

# RISC Technical Guide Errata, Updates and Revisions

This section provides a history of corrected errata and any updates or revisions that have occurred to the RISC Technical Guide since it was published in 2001. All of the errata, updates and revisions listed below have already been incorporated into the RISC Technical Guide for your convenience. Incorporated errata have also been highlighted in red to emphasize parts that have been corrected.

## **Errata**

### **July 24, 2001**

<b>Section</b>	<b>Page</b>	<b>Paragraph</b>	<b>Revision</b>
4.4.2.1	4-11	First	First line, delete the word "be"
6.2.1	6-4	Last	Second line, change "Chapter 6" to "Section 6.4"
7.4	7-15	First	First bullet, change "legal" to "constructive"
7.5	7-16	Last	Last sentence, change "COCss" to "COCs"
7.9	7-23	Last	Second line, change "constituent" to "contaminant"
Appendix 1	A.1-11	Row 6, Column 8	Methyl ethyl ketone (MEK), change Migration to GW level from "12" to "11"
Appendix 1	A.1-11	Row 6, Column 10	Methyl ethyl ketone (MEK), change Default Closure Level from "12" to "11"
Appendix 1	A.1-11	Row 14, Column 8	Nitrobenzene, change Migration to GW from "0.12" to "0.028"
Appendix 1	A.1-11	Row 14, Column 10	Nitrobenzene, change Default Closure Level from "0.12" to "0.028"
Appendix 1	A.1-11	Row 14, Column 13	Nitrobenzene, change Residential from "0.018" to "0.0043"
Appendix 1	A.1-11	Row 14, Column 10	Nitrobenzene, change Default Closure Level from "0.018" to "0.0043"
Appendix 1	A.1-11	Row 26, Column 6	1,1,1,2-Tetrachloroethane, change Direct level from "42" to "37"
Appendix 1	A.1-14	Row 22, Column 6	1,1,1,2-Tetrachloroethane, change Direct level from "74" to "63"
Appendix 1	A.1-18	Row 8, Column 10	Arsenic, change MP from "817" to "818"
Appendix 1	A.1-18	Row 8, Column 11	Arsenic, change BP from "615" to "613"
Appendix 1	A.1-20	Row 3, Column 11	Cyanide, Free, change BP from "-201" to "201"
Appendix 1	A.1-21	Row 4, Column 4	Dimethylphthalate, change Koc from "3.70e+01" to "3.74e+01"
Appendix 1	A.1-21	Row 4, Column 8	Dimethylphthalate, change S from "4.30e-03" to "4.30e+03"
Appendix 1	A.1-22	Row 6	An informational note about lead was added
Appendix 1	A.1-22	Row 19, Column 4	2-nitroaniline, change Koc from "3.93e+02" to "2.66e+01"
Appendix 1	A.1-24	Notes	Added note #2: "Lead is regulated using two different models: a media-specific ingestion and absorption model for industrial exposure, and a pharmacokinetic model for children in residential exposure. See also footnote 8 on page A-15"
Appendix 1	A.1-45	Row 2, Column 9	Nitrobenzene, change RfDi Value from "1.1e-01" to "5.7e-4"
Appendix 1	A.1-45	Row 2, Column 10	Nitrobenzene, change RfDi Source from "H" to "9 (H) "
Appendix 1	A.1-46	Table Legend	Added the following note: "A parenthesis indicates the reference cited by a source. Example: 9 (N) means the value was taken from EPA Region 9 Screening Tables, and Region 9 cited NCEA as its source."

### **December 21, 2001**

<b>Section</b>	<b>Page</b>	<b>Paragraph</b>	<b>Revision</b>
Appendix 1	A.1-9	Row 39, Column 8	Cyanide free, change Migration to GW from "150" to "40"
Appendix 1	A.1-9	Row 40, Column 6	Cyclohexane, change Direct from "24'00" to "24,000"
Appendix 1	A.1-14	Row 22, Column 4	1,1,1,2-Tetrachloroethane, change Construction from "7900" to "7100"
Appendix 1			2,4-Dichlorophenoxyacetic acid added as a constituent to tables, contact IDEM for closure numbers

### **February 20, 2003**

<b>Section</b>	<b>Page</b>	<b>Paragraph</b>	<b>Revision</b>
Appendix 2	A.2-4	Fourth	Fifth line, Added the chemical Naphthalene to the list of polynuclear aromatic hydrocarbons (PAHs) contaminants to be screened for at High-End Liquid Hydrocarbon Fuels and Hydrocarbon Oils petroleum sites. The list of PAHs currently screened for by IDEM can be found in Chapter 8 of the RISC Technical Guide.

### **July 29, 2003**

The following compounds have been updated and the new numbers can be found in the updated table, RISC Default Table 2003. The updated table is located on the RISC web page under Appendix 1 of the Technical Guide and also in the Updates section of the web page. New toxicology information was used to calculate these values. The table located within Appendix 1 of the Technical Guide is not the most current and up to date table. Please continue to check the Updates section of the web page for new numbers and information.

