## A GUIDE TO SELECTED ALGORITHMS, DISTRIBUTIONS, AND DATABASES USED IN EXPOSURE MODELS DEVELOPED BY THE OFFICE OF AIR QUALITY PLANNING AND STANDARDS

## **APPENDICES**

by

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### **REVISED DRAFT**

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Appendix A

Distribution of Energy Expenditure Rates Associated with CHAD Location Descriptors Distributions for Energy Expenditure Rates By Activity Code, Age, and Occupation (if applicable).

Notes:

- 1. Activities coded as 10... are activities with codes beginning with 10.
- 2. OCC: occupational categories.
- 3. DN: distribution number
- 4. DL: distribution type (T = triangular, N = normal, U = uniform, E = exponential, P = point)
- 5. Activities starting with 17... are calculated based on age.
  - Age = 1 if respondent < 25 years
    - Age = 2 if respondent 25 39 years
    - Age = 3 if respondent > 40 years

ACTIV- ITY	AGE	000	DN	DL	MEAN	MED	SD	MIN	MAX	FLAG	LEFT	RIGHT
10	Х	ADMIN	4	L	1.7	1.7	0.3	1.4	2.7	0	0.16	0.01
10	Х	PROF	5	Т	2.9	2.7	1	1.2	5.6	0	0	0
10	Х	ADMSUP	4	L	1.7	1.7	0.3	1.4	2.7	0	0.16	0.01
10	Х	TECH	5	Т	3.3	3.3	0.4	2.5	4.5	1	0	0
10	Х	TRANS	4	L	3.3	3	1.5	1.3	8.4	1	0.03	0.01
10	Х	SALE	5	Т	2.9	2.7	1	1.2	5.6	0	0	0
10	Х	SERV	5	Т	5.2	5.3	1.4	1.6	8.4	1	0	0
10	Х	HSHLD	4	L	3.6	3.5	0.8	2.5	6	1	0.07	0.01
10	Х	PROTECT	5	Т	2.9	2.7	1	1.2	5.6	0	0	0
10	Х	PREC	5	Т	3.3	3.3	0.4	2.5	4.5	1	0	0
10	Х	MACH	2	U	5.3	5.3	0.7	4	6.5	1	0	0
10	Х	FARM	4	L	7.5	7	3	3.6	17	1	0.04	0.01
10	Х	LABOR	5	Т	8.5	8.4	2.1	3.6	13.8	1	0	0
17100	1	Х	4	L	5.7	5	3	1.4	16	1	0.01	0.01
17100	2	Х	1	Ν	5	5	2	1	9	1	0.02	0.02
17100	3	Х	1	Ν	4.5	4.5	1.4	1.7	7.3	1	0.02	0.02
17110	1	Х	4	L	3.6	3.2	1.9	1.4	10	1	0.05	0.01
17110	2	Х	4	L	3.6	3.2	1.9	1.4	10	1	0.05	0.01
17110	3	Х	4	L	3.4	3	1.7	1.4	9	1	0.05	0.01
17111	1	Х	1	Ν	5.6	5.6	2.1	1.4	9.8	1	0.02	0.02
17111	2	Х	1	Ν	5.8	5.8	2.4	1	10.6	1	0.02	0.02
17111	3	Х	1	Ν	4.7	4.7	1.8	1.1	8.3	1	0.02	0.02
17112	1	Х	2	U	3.8	3.8	1	2	5.5	1	0	0
17112	2	Х	2	U	3.8	3.8	1	2	5.5	1	0	0
17112	3	Х	2	U	3.5	3.5	0.9	2	5	1	0	0
17120	1	Х	4	L	4.2	3.9	1.5	2	9	1	0.03	0.01
17120	2	Х	4	L	4.2	3.9	1.5	2	9	1	0.03	0.01
17120	3	Х	6	Р	3.5	3.5		•	•	1		
17121	1	Х	4	L	4.2	3.9	1.5	2	9	1	0.03	0.01
17121	2	Х	4	L	4.2	3.9	1.5	2	9	1	0.03	0.01
17121	3	Х	6	Р	3.5	3.5	•	•	•	1		
17130	1	Х	4	L	5.8	5.5	1.8	1.8	11.3	1	0	0.01
17130	2	Х	1	Ν	5.7	5.7	1.8	2.1	9.3	1	0.02	0.02
17130	3	Х	1	Ν	4.7	4.7	1.2	2.3	7.1	1	0.02	0.02
17131	1	Х	4	L	5.8	5.5	1.8	1.8	11.3	1	0	0.01
17131	2	Х	1	Ν	5.7	5.7	1.8	2.1	9.3	1	0.02	0.02
17131	3	Х	1	Ν	4.7	4.7	1.2	2.3	7.1	1	0.02	0.02
17140	1	Х	1	Ν	5.3	5.3	1.8	1.7	8.9	1	0.02	0.02
17140	2	Х	1	Ν	5.2	5.2	1.7	1.7	8.9	1	0.02	0.01

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ACTIV- ITY	AGE	000	DN	DL	MEAN	MED	SD	MIN	MAX	FLAG	LEFT	RIGHT
17140	3	Х	1	Ν	3.8	3.8	1	1.8	5.8	1	0.02	0.02
17144	1	Х	1	N	5.3	5.3	1.8	1.7	8.9	1	0.02	0.02
17144	2	Х	1	N	5.2	5.2	1.7	1.7	8.9	1	0.02	0.01
17144	3	Х	1	N	3.8	3.8	1	1.8	5.8	1	0.02	0.02
17180	1	Х	4	L	6.6	5.9	3.2	2	17.4	1	0.01	0.01
17180	2	Х	1	N	6	6	2	2	10	1	0.02	0.02
17180	3	Х	1	N	4.8	4.8	1.4	2	7.6	1	0.02	0.02
10200	Х	Х	2	U	1.8	1.8	0.4	1	2.5	0	0	0
10300	Х	Х	2	U	1.8	1.8	0.4	1	2.5	0	0	0
11000	Х	Х	5	Т	4.7	4.6	1.3	1.5	8	1	0	0
11100	Х	Х	4	L	2.6	2.5	0.5	2	4	0	0.13	0.01
11110	Х	Х	3	E	2.8	2.5	0.9	1.9	4	0	0	0.02
11200	Х	Х	3	E	3.4	3	1.4	2	5	1	0	0.01
11210	Х	Х	2	U	2.5	2.5	0.1	2.3	2.7	0	0	0
11220	Х	Х	3	E	4.1	3.5	1.9	2.2	5	1	0	0.01
11300	Х	Х	1	Ν	5	5	1	2	7	1	0	0.02
11310	Х	Х	3	Е	5.3	4.5	2.7	2.6	6	1	0	0
11400	Х	Х	3	Е	2.2	2	0.7	1.5	4	0	0	0.02
11410	Х	Х	6	Р	2	2				0	-	
11500	Х	Х	6	Р	2	2			-	0	-	-
11600	Х	Х	1	Ν	4.5	4.5	1.5	2	8	1	0.05	0.01
11610	Х	Х	6	Р	4.5	4.5				1	-	
11620	Х	Х	3	E	4.9	4.5	1.4	3.5	6	1	0	0
11630	Х	Х	5	Т	3.5	3.4	0.4	3	4.5	1	0	0
11640	Х	Х	3	E	4.7	4.5	0.7	4	6	1	0	0
11650	Х	Х	2	U	4.5	4.5	1.4	2	7	1	0	0
11700	Х	Х	2	U	3.5	3.5	0.9	2	5	1	0	0
11800	Х	Х	2	U	3.3	3.3	0.1	3	3.5	1	0	0
11900	Х	Х	3	Е	6.6	5.5	3.6	3	9	1	0	0
12000	Х	Х	4	L	3.1	3	0.7	2.5	5	1	0.2	0.01
12100	Х	Х	2	U	3.3	3.3	0.1	3	3.5	1	0	0
12200	Х	Х	2	U	3.3	3.3	0.1	3	3.5	1	0	0
12300	Х	Х	2	U	2.8	2.8	0.1	2.5	3	0	0	0
12400	Х	Х	2	U	2.8	2.8	0.1	2.5	3	0	0	0
12500	Х	Х	2	U	2.8	2.8	0.1	2.5	3	0	0	0
12600	Х	Х	2	U	4.5	4.5	0.3	4	5	1	0	0
12700	Х	Х	2	U	3.2	3.2	0.1	3	3.3	1	0	0
12800	Х	Х	2	U	3	3	0.3	2.5	3.5	1	0	0
13000	Х	Х	5	Т	3.8	3.7	0.8	2	6	1	0	0
13100	Х	Х	2	U	3.3	3.3	0.4	2.5	4	1	0	0
13200	Х	Х	5	Т	3.7	3.6	0.8	2	6	1	0	0
13210	Х	Х	5	Т	3.9	3.8	0.8	2.2	6	1	0	0
13220	Х	Х	2	U	3.4	3.4	0.6	2.3	4.5	1	0	0
13230	Х	Х	2	U	3.5	3.5	0.6	2.5	4.5	1	0	0
13300	Х	Х	2	U	3.5	3.5	0.6	2.5	4.5	1	0	0
13400	Х	Х	2	U	3.5	3.5	0.6	2.5	4.5	1	0	0
13500	X	X	2	U	3.5	3.5	0.6	2.5	4.5	1	0	0
13600	X	X	2	U	3.5	3.5	0.6	2.5	4.5	1	0	0
13700	X	X	2	U	3.5	3.5	0.6	2.5	4.5	1	0	0
13800	X	X	2	U	3.5	3.5	0.6	2.5	4.5	1	0	0
10000	~	~	-	5	0.0	0.0	0.0	2.0	7.0		5	5

I												
ACTIV- ITY	AGE	000	DN	DL	MEAN	MED	SD	MIN	MAX	FLAG	LEFT	RIGHT
14000	Х	Х	2	U	2	2	0.6	1	3	0	0	0
14100	Х	Х	1	Ν	2	2	0.3	1	4	0	0	0
14110	Х	Х	2	U	3	3	0.6	2	4	1	0	0
14120	Х	Х	2	U	1.8	1.8	0.4	1	2.5	0	0	0
14200	Х	Х	2	U	1.8	1.8	0.4	1	2.5	0	0	0
14300	Х	Х	4	L	3.1	3	0.7	2.5	5	1	0.2	0.01
14400	Х	Х	2	U	1.8	1.8	0.1	1.5	2	0	0	0
14500	Х	Х	4	L	0.9	0.9	0.1	0.8	1.1	0	0.09	0.01
14600	Х	Х	6	Р	2.5	2.5				0	-	
14700	Х	Х	5	Т	2	2	0.4	1	2.9	0	0	0
15000	Х	Х	4	L	1.9	1.8	0.7	1.4	4	0	0.23	0.01
15100	Х	Х	2	U	2.1	2.1	0.4	1.4	2.8	0	0	0
15110	Х	Х	2	U	2.3	2.3	0.4	1.5	3	0	0	0
15120	Х	Х	2	U	2.1	2.1	0.4	1.4	2.8	0	0	0
15130	Х	Х	2	U	2	2	0.3	1.4	2.5	0	0	0
15140	Х	Х	2	U	1.8	1.8	0.2	1.4	2.2	0	0	0
15200	Х	Х	2	U	2.2	2.2	0.5	1.4	3	0	0	0
15300	Х	Х	6	Р	1.8	1.8				0		
15400	Х	Х	2	U	2.3	2.3	0.4	1.5	3	0	0	0
15500	Х	Х	2	U	2.8	2.8	0.7	1.5	4	0	0	0
16000	Х	Х	4	L	2.2	2	1.1	1	6	0	0.07	0.01
16100	Х	Х	2	U	2.7	2.7	0.8	1.4	4	0	0	0
16200	Х	Х	2	U	1.7	1.7	0.2	1.4	2	0	0	0
16210	Х	Х	2	U	1.7	1.7	0.2	1.4	2	0	0	0
16300	Х	Х	2	U	1.3	1.3	0.2	1	1.6	0	0	0
16400	Х	Х	2	U	1.7	1.7	0.4	1	2.3	0	0	0
16500	Х	Х	2	U	2.5	2.5	0.3	2	2.9	0	0	0
16600	Х	Х	2	U	1.5	1.5	0.3	1	1.9	0	0	0
16700	Х	Х	4	L	3.3	3	1.4	1.5	8	1	0.05	0.01
16800	Х	Х	4	L	3.3	3	1.4	1.5	8	1	0.05	0.01
16900	Х	Х	2	U	3.8	3.8	1.3	1.5	6	1	0	0
17113	Х	Х	2	U	3	3	0.6	2	4	1	0	0
17114	Х	Х	5	Т	3.1	3.2	0.6	1.4	4	1	0	0
17122	Х	Х	2	U	1.5	1.5	0.2	1.2	1.8	0	0	0
17141	Х	Х	5	Т	2.8	2.7	0.8	1.5	5	0	0	0
17142	Х	Х	5	Т	2	1.9	0.4	1.5	3	0	0	0
17143	Х	Х	2	U	2.5	2.5	0.3	2	3	0	0	0
17150	X	Х	5	T	3.3	3.2	0.6	2.4	5	1	0	0
17160	Х	Х	2	U	1.6	1.6	0.2	1.2	2	0	0	0
17170	Х	Х	2	U	5	5	1.7	2	8	1	0	0
17200	X	X	4	L	1.3	1.3	0.3	1	2.3	0	0.14	0.01
17210	X	X	2	U	1.5	1.5	0.2	1.2	1.8	0	0	0
17211	X	X	2	U				1.2		0	0	
17212	X	X	2	U				1.2		0	0	
17213	X	X	2	U				1.2		0	0	
17210	X	X	2	U	· ·			1.2		0	0	
17214	X	X	2	U			-	1.2	•	0	0	· ·
17216	X	X	2	U	2.7	2.7	0.8	1.2	4	0	0	0
17210	X	X	4	L	1.2	1.2	0.0	0.9	2.3	0	0.15	0.01
17220	X	× X	2	U	1.2	1.2		1		0		0.01
17221	^	٨	2	U	1.2	1.Z	0.1	I	1.3	U	0	U

