RADIUS Emission Point Inventory Guidance for Calculating Equivalent Diameter, Exhaust Temperature, and Exhaust Volume For Atypical, Non-Combustion, Significant Sources

Source Description	Stack Config.	Equivalent Diameter	Exhaust Temperature	Exhaust Volume
Hopper (Outdoors)	Rectangle	For Hopper, use length and width in RADIUS Equivalent Diameter Calculation Tool*	Usually Ambient** Outdoor Temperature OR Case by Case, e.g. when dumping Hot Ashes	Exhaust volume equals material rate of process (cfm). Must be consistent with the operating time used in operating scenario.
Material Handling (Covered or Uncovered, Indoors)	Window	Use opening, window, or vent length and width in RADIUS Equivalent Diameter Calculation Tool	Usually Room Temperature Case by case, e.g., Oven Discharge	Open Window (passive). Exhaust Fan (active): Volume of fan in acfm.
Conveyor (Covered, Outdoors)	Rectangle	Use width of gap between cover and belt and length of the conveyor in RADIUS Equivalent Diameter Calculation Tool. For closed conveyor (no crack), use outlet opening.	Usually Ambient Outdoor Temperature	Use acfm same as used for N.J.A.C. 7:276-6.2 calculations (Table Column 3)
Vibrating Conveyor (Open, Outdoors)	Rectangle	Use width of gap between cover and belt and length of the conveyor in RADIUS Equivalent Diameter Calculation Tool.	Usually Ambient Outdoor Temperature	Use acfm same as used for N.J.A.C. 7:276-6.2 calculations (Table Column 3)
Landfill Vent	Round	Use Vent Diameter, assuming no air pollution control.	Outdoor / Inner Landfill Temperature	Use LandGEM to calculate total acfm. Use 60-80% of LandGEM acfm for exhaust volume. 20-40% of LandGEM acfm is Source Fugitive.
Fixed Roof Tank	Round	Use dimensions of vent/opening used for exhaust during filling.	Tank Contents (Liquid Surface Temperature)	Exhaust Volume: Max = maximum filling rate converted to acfm. Average = Working + Breathing losses, averaged over 8760 hours. Minimum could be zero.
Floating Roof Tank	Round	Use dimensions of vent/opening used for exhaust during filling. Do not use floating seal dimensions.	Tank Contents (Liquid Surface Temperature)	Exhaust Volume: Max = maximum filling rate converted to acfm. Average = Working + Breathing losses, averaged over 8760 hours. Minimum could be zero.
Lagoon (Significant Equipment)	Surface	***Use RADIUS maximum: 999 inch	Liquid Surface Temperature	Use Evaporation rate. Account for wind, temperature, etc.
Cooling Tower	Round	Equivalent Diameter based on tower outlet. Use RADIUS maximum 999 inch for larger diameter.	Process temperature	Fan acfm. Natural convection data, if no fan.

* Equivalent Diameter Calculation Tool is at the bottom of Emission Point Inventory in RADIUS

**Ambient temperature in your location can be found at: https://www.njweather.org/data/daily

*** RADIUS will be updated to allow more digits.