

MATESIII Proposed Dispersion Modeling

MATESII Modeling

- Regional Modeling
 - > UAM-TOX
 - > CALMET meteorological model
 - > 2 km grid (60 X 105)
 - > origin: 310 Easting, 3690 Northing
- Microscale Point Source Modeling
 - > ISCST3
 - > Meteorology extracted from CALMET
or 1981 District regulatory permit data
 - > Sub-grid scale

MATESIII Considerations

- Consistency with MATESII where possible
 - > same domain
 - > same grid/spacing
 - > UAM – TOX (primary)
 - > ISCST3 (microscale studies)
- Investigate alternate modeling platforms and chemistry packages (e.g., CAMx, CMAQ)

MATESIII Considerations (Continued)

- Updated emissions
 - > new and deleted sources
 - > new speciation profiles
 - > updated stack parameters
 - > new shipping & aircraft emissions
- Meteorological Modeling
 - > CALMET objective/diagnostic
 - > use ETA 12 km with MM5-4DDA (or alternate) with CALMET
 - > ETA 12 km / CALMET

Meteorological Data Acquisition and Analysis

- Build meteorological archive real-time
- Archive prognostic model output and generate high resolution met fields from MM5, CALMET, ETA or combination
- Review met fields generated weekly
- Archive NWS meteorological synopsis
- Adjust met fields where needed
- Periodically test met data with regional model

Corroborating Analyses

- TEP 2004 to provide PM characterization for PM2.5 SIP
- Limited intensive field monitoring for ozone episodes during summer 2004
- Use the MATESIII meteorological data set for SIP modeling

Expected Model Outputs

- Regional Modeling
 - > grid concentration by species
 - > interpolated concentration to monitoring sites
 - > cancer risk & hazard index
- Microscale Studies
 - > concentration by species at sensitive receptor sites
 - > cancer risk & hazard index

Risk Assessment

- Methodology: URF (or 1/REL) X concentration
 - > Modeled
 - > Ambient Monitored
- Use most