ACTIV- ITY	AGE	OCC	DN	DL	MEAN	MED	SD	MIN	МАХ	FLAG	LEFT	RIGHT
17222	Х	Х	2	U	1.9	1.9	0.2	1.5	2.3	0	0	0
17223	Х	Х	6	Р	1	1				0		-
17230	Х	Х	2	U	1.3	1.3	0.2	1	1.6	0	0	0
17231	Х	Х	2	U	1.3	1.3	0.2	1	1.6	0	0	0
17232	Х	Х	2	U	1.3	1.3	0.2	1	1.6	0	0	0
17233	Х	Х	2	U	1.3	1.3	0.2	1	1.6	0	0	0
17240	Х	Х	2	U	1.4	1.4	0.2	1	1.8	0	0	0
17241	Х	Х	2	U	1.4	1.4	0.2	1	1.8	0	0	0
17242	Х	Х	2	U	1.4	1.4	0.2	1	1.8	0	0	0
17250	Х	Х	2	U	1.2	1.2	0.1	1	1.3	0	0	0
17260	Х	Х	2	U	1.9	1.9	0.2	1.5	2.3	0	0	0
17300	Х	Х	2	U	1.5	1.5	0.2	1.2	1.8	0	0	0
18000	Х	Х	4	L	2.3	2	1.3	1	7	0	0.1	0.01
18100	Х	Х	4	L	2.3	2	1.3	1	7	0	0.1	0.01
18200	Х	Х	4	L	2.3	2	1.3	1	7	0	0.1	0.01
18300	Х	Х	4	L	2.3	2	1.3	1	7	0	0.1	0.01
18400	Х	Х	4	L	2.3	2	1.3	1	7	0	0.1	0.01
18500	Х	Х	4	L	2.3	2	1.3	1	7	0	0.1	0.01
18600	Х	Х	4	L	2.3	2	1.3	1	7	0	0.1	0.01
18700	Х	Х	4	L	2.3	2	1.3	1	7	0	0.1	0.01
18800	Х	Х	4	L	2.3	2	1.3	1	7	0	0.1	0.01
18900	Х	Х	4	L	2.3	2	1.3	1	7	0	0.1	0.01
18910	Х	Х	4	L	2.3	2	1.3	1	7	0	0.1	0.01
18920	Х	Х	4	L	2.3	2	1.3	1.8	7	0	0.42	0.01

## **CHAD Activity Codes**

#### <10> Work and Other Income Producing Activities

10000: work and other income producing activities, general 10100: work, general

10110: work, general, for organizational activities

10111: work for professional/union organizations

10112: work for special interest identity organizations

10113: work for political party and civic participation

10114: work for volunteer/ helping organizations

10115: work of/ for religious groups

10116: work for fraternal organizations

10117: work for child/ youth/ family organizations

10118: work for other organizations

10120: work, income-related only

10130: work, secondary (income-related)

10200: unemployment

<11> Household Activities

10300: breaks

11000: general household activities 11100: prepare food 11110: prepare and clean-up food 11200: indoor chores 11210: clean-up food 11220: clean house 11300: outdoor chores 11310: clean outdoors 11400: care of clothes 11410: wash clothes 11500: build a fire 11600: repair, general 11610: repair of boat 11620: paint home/ room 11630: repair/ maintain car 11640: home repairs 11650: other repairs 11700: care for plants 11800: care for pets/ animals 11900: other household <12> Child Care 12000: child care, general 12100: care of baby 12200: care of child 12300: help/teach 12400: talk/read 12500: play indoors

12600: play outdoors 12700: medical care-child 12800: other child care <13> Obtain Goods and Services 13000: obtain goods and services, general 13100: dry clean 13200: shop/ run errands, general 13210: shop for food 13220: shop for clothes or household goods 13230: run errands 13300: obtain personal care service 13400: obtain medical service 13500: obtain government/ financial services 13600: obtain car service 13700: other repairs 13800: other services <14> Personal Needs and Care 14000: personal needs and care, general 14100: shower, bathe, personal hygiene 14110: shower, bathe 14120: personal hygiene 14200: medical care 14300: help and care 14400: eat 14500: sleep or nap 14600: dress, groom 14700: other personal needs <15> Education and Professional Training 15000: general education and professional training 15100: attend full-time school 15110: attend day-care 15120: attend K-12 15130: attend college or trade school 15140: attend adult education and special training 15200: attend other classes 15300: do homework 15400: use library 15500: other education <16> Entertainment/ Social Activities 16000: general entertainment/ social activities 16100: attend sports events 16200: participate in social, political, or religious activities 16210: practice religion 16300: view movie 16400: attend theater 16500: visit museums 16600: visit

16700: attend a party 16800: go to bar/ lounge 16900: other entertainment/ social events <17> Leisure 17000: leisure, general 17100: participate in sports and active leisure 17110: participate in sports 17111: hunting, fishing, hiking 17112: golf 17113: bowling/ pool/ ping pong/ pinball 17114: yoga 17120: participate in outdoor leisure 17121: play, unspecified 17122: passive, sitting 17130: exercise 17131: walk, bike, or jog (not in transit) 17140: create art, music, participate in hobbies 17141: participate in hobbies 17142: create domestic crafts 17143: create art 17144: perform music/ drama/ dance 17150: play games 17160: use of computer 17170: participate in recess and physical education 17180: other sports and active leisure 17200: participate in passive leisure 17210: watch 17211: watch adult at work 17212: watch someone provide childcare 17213: watch personal care 17214: watch education 17215: watch organizational activities 17216: watch recreation 17220: listen to radio/ listen to recorded music/ watch t.v. 17221: listen to radio 17222: listen to recorded music 17223: watch t.v. 17230: read, general 17231: read books 17232: read magazine/ not ascertained 17233: read newspaper 17240: converse/ write 17241: converse 17242: write for leisure/ pleasure/ paperwork 17250: think and relax 17260: other passive leisure 17300: other leisure

#### <18> Travel

18000: travel, general 18100: travel during work 18200: travel to/from work 18300: travel for child care 18400: travel for goods and services 18500: travel for personal care 18600: travel for education 18700: travel for organizational activity 18800: travel for event/ social activity 18900: travel for leisure 18910: travel for active leisure

18920: travel for passive leisure

Appendix B

Microenvironmental Factors Developed for HAPEM4

#### Microenvironmental Factors by Pollutant, Microenvironment, and Source Category for Specified HAPs

		PROX [D	ata Code] ª		MULT = P	ROX × PEN	
Pollutant: <u>Acetaldehyde</u> (#1) HAPEM ME / Number	ADD (œg/m³)	Onroad <sup>b</sup>	Major, area, and nonroad °	PEN [Data Code] <sup>a</sup>	Onroad <sup>d</sup>	Major, area, and nonroad <sup>d</sup>	Reference Sources
Car - In vehicle / 1		3.5 [2]	1.0 [3]	0.90 [2]	3.15	0.9	
Bus - In vehicle / 2		3.5 [2]	1.0 [3]	0.90 [2]	3.15	0.9	
Truck - In vehicle / 3		3.5 [2]	1.0 [3]	0.90 [2]	3.15	0.9	
Other - In vehicle / 4		3.5 [2]	1.0 [3]	0.90 [2]	3.15	0.9	
Public garage - Indoors / 5		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Parking lot/garage - Outdoors / 6		2.7 [2]	1.0 [3]	1.0 [3]	2.7	1	
Near road - Outdoors / 7		2.7 [2]	1.0 [3]	1.0 [3]	2.7	1	
Motorcycle - Outdoors / 8		2.7 [2]	1.0 [3]	1.0 [3]	2.7	1	
Service station - Indoors / 9		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Service station - Outdoors / 10		2.7 [2]	1.0 [3]	1.0 [3]	2.7	1	
Residential garage - Indoors / 11		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Other repair shop - Indoors / 12		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Residence (no CO source) - Indoors/13		1.0 [3]	1.0 [3]	0.75 [1]	0.75	0.75	MZ 27
Residence (gas stove) - Indoors / 14		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Residence (attached garage) - Indoors/15		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Residence (stove and garage)- Indoors/16		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Office - Indoors / 17		1.0 [3]	1.0 [3]	0.55 [1]	0.55	0.55	MZ 10
Store - Indoors / 18		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Restaurant - Indoors / 19		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Manufacturing facility - Indoors / 20		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
School - Indoors / 21		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Church- Indoors / 22		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Shopping mall - Indoors / 23		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Auditorium - Indoors / 24		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Health care facility - Indoors / 25		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Other public building - Indoors / 26		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Other location - Indoors / 27		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Not specified - Indoors / 28		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Train/subway - In vehicle / 36		3.5 [2]	1.0 [3]	0.90 [2]	3.15	0.9	
Airplane - In vehicle / 37		0.0 [3]	0.0 [3]	0.90 [2]	0	0	

<sup>a</sup> <u>Data Code</u>: 1 = value obtained from literature; 2 = value obtained using grouping scheme; 3 = default value.

<sup>b</sup> Onroad vehicle source category (see text).

<sup>c</sup> Major, area, and nonroad-mobile source categories (see text).

<sup>d</sup> The MULT factor is the product of the PROX factor and the PEN factor for the onroad vehicle source category and for the major, area, and nonroad-mobile source categories for this pollutant.

<u>Formula</u>: Microenvironmental concentration,  $\mu g/m^3 = ADD + (PROX)(PEN)(monitor concentration, <math>\mu g/m^3$ ). Abbreviations: ADD = additive factor; PROX = proximity factor; PEN = penetration factor; MULT = PROX × PEN.

		PROX [D	ata Code] ª		MULT = Pl	ROX × PEN	
Pollutant: <u>Acrolein</u> (#2) HAPEM ME / Number	ADD (∝g/m³)	Onroad <sup>b</sup>	Major, area, and nonroad °	PEN [Data Code] <sup>a</sup>	Onroad <sup>d</sup>	Major, area, and nonroad <sup>d</sup>	Reference Sources
Car - In vehicle / 1		3.5 [2]	1.0 [3]	0.90 [2]	3.15	0.9	
Bus - In vehicle / 2		3.5 [2]	1.0 [3]	0.90 [2]	3.15	0.9	
Truck - In vehicle / 3	1	3.5 [2]	1.0 [3]	0.90 [2]	3.15	0.9	
Other - In vehicle / 4	1	3.5 [2]	1.0 [3]	0.90 [2]	3.15	0.9	
Public garage - Indoors /5		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Parking lot/garage - Outdoors / 6		2.7 [2]	1.0 [3]	1.0 [3]	2.7	1	
Near road - Outdoors / 7		2.7 [2]	1.0 [3]	1.0 [3]	2.7	1	
Motorcycle - Outdoors / 8		2.7 [2]	1.0 [3]	1.0 [3]	2.7	1	
Service station - Indoors / 9		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Service station - Outdoors / 10		2.7 [2]	1.0 [3]	1.0 [3]	2.7	1	
Residential garage - Indoors / 11		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Other repair shop - Indoors / 12		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Residence (no CO source) - Indoors/13		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Residence (gas stove) - Indoors / 14		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Residence (attached garage) - Indoors/15		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Residence (stove and garage)- Indoors/16		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Office - Indoors / 17		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Store - Indoors / 18		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Restaurant - Indoors / 19		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Manufacturing facility - Indoors / 20		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
School - Indoors / 21		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Church- Indoors / 22		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Shopping mall - Indoors / 23		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Auditorium - Indoors / 24		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Health care facility - Indoors / 25		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Other public building - Indoors / 26		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Other location - Indoors / 27		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Not specified - Indoors / 28		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Construction site - Outdoors / 29	İ	1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Residential grounds - Outdoors / 30	İ	1.0 [3]	1.0 [3]	1.0 [3]	1	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Sports arena - Outdoors / 32	İ	1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Not specified - Outdoors / 35	1	1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Train/subway - In vehicle / 36		3.5 [2]	1.0 [3]	0.90 [2]	3.15	0.9	
Airplane - In vehicle / 37		0.0 [3]	0.0 [3]	0.90 [2]	0	0	

<sup>a</sup> <u>Data Code</u>: 1 = value obtained from literature; 2 = value obtained using grouping scheme; 3 = default value. <sup>b</sup> Onroad vehicle source category (see text).

° Major, area, and nonroad-mobile source categories (see text).

<sup>d</sup> The MULT factor is the product of the PROX factor and the PEN factor for the onroad vehicle source category and for the major, area, and nonroad-mobile source categories for this pollutant.

Formula: Microenvironmental concentration,  $\mu g/m^3 = ADD + (PROX)(PEN)(monitor concentration, <math>\mu g/m^3)$ .

<u>Abbreviations</u>: ADD = additive factor; PROX = proximity factor; PEN = penetration factor; MULT = PROX  $\times$  PEN.

Pollutant: <u>Acrylonitrile</u> (#3)					
HAPEM ME / Number	ADD (ccg/m <sup>3</sup> )	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors /5		1.0 [3]	0.81 [2]	0.81	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.81 [2]	0.81	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.72 [2]	0.72	
Other repair shop - Indoors / 12		1.0 [3]	0.81 [2]	0.81	
Residence (no CO source) - Indoors/13		1.0 [3]	0.72 [2]	0.72	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.72 [2]	0.72	
Residence (attached garage) - Indoors/15		1.0 [3]	0.72 [2]	0.72	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.72 [2]	0.72	
Office - Indoors / 17		1.0 [3]	0.81 [2]	0.81	
Store - Indoors / 18		1.0 [3]	0.81 [2]	0.81	
Restaurant - Indoors / 19		1.0 [3]	0.81 [2]	0.81	
Manufacturing facility - Indoors / 20		1.0 [3]	0.81 [2]	0.81	
School - Indoors / 21		1.0 [3]	0.81 [2]	0.81	
Church- Indoors / 22		1.0 [3]	0.81 [2]	0.81	
Shopping mall - Indoors / 23		1.0 [3]	0.81 [2]	0.81	
Auditorium - Indoors / 24		1.0 [3]	0.81 [2]	0.81	
Health care facility - Indoors / 25		1.0 [3]	0.81 [2]	0.81	
Other public building - Indoors / 26		1.0 [3]	0.81 [2]	0.81	
Other location - Indoors / 27		1.0 [3]	0.81 [2]	0.81	
Not specified - Indoors / 28		1.0 [3]	0.81 [2]	0.81	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30	1	1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31	1	1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37	1	0.0 [3]	0.88 [2]	0	

Pollutant: <u>Arsenic compnds</u> (#4)					
HAPEM ME / Number	ADD (ccg/m <sup>3</sup> )	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	<b>Reference Sources</b>
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors /5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.77 [2]	0.77	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37	1	0.0 [3]	0.88 [2]	0	

