A Manual of Recommended Practice on Assessment of Health Risks Arising from the Use of Chemicals Hazardous to Health at the Workplace 3rd Edition (2017)

CORRIGENDA

The following list provides a description of the changes made to the publication since the original version was printed.

Chapter 1: INTRODUCTION

1. Page 10, 1.1 SCOPE, first paragraph second sentence b):
   Delete "2013" *after* "CLASS Regulations"

Chapter 4: DETERMINE DEGREE OF HAZARD

2. Page 27, 4.2.1.1 Hazard rating – inhalation
   Replace Table 1 *with Table below*

Table 1: Hazard Rating for Inhalation Exposure Based on Health Effect, Hazard Classification, H-code and Acute Toxicity Data

HR	Health Effects	Hazard Classification	H-code	Acute toxicity
5	• Injury of sufficient severity to threaten life by single exposure; • Causing fatality at low doses or concentration; • Severe irreversible effects (damage to target organ e.g. central nervous system effects, kidney necrosis, liver lesions, anaemia or paralysis) after a single exposure; • Known to have carcinogenic potential for humans; • Known to induce heritable mutations in the germ cells of humans; • Known human reproductive toxicant	Acute toxicity category 1 (inhalation)	H330	$LC_{50} \leq 0.5$ mg/l (vapours) $LC_{50} \leq 100$ ppmV (gases) $LC_{50} \leq 0.05$ mg/l (dusts/mists)
		Carcinogenicity category 1A	H350, H350i	
		Mutagenicity category 1A	H340	
		Reproductive toxicity category 1A	H360, H360D, H360F, H360FD, H360Fd, H360Df	
		Specific target organ toxicity – single exposure category 1	H370	
4	• Injury of sufficient severity to cause permanent	Acute toxicity category 2 (inhalation)	H330	$0.5 < LC_{50} \leq 2.0$ mg/l (vapours)

HR	Health Effects	Hazard Classification	H-code	Acute toxicity
	impairment, disfigurement or irreversible change from single or repeated exposure. • Very serious physical or health impairment by repeated or prolonged exposure; • Serious damage to target organ from single exposure; • Presumed to have carcinogenic potential for humans; • Chemicals which should be regarded as if they induce heritable mutations in the germ cells of humans; • Presumed human reproductive toxicant	Carcinogenicity category 1B	H350, H350i	$100 < LC_{50} \leq 500$ ppmV (gases) $0.05 < LC_{50} \leq 0.5$ mg/l (dusts/mists)
		Mutagenicity category 1B	H340	
		Reproductive toxicity category 1B	H360, H360D, H360F, H360FD, H360Fd, H360Df	
		Effects on or via lactation	H362	
		Specific target organ toxicity – single exposure category 2	H371	
		Specific target organ toxicity – repeated exposure category 1	H372	
		Respiratory sensitisation category 1	H334	
3	• Serious damage to target organ from repeated exposure; • Toxic effects after exposure; • Suspected human carcinogens; • Chemicals which cause concern for humans owing to the possibility that they may induce heritable mutations in the germ cells of humans; • Suspected human reproductive toxicant; • Effect to respiratory tract after single exposure.	Acute toxicity category 3 (inhalation)	H331	$2 < LC_{50} \leq 10$ mg/l (vapours) $500 < LC_{50} \leq 2500$ ppmV (gases) $0.5 < LC_{50} \leq 1$ mg/l (dusts/mists)
		Carcinogenicity category 2	H351	
		Mutagenicity category 2	H341	
		Reproductive toxicity category 2	H361, H361f, H361d, H361fd	
		Specific target organ toxicity – repeated exposure category 2	H373	
		Specific target organ toxicity – single exposure category 3 *(respiratory tract irritation)*	H335	
2	• Reversible effects, not severe enough to cause	Acute toxicity category 4 (inhalation)	H332	$10 < LC_{50} \leq 20$ mg/l (vapours)

