/14/2014
	Surface Water Pathway Human Foodchain Non Cancer Risk	-	2E+01 mg/kg	Correction of a publication error	3/14/2014
	RfC	6.0E-01 mg/m^3	-	Correction of a publication error	3/14/2014
	Inhal RfD	1.7E-01 mg/kg/day	-	Correction of a publication error	3/14/2014
	Air Pathway Non Cancer Risk	6E-01 mg/m^3	-	Correction of a publication error	3/14/2014
Nitrosodimethylamine, N-	Oral Wt-of-Evid	-	B2	Correction of a publication error	3/14/2014



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Tetrachlorodibenzo-p-dioxin, 2,3,7,8-(TCDD)	Surface Water Pathway Human Foodchain Non Cancer Risk	-	9E-07 mg/kg	Correction of a publication error	3/14/2014
All chemicals	All			Comprehensive review and update to increase consistency across EPA programs	1/30/2014