		PROX [D	ata Code] <sup>a</sup>		MULT = P	PROX × PEN	
Pollutant: <u>Benzene</u> (#5) HAPEM ME / Number	ADD ∝g/m³	Onroad <sup>b</sup>	Major, area, and nonroad <sup>c</sup>	PEN [Data Code] ª	Onroad <sup>d</sup>	Major, area, and nonroad <sup>d</sup>	Reference Sources
Car - In vehicle / 1		6.9 [1]	1.0 [3]	0.96 [1]	6.6	0.96	MZ 28
Bus - In vehicle / 2		3.5 [1]	1.0 [3]	0.79 [1]	2.8	0.79	MZ 14 <sup>e</sup> , RA 7 <sup>f</sup>
Truck - In vehicle / 3		5.2 [2]	1.0 [3]	0.88 [2]	4.6	0.88	
Other - In vehicle / 4		5.2 [2]	1.0 [3]	0.88 [2]	4.6	0.88	
Public garage - Indoors /5		1.0 [3]	1.0 [3]	0.86 [1]	0.9	0.86	RA 24
Parking lot/garage - Outdoors / 6		4.4 [2]	1.0 [3]	1.0 [3]	4.4	1	
Near road - Outdoors / 7		4.4 [1]	1.0 [3]	1.0 [3]	4.4	1	MZ 28
Motorcycle - Outdoors / 8		4.4 [2]	1.0 [3]	1.0 [3]	4.4	1	
Service station - Indoors / 9		1.0 [3]	1.0 [3]	0.78 [2]	0.8	0.78	
Service station - Outdoors / 10		4.4 [2]	1.0 [3]	1.0 [3]	4.4	1	
Residential garage - Indoors / 11		1.0 [3]	1.0 [3]	0.77 [2]	0.8	0.77	
Other repair shop - Indoors / 12		1.0 [3]	1.0 [3]	0.78 [2]	0.8	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	1.0 [3]	0.88 [1]	0.9	0.88	MZ 2
Residence (gas stove) - Indoors / 14		1.0 [3]	1.0 [3]	0.77 [2]	0.8	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	1.0 [3]	1.0 [1]	1.0	1	TL 18
Residence (stove and garage)- Indoors/16		1.0 [3]	1.0 [3]	0.77 [2]	0.8	0.77	
Office - Indoors / 17		1.0 [3]	1.0 [3]	0.63 [1]	0.6	0.63	MZ 39
Store - Indoors / 18		1.0 [3]	1.0 [3]	0.78 [2]	0.8	0.78	
Restaurant - Indoors / 19		1.0 [3]	1.0 [3]	0.9 [1]	0.9	0.9	RA 35
Manufacturing facility - Indoors / 20		1.0 [3]	1.0 [3]	0.78 [2]	0.8	0.78	
School - Indoors / 21		1.0 [3]	1.0 [3]	0.7 [1]	0.7	0.7	MZ 1
Church- Indoors / 22		1.0 [3]	1.0 [3]	0.78 [2]	0.8	0.78	
Shopping mall - Indoors / 23		1.0 [3]	1.0 [3]	0.78 [2]	0.8	0.78	
Auditorium - Indoors / 24		1.0 [3]	1.0 [3]	0.78 [2]	0.8	0.78	
Health care facility - Indoors / 25		1.0 [3]	1.0 [3]	0.78 [2]	0.8	0.78	
Other public building - Indoors / 26		1.0 [3]	1.0 [3]	0.78 [2]	0.8	0.78	
Other location - Indoors / 27		1.0 [3]	1.0 [3]	0.78 [2]	0.8	0.78	
Not specified - Indoors / 28		1.0 [3]	1.0 [3]	0.78 [2]	0.8	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1.0 [3]	1.0	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1.0 [3]	1.0	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1.0 [3]	1.0	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1.0 [3]	1.0	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1.0 [3]	1.0	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1.0 [3]	1.0	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1.0 [3]	1.0	1	
Train/subway - In vehicle / 36		5.2 [2]	1.0 [3]	0.88 [2]	4.6	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.0 [3]	0.88 [2]	0.0	0	

<sup>a</sup> <u>Data Code</u>: 1 = value obtained from literature; 2 = value obtained using grouping scheme; 3 = default value.

<sup>b</sup> Onroad vehicle source category (see text).

° Major, area, and nonroad-mobile source categories (see text).

<sup>d</sup> The MULT factor is the product of the PROX factor and the PEN factor for the onroad vehicle source category and for the major, area, and nonroad-mobile source categories for this pollutant.

<sup>e</sup> Reference used to derive PROX factor

<sup>f</sup> Reference used to derive PEN factor

<u>Formula</u>: Microenvironmental concentration,  $\mu g/m^3 = ADD + (PROX)(PEN)(monitor concentration, <math>\mu g/m^3)$ .

<u>Abbreviations</u>: ADD = additive factor; PROX = proximity factor; PEN = penetration factor; MULT = PROX × PEN.

Pollutant: <u>Beryllium cmpds</u> (#6)			PEN		
HAPEM ME / Number	ADD (œg/m <sup>3</sup> )	PROX [Data Code] <sup>a, b</sup>	[Data Code]	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors /5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.77 [2]	0.77	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.7° [1]	0.7	MZ 24
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

 a Data Code: 1 = value obtained from literature; 2 = value obtained using grouping scheme; 3 = default value.

 b The PROX factor is assumed to be the same for each source category for this pollutant.

 c Indoor location is a laboratory

		PROX [D	ata Code] ª		MULT = P	ROX × PEN	
Pollutant: 1,3-butadiene (#7) HAPEM ME / Number	ADD (∝g/m³)	Onroad <sup>b</sup>	Major, area, and nonroad <sup>c</sup>	PEN [Data Code] ª	Onroad <sup>d</sup>	Major, area, and nonroad <sup>d</sup>	Reference Sources
Car - In vehicle / 1		2.2 [1]	1.0 [3]	1.0 [1]	2.2	1	MZ 28
Bus - In vehicle / 2	1	3.5 [2]	1.0 [3]	0.9 [1]	3.15	0.9	RA 7
Truck - In vehicle / 3	1	2.8 [2]	1.0 [3]	0.90 [2]	2.52	0.9	
Other - In vehicle / 4		2.8 [2]	1.0 [3]	0.90 [2]	2.52	0.9	
Public garage - Indoors / 5		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Parking lot/garage - Outdoors / 6		1.0 [2]	1.0 [3]	1.0 [3]	1	1	
Near road - Outdoors / 7		1.0 [1]	1.0 [3]	1.0 [3]	1	1	MZ 28
Motorcycle - Outdoors / 8		1.0 [2]	1.0 [3]	1.0 [3]	1	1	
Service station - Indoors / 9		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Service station - Outdoors / 10		1.0 [2]	1.0 [3]	1.0 [3]	1	1	
Residential garage - Indoors / 11		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Other repair shop - Indoors / 12		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Residence (no CO source) - Indoors/13		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Residence (gas stove) - Indoors / 14		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Residence (attached garage) - Indoors/15		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Residence (stove and garage)- Indoors/16		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Office - Indoors / 17		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Store - Indoors / 18		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Restaurant - Indoors / 19		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Manufacturing facility - Indoors / 20		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
School - Indoors / 21		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Church- Indoors / 22		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Shopping mall - Indoors / 23		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Auditorium - Indoors / 24		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Health care facility - Indoors / 25		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Other public building - Indoors / 26		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Other location - Indoors / 27		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Not specified - Indoors / 28		1.0 [3]	1.0 [3]	0.80 [2]	0.8	0.8	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Train/subway - In vehicle / 36		2.8 [2]	1.0 [3]	0.90 [2]	2.52	0.9	
Airplane - In vehicle / 37		0.0 [3]	0.0 [3]	0.90 [2]	0	0	

<sup>a</sup> <u>Data Code</u>: 1 = value obtained from literature; 2 = value obtained using grouping scheme; 3 = default value.

<sup>b</sup> Onroad vehicle source category (see text).

<sup>e</sup> Major, area, and nonroad-mobile source categories (see text).

<sup>d</sup> The MULT factor is the product of the PROX factor and the PEN factor for the onroad vehicle source category and for the major, area, and nonroad-mobile source categories for this pollutant.

<u>Formula</u>: Microenvironmental concentration,  $\mu g/m^3 = ADD + (PROX)(PEN)(monitor concentration, <math>\mu g/m^3)$ .

<u>Abbreviations</u>: ADD = additive factor; PROX = proximity factor; PEN = penetration factor; MULT = PROX × PEN.

Pollutant: <u>Cadmium compounds</u> (#8)		PROX			
HAPEM ME / Number	ADD (∝g/m <sup>3</sup> )	[Data Code] <sup>a,</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.77 [2]	0.77	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>Carbon tetrachloride</u> (#9)		PROX			
HAPEM ME / Number	ADD (∝g/m³)	[Data <sub>b</sub> Code] <sup>a,</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.55 [1]	0.55	MZ 27
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>Chloroform</u> (#10)		PROX			
HAPEM ME / Number	ADD (∝g/m³)	[Data Code] <sup>a,</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.85 [1]	0.85	MZ 38
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>Chromium compounds (</u> #11)	ADD	PROX	PEN		Reference
HAPEM ME / Number	$(\alpha g/m^3)$	[Data Code] <sup>a,</sup>	[Data Code] <sup>a</sup>	MULT	Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.35 [1]	0.35	TL 9
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.31 (Cr <sup>6+</sup> ); 0.62 Tot (Cr) [1]	0.31	TL 11
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>Coke oven emissions</u> (#12)		DDOV	DEN		
HAPEM ME / Number	ADD (∝g/m <sup>3</sup> )	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]			
Bus - In vehicle / 2		1.0 [3]			
Truck - In vehicle / 3		1.0 [3]			
Other - In vehicle / 4		1.0 [3]			
Public garage - Indoors / 5		1.0 [3]			
Parking lot/garage - Outdoors / 6		1.0 [3]			
Near road - Outdoors / 7		1.0 [3]			
Motorcycle - Outdoors / 8		1.0 [3]			
Service station - Indoors / 9		1.0 [3]			
Service station - Outdoors / 10		1.0 [3]			
Residential garage - Indoors / 11		1.0 [3]			
Other repair shop - Indoors / 12		1.0 [3]			
Residence (no CO source) - Indoors/13		1.0 [3]			
Residence (gas stove) - Indoors / 14		1.0 [3]			
Residence (attached garage) - Indoors/15		1.0 [3]			
Residence (stove and garage)- Indoors/16		1.0 [3]			
Office - Indoors / 17		1.0 [3]			
Store - Indoors / 18		1.0 [3]			
Restaurant - Indoors / 19		1.0 [3]			
Manufacturing facility - Indoors / 20		1.0 [3]			
School - Indoors / 21		1.0 [3]			
Church- Indoors / 22		1.0 [3]			
Shopping mall - Indoors / 23		1.0 [3]			
Auditorium - Indoors / 24		1.0 [3]			
Health care facility - Indoors / 25		1.0 [3]			
Other public building - Indoors / 26		1.0 [3]			
Other location - Indoors / 27		1.0 [3]			
Not specified - Indoors / 28		1.0 [3]			
Construction site - Outdoors / 29		1.0 [3]			
Residential grounds - Outdoors / 30		1.0 [3]			
School grounds - Outdoors / 31		1.0 [3]			
Sports arena - Outdoors / 32		1.0 [3]			
Park/golf course - Outdoors / 33		1.0 [3]			
Other location - Outdoors / 34		1.0 [3]			
Not specified - Outdoors / 35		1.0 [3]			
Train/subway - In vehicle / 36		1.0 [3]			
Airplane - In vehicle / 37		0.0 [3]			

Pollutant: <u>1,2-dichloroethane (ethylene</u> <u>dichloride)</u> (#13) HAPEM ME / Number			PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1	('8' )	1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	1.0 [1]	1	MZ 38
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>1,3-dichloropropene</u> (#14)					
HAPEM ME / Number	ADD (∝g/m <sup>3</sup> )	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1	( '8' )	1.0 [3]	0.90 [2]	0.9	
Bus - In vehicle / 2		1.0 [3]	0.90 [2]	0.9	
Truck - In vehicle / 3		1.0 [3]	0.90 [2]	0.9	
Other - In vehicle / 4		1.0 [3]	0.90 [2]	0.9	
Public garage - Indoors / 5		1.0 [3]	0.80 [2]	0.8	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.80 [2]	0.8	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.81 [2]	0.81	
Other repair shop - Indoors / 12		1.0 [3]	0.80 [2]	0.81	
Residence (no CO source) - Indoors/13		1.0 [3]	0.80 [2]	0.81	TL 3
Residence (gas stove) - Indoors / 14		1.0 [3]	0.81 [2]	0.81	IL 5
Residence (gas sove) - Indoors / 14 Residence (attached garage) - Indoors / 15		1.0 [3]	0.81 [2]	0.81	
Residence (attached garage) - Indoors/16		1.0 [3]	0.81 [2]	0.81	
Office - Indoors / 17		1.0 [3]	0.80 [2]	0.81	
Store - Indoors / 18		1.0 [3]	0.80 [2]	0.8	
Restaurant - Indoors / 19		1.0 [3]	0.80 [2]	0.8	
Manufacturing facility - Indoors / 20		1.0 [3]	0.80 [2]	0.8	
School - Indoors / 21		1.0 [3]	0.80 [2]	0.8	
Church- Indoors / 22		1.0 [3]	0.80 [2]	0.8	
Shopping mall - Indoors / 23		1.0 [3]	0.80 [2]	0.8	
Auditorium - Indoors / 23		1.0 [3]	0.80 [2]	0.8	
Health care facility - Indoors / 25		1.0 [3]	0.80 [2]	0.8	
Other public building - Indoors / 26		1.0 [3]	0.80 [2]	0.8	
Other location - Indoors / 27		1.0 [3]	0.80 [2]	0.8	
Not specified - Indoors / 28		1.0 [3]	0.80 [2]	0.8	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	0.8	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 32		1.0 [3]	L .	1	
Other location - Outdoors / 33		1.0 [3]	1.0 [3] 1.0 [3]	1	
				1	
Not specified - Outdoors / 35 Train/subway - In vehicle / 36		1.0 [3]	1.0 [3]	1 0.9	
		1.0 [3]	0.90 [2]		
Airplane - In vehicle / 37		0.0 [3]	0.90 [2]	0	

Pollutant: Ethylene dibromide (dibromoethane)					
(#15)		PROX			
HAPEM ME / Number	ADD (∝g/m³)	[Data Code] <sup>a,</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.77 [2]	0.77	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>Ethylene oxide</u> (#16)		PROX	DEN		Difi
HAPEM ME / Number	ADD (∝g/m³)	[Data Code] <sup>a,</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.77 [2]	0.77	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30	1	1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31	1	1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

		PROX [Da	nta Code] ª		MULT = P	ROX × PEN	
Pollutant: <u>Formaldehyde</u> (#17) HAPEM ME / Number	ADD (œg/m³)	Onroad <sup>b</sup>	Major, area, and nonroad <sup>c</sup>	PEN [Data Code] <sup>a</sup>	Onroad <sup>d</sup>	Major, area, and nonroad <sup>d</sup>	Reference Sources
Car - In vehicle/1		3.5 [2]	1.0 [3]	0.88 [2]	3.08	0.88	
Bus - In vehicle/2		3.5 [2]	1.0 [3]	0.88 [2]	3.08	0.88	
Truck - In vehicle/3		3.5 [2]	1.0 [3]	0.88 [2]	3.08	0.88	
Other - In vehicle/4		3.5 [2]	1.0 [3]	0.88 [2]	3.08	0.88	
Public garage - Indoors/5		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Parking lot/garage - Outdoors/ 6		2.7 [2]	1.0 [3]	1.0 [3]	2.7	1	
Near road - Outdoors/7		2.7 [2]	1.0 [3]	1.0 [3]	2.7	1	
Motorcycle - Outdoors/ 8		2.7 [2]	1.0 [3]	1.0 [3]	2.7	1	
Service station - Indoors/9		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Service station - Outdoors/10		2.7 [2]	1.0 [3]	1.0 [3]	2.7	1	
Residential garage - Indoors/11		1.0 [3]	1.0 [3]	0.72 [2]	0.72	0.72	
Other repair shop - Indoors/12		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Residence (no CO source) - Indoors/13		1.0 [3]	1.0 [3]	0.5 [1]	0.5	0.5	MZ 15
Residence (gas stove) - Indoors/14		1.0 [3]	1.0 [3]	0.72 [2]	0.72	0.72	
Residence (attached garage) - Indoors/15		1.0 [3]	1.0 [3]	0.72 [2]	0.72	0.72	
Residence (stove and garage)- Indoors/16		1.0 [3]	1.0 [3]	0.72 [2]	0.72	0.72	
Office - Indoors / 17		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Store - Indoors / 18		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Restaurant - Indoors / 19		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Manufacturing facility - Indoors / 20		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
School - Indoors / 21		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Church- Indoors/22		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Shopping mall - Indoors/23		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Auditorium - Indoors / 24		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Health care facility - Indoors/25		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Other public building - Indoors/26		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Other location - Indoors/27		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Not specified - Indoors/28		1.0 [3]	1.0 [3]	0.81 [2]	0.81	0.81	
Construction site - Outdoors/29		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Residential grounds - Outdoors/30		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
School grounds - Outdoors/31		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Sports arena - Outdoors/32		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Park/golf course - Outdoors/33		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Other location - Outdoors/34		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Not specified - Outdoors/35		1.0 [3]	1.0 [3]	1.0 [3]	1	1	
Train/subway - In vehicle/36		3.5 [2]	1.0 [3]	0.88 [2]	3.08	0.88	
Airplane - In vehicle/37		0.0 [3]	0.0 [3]	0.88 [2]	0	0	

<sup>a</sup> <u>Data Code</u>: 1 = value obtained from literature; 2 = value obtained using grouping scheme; 3 = default value.