HR	Health Effects	Hazard Classification	H-code	Acute toxicity
	serious health impairment; • Changes readily reversible once exposure ceases; • Harmful effects after exposure.	Specific target organ toxicity – single exposure category 3 *(narcotic effect)*	H336	$2500 < LC_{50} \leq 20000$ ppmV (gases) $1 < LC_{50} \leq 5$ mg/l (dusts/mists)
1	• Minimal adverse health effects	Chemical not otherwise classified	H333	$LC_{50} > 20$ mg/l (vapours) $LC_{50} > 20000$ ppmV (gases) $LC_{50} > 5$ mg/l (dusts/mists)

3. Page 34, 4) Herbicide diquat, Health hazard classification:
"Acute toxicity category 2 (inhalation)" is *corrected as* "Acute toxicity category 3 (inhalation)"

4. Page 35
(a) HR determined based on acute toxicity data using **Table 1**:
HR in the table below the sentence (a) is *corrected to* HR = 3 as *indicated in the following table*

Acute toxicity data		HR
LC_{50} (inhalation)	0.64 mg/L	3

(b) HR determined based on hazard classification data using **Table 1**:
Hazard classification and HR for acute toxicity is *corrected as below*

Hazard classification	HR
Acute toxicity category 3 (inhalation)	3

CHAPTER 7: CONTROL MEASURES

5. Page 66, 7.3.3 Control of dermal exposure, second paragraph, sentence 1)
Replace "dermatitis" *with* "any skin disease or skin absorption"

CHAPTER 8: EXPOSURE MONITORING PROGRAMME

6. Page 70, Figure 5
6.1 *In box* "Level of risk i.e. moderate to high (inhalation)" *delete* "(inhalation)"
6.2 *In box* "Availability of valid method and PEL/OEL" *add* "/BEL"

CHAPTER 9: MEDICAL SURVEILLANCE PROGRAMME

7. Page 72, Figure 6

7.1 *Replace* Figure 6 *with the following Figure*

7.2 *Remove note* "EM: Exposure monitoring"

