TABLE 6.8 (NEW)
TIER 2A, 2B and 3B METHODS -- DEFAULT WEIGHTING FACTORS $\gamma_{I,p}$ AND $\gamma_{K,I,p}$ FOR SEMICONDUCTOR AND MEMS MANUFACTURING UNDER CERTAIN CONDITIONS*

Tier, input gas ($\gamma_{i,p}$) vs. byproduct ($\gamma_{k,i,p}$), and wafer size	**CF_4 (IPC or ITC)/ EWC**	**C_2F_6 IPC/ EWC**	**c-C_4F_8 IPC/ EWC**	**NF_3 (IPC or ITC)/ EWC**	**SF_6 IPC/ EWC**	**NF_3 RPC/ EWC**	**CF_4 RPC/ EWC**	**C_3F_8 RPC/ EWC**	**N_2O TFD/ other**
Tier 2a									
$\gamma_{i,p}$	13†	9.3	4.7	14†	11				
$\gamma_{CF4,i,p}$	NA	23	6.6	63	8.5				
$\gamma_{C2F6,i,p}$	NA	NA	NA	NA	3.4				
Tier 2b									
$\gamma_{i,p}$ (≤200 mm wafer size)	13†	9.3	4.7	2.9†	11				
$\gamma_{CF4,i,p}$ (≤200 mm wafer size)	NA	23	6.6	110	8.5				
$\gamma_{C2F6,i,p}$ (≤200 mm wafer size)	NA	NA	NA	NA	3.4				
$\gamma_{i,p}$ (300 mm wafer size)	NM	NM	NM	26†	NM				
$\gamma_{CF4,i,p}$ (300 mm wafer size)	NA	NA	NA	17	NA				
Tier 3b									
$\gamma_{i,p}$ (both ≤200 mm and 300 mm wafer size)	13†	9.3	4.7	14†	11	5.7	NM	NM	25
$\gamma_{CF4,i,p}$ (both ≤200 mm and 300 mm wafer size)	NA	23	6.6	63	8.5	57	NA	NA	NA
$\gamma_{C2F6,i,p}$ (both ≤200 mm and 300 mm wafer size)	NA	NA	NA	NA	3.4	NA	NA	NA	NA
$\gamma_{i,p}$ (≤200 mm wafer size)	13†	9.3	4.7	2.9†	11	1.4	NM	NM	48
$\gamma_{CF4,i,p}$ (≤200 mm wafer size)	NA	23	6.6	110	8.5	35	NM	NA	NA
$\gamma_{C2F6,i,p}$ (≤200 mm wafer size)	NA	NA	NA	NA	3.4	NA	NA	NA	NA
$\gamma_{i,p}$ (300 mm wafer size)	NM	NM	NM	26†	NM	10	NM	NM	2.4
$\gamma_{CF4,i,p}$ (300 mm wafer size)	NA	NA	NA	17	NA	78	NA	NA	NA

Source: Survey of industrial facility data conducted by the authors of Chapter 6.
*Gamma weighting factors for semiconductor manufacturing may be applied to MEMS manufacturing processes that are carried out using tools and processes similar to those used to manufacture semiconductors (for further details see discussion in the Choice of method section, in particular footnote 3).
† The gamma values for (IPC or ITC)/EWC for 200 mm were developed based on IPC only and the values for 300 mm were developed based on the total emissions and tool count from ITC and IPC. Gamma is assigned based on analogy due to similar emission factors for IPC and ITC, where known, for the same gas and wafer size. For all other cases where no gamma has been measured and a gamma is needed, compiler may assume $\gamma_i = 10$, $\gamma_k = 10$.