<sup>b</sup> Onroad vehicle source category (see text).

<sup>e</sup> Major, area, and nonroad-mobile source categories (see text).

<sup>d</sup> The MULT factor is the product of the PROX factor and the PEN factor for the onroad vehicle source category and for the major, area, and nonroad-mobile source categories for this pollutant.

<u>Formula</u>: Microenvironmental concentration,  $\mu g/m^3 = ADD + (PROX)(PEN)(monitor concentration, <math>\mu g/m^3)$ .

<u>Abbreviations</u>: ADD = additive factor; PROX = proximity factor; PEN = penetration factor; MULT = PROX  $\times$  PEN.

Pollutant: <u>Hexachlorobenzene</u> (#18)					
HAPEM ME / Number	ADD (∝g/m <sup>3</sup> )	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.82 [1]	0.82	TL 3
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>Hydrazine</u> (#19)					
HAPEM ME / Number	ADD (∝g/m <sup>3</sup> )	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.90 [2]	0.9	
Bus - In vehicle / 2		1.0 [3]	0.90 [2]	0.9	
Truck - In vehicle / 3		1.0 [3]	0.90 [2]	0.9	
Other - In vehicle / 4		1.0 [3]	0.90 [2]	0.9	
Public garage - Indoors / 5		1.0 [3]	0.80 [2]	0.8	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.80 [2]	0.8	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.81 [2]	0.81	
Other repair shop - Indoors / 12		1.0 [3]	0.80 [2]	0.8	
Residence (no CO source) - Indoors/13		1.0 [3]	0.81 [2]	0.81	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.81 [2]	0.81	
Residence (attached garage) - Indoors/15		1.0 [3]	0.81 [2]	0.81	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.81 [2]	0.81	
Office - Indoors / 17		1.0 [3]	0.80 [2]	0.8	
Store - Indoors / 18		1.0 [3]	0.80 [2]	0.8	
Restaurant - Indoors / 19		1.0 [3]	0.80 [2]	0.8	
Manufacturing facility - Indoors / 20		1.0 [3]	0.80 [2]	0.8	
School - Indoors / 21		1.0 [3]	0.80 [2]	0.8	
Church- Indoors / 22		1.0 [3]	0.80 [2]	0.8	
Shopping mall - Indoors / 23		1.0 [3]	0.80 [2]	0.8	
Auditorium - Indoors / 24		1.0 [3]	0.80 [2]	0.8	
Health care facility - Indoors / 25		1.0 [3]	0.80 [2]	0.8	
Other public building - Indoors / 26		1.0 [3]	0.80 [2]	0.8	
Other location - Indoors / 27		1.0 [3]	0.80 [2]	0.8	
Not specified - Indoors / 28		1.0 [3]	0.80 [2]	0.8	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.90 [2]	0.9	
Airplane - In vehicle / 37		0.0 [3]	0.90 [2]	0	

Pollutant: <u>Lead compounds - organic</u> (#20)					
HAPEM ME / Number	ADD (∝g/m <sup>3</sup> )	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.77 [2]	0.77	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30	1	1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34	1	1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>Lead compounds - inorganic</u> (#21)					
HAPEM ME / Number	ADD (œg/m <sup>3</sup> )	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.91° [1]	0.91	RA 29, TL12
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.86 [1]	0.86	TL 8
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.63 [1]	0.63	TL 12
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

<sup>a</sup> <u>Data Code</u>: 1 = value obtained from literature; 2 = value obtained using grouping scheme; 3 = default value. <sup>b</sup> The PROX factor is assumed to be the same for each source category for this pollutant. <sup>c</sup> Average of values from RA 29 and TL12.

Pollutant: <u>Manganese cmpds</u> (#22)					
HAPEM ME / Number	ADD (∝g/m³)	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle $/ 2$		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.61 [1]	0.61	MZ 6, MZ 7
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30	1	1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31	1	1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34	1	1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35	1	1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36	1	1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>Mercury compounds</u> (#23)		DDOV	DEN		
HAPEM ME / Number	ADD (∝g/m <sup>3</sup> )	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.77 [2]	0.77	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>Methylene chloride</u> <u>(dichloromethane)</u> (#24)	ADD	PROX	PEN		Reference
HAPEM ME / Number	(∝g/m³)	[Data Code] <sup>a, b</sup>	[Data Code] <sup>a</sup>	MULT	Sources
Car - In vehicle / 1	_	1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.77 [2]	0.77	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	1.0 [1]	1	MZ 39, TL 10
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36	1	1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>Nickel compounds</u> (#25)					
HAPEM ME / Number	ADD (∝g/m <sup>3)</sup>	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.77 [2]	0.77	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30	1	1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35	1	1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36	1	1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: 7-PAH : (Lower and upper bound)					
(#26)		DDOV	DEN		D
HAPEM ME / Number	$\begin{array}{c} ADD \\ (\propto g/m^3) \end{array}$	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.81 [2]	0.81	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.81 [2]	0.81	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.72 [2]	0.72	
Other repair shop - Indoors / 12		1.0 [3]	0.81 [2]	0.81	
Residence (no CO source) - Indoors/13		1.0 [3]	0.7 [1]	0.7	MZ 17
Residence (gas stove) - Indoors / 14		1.0 [3]	0.72 [2]	0.72	
Residence (attached garage) - Indoors/15		1.0 [3]	0.72 [2]	0.72	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.72 [2]	0.72	
Office - Indoors / 17		1.0 [3]	0.81 [2]	0.81	
Store - Indoors / 18		1.0 [3]	0.81 [2]	0.81	
Restaurant - Indoors / 19		1.0 [3]	0.81 [2]	0.81	
Manufacturing facility - Indoors / 20		1.0 [3]	0.81 [2]	0.81	
School - Indoors / 21		1.0 [3]	0.81 [2]	0.81	
Church- Indoors / 22		1.0 [3]	0.81 [2]	0.81	
Shopping mall - Indoors / 23		1.0 [3]	0.81 [2]	0.81	
Auditorium - Indoors / 24		1.0 [3]	0.81 [2]	0.81	
Health care facility - Indoors / 25		1.0 [3]	0.81 [2]	0.81	
Other public building - Indoors / 26		1.0 [3]	0.81 [2]	0.81	
Other location - Indoors / 27		1.0 [3]	0.81 [2]	0.81	
Not specified - Indoors / 28		1.0 [3]	0.81 [2]	0.81	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>Polychlorinated biphenyls</u> (#27)					
HAPEM ME / Number	ADD (œg/m <sup>3</sup> )	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.77 [2]	0.77	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>Propylene dichloride (1,2-</u> <u>dichloropropane)</u> (#28)	ADD	PROX	PEN		Reference
HAPEM ME / Number	(∝g/m <sup>3</sup> )	[Data Code] <sup>a, b</sup>	[Data Code] <sup>a</sup>	MULT	Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.77 [2]	0.77	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30	1	1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31	1	1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32	1	1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33	1	1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>Quinoline</u> (#29)					
HAPEM ME / Number	ADD (∝g/m <sup>3</sup> )	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.81 [2]	0.81	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.81 [2]	0.81	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.72 [2]	0.72	
Other repair shop - Indoors / 12		1.0 [3]	0.81 [2]	0.81	
Residence (no CO source) - Indoors/13		1.0 [3]	0.72 [2]	0.72	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.72 [2]	0.72	
Residence (attached garage) - Indoors/15		1.0 [3]	0.72 [2]	0.72	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.72 [2]	0.72	
Office - Indoors / 17		1.0 [3]	0.81 [2]	0.81	
Store - Indoors / 18		1.0 [3]	0.81 [2]	0.81	
Restaurant - Indoors / 19		1.0 [3]	0.81 [2]	0.81	
Manufacturing facility - Indoors / 20		1.0 [3]	0.81 [2]	0.81	
School - Indoors / 21		1.0 [3]	0.81 [2]	0.81	
Church- Indoors / 22		1.0 [3]	0.81 [2]	0.81	
Shopping mall - Indoors / 23		1.0 [3]	0.81 [2]	0.81	
Auditorium - Indoors / 24		1.0 [3]	0.81 [2]	0.81	
Health care facility - Indoors / 25		1.0 [3]	0.81 [2]	0.81	
Other public building - Indoors / 26		1.0 [3]	0.81 [2]	0.81	
Other location - Indoors / 27		1.0 [3]	0.81 [2]	0.81	
Not specified - Indoors / 28		1.0 [3]	0.81 [2]	0.81	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37	<u> </u>	0.0 [3]	0.88 [2]	0	

Pollutant: <u>Styrene</u> (#30)					
HAPEM ME / Number	ADD (∝g/m³)	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.90 [2]	0.9	
Bus - In vehicle / 2		1.0 [3]	0.90 [2]	0.9	
Truck - In vehicle / 3		1.0 [3]	0.90 [2]	0.9	
Other - In vehicle / 4		1.0 [3]	0.90 [2]	0.9	
Public garage - Indoors / 5		1.0 [3]	0.80 [2]	0.8	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.80 [2]	0.8	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.81 [2]	0.81	
Other repair shop - Indoors / 12		1.0 [3]	0.80 [2]	0.8	
Residence (no CO source) - Indoors/13		1.0 [3]	0.95 [1]	0.95	MZ 38
Residence (gas stove) - Indoors / 14		1.0 [3]	0.81 [2]	0.81	
Residence (attached garage) - Indoors/15		1.0 [3]	0.81 [2]	0.81	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.81 [2]	0.81	
Office - Indoors / 17		1.0 [3]	0.85 [1]	0.85	MZ 39
Store - Indoors / 18		1.0 [3]	0.80 [2]	0.8	
Restaurant - Indoors / 19		1.0 [3]	0.80 [2]	0.8	
Manufacturing facility - Indoors / 20		1.0 [3]	0.80 [2]	0.8	
School - Indoors / 21		1.0 [3]	0.80 [2]	0.8	
Church- Indoors / 22		1.0 [3]	0.80 [2]	0.8	
Shopping mall - Indoors / 23		1.0 [3]	0.80 [2]	0.8	
Auditorium - Indoors / 24		1.0 [3]	0.80 [2]	0.8	
Health care facility - Indoors / 25		1.0 [3]	0.80 [2]	0.8	
Other public building - Indoors / 26		1.0 [3]	0.80 [2]	0.8	
Other location - Indoors / 27		1.0 [3]	0.80 [2]	0.8	
Not specified - Indoors / 28		1.0 [3]	0.80 [2]	0.8	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.90 [2]	0.9	
Airplane - In vehicle / 37		0.0 [3]	0.90 [2]	0	

Pollutant: 2,3,7,8-TCDD: (Lower and upper					
<u>bound)</u> (#31)					
HAPEM ME / Number	$\begin{array}{c} ADD \\ (\infty g/m^3) \end{array}$	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5	1	1.0 [3]	0.81 [2]	0.81	
Parking lot/garage - Outdoors / 6	1	1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.81 [2]	0.81	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.72 [2]	0.72	
Other repair shop - Indoors / 12		1.0 [3]	0.81 [2]	0.81	
Residence (no CO source) - Indoors/13		1.0 [3]	0.72 [2]	0.72	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.72 [2]	0.72	
Residence (attached garage) - Indoors/15		1.0 [3]	0.72 [2]	0.72	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.72 [2]	0.72	
Office - Indoors / 17		1.0 [3]	0.81 [2]	0.81	
Store - Indoors / 18	1	1.0 [3]	0.81 [2]	0.81	
Restaurant - Indoors / 19	1	1.0 [3]	0.81 [2]	0.81	
Manufacturing facility - Indoors / 20		1.0 [3]	0.81 [2]	0.81	
School - Indoors / 21		1.0 [3]	0.81 [2]	0.81	
Church- Indoors / 22		1.0 [3]	0.81 [2]	0.81	
Shopping mall - Indoors / 23		1.0 [3]	0.81 [2]	0.81	
Auditorium - Indoors / 24		1.0 [3]	0.81 [2]	0.81	
Health care facility - Indoors / 25		1.0 [3]	0.81 [2]	0.81	
Other public building - Indoors / 26		1.0 [3]	0.81 [2]	0.81	
Other location - Indoors / 27		1.0 [3]	0.81 [2]	0.81	
Not specified - Indoors / 28		1.0 [3]	0.81 [2]	0.81	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30	1	1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31	1	1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32	1	1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33	1	1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>1,1,2,2-tetrachloroethane</u> (#32)					
HAPEM ME / Number	ADD (∝g/m³)	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.77 [2]	0.77	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.87 [1]	0.87	MZ 39
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>Tetrachloroethylene</u> (perchloroethylene) (#33)	ADD	PROX	PEN		Reference
HAPEM ME / Number	(∝g/m <sup>3</sup> )	[Data Code] <sup>a, b</sup>	[Data Code] <sup>a</sup>	MULT	Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11	1	1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.65 [1]	0.65	MZ 27
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15	1	1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16	1	1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17	1	1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18	1	1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19	1	1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.65 [1]	0.65	MZ 1
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.9° [1]	0.9	MZ 32
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34	1	1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35	1	1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36	1	1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37	1	0.0 [3]	0.88 [2]	0	

