

Appendix R

Physical Features - I Extract Table

EXTRACT MATRIX XVII: PHYSICAL FEATURES OF MODELS I - PART A

Model	Stability Classification/ Turbulence Typing (Pasquill-gifford- turner, Star, Irwin, Sigma Theta, Split Sigma, Richardson Number, Monin- obukhov Length, Roughness Length, Tke-driven)	Release Elevation (Ground, Roof, Stack, Continuous Height Range)	Aerodynamic Effects from Buildings and Obstacles (Building Wake, Cavity, K- factors, Flow Separation)	Horizontal Plume Meander	Horizontal/vertical Wind Shear	Mixing Layer (Trapping, Lofting, Reflection, Penetration, Inversion Breakup Fumigation, Temporal Variability)
ADAM	✓	Ground, Roof	NA	✓	✓	NA
AFTOX	✓	Ground, Roof	NA	✓	NA	NA
AI-RISK	NA	NA	NA	NA	NA	NA
ALOHA	✓	NA	NA	NA	NA	NA
AQPAC	✓	Ground, Roof	NA	NA	NA	Reflection
ARAC (MATHEW/ADPIC)	✓	NA	NA	NA	NA	NA
ARCON96	✓	NA	NA	✓	✓	NA
AXAIRQ	✓	Ground	NA	NA	NA	✓
AXAOTHER XL	✓	Roof	NA	NA	NA	Reflection
BNLGPM	✓	✓	NA	NA	NA	NA
CALPUFF	✓	Ground, Roof	✓	✓	✓	✓
CAP88-PC	✓	✓	NA	NA	NA	✓
CASRAM	NA	Ground, Roof	NA	✓	NA	Trapping
CTDMPLUS	✓	✓	NA	NA	NA	NA
DEGADIS	NA	✓	NA	NA	NA	NA
DOSEEP	✓	Ground, Roof	NA	Shear/stability	Horizontal shear used	✓
EMGRES	✓	Ground, Roof	NA	NA	NA	Trapping, Reflection
ERAD	✓	NA	NA	NA	NA	✓
ETMOD	✓	✓	✓	✓	NA	NA

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FEM3C	✓	✓	✓	NA	✓	NA
GAUS1	✓	✓	✓	NA	NA	Trapping
GENII	✓	✓	NA	NA	NA	NA
GXQ	✓	Ground, Roof	Building Wake	✓	NA	NA
HARM II	✓	Ground, Roof	NA	NA	NA	Reflection
HGSYSTEM	✓	Ground	NA	NA	NA	NA
HOTMAC/RAPTAD	NA	Ground, Roof	NA	NA	NA	NA
HOTSPOT	✓	Ground, Roof	NA	NA	NA	Reflection, Penetration
HRW	✓	NA	✓	NA	NA	NA
HYSPLIT	Monin-Obukhov	NA	NA	✓	✓	Temporal Variability
INPUFF	✓	✓	NA	✓	✓	✓
MACCS2	✓	Ground, Roof	NA	✓	NA	✓
MARSS	✓	Ground, Roof	NA	NA	NA	NA
OMEGA/ADM v3.5	✓	Ground, Roof	NA	NA	✓	✓
PAVAN	✓	Ground, Roof	Building Wake	✓	NA	NA
PIKE	Not Stated	Ground	NA	NA	✓	Penetration
PUFF-PLUME	✓	Ground, Roof	NA	NA	NA	Reflection
RSAC-5	✓	✓	✓	NA	NA	NA
RTVSM	STAR, Sigma Theta	Ground, Roof	NA	NA	✓	✓
SCIPUFF	✓	Ground, Roof	NA	✓	✓	NA
SLAB	✓	Ground, Roof	NA	NA	NA	NA

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SUDU	Pasquill-Gifford-Turner	Ground, Roof	Building Wake, Cavity	NA	NA	Reflection
TRAC RA/HA	Not Stated	Ground, Roof	NA	✓	NA	✓
TRIAD 2-1	✓	Ground	NA	✓	✓	Trapping, Reflection
TSCREEN	NA	Ground	✓	NA	NA	NA
UFOTRI	Pasquill-Gifford-Turner	Ground, Roof	Building Wake	✓	NA	Reflection
VDI	✓	Ground, Roof	✓	Building Wake	Building Wake	Reflection
VENTSAR XL	✓	Ground	✓	NA	NA	NA
VLSTRACK	✓	Ground, Roof	NA	NA	NA	✓

NA Not applicable for this model.