

Case study: comparison of air dispersion from solid waste incinerator emission using AERMOD and ISCST3

ABSTRACT

Combustion of municipal solid waste in a solid waste incinerator will generate flue gas emissions that may be detrimental to human health. It was intended to observe the dispersion of the pollutants from the chimney of a solid waste incinerator in Cameron Highlands using two air dispersion models, AERMOD and ISCST3. This study involves the use of 1 year hourly meteorological data, terrain data, chimney specifications and pollutant emission rates as input in both models to predict the incremental concentration of pollutants in the surrounding environment. It was found that the AERMOD model simulates in a way similar to the real meteorological conditions as compared to ISCST3. Higher concentrations were predicted closer to the pollutant source and at sensitive receptors in AERMOD as compared to ISCST3 predictions.

Keyword: Air dispersion; AERMOD; ISCST3; Incinerator