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Pollutant: <u>Trichloroethylene</u> (#34)	. – –				
HAPEM ME / Number	ADD (∝g/m³)	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.78 [2]	0.78	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.78 [2]	0.78	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.77 [2]	0.77	
Other repair shop - Indoors / 12		1.0 [3]	0.78 [2]	0.78	
Residence (no CO source) - Indoors/13		1.0 [3]	0.9 [1]	0.9	MZ 27
Residence (gas stove) - Indoors / 14		1.0 [3]	0.77 [2]	0.77	
Residence (attached garage) - Indoors/15		1.0 [3]	0.77 [2]	0.77	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.77 [2]	0.77	
Office - Indoors / 17		1.0 [3]	0.78 [2]	0.78	
Store - Indoors / 18		1.0 [3]	0.78 [2]	0.78	
Restaurant - Indoors / 19		1.0 [3]	0.78 [2]	0.78	
Manufacturing facility - Indoors / 20		1.0 [3]	0.78 [2]	0.78	
School - Indoors / 21		1.0 [3]	0.78 [2]	0.78	
Church- Indoors / 22		1.0 [3]	0.78 [2]	0.78	
Shopping mall - Indoors / 23		1.0 [3]	0.78 [2]	0.78	
Auditorium - Indoors / 24		1.0 [3]	0.78 [2]	0.78	
Health care facility - Indoors / 25		1.0 [3]	0.78 [2]	0.78	
Other public building - Indoors / 26		1.0 [3]	0.78 [2]	0.78	
Other location - Indoors / 27		1.0 [3]	0.78 [2]	0.78	
Not specified - Indoors / 28		1.0 [3]	0.78 [2]	0.78	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: Vinyl chloride (#35)					
HAPEM ME / Number	$\begin{array}{c} ADD \\ (\infty g/m^3) \end{array}$	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [2]	0.88	
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.81 [2]	0.81	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.81 [2]	0.81	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.72 [2]	0.72	
Other repair shop - Indoors / 12		1.0 [3]	0.81 [2]	0.81	
Residence (no CO source) - Indoors/13		1.0 [3]	0.72 [2]	0.72	
Residence (gas stove) - Indoors / 14		1.0 [3]	0.72 [2]	0.72	
Residence (attached garage) - Indoors/15		1.0 [3]	0.72 [2]	0.72	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.72 [2]	0.72	
Office - Indoors / 17		1.0 [3]	0.81 [2]	0.81	
Store - Indoors / 18		1.0 [3]	0.81 [2]	0.81	
Restaurant - Indoors / 19		1.0 [3]	0.81 [2]	0.81	
Manufacturing facility - Indoors / 20		1.0 [3]	0.81 [2]	0.81	
School - Indoors / 21		1.0 [3]	0.81 [2]	0.81	
Church- Indoors / 22		1.0 [3]	0.81 [2]	0.81	
Shopping mall - Indoors / 23		1.0 [3]	0.81 [2]	0.81	
Auditorium - Indoors / 24		1.0 [3]	0.81 [2]	0.81	
Health care facility - Indoors / 25		1.0 [3]	0.81 [2]	0.81	
Other public building - Indoors / 26		1.0 [3]	0.81 [2]	0.81	
Other location - Indoors / 27		1.0 [3]	0.81 [2]	0.81	
Not specified - Indoors / 28		1.0 [3]	0.81 [2]	0.81	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>Ethylbenzene</u>					
HAPEM ME / Number	ADD (∝g/m³)	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.8 [1]	0.8	MZ 28
Bus - In vehicle / 2		1.0 [3]	0.90 [2]	0.9	
Truck - In vehicle / 3		1.0 [3]	0.90 [2]	0.9	
Other - In vehicle / 4		1.0 [3]	0.90 [2]	0.9	
Public garage - Indoors / 5		1.0 [3]	0.79 [1]	0.79	RA 24
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.80 [2]	0.8	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.81 [2]	0.81	
Other repair shop - Indoors / 12		1.0 [3]	0.80 [2]	0.8	
Residence (no CO source) - Indoors/13		1.0 [3]	0.85 [1]	0.85	MZ 27
Residence (gas stove) - Indoors / 14		1.0 [3]	0.81 [2]	0.81	
Residence (attached garage) - Indoors/15		1.0 [3]	0.81 [2]	0.81	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.81 [2]	0.81	
Office - Indoors / 17		1.0 [3]	0.74 [1]	0.74	MZ 39
Store - Indoors / 18		1.0 [3]	0.80 [2]	0.8	
Restaurant - Indoors / 19		1.0 [3]	0.80 [2]	0.8	
Manufacturing facility - Indoors / 20		1.0 [3]	0.80 [2]	0.8	
School - Indoors / 21		1.0 [3]	0.80 [2]	0.8	
Church- Indoors / 22		1.0 [3]	0.80 [2]	0.8	
Shopping mall - Indoors / 23		1.0 [3]	0.80 [2]	0.8	
Auditorium - Indoors / 24		1.0 [3]	0.80 [2]	0.8	
Health care facility - Indoors / 25		1.0 [3]	0.80 [2]	0.8	
Other public building - Indoors / 26		1.0 [3]	0.80 [2]	0.8	
Other location - Indoors / 27		1.0 [3]	0.80 [2]	0.8	
Not specified - Indoors / 28		1.0 [3]	0.80 [2]	0.8	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.90 [2]	0.9	
Airplane - In vehicle / 37		0.0 [3]	0.90 [2]	0	

Pollutant: <u>Hexane</u>					
HAPEM ME / Number	ADD (∝g/m³)	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.93 [1]	0.93	MZ 28
Bus - In vehicle / 2		1.0 [3]	0.90 [2]	0.9	
Truck - In vehicle / 3		1.0 [3]	0.90 [2]	0.9	
Other - In vehicle / 4		1.0 [3]	0.90 [2]	0.9	
Public garage - Indoors / 5		1.0 [3]	0.80 [2]	0.8	
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.80 [2]	0.8	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.81 [2]	0.81	
Other repair shop - Indoors / 12		1.0 [3]	0.80 [2]	0.8	
Residence (no CO source) - Indoors/13		1.0 [3]	0.65 [1]	0.65	MZ 27
Residence (gas stove) - Indoors / 14		1.0 [3]	0.81 [2]	0.81	
Residence (attached garage) - Indoors/15		1.0 [3]	0.81 [2]	0.81	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.81 [2]	0.81	
Office - Indoors / 17		1.0 [3]	0.80 [2]	0.8	
Store - Indoors / 18		1.0 [3]	0.80 [2]	0.8	
Restaurant - Indoors / 19		1.0 [3]	0.80 [2]	0.8	
Manufacturing facility - Indoors / 20		1.0 [3]	0.80 [2]	0.8	
School - Indoors / 21		1.0 [3]	0.80 [2]	0.8	
Church- Indoors / 22		1.0 [3]	0.80 [2]	0.8	
Shopping mall - Indoors / 23		1.0 [3]	0.80 [2]	0.8	
Auditorium - Indoors / 24		1.0 [3]	0.80 [2]	0.8	
Health care facility - Indoors / 25		1.0 [3]	0.80 [2]	0.8	
Other public building - Indoors / 26		1.0 [3]	0.80 [2]	0.8	
Other location - Indoors / 27		1.0 [3]	0.80 [2]	0.8	
Not specified - Indoors / 28		1.0 [3]	0.80 [2]	0.8	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.90 [2]	0.9	
Airplane - In vehicle / 37		0.0 [3]	0.90 [2]	0	

Pollutant: <u>MTBE</u>					
HAPEM ME / Number	ADD (∝g/m <sup>3</sup> )	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]		0	
Bus - In vehicle / 2		1.0 [3]	1.0 [1]	1	MZ 14
Truck - In vehicle / 3		1.0 [3]		0	
Other - In vehicle / 4		1.0 [3]		0	
Public garage - Indoors / 5		1.0 [3]		0	
Parking lot/garage - Outdoors / 6		1.0 [3]		0	
Near road - Outdoors / 7		1.0 [3]		0	
Motorcycle - Outdoors / 8		1.0 [3]		0	
Service station - Indoors / 9		1.0 [3]		0	
Service station - Outdoors / 10		1.0 [3]		0	
Residential garage - Indoors / 11		1.0 [3]		0	
Other repair shop - Indoors / 12		1.0 [3]		0	
Residence (no CO source) - Indoors/13		1.0 [3]		0	
Residence (gas stove) - Indoors / 14		1.0 [3]		0	
Residence (attached garage) - Indoors/15		1.0 [3]		0	
Residence (stove and garage)- Indoors/16		1.0 [3]		0	
Office - Indoors / 17		1.0 [3]		0	
Store - Indoors / 18		1.0 [3]		0	
Restaurant - Indoors / 19		1.0 [3]		0	
Manufacturing facility - Indoors / 20		1.0 [3]		0	
School - Indoors / 21		1.0 [3]		0	
Church- Indoors / 22		1.0 [3]		0	
Shopping mall - Indoors / 23		1.0 [3]		0	
Auditorium - Indoors / 24		1.0 [3]		0	
Health care facility - Indoors / 25		1.0 [3]		0	
Other public building - Indoors / 26		1.0 [3]		0	
Other location - Indoors / 27		1.0 [3]		0	
Not specified - Indoors / 28		1.0 [3]		0	
Construction site - Outdoors / 29		1.0 [3]		0	
Residential grounds - Outdoors / 30		1.0 [3]		0	
School grounds - Outdoors / 31		1.0 [3]		0	
Sports arena - Outdoors / 32		1.0 [3]		0	
Park/golf course - Outdoors / 33		1.0 [3]		0	
Other location - Outdoors / 34		1.0 [3]		0	
Not specified - Outdoors / 35		1.0 [3]		0	
Train/subway - In vehicle / 36		1.0 [3]		0	
Airplane - In vehicle / 37		0.0 [3]		0	

Pollutant: <u>Toluene</u>					
HAPEM ME / Number	ADD (∝g/m³)	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1		1.0 [3]	0.88 [1]	0.88	MZ 28
Bus - In vehicle / 2		1.0 [3]	0.88 [2]	0.88	
Truck - In vehicle / 3		1.0 [3]	0.88 [2]	0.88	
Other - In vehicle / 4		1.0 [3]	0.88 [2]	0.88	
Public garage - Indoors / 5		1.0 [3]	0.80 [1]	0.8	RA 24
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.81 [2]	0.81	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.72 [2]	0.72	
Other repair shop - Indoors / 12		1.0 [3]	0.81 [2]	0.81	
Residence (no CO source) - Indoors/13		1.0 [3]	0.95 [1]	0.95	MZ 27
Residence (gas stove) - Indoors / 14		1.0 [3]	0.72 [2]	0.72	
Residence (attached garage) - Indoors/15		1.0 [3]	0.72 [2]	0.72	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.72 [2]	0.72	
Office - Indoors / 17		1.0 [3]	0.82 [1]	0.82	MZ 39
Store - Indoors / 18		1.0 [3]	0.81 [2]	0.81	
Restaurant - Indoors / 19		1.0 [3]	0.81 [2]	0.81	
Manufacturing facility - Indoors / 20		1.0 [3]	0.81 [2]	0.81	
School - Indoors / 21		1.0 [3]	0.81 [2]	0.81	
Church- Indoors / 22		1.0 [3]	0.81 [2]	0.81	
Shopping mall - Indoors / 23		1.0 [3]	0.81 [2]	0.81	
Auditorium - Indoors / 24		1.0 [3]	0.81 [2]	0.81	
Health care facility - Indoors / 25		1.0 [3]	0.81 [2]	0.81	
Other public building - Indoors / 26		1.0 [3]	0.81 [2]	0.81	
Other location - Indoors / 27		1.0 [3]	0.81 [2]	0.81	
Not specified - Indoors / 28		1.0 [3]	0.81 [2]	0.81	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30	1	1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.88 [2]	0.88	
Airplane - In vehicle / 37		0.0 [3]	0.88 [2]	0	

Pollutant: <u>Xylenes</u>	T				
HAPEM ME / Number	ADD (∝g/m³)	PROX [Data Code] <sup>a, b</sup>	PEN [Data Code] <sup>a</sup>	MULT	Reference Sources
Car - In vehicle / 1	-	1.0 [3]	0.88 [1]	0.88	MZ 28
Bus - In vehicle / 2	-	1.0 [3]	0.90 [2]	0.9	
Truck - In vehicle / 3	-	1.0 [3]	0.90 [2]	0.9	
Other - In vehicle / 4		1.0 [3]	0.90 [2]	0.9	
Public garage - Indoors / 5		1.0 [3]	0.94 [1]	0.94	RA 24
Parking lot/garage - Outdoors / 6		1.0 [3]	1.0 [3]	1	
Near road - Outdoors / 7		1.0 [3]	1.0 [3]	1	
Motorcycle - Outdoors / 8		1.0 [3]	1.0 [3]	1	
Service station - Indoors / 9		1.0 [3]	0.80 [2]	0.8	
Service station - Outdoors / 10		1.0 [3]	1.0 [3]	1	
Residential garage - Indoors / 11		1.0 [3]	0.81 [2]	0.81	
Other repair shop - Indoors / 12		1.0 [3]	0.80 [2]	0.8	
Residence (no CO source) - Indoors/13		1.0 [3]	0.85 [1]	0.85	MZ 27
Residence (gas stove) - Indoors / 14		1.0 [3]	0.81 [2]	0.81	
Residence (attached garage) - Indoors/15		1.0 [3]	0.81 [2]	0.81	
Residence (stove and garage)- Indoors/16		1.0 [3]	0.81 [2]	0.81	
Office - Indoors / 17		1.0 [3]	0.74 [1]	0.74	MZ 39
Store - Indoors / 18		1.0 [3]	0.80 [2]	0.8	
Restaurant - Indoors / 19		1.0 [3]	0.80 [2]	0.8	
Manufacturing facility - Indoors / 20		1.0 [3]	0.80 [2]	0.8	
School - Indoors / 21		1.0 [3]	0.80 [2]	0.8	
Church- Indoors / 22		1.0 [3]	0.80 [2]	0.8	
Shopping mall - Indoors / 23		1.0 [3]	0.80 [2]	0.8	
Auditorium - Indoors / 24		1.0 [3]	0.80 [2]	0.8	
Health care facility - Indoors / 25		1.0 [3]	0.80 [2]	0.8	
Other public building - Indoors / 26		1.0 [3]	0.80 [2]	0.8	
Other location - Indoors / 27		1.0 [3]	1.0° [1]	1	MZ 29
Not specified - Indoors / 28		1.0 [3]	0.80 [2]	0.8	
Construction site - Outdoors / 29		1.0 [3]	1.0 [3]	1	
Residential grounds - Outdoors / 30		1.0 [3]	1.0 [3]	1	
School grounds - Outdoors / 31		1.0 [3]	1.0 [3]	1	
Sports arena - Outdoors / 32		1.0 [3]	1.0 [3]	1	
Park/golf course - Outdoors / 33		1.0 [3]	1.0 [3]	1	
Other location - Outdoors / 34		1.0 [3]	1.0 [3]	1	
Not specified - Outdoors / 35		1.0 [3]	1.0 [3]	1	
Train/subway - In vehicle / 36		1.0 [3]	0.90 [2]	0.9	
Airplane - In vehicle / 37		0.0 [3]	0.90 [2]	0	

 a Data Code: 1 = value obtained from literature; 2 = value obtained using grouping scheme; 3 = default value.

 b The PROX factor is assumed to be the same for each source category for this pollutant.

 c Telephone switching center

Appendix C

Distributions and Equations Used in the Ventilation Rate Algorithm

Each table in Appendix C is specific to parameter and gender (e.g.,  $NVO_{2max}$  values for males). The tables which list distributions include the following data items

Age: age of person in years Source: source of data (see Table C-1) Distr: distribution of data [normal, lognormal (LN), or uniform] Mean: arithmetic mean for normal distribution GM: geometric mean of lognormal distribution GSD: geometric standard deviation of lognormal distribution Lower bound: smallest value permitted Upper bound: largest value permitted Assumptions: special assumptions used in developing distribution parameters

The tables which provide equations for estimating RMR include the following data items

Age: age of person in years Source: source of data (see Table C-1) DV: dependent variable of regression equation IV: independent variable of regression equation Slope: slope of regression equation (estimate of "a" in Equation 9-17) Interc: intercept of regression equation (estimate of "b" in Equation 9-17) SE: standard error of regression residuals (estimate of  $\sigma_e$  in Equation 9-17) Assumptions: special assumptions used in developing equation parameters

The codes listed under "source" are informal identification codes developed by analysts. The following table relates these codes to tables provided in Section 9.

