Appendix E: List of the available $^{EM}HBALs_{10min}$, STELs, and ceiling values

Chemical(s)	CAS No.	$^{EM}HBAL_{10min}$ (ppb)	ACGIH STEL (ppb)	Cal/OSHA STEL (ppb)	NIOSH STEL (ppb)	ACGIH C (ppb)	Cal/OSHA C (ppb)	NIOSH C (ppb)	OSHA C (ppb)
Acetylene	74-86-2	75,000	--	--	--	--	--	2,500,000	--
Ammonia	7664-41-7	2,550	35,000	35,000	35,000	--	--	--	--
Benzene	71-43-2	500	2,500	5,000	1,000	--	--	--	--
1,3-Butadiene	106-99-0	2,500	--	5,000	--	--	--	--	--
Butane	106-97-8	276,000	1,000,000	--	--	--	--	--	--
1-Butene	106-98-9	81,000	--	--	--	--	--	--	--
C3-C4 Saturated	--	--	--	--	--	--	--	--	--
Chlorine	7782-50-5	200	400	1,000	--	--	--	--	--
Cyclohexane	110-82-7	3,000	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	60,000	--	125,000	125,000	--	--	--	--
Ethylene Dichloride	107-06-2	1,000	--	2,000	2,000	--	--	--	--
Ethylene Glycol	107-21-1	5,700	50,000	--	--	--	--	--	--
Ethylene Oxide	75-21-8	2,500	--	5,000	--	--	--	--	--
Formaldehyde	50-00-0	132	300	2,000	--	--	--	100 [a]	--
n-Hexane	110-54-3	16,200	--	--	--	--	--	--	--

Chemical(s)	CAS No.	$^{EM}HBAL_{10min}$ (ppb)	ACGIH STEL (ppb)	Cal/OSHA STEL (ppb)	NIOSH STEL (ppb)	ACGIH C (ppb)	Cal/OSHA C (ppb)	NIOSH C (ppb)	OSHA C (ppb)
Hydrochloric Acid	7647-01-0	1,000	--	--	--	2,000	2,000	5,000	5,000
Hydrogen Sulfide	7783-06-4	210	5,000	15,000	--	--	--	--	--
Isobutane	75-28-5	99,000	1,000,000	--	--	--	--	--	--
n-Octane	111-65-9	12,300	--	375,000	375,000	--	--	--	--
Propane	74-98-6	--	--	--	--	--	--	--	--
Propylene	115-07-1	--	--	--	--	--	--	--	--
Sodium Hydroxide	1310-73-2	15	--	--	--	1,200	1,200	1,200	--
Styrene	100-42-5	10,000	20,000	100,000	100,000	--	--	--	--
Sulfur Dioxide	7446-09-5	375 [c]	250	5,000	5,000	--	--	--	--
Sulfuric Acid	7664-93-9	90	--	--	750	--	--	--	--
Toluene	108-88-3	12,000	--	150,000	150,000	--	--	--	--
Vinyl Chloride	75-01-4	216,000	--	--	--	--	--	--	5,000 [b]
Xylenes + Ethylbenzene	1330-20-7 + 100-41-4	15,000	--	--	--	--	--	--	--
Xylenes	1330-20-7	15,000	150,000	150,000	150,000	--	--	--	--

[a] Basis of the NIOSH ceiling value was based on long-term exposures than can cause cancer (which is the basis of the NIOSH limits), and therefore, the NIOSH ceiling value was not considered fit-for-purpose to derive a mobile monitoring comparison value for formaldehyde; [b] Basis not yet verified, but is likely based on protection against long-term exposures that can cause cancer and therefore, the OSHA ceiling value was not considered; [c] ½ STEL not used for sulfur dioxide because the basis of the STEL is the same as the $HBAL_{10\text{-}min}$;ACGIH – American Conference of Governmental Industrial Hygienists; C – ceiling value; Cal/OSHA – California Division of Occupational Safety and Health; $^{EM}HBAL_{10min}$ – 10-minute exposure mitigation health-based action level; NIOSH – National Institute for Occupational Safety and Health; OSHA – Occupational Safety and Health Administration; ppb – parts per billion; STEL – 15-minute short-term exposure limits;

and “--”no value available.