

AERSCREEN Update

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Status of AERSCREEN

- 2005 *Guideline* preamble
 - Screening version of AERMOD being developed (AERSCREEN) and meantime SCREEN3 could be used until AERSCREEN available
- 2011: AERSCREEN and MAKEMET released
- April 11, 2011 memorandum: AERSCREEN is EPA's recommended screening model
 - Based on AERMOD – state of the science
 - Single source only
- Proposed 2015 *Guideline*:
 - Incorporate AERSCREEN into *Guideline* as the screening model for AERMOD
 - May be applicable in all types of terrain and building downwash applications
 - AERSCREEN discussed in Section 4.2.1.1 of proposed *Guideline*



AERSCREEN 15181

- Incorporated inversion break-up fumigation and coastal fumigation from SCREEN3
 - Uses AERMOD equations for σ_y and σ_z estimates
 - See AERSCREEN User's Guide for full details
 - http://www.epa.gov/ttn/scram/models/screen/aerscreen_userguide.pdf
- Made code more portable across OS
 - Eliminated system calls to copy and delete files when possible
- Added debug option to output PROBE, FLOWSECTOR and fumigation estimates
- Bug fixes



MAKEMET 15181

- Incorporated ability to adjust surface friction velocity, u^* , based on AERMET adjustment algorithms
- U^* adjustment currently not done when calling MAKEMET from AERSCREEN
- U^* adjustment can be done running MAKEMET outside of AERSCREEN