Code Listed in "Source" Column of Table in Appendix C	Referenced Table in This Report	Original Reference
1 and 2	NA	Values for ages 6 through 64 based on Figure 9-13 in Astrand and Rodahl (1977). Values for ages 0 through 5 and ages 65 through 74 obtained by extending curves tangentially.
3a	Table 9-9	Astrand (1960)
3b	Table 9-9	Mercier et al. (1991)
3c	Table 9-9	Katch and Park (1975)
3d	Table 9-9	Heil et al. (1995)
3g	Table 9-9	Rowland et al. (1987)
4	Table 9-8	Brainard and Burmaster (1992), Burmaster and Crouch (1997).
5	Table 9-10	Esmail, Bhambhani, and Brintnell (1995).
R47a - R47l	Table 9-11	Schofield (1985)

Table C-1. Explanation of Codes Listed Under "Source" in Appendix C Tables.

Males	(last revised 6	5-11-98)					
			NV	/O <sub>2max</sub> distribut	ion		
Age	Source	Distr	Mean	SD	Lower	Upper	Assumptions
0	1	Normal	44.0	5.2	33.7	54.3	2-yr-old mean, $CV = 6.9/57.9$
1	1	Normal	44.0	5.2	33.7	54.3	2-yr-old mean, $CV = 6.9/57.9$
2	1	Normal	44.0	5.2	33.7	54.3	CV = 6.9/57.9
3	1	Normal	46.0	5.5	35.3	56.7	CV = 6.9/57.9
4	1	Normal	48.0	5.7	36.8	59.2	CV = 6.9/57.9
5	1	Normal	50.0	6.0	38.3	61.7	CV = 6.9/57.9
6	1	Normal	52.0	6.2	39.9	64.1	CV = 6.9/57.9
7	1	Normal	54.0	6.4	41.4	66.6	CV = 6.9/57.9
8	1	Normal	56.0	6.7	42.9	69.1	CV = 6.9/57.9
9	3g	Normal	57.9	6.9	44.4	71.4	
10	3g	Normal	57.9	6.9	44.4	71.4	
11	3b	Normal	45.4	8.1	29.6	61.2	
12	3b	Normal	47.4	8.1	31.5	63.3	
13	3b	Normal	46.0	7.0	32.3	59.7	
14	3b	Normal	45.7	4.3	37.4	54.0	
15	3b	Normal	47.5	4.7	38.3	56.7	
16	1	Normal	55.0	5.4	44.4	65.6	CV = 4.69/47.5
17	1	Normal	53.0	5.2	42.7	63.3	
18	1	Normal	50.0	4.9	40.3	59.7	
19	1	Normal	50.0	4.9	40.3	59.7	
20	3a	Normal	58.6	4.5	49.8	67.4	
21	3c	Normal	54.5	7.6	39.6	69.4	
22	3c	Normal	54.5	7.6	39.6	69.4	
23	3c	Normal	54.5	7.6	39.6	69.4	
24	3c	Normal	54.5	7.6	39.6	69.4	
25	3c	Normal	54.5	7.6	39.6	69.4	
26	3c	Normal	54.5	7.6	39.6	69.4	
27	3c	Normal	54.5	7.6	39.6	69.4	
28	3a	Normal	58.6	4.5	49.8	67.4	
29	3a	Normal	58.6	4.5	49.8	67.4	
30	3a	Normal	39.8	7.3	25.5	54.1	
31	3a	Normal	39.8	7.3	25.5	54.1	
32	3a	Normal	39.8	7.3	25.5	54.1	
33	3a	Normal	39.8	7.3	25.5	54.1	
34	3a	Normal	39.8	7.3	25.5	54.1	
35	3a	Normal	39.8	7.3	25.5	54.1	
36	3a	Normal	39.8	7.3	25.5	54.1	
37	3a	Normal	39.8	7.3	25.5	54.1	
38	3a	Normal	39.8	7.3	25.5	54.1	
39	3a	Normal	39.8	7.3	25.5	54.1	
40	3a	Normal	39.2	5.5	28.4	50.0	
41	3a	Normal	39.2	5.5	28.4	50.0	
42	3a	Normal	39.2	5.5	28.4	50.0	
43	3a	Normal	39.2	5.5	28.4	50.0	
44	3a	Normal	39.2	5.5	28.4	50.0	
45	3a	Normal	39.2	5.5	28.4	50.0	
46	3a	Normal	39.2	5.5	28.4	50.0	
47	3a	Normal	39.2	5.5	28.4	50.0	
48	3a	Normal	39.2	5.5	28.4	50.0	

			NV	/O <sub>2max</sub> distribut	ion		
Age	Source	Distr	Mean	SD	Lower	Upper	Assumptions
49	3a	Normal	39.2	5.5	28.4	50.0	
50	3a	Normal	33.1	4.9	23.5	42.7	
51	3a	Normal	33.1	4.9	23.5	42.7	
52	3a	Normal	33.1	4.9	23.5	42.7	
53	3a	Normal	33.1	4.9	23.5	42.7	
54	3a	Normal	33.1	4.9	23.5	42.7	
55	3a	Normal	33.1	4.9	23.5	42.7	
56	3a	Normal	33.1	4.9	23.5	42.7	
57	3a	Normal	33.1	4.9	23.5	42.7	
58	3a	Normal	33.1	4.9	23.5	42.7	
59	3a	Normal	33.1	4.9	23.5	42.7	
60	3a	Normal	31.4	5.3	21.0	41.8	
61	3a	Normal	31.4	5.3	21.0	41.8	
62	3a	Normal	31.4	5.3	21.0	41.8	
63	3a	Normal	31.4	5.3	21.0	41.8	
64	3a	Normal	31.4	5.3	21.0	41.8	
65	3a	Normal	31.4	5.3	21.0	41.8	
66	3a	Normal	31.4	5.3	21.0	41.8	
67	3a	Normal	31.4	5.3	21.0	41.8	
68	3a	Normal	31.4	5.3	21.0	41.8	
69	3a	Normal	31.4	5.3	21.0	41.8	
70	3d	Normal	27.2	5.7	16.1	38.3	
71	3d	Normal	27.2	5.7	16.1	38.3	
72	3d	Normal	27.2	5.7	16.1	38.3	
73	3d	Normal	27.2	5.7	16.1	38.3	
74	3d	Normal	27.2	5.7	16.1	38.3	
75	3d	Normal	27.2	5.7	16.1	38.3	
76	3d	Normal	27.2	5.7	16.1	38.3	
77	3d	Normal	27.2	5.7	16.1	38.3	
78 79	3d	Normal	27.2	5.7	16.1	38.3	
79 80	3d	Normal	27.2	5.7 5.7	16.1	38.3 38.3	Assumes data for any 70,70 applies
81	(3d) (3d)	Normal Normal	27.2	5.7	16.1 16.1	38.3	Assumes data for age 70-79 applies Assumes data for age 70-79 applies
82	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
83	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
84	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
85	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
86	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
87	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
88	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
89	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
90	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
91	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
92	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
93	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
94	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
95	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
96	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
97	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
98	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies

SD	*		
3D	Lower	Upper	Assumptions
5.7	16.1	38.3	Assumes data for age 70-79 applies
5.7	16.1	38.3	Assumes data for age 70-79 applies

1		6-11-98)	<b>K</b> 13	0	tion		
٨	C	Dist		O <sub>2max</sub> distribu		ت	A
Age	Source	Distr	Mean	SD	Lower	Upper	Assumptions
0	2	Normal	43.0	5.1	33.1	52.9	2-yr-old mean, CV = 4.7/39.9
1	2	Normal	43.0	5.1	33.1	52.9	2-yr-old mean, CV = 4.7/39.9
2	2	Normal	43.0	5.1	33.1	52.9	CV = 4.7/39.9
3	2	Normal	44.0	5.2	33.8	54.2	CV = 4.7/39.9
4	2	Normal	46.0	5.4	35.4	56.6	CV = 4.7/39.9
5	2	Normal	47.0	5.5	36.1	57.9	CV = 4.7/39.9
6	2	Normal	50.0	5.9	38.5	61.5	CV = 4.7/39.9
7	2	Normal	52.0	6.1	40.0	64.0	CV = 4.7/39.9
8	2	Normal	53.0	6.2	40.8	65.2	CV = 4.7/39.9
9	2	Normal	52.0	6.1	40.0	64.0	CV = 4.7/39.9
10	2	Normal	51.0	6.0	39.2	62.8	CV = 4.7/39.9
11	2	Normal	50.0	5.9	38.5	61.5	CV = 4.7/39.9
12	2	Normal	49.0	5.8	37.7	60.3	CV = 4.7/39.9
13	2	Normal	47.0	5.5	36.1	57.9	CV = 4.7/39.9
14	2	Normal	46.0	5.4	35.4	56.6	CV = 4.7/39.9
15	2	Normal	46.0	5.4	35.4	56.6	CV = 4.7/39.9
16	2	Normal	45.0	5.3	34.6	55.4	CV = 4.7/39.9
17	2	Normal	44.0	5.2	33.8	54.2	CV = 4.7/39.9
18	2	Normal	41.0	4.8	31.5	50.5	CV = 4.7/39.9
19	2	Normal	41.0	4.8	31.5	50.5	CV = 4.7/39.9
20	3a	Normal	39.9	4.7	30.7	49.1	
21	3a	Normal	39.9	4.7	30.7	49.1	
22	3a	Normal	39.9	4.7	30.7	49.1	
23	3a	Normal	39.9	4.7	30.7	49.1	
24	3a	Normal	39.9	4.7	30.7	49.1	
25	3a	Normal	39.9	4.7	30.7	49.1	
26	3a	Normal	39.9	4.7	30.7	49.1	
27	3a	Normal	39.9	4.7	30.7	49.1	
28	3a	Normal	39.9	4.7	30.7	49.1	
29	3a	Normal	39.9	4.7	30.7	49.1	
30	3a	Normal	37.3	5.2	27.1	47.5	
31	3a	Normal	37.3	5.2	27.1	47.5	
32	3a	Normal	37.3	5.2	27.1	47.5	
33	3a	Normal	37.3	5.2	27.1	47.5	
34	3a	Normal	37.3	5.2	27.1	47.5	
35	3a	Normal	37.3	5.2	27.1	47.5	1
36	3a	Normal	37.3	5.2	27.1	47.5	1
37	3a	Normal	37.3	5.2	27.1	47.5	1
38	3a	Normal	37.3	5.2	27.1	47.5	1
30 39	3a	Normal	37.3	5.2	27.1	47.5	1
40	3a		32.5	2.7		37.8	1
40 41	3a 3a	Normal	32.5 32.5	2.7	27.2	37.8	
		Normal			27.2		
42	3a	Normal	32.5	2.7	27.2	37.8	1
43	3a	Normal	32.5	2.7	27.2	37.8	1
44	3a	Normal	32.5	2.7	27.2	37.8	1
45	3a	Normal	32.5	2.7	27.2	37.8	1
46	3a	Normal	32.5	2.7	27.2	37.8	

 $\mathrm{NVO}_{\mathrm{2max}}$  - Females

			NV	O <sub>2max</sub> distribu	tion		
Age	Source	Distr	Mean	SD	Lower	Upper	Assumptions
48	3a	Normal	32.5	2.7	27.2	37.8	
49	3a	Normal	32.5	2.7	27.2	37.8	
50	3a	Normal	28.4	2.7	23.1	33.7	
51	3a	Normal	28.4	2.7	23.1	33.7	
52	3a	Normal	28.4	2.7	23.1	33.7	
53	3a	Normal	28.4	2.7	23.1	33.7	
54	3a	Normal	28.4	2.7	23.1	33.7	
55	3a	Normal	28.4	2.7	23.1	33.7	
56	3a	Normal	28.4	2.7	23.1	33.7	
57	3a	Normal	28.4	2.7	23.1	33.7	
58	3a	Normal	28.4	2.7	23.1	33.7	
59	3a	Normal	28.4	2.7	23.1	33.7	
60	3a	Normal	30.7	8.0	15.1	46.3	
61	3a	Normal	30.7	8.0	15.1	46.3	
62	3a	Normal	30.7	8.0	15.1	46.3	
63	3a	Normal	30.7	8.0	15.1	46.3	
64	3a	Normal	30.7	8.0	15.1	46.3	
65	3a	Normal	30.7	8.0	15.1	46.3	
66	3d	Normal	30.7	8.0	15.1	46.3	
67	3d	Normal	30.7	8.0	15.1	46.3	
68	3d	Normal	30.7	8.0	15.1	46.3	
69	3d	Normal	30.7	8.0	15.1	46.3	
70	3d	Normal	27.2	5.7	16.1	38.3	
71	3d	Normal	27.2	5.7	16.1	38.3	
72	3d	Normal	27.2	5.7	16.1	38.3	
73	3d	Normal	27.2	5.7	16.1	38.3	
74	3d	Normal	27.2	5.7	16.1	38.3	
75	3d	Normal	27.2	5.7	16.1	38.3	
76	3d	Normal	27.2	5.7	16.1	38.3	
77	3d	Normal	27.2	5.7	16.1	38.3	
78	3d	Normal	27.2	5.7	16.1	38.3	
79	3d	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
80	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
81	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
82	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
83	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
84 85	(3d)	Normal Normal	27.2 27.2	5.7 5.7	16.1	38.3 38.3	Assumes data for age 70-79 applies
85 86	(3d) (3d)	Normal	27.2	5.7	16.1 16.1	38.3	Assumes data for age 70-79 applies Assumes data for age 70-79 applies
87	(3d) (3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
88	(3d) (3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
89	(3d) (3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
90	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
90 91	(3d) (3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
91	(3d) (3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
92	(3d) (3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
93 94	(3d) (3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
94 95	(3d) (3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
95 96	(3d) (3d)	Normal	27.2	5.7		38.3	
96 97	· · · ·		27.2	5.7	16.1 16.1	38.3	Assumes data for age 70-79 applies Assumes data for age 70-79 applies
97 98	(3d) (3d)	Normal Normal	27.2	5.7	16.1 16.1	38.3	Assumes data for age 70-79 applies

			NV	O <sub>2max</sub> distribut			
Age	Source	Distr	Mean	SD	Lower	Upper	Assumptions
99	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies
100	(3d)	Normal	27.2	5.7	16.1	38.3	Assumes data for age 70-79 applies