<b>Section</b>	<b>Page</b>	<b>Paragraph</b>	<b>Revision</b>
Appendix 1	A.1	Row 27	Carbon Tetrachloride - CAS 56-23-5
Appendix 1	A.2	Row 7	1,1-Dichloroethane - CAS 75-34-3
Appendix 1	A.2	Row 8	1,2-Dichloroethane - CAS 107-06-02
Appendix 1	A.2	Row 9	1,1-Dichloroethylene - CAS 75-35-4
Appendix 1	A.2	Row 10	Cis 1,2-Dichloroethylene - CAS 156-59-2
Appendix 1	A.2	Row 11	Trans 1,2-Dichloroethylene - CAS 156-60-5
Appendix 1	A.3	Row 24	Tetrachloroethylene (PCE) - CAS 127-18-4
Appendix 1	A.3	Row 31	Trichloroethylene (TCE) - CAS 79-01-6
Appendix 1	A.3	Row 38	Vinyl Chloride (chloroethene) - CAS 75-01-4

### **February 19, 2004**

<b>Section</b>	<b>Page</b>	<b>Paragraph</b>	<b>Revision</b>
Appendix 1	A.1-46	Row 10	The Table F Human Health Toxicity Parameters for Iodomethane are incomplete. The Chronic SFi for Iodomethane should be listed as 1.0 (mg/kg-day) <sup>-1</sup> and the Chronic RfDi as 0.0042 mg/kg-day.

### **August 21, 2009**

<b>Section</b>	<b>Page</b>	<b>Paragraph</b>	<b>Revision</b>
Chapter 6	6-9	Fifth, second line	delete the word "a."
Chapter 7	7-20	Third bullet in 7.5.3	Put space between "at" and "http:"
Chapter 7	7-49	Fourth	Line 4, delete the word "of" so the line reads "evaluate the performance"
Chapter 8	8-11	Third	Line 2, delete the words "to be" from the parenthetical phrase

## **Updates and Revisions**

### **July 14, 2003**

The default RISC tables were updated.

### **January 1, 2004**

The default RISC tables as well as other tables located within Appendix 1 of the RISC Technical Guide were updated.

### **January 31, 2006**

The default RISC tables were updated.

### **August 1, 2006**

Changes were made to the some PAH closure levels August 1, 2009. Additional information on the changes is available at [http://www.in.gov/idem/files/risc\\_pah\\_announcement.pdf](http://www.in.gov/idem/files/risc_pah_announcement.pdf).

### **November 13, 2006**

TCE slope factors were updated November 13, 2006. Additional information on the update is available at <http://www.in.gov/idem/5316.htm>.

### **May 21, 2009**

The default RISC tables were updated to include revised closure levels for certain PAHs developed in August of 2006, revised TCE toxicity information developed in November of 2006. The default RISC construction worker closure levels were corrected using industrial slope factors instead of the incorrect residential slope factors for vinyl chloride. Three compounds were also added to Appendix 1 tables; ethylene glycol, propylene glycol monomethyl ether, and trichlorofluoromethane. One compound, bis(2-chloroisopropyl)ether, was removed from Appendix 1 because its toxicity factors were removed from the IRIS database.

### **August 21, 2009**

Chapter 8 and Appendix 8 were updated to reflect updates to IDEM's TPH Remediation Goals and Procedures made on July 16, 2009 (available at [http://www.in.gov/idem/files/risc\\_tph\\_announce\\_20090716.pdf](http://www.in.gov/idem/files/risc_tph_announce_20090716.pdf)). Three fractions were given more appropriate toxicity surrogates:

Aromatic EC > 8-10: naphthalene was replaced with cumene

Aromatic EC > 10-12: naphthalene was replaced with 1,1 biphenyl

Aromatic EC > 12-16: naphthalene was replaced with 1,1 biphenyl

These new surrogates propagated the calculation of new default closure levels. Diesel analysis was limited to the 8015 DRO range, rather than ERO range. A weight of evidence for site closure was also developed for sites whose soil and groundwater COC levels were below their closure levels, but TPH DRO was still detected above residential ground water closure levels. Lastly, the potential for naturally occurring TPH from shale and crude oil in soils was addressed by recommending it be investigated as a background issue.

### **June 14, 2010**

Chapter 8 and Appendix 8.1 were updated to reflect changes in IDEM's guidance concerning sampling for TPH in ground water made on June 14, 2010. Please see the document "Announcement of Changes to Total Petroleum Hydrocarbon (TPH) Procedures for Ground Water (available at [http://www.in.gov/idem/files/risc\\_tph\\_announce\\_20100617.pdf](http://www.in.gov/idem/files/risc_tph_announce_20100617.pdf)) for more information.