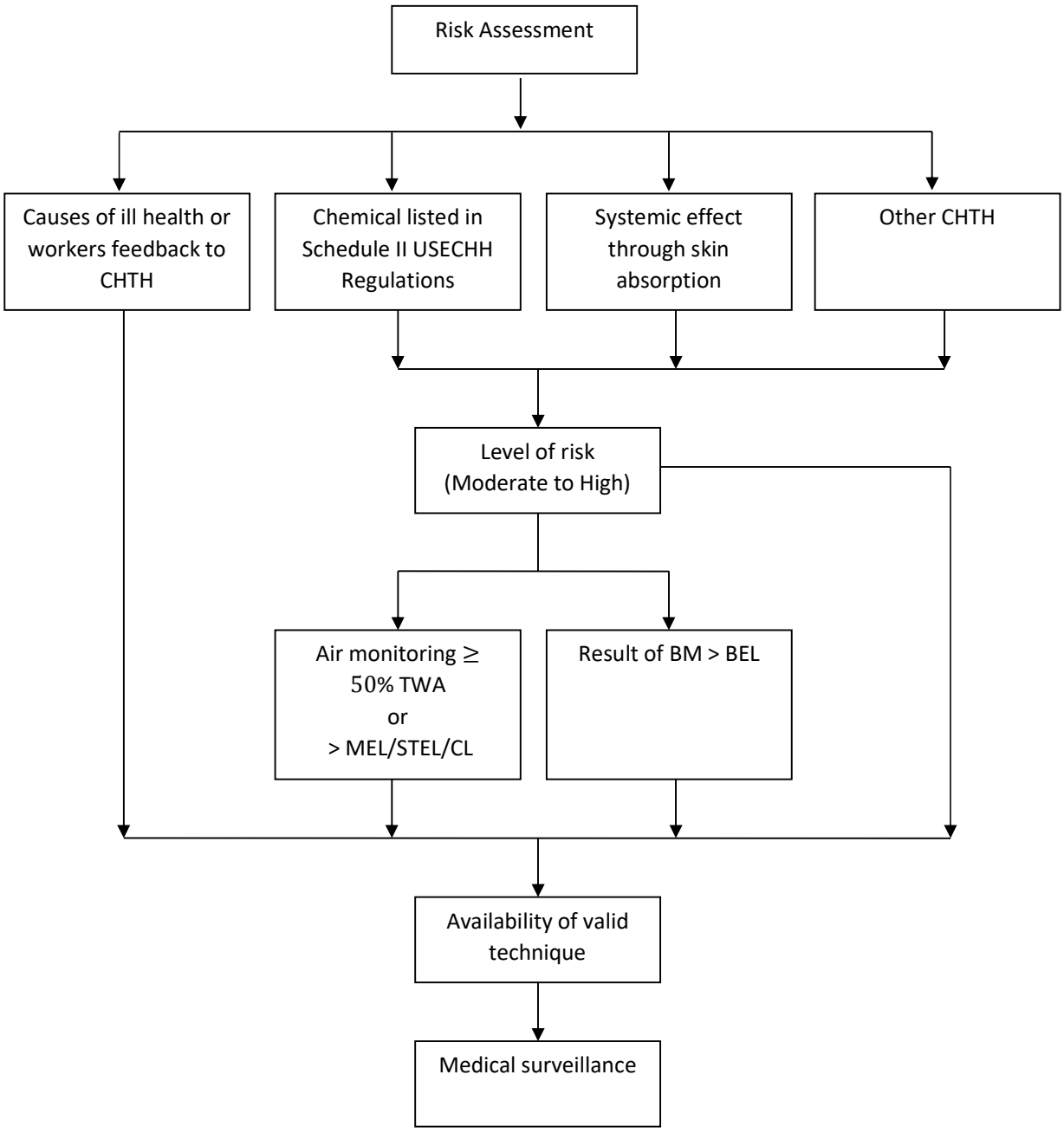

Figure 6: Necessity of the Medical Surveillance Programme

CHAPTER 10: CONCLUDE, RECOMMEND AND PRIORITISE

8. Page 77, 10.2.5 Requirement for training and retraining, first paragraph and first sentence
   Add "or exposed to" *after* "handling"

9. Page 77, 10.3 SPECIFIC ACTIONS TO BE TAKEN, first sentence
   9.1 *Add* "or presumed" *after* "a) Known"
   9.2 *Replace* "**Chapter 7**" *with* "paragraph 7.3.1 and 7.3.2"

FORMS AND GUIDANCE NOTES ON FILLING FORMS

10. Page 99, Table D4: Exposure Monitoring & Medical Surveillance
    Replace "(a) Monitoring of personal exposures and general air levels" *with* "(a) Exposure monitoring (air monitoring and or biological monitoring)"

Guidance Notes on Filling Form D (Control Measures and Recommendation)

11. Page 102, Table D4: Exposure Monitoring and Medical Surveillance
    11.1 *Remove sentence* "Recommendation: State Yes (Y), No (N) or Not Applicable (NA)."
    11.2 *Replace sentence* "State quantitative exposure monitoring that has been conducted by hygiene technician I for the chemical of interest." *with* "State necessity to conduct exposure monitoring. If exposure monitoring is necessary, specify the chemical identity or chemical name."
    11.3 *Replace* "exposure" *with* "air and or biological"
    11.4 *Add* "and or BEL" *after* "PEL"
    11.5 *Replace sentence* "State any medical surveillance that have been conducted by OHD." *with* "State necessity to conduct medical surveillance. If medical surveillance is necessary, specify the chemicals identity or chemical name."

APPENDIX 3 (CHAPTER 4)

12. Page 116, first paragraph

Replace existing table with *the following table:*

WHO Classification		Pesticides Hazard Class	CLASS Regulations		
LD_{50} for the rat (mg/kg body weight)			Acute Toxicity Hazard Category	LD_{50} (mg/kg body weight)	
Oral	Dermal			Oral	Dermal
< 5	< 50	Ia	Category 1	≤ 5	≤ 50
5 - 50	50 - 200	Ib	Category 2	$5 < LD_{50} \leq 50$	$50 < LD_{50} \leq 200$
50 - 2000	200 - 2000	II	Category 3	$50 < LD_{50} \leq 300$	$200 < LD_{50} \leq 1000$
			Category 4	$300 < LD_{50} \leq 2000$	$1000 < LD_{50} \leq 2000$
> 2000	> 2000	III	Not Classified (GHS Cat. 5)	> 2000	> 2000
≥ 5000	≥ 5000	IV			