Males	(last revised	6-11-98)		J	101055 - 1010		
			Body r	nass distribut	ion, kg		
Age	Source	Distr	GM	GSD	Lower	Upper	Assumptions
0	4	LN	9.3	1.141	7.2	12.0	ĺ
1	4	LN	11.7	1.126	9.3	14.8	
2	4	LN	13.5	1.127	10.7	17.1	
3	4	LN	15.6	1.121	12.5	19.5	
4	4	LN	17.6	1.142	13.6	22.8	
5	4	LN	19.9	1.148	15.2	26.1	
6	4	LN	22.9	1.156	17.2	30.4	
7	4	LN	24.8	1.163	18.4	33.3	
8	4	LN	27.9	1.198	19.6	39.8	
9	4	LN	30.9	1.179	22.4	42.7	
10	4	LN	36.2	1.215	24.7	53.0	
11	4	LN	40.0	1.287	24.4	65.6	
12	4	LN	43.8	1.251	28.2	67.9	
13	4	LN	48.4	1.240	31.7	73.8	
14	4	LN	55.7	1.198	39.1	79.4	
15	4	LN	59.7	1.172	43.7	81.5	
16	4	LN	66.7	1.183	48.0	92.7	
17	4	LN	66.0	1.182	47.6	91.6	
18	4	LN	70.1	1.172	51.4	95.7	
19	4	LN	70.8	1.166	52.4	95.7	
20	4	LN	76.7	1.190	54.5	107.9	
21	4	LN	76.7	1.190	54.5	107.9	
22	4	LN	76.7	1.190	54.5	107.9	
23	4	LN	76.7	1.190	54.5	107.9	
24	4	LN	76.7	1.190	54.5	107.9	
25	4	LN	76.7	1.190	54.5	107.9	
26	4	LN	76.7	1.190	54.5	107.9	
27	4	LN	76.7	1.190	54.5	107.9	
28	4	LN	76.7	1.190	54.5	107.9	
29	4	LN	76.7	1.190	54.5	107.9	
30	4	LN	76.7	1.190	54.5	107.9	
31 32	4	LN LN	76.7 76.7	1.190 1.190	54.5 54.5	107.9 107.9	
32	4	LN	76.7	1.190	54.5 54.5	107.9	
33	4	LN	76.7	1.190	54.5 54.5	107.9	
35	4	LN	76.7	1.190	54.5	107.9	
36	4 4	LN	76.7	1.190	54.5	107.9	
37	4	LN	76.7	1.190	54.5	107.9	
38	4	LN	76.7	1.190	54.5	107.9	
39	4	LN	76.7	1.190	54.5	107.9	
40	4	LN	76.7	1.190	54.5	107.9	
41	4	LN	76.7	1.190	54.5	107.9	
42	4	LN	76.7	1.190	54.5	107.9	
43	4	LN	76.7	1.190	54.5	107.9	
44	4	LN	76.7	1.190	54.5	107.9	
45	4	LN	76.7	1.190	54.5	107.9	
46	4	LN	76.7	1.190	54.5	107.9	
47	4	LN	76.7	1.190	54.5	107.9	
48	4	LN	76.7	1.190	54.5	107.9	

Body Mass - Males

			Body	nass distribut			
Age	Source	Distr	GM	GSD	Lower	Upper	Assumptions
49	4	LN	76.7	1.190	54.5	107.9	
50	4	LN	76.7	1.190	54.5	107.9	
51	4	LN	76.7	1.190	54.5	107.9	
52	4	LN	76.7	1.190	54.5	107.9	
53	4	LN	76.7	1.190	54.5	107.9	
54	4	LN	76.7	1.190	54.5	107.9	
55	4	LN	76.7	1.190	54.5	107.9	
56	4	LN	76.7	1.190	54.5	107.9	
57	4	LN	76.7	1.190	54.5	107.9	
58	4	LN	76.7	1.190	54.5	107.9	
59	4	LN	76.7	1.190	54.5	107.9	
60	4	LN	76.7	1.190	54.5	107.9	
61	4	LN	76.7	1.190	54.5	107.9	
62	4	LN	76.7	1.190	54.5	107.9	
63	4	LN	76.7	1.190	54.5	107.9	
64	4	LN	76.7	1.190	54.5	107.9	
65	4	LN	76.7	1.190	54.5	107.9	
66	4	LN	76.7	1.190	54.5	107.9	
67	4	LN	76.7	1.190	54.5	107.9	
68	4	LN	76.7	1.190	54.5	107.9	
69	4	LN	76.7	1.190	54.5	107.9	
70	4	LN	76.7	1.190	54.5	107.9	
71	4	LN	76.7	1.190	54.5	107.9	
72	4	LN	76.7	1.190	54.5	107.9	
73	4	LN	76.7	1.190	54.5	107.9	
74	4	LN	76.7	1.190	54.5	107.9	
75	4	LN	76.7	1.190	54.5	107.9	
76	4	LN	76.7	1.190	54.5	107.9	
77	4	LN	76.7	1.190	54.5	107.9	
78	4	LN	76.7	1.190	54.5	107.9	
79	4	LN	76.7	1.190	54.5	107.9	
80	4	LN	76.7	1.190	54.5	107.9	
81	4	LN	76.7	1.190	54.5	107.9	
82	4	LN	76.7	1.190	54.5	107.9	
83	4	LN	76.7	1.190	54.5	107.9	
84	4	LN	76.7	1.190	54.5	107.9	
85	4	LN	76.7	1.190	54.5	107.9	
86	4	LN	76.7	1.190	54.5	107.9	
87	4	LN	76.7	1.190	54.5	107.9	
88	4	LN	76.7	1.190	54.5	107.9	
89	4	LN	76.7	1.190	54.5	107.9	
90	4	LN	76.7	1.190	54.5	107.9	
91	4	LN	76.7	1.190	54.5	107.9	
92	4	LN	76.7	1.190	54.5	107.9	
93	4	LN	76.7	1.190	54.5	107.9	
94	4	LN	76.7	1.190	54.5	107.9	
95	4	LN	76.7	1.190	54.5	107.9	
96	4	LN	76.7	1.190	54.5	107.9	
97	4	LN	76.7	1.190	54.5	107.9	
98	4	LN	76.7	1.190	54.5	107.9	
99	4	LN	76.7	1.190	54.5	107.9	

			Body r	nass distribut			
Age	Source	Distr	GM	GSD	Lower	Upper	Assumptions
100	4	LN	76.7	1.190	54.5	107.9	

Females	(last revised 6-11-98)										
			Body m	ass distribu	ution, kg						
Age	Source	Distr	GM	GSD	Lower	Upper	Assumptions				
0	4	LN	8.7	1.156	6.5	11.6					
1	4	LN	10.8	1.137	8.4	13.9					
2	4	LN	12.9	1.119	10.3	16.1					
3	4	LN	14.7	1.147	11.2	19.2					
4	4	LN	16.9	1.142	13.0	21.9					
5	4	LN	19.7	1.177	14.3	27.1					
6	4	LN	22.2	1.190	15.8	31.2					
7	4	LN	24.3	1.190	17.3	34.2					
8	4	LN	27.4	1.169	20.2	37.2					
9	4	LN	31.8	1.239	20.9	48.4					
10	4	LN	35.5	1.220	24.0	52.4					
11	4	LN	40.9	1.254	26.2	63.7					
12	4	LN	45.6	1.237	30.1	69.2					
13	4	LN	50.4	1.241	33.0	77.0					
14	4	LN	54.1	1.206	37.5	78.1					
15	4	LN	54.6	1.169	40.2	74.1					
16	4	LN	58.0	1.182	41.8	80.5					
17	4	LN	59.1	1.179	42.8	81.6					
18	4	LN	58.6	1.158	44.0	78.1					
19	4	LN	60.3	1.161	45.0	80.8					
20	4	LN	64.7	1.220	43.8	95.5					
21	4	LN	64.7	1.220	43.8	95.5					
22	4	LN	64.7	1.220	43.8	95.5					
23	4	LN	64.7	1.220	43.8	95.5					
24	4	LN	64.7	1.220	43.8	95.5					
25	4	LN	64.7	1.220	43.8	95.5					
26	4	LN	64.7	1.220	43.8	95.5					
27	4	LN	64.7	1.220	43.8	95.5					
28	4	LN	64.7	1.220	43.8	95.5					
29	4	LN	64.7	1.220	43.8	95.5					
30	4	LN	64.7	1.220	43.8	95.5					
31	4		64.7	1.220	43.8	95.5					
32	4		64.7	1.220	43.8	95.5					
33	4		64.7	1.220	43.8	95.5					
34	4		64.7	1.220	43.8	95.5					
35	4		64.7	1.220	43.8	95.5					
36	4		64.7	1.220	43.8	95.5					
37	4		64.7	1.220	43.8	95.5					
38	4		64.7	1.220	43.8	95.5					
39	4		64.7	1.220	43.8	95.5					
40	4	LN	64.7	1.220	43.8	95.5					

Body Mass - Females

Age 41 42 43	Source 4 4	Distr LN	GM	ass distribu GSD	Lower	Upper	
41 42 43	4			000	Assumptions		
42 43		LIN	64.7	1.220	43.8	95.5	
43		LN	64.7	1.220	43.8	95.5	
	4	LN	64.7	1.220	43.8	95.5	
44	4	LN	64.7	1.220	43.8	95.5	
45	4	LN	64.7	1.220	43.8	95.5	
46	4	LN	64.7	1.220	43.8	95.5	
47	4	LN	64.7	1.220	43.8	95.5	
48	4	LN	64.7	1.220	43.8	95.5	
49	4	LN	64.7	1.220	43.8	95.5	
50	4	LN	64.7	1.220	43.8	95.5	
51	4	LN	64.7	1.220	43.8	95.5	
52	4	LN	64.7	1.220	43.8	95.5	
53	4	LN	64.7	1.220	43.8	95.5	
54	4	LN	64.7	1.220	43.8	95.5	
55	4	LN	64.7	1.220	43.8	95.5	
56	4	LN	64.7	1.220	43.8	95.5	
57	4	LN	64.7	1.220	43.8	95.5	
58	4	LN	64.7	1.220	43.8	95.5	
59	4	LN	64.7	1.220	43.8	95.5	
60	4	LN	64.7	1.220	43.8	95.5	
61	4	LN	64.7	1.220	43.8	95.5	
62	4	LN	64.7	1.220	43.8	95.5	
63	4	LN	64.7	1.220	43.8	95.5	
64	4	LN	64.7	1.220	43.8	95.5	
65	4	LN	64.7	1.220	43.8	95.5	
66	4	LN	64.7	1.220	43.8	95.5	
67	4	LN	64.7	1.220	43.8	95.5	
68	4	LN	64.7	1.220	43.8	95.5	
69	4	LN	64.7	1.220	43.8	95.5	
70	4	LN	64.7	1.220	43.8	95.5	
71	4	LN	64.7	1.220	43.8	95.5	├
72	4		64.7	1.220	43.8	95.5	<u> </u>
73	4		64.7	1.220	43.8	95.5 05.5	
74	4		64.7	1.220	43.8	95.5 05.5	
75 76	4	LN LN	64.7 64.7	1.220 1.220	43.8	95.5 95.5	
76	4	LN	64.7 64.7	1.220	43.8 43.8	95.5 95.5	
78	4		64.7 64.7	1.220	43.8 43.8	95.5 95.5	
78	4	LN	64.7 64.7	1.220	43.8	95.5 95.5	
79 80	4	LN	64.7	1.220	43.8	95.5 95.5	
81	4	LN	64.7	1.220	43.8	95.5 95.5	
82	4	LN	64.7	1.220	43.8	95.5 95.5	
83	4	LN	64.7	1.220	43.8	95.5 95.5	

			Body m	ass distribu	ution, kg		
Age	Source	Distr	GM	GSD	Lower	Upper	Assumptions
84	4	LN	64.7	1.220	43.8	95.5	
85	4	LN	64.7	1.220	43.8	95.5	
86	4	LN	64.7	1.220	43.8	95.5	
87	4	LN	64.7	1.220	43.8	95.5	
88	4	LN	64.7	1.220	43.8	95.5	
89	4	LN	64.7	1.220	43.8	95.5	
90	4	LN	64.7	1.220	43.8	95.5	
91	4	LN	64.7	1.220	43.8	95.5	
92	4	LN	64.7	1.220	43.8	95.5	
93	4	LN	64.7	1.220	43.8	95.5	
94	4	LN	64.7	1.220	43.8	95.5	
95	4	LN	64.7	1.220	43.8	95.5	
96	4	LN	64.7	1.220	43.8	95.5	
97	4	LN	64.7	1.220	43.8	95.5	
98	4	LN	64.7	1.220	43.8	95.5	
99	4	LN	64.7	1.220	43.8	95.5	
100	4	LN	64.7	1.220	43.8	95.5	

Males	(last revised	6-11-98)		CF - Males	
			ECF		
Age	Source	Distr	Lower	Upper	Assumptions
0	5	Uniform	0.20	0.21	
1	5	Uniform 0.20		0.21	
2	5	Uniform	0.20	0.21	
3	5	Uniform	0.20	0.21	
4	5	Uniform	0.20	0.21	
5	5	Uniform	0.20	0.21	
6	5	Uniform	0.20	0.21	
7	5	Uniform	0.20	0.21	
8	5	Uniform	0.20	0.21	
9	5	Uniform	0.20	0.21	
10	5	Uniform	0.20	0.21	
11	5	Uniform	0.20	0.21	
12	5	Uniform	0.20	0.21	
13	5	Uniform	0.20	0.21	
14	5	Uniform	0.20	0.21	
15	5	Uniform	0.20	0.21	
16	5	Uniform	0.20	0.21	
17	5	Uniform	0.20	0.21	
18	5	Uniform	0.20	0.21	
19	5	Uniform	0.20	0.21	
20	5	Uniform	0.20	0.21	
21	5	Uniform	0.20	0.21	
22	5	Uniform	0.20	0.21	
23	5	Uniform	0.20	0.21	
24	5	Uniform	0.20	0.21	
25	5	Uniform	0.20	0.21	
26	5	Uniform	0.20	0.21	
27	5	Uniform	0.20	0.21	
28	5	Uniform	0.20	0.21	
29	5	Uniform	0.20	0.21	
30	5	Uniform	0.20	0.21	
31	5	Uniform	0.20	0.21	
32	5	Uniform	0.20	0.21	
33	5	Uniform	0.20	0.21	
34	5	Uniform	0.20	0.21	
35	5	Uniform	0.20	0.21	
36	5	Uniform	0.20	0.21	
37	5	Uniform	0.20	0.21	
38	5	Uniform	0.20	0.21	
39	5	Uniform	0.20	0.21	
40	5	Uniform	0.20	0.21	

ECF - Males

			ECF		
Age	Source	Distr	Lower	Upper	Assumptions
41	5	Uniform	0.20	0.21	
42	5	Uniform	0.20	0.21	
43	5	Uniform	0.20	0.21	
44	5	Uniform	0.20	0.21	
45	5	Uniform	0.20	0.21	
46	5	Uniform	0.20	0.21	
47	5	Uniform	0.20	0.21	
48	5	Uniform	0.20	0.21	
49	5	Uniform	0.20	0.21	
50	5	Uniform	0.20	0.21	
51	5	Uniform	0.20	0.21	
52	5	Uniform	0.20	0.21	
53	5	Uniform	0.20	0.21	
54	5	Uniform	0.20	0.21	
55	5	Uniform	0.20	0.21	
56	5	Uniform	0.20	0.21	
57	5	Uniform	0.20	0.21	
58	5	Uniform	0.20	0.21	
59	5	Uniform	0.20	0.21	
60	5	Uniform	0.20	0.21	
61	5	Uniform	0.20	0.21	
62	5	Uniform	0.20	0.21	
63	5	Uniform	0.20	0.21	
64	5	Uniform	0.20	0.21	
65	5	Uniform	0.20	0.21	
66	5	Uniform	0.20	0.21	
67	5	Uniform	0.20	0.21	
68	5	Uniform	0.20	0.21	
69 70	5	Uniform	0.20	0.21	
70	5 5	Uniform	0.20	0.21	
71 72	5	Uniform	0.20	0.21	
72	5	Uniform Uniform	0.20 0.20	0.21 0.21	
73	5	Uniform	0.20	0.21	
74	5	Uniform	0.20	0.21	
75	5	Uniform	0.20	0.21	
70	5	Uniform	0.20	0.21	
78	5	Uniform	0.20	0.21	
70	5	Uniform	0.20	0.21	
80	5	Uniform	0.20	0.21	
81	5	Uniform	0.20	0.21	
82	5	Uniform	0.20	0.21	
83	5	Uniform	0.20	0.21	
00		Unitern	0.20	0.21	

			ECF		
Age	Source	Distr	Lower	Upper	Assumptions
84	5	Uniform	0.20	0.21	
85	5	Uniform	0.20	0.21	
86	5	Uniform	0.20	0.21	
87	5	Uniform	0.20	0.21	
88	5	Uniform	0.20	0.21	
89	5	Uniform	0.20	0.21	
90	5	Uniform	0.20	0.21	
91	5	Uniform	0.20	0.21	
92	5	Uniform	0.20	0.21	
93	5	Uniform	0.20	0.21	
94	5	Uniform	0.20	0.21	
95	5	Uniform	0.20	0.21	
96	5	Uniform	0.20	0.21	
97	5	Uniform	0.20	0.21	
98	5	Uniform	0.20	0.21	
99	5	Uniform	0.20	0.21	
100	5	Uniform	0.20	0.21	

Females	(last revised	6-11-98)		- Females	
			ECF		
Age	Source	Distr	Lower	Upper	Assumptions
0	5	Uniform	0.20	0.21	
1	5	Uniform	0.20	0.21	
2	5	Uniform	0.20	0.21	
3	5	Uniform	0.20	0.21	
4	5	Uniform	0.20	0.21	
5	5	Uniform	0.20	0.21	
6	5	Uniform	0.20	0.21	
7	5	Uniform	0.20	0.21	
8	5	Uniform	0.20	0.21	
9	5	Uniform	0.20	0.21	
10	5	Uniform	0.20	0.21	
11	5	Uniform	0.20	0.21	
12	5	Uniform	0.20	0.21	
13	5	Uniform	0.20	0.21	
14	5	Uniform	0.20	0.21	
15	5	Uniform	0.20	0.21	
16	5	Uniform	0.20	0.21	
17	5	Uniform	0.20	0.21	
18	5	Uniform	0.20	0.21	
19	5	Uniform	0.20	0.21	
20	5	Uniform	0.20	0.21	
21	5	Uniform	0.20	0.21	
22	5	Uniform	0.20	0.21	
23	5	Uniform	0.20	0.21	
24	5	Uniform	0.20	0.21	
25	5	Uniform	0.20	0.21	
26	5	Uniform	0.20	0.21	
27	5	Uniform	0.20	0.21	
28	5	Uniform	0.20	0.21	
29	5	Uniform	0.20	0.21	
30	5	Uniform	0.20	0.21	
31	5	Uniform	0.20	0.21	
32	5	Uniform	0.20	0.21	
33	5	Uniform	0.20	0.21	
34	5	Uniform	0.20	0.21	
35	5	Uniform	0.20	0.21	
36	5	Uniform	0.20	0.21	
37	5	Uniform	0.20	0.21	
38	5	Uniform	0.20	0.21	
39	5	Uniform	0.20	0.21	
40	5	Uniform	0.20	0.21	

ECF - Females

			ECF		
Age	Source	Distr	Lower	Upper	Assumptions
41	5	Uniform	0.20	0.21	
42	5	Uniform	0.20	0.21	
43	5	Uniform	0.20	0.21	
44	5	Uniform	0.20	0.21	
45	5	Uniform	0.20	0.21	
46	5	Uniform	0.20	0.21	
47	5	Uniform	0.20	0.21	
48	5	Uniform	0.20	0.21	
49	5	Uniform	0.20	0.21	
50	5	Uniform	0.20	0.21	
51	5	Uniform	0.20	0.21	
52	5	Uniform	0.20	0.21	
53	5	Uniform	0.20	0.21	
54	5	Uniform	0.20	0.21	
55	5	Uniform	0.20	0.21	
56	5	Uniform	0.20	0.21	
57	5	Uniform	0.20	0.21	
58	5	Uniform	0.20	0.21	
59	5	Uniform	0.20	0.21	
60	5	Uniform	0.20	0.21	
61	5	Uniform	0.20	0.21	
62	5	Uniform	0.20	0.21	
63	5	Uniform	0.20	0.21	
64	5	Uniform	0.20	0.21	
65	5	Uniform	0.20	0.21	
66	5	Uniform	0.20	0.21	
67	5	Uniform	0.20	0.21	
68	5	Uniform	0.20	0.21	
69 70	5	Uniform	0.20	0.21	
70	5 5	Uniform	0.20	0.21	
71 72	5	Uniform	0.20	0.21	
72	5	Uniform Uniform	0.20 0.20	0.21 0.21	
73	5	Uniform	0.20	0.21	
74	5	Uniform	0.20	0.21	
75	5	Uniform	0.20	0.21	
70	5	Uniform	0.20	0.21	
78	5	Uniform	0.20	0.21	
70	5	Uniform	0.20	0.21	
80	5	Uniform	0.20	0.21	
81	5	Uniform	0.20	0.21	
82	5	Uniform	0.20	0.21	
83	5	Uniform	0.20	0.21	
00		Unitern	0.20	0.21	

			ECF		
Age	Source	Distr	Lower	Upper	Assumptions
84	5	Uniform	0.20	0.21	
85	5	Uniform	0.20	0.21	
86	5	Uniform	0.20	0.21	
87	5	Uniform	0.20	0.21	
88	5	Uniform	0.20	0.21	
89	5	Uniform	0.20	0.21	
90	5	Uniform	0.20	0.21	
91	5	Uniform	0.20	0.21	
92	5	Uniform	0.20	0.21	
93	5	Uniform	0.20	0.21	
94	5	Uniform	0.20	0.21	
95	5	Uniform	0.20	0.21	
96	5	Uniform	0.20	0.21	
97	5	Uniform	0.20	0.21	
98	5	Uniform	0.20	0.21	
99	5	Uniform	0.20	0.21	
100	5	Uniform	0.20	0.21	

Males (la	ast revise	d 6-11-	98)			Tuvit	- maies		
			/	Rearess	sion equa	ation		Estimate for	
				logiood				median	
Age	Source	DV	IV	Slope	Interc	SE	Units	weight	Assumptions
0	R47g	BMR	BM	0.244	-0.127	0.290	MJ/day	2.1	equation for age = 1 yr applies
1	R47g	BMR	BM	0.244	-0.127	0.290	MJ/day	2.7	
2	R47g	BMR	BM	0.244	-0.127	0.280	MJ/day	3.2	
3	R47h	BMR	BM	0.095	2.110	0.280	MJ/day	3.6	
4	R47h	BMR	BM	0.095	2.110	0.280	MJ/day	3.8	
5	R47h	BMR	BM	0.095	2.110	0.280	MJ/day	4.0	
6	R47h	BMR	BM	0.095	2.110	0.280	MJ/day	4.3	
7	R47h	BMR	BM	0.095	2.110	0.280	MJ/day	4.5	
8	R47h	BMR	BM	0.095	2.110	0.280	MJ/day	4.8	
9	R47h	BMR	BM	0.095	2.110	0.280	MJ/day	5.0	
10	R47i	BMR	BM	0.074	2.754	0.440	MJ/day	5.4	
11	R47i	BMR	BM	0.074	2.754	0.440	MJ/day	5.7	
12	R47i	BMR	BM	0.074	2.754	0.440	MJ/day	6.0	
13	R47i	BMR	BM	0.074	2.754	0.440	MJ/day	6.3	
14	R47i	BMR	BM	0.074	2.754	0.440	MJ/day	6.9	
15	R47i	BMR	BM	0.074	2.754	0.440	MJ/day	7.2	
16	R47i	BMR	BM	0.074	2.754	0.440	MJ/day	7.7	
17	R47i	BMR	BM	0.074	2.754	0.440	MJ/day	7.6	
18	R47j	BMR	BM	0.063	2.896	0.640	MJ/day	7.3	
19	R47j	BMR	BM	0.063	2.896	0.640	MJ/day	7.4	
20	R47j	BMR	BM	0.063	2.896	0.640	MJ/day	7.7	
21	R47j	BMR	BM	0.063	2.896	0.640	MJ/day	7.7	
22	R47j	BMR	BM	0.063	2.896	0.640	MJ/day	7.7	
23	R47j	BMR	BM	0.063	2.896	0.640	MJ/day	7.7	
24	R47j	BMR	BM	0.063	2.896	0.640	MJ/day	7.7	
25	R47j	BMR	BM	0.063	2.896	0.640	MJ/day	7.7	
26	R47j	BMR	BM	0.063	2.896	0.640	MJ/day	7.7	
27	R47j	BMR	BM	0.063	2.896	0.640	MJ/day	7.7	
28	R47j	BMR	BM	0.063	2.896	0.640	MJ/day	7.7	
29	R47j	BMR	BM	0.063	2.896	0.640	MJ/day	7.7	
30	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
31	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
32	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
33	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
34	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
35	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
36	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
37	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
38	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
39	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	

RMR - Males

		Regression equation							
								Estimate for median	
Age	Source	DV	IV	Slope	Interc	SE	Units	weight	Assumptions
40	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
41	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
42	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
43	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
44	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
45	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
46	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
47	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
48	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
49	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
50	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
51	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
52	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
53	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
54	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
55	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
56	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
57	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
58	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
59	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
60	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
61	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
62	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
63	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
64	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
65	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
66	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
67	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
68	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
69	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
70	R47k	BMR	BM	0.048	3.653	0.700	MJ/day	7.3	
71	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2	
72	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2	
73	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2	
74	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2	
75	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2	
76	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2	
77	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2	
78	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2	
79	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2	
80	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2	
81	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2	

				Regress	ion equa	ation		Estimate for		
Age	Source	DV	IV	Slope	Interc	SE	Units	median weight	Assumptions	
82	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
83	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
84	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
85	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
86	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
87	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
88	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
89	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
90	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
91	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
92	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
93	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
94	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
95	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
96	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
97	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
98	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
99	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		
100	R47I	BMR	BM	0.049	2.459	0.690	MJ/day	6.2		

Females (last revised 6-11-98)											
Females (la											
				Regression	equatior	Estimate for					
Age	Source	DV	IV	Slope	Interc	SE	Units	median weight	Assumptions		
0	R47a	BMR	BM	0.244	-0.130	0.250	MJ/day	2.0			
1	R47a	BMR	BM	0.244	-0.130	0.250	MJ/day	2.5			
2	R47a	BMR	BM	0.244	-0.130	0.250	MJ/day	3.0			
3	R47b	BMR	BM	0.085	2.033	0.290	MJ/day	3.3			
4	R47b	BMR	BM	0.085	2.033	0.290	MJ/day	3.5			
5	R47b	BMR	BM	0.085	2.033	0.290	MJ/day	3.7			
6	R47b	BMR	BM	0.085	2.033	0.290	MJ/day	3.9			
7	R47b	BMR	BM	0.085	2.033	0.290	MJ/day	4.1			
8	R47b	BMR	BM	0.085	2.033	0.290	MJ/day	4.4			
9	R47b	BMR	BM	0.085	2.033	0.290	MJ/day	4.7			
10	R47c	BMR	BM	0.056	2.898	0.470	MJ/day	4.9			
11	R47c	BMR	BM	0.056	2.898	0.470	MJ/day	5.2			
12	R47c	BMR	BM	0.056	2.898	0.470	MJ/day	5.5			
13	R47c	BMR	BM	0.056	2.898	0.470	MJ/day	5.7			
14	R47c	BMR	BM	0.056	2.898	0.470	MJ/day	5.9			
15	R47c	BMR	BM	0.056	2.898	0.470	MJ/day	6.0			
16	R47c	BMR	BM	0.056	2.898	0.470	MJ/day	6.1			
17	R47c	BMR	BM	0.056	2.898	0.470	MJ/day	6.2			
18	R47d	BMR	BM	0.062	2.036	0.500	MJ/day	5.7			
19	R47d	BMR	BM	0.062	2.036	0.500	MJ/day	5.8			
20	R47d	BMR	BM	0.062	2.036	0.500	MJ/day	6.0			
21	R47d	BMR	BM	0.062	2.036	0.500	MJ/day	6.0			
22	R47d	BMR	BM	0.062	2.036	0.500	MJ/day	6.0			
23	R47d	BMR	BM	0.062	2.036	0.500	MJ/day	6.0			
24	R47d	BMR	BM	0.062	2.036	0.500	MJ/day	6.0			
25	R47d	BMR	BM	0.062	2.036	0.500	MJ/day	6.0			
26	R47d	BMR	BM	0.062	2.036	0.500	MJ/day	6.0			
27	R47d	BMR	BM	0.062	2.036	0.500	MJ/day	6.0			
28	R47d	BMR	BM	0.062	2.036	0.500	MJ/day	6.0			
29	R47d	BMR	BM	0.062	2.036	0.500	MJ/day	6.0			
30	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7			
31	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7			
32	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7			
33	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7			
34	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7			
35	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7			
36	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7			
37	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7			
38	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7			
39	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7			

RMR - Females

				Regression	equatior	Estimate for			
						median			
Age	Source	DV	IV	Slope	Interc	SE	Units	weight	Assumptions
40	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
41	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
42	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
43	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
44	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
45	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
46	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
47	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
48	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
49	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
50	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
51	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
52	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
53	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
54	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
55	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
56	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
57	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
58	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
59	R47e	BMR	BM	0.034	3.538	0.470	MJ/day	5.7	
60	R47e	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
61	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
62	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
63	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
64	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
65	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
66	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
67	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
68	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
69	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
70	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
71	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
72	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
73	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
74	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
75	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
76	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
77	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
78	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
79	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
80	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
81	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	

				Regression	equatior	Estimate for			
Age	Source	DV	IV	Slope	Interc	SE	Units	median weight	Assumptions
82	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
83	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
84	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
85	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
86	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
87	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
88	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
89	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
90	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
91	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
92	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
93	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
94	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
95	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
96	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
97	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
98	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
99	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
100	R47f	BMR	BM	0.038	2.755	0.450	MJ/day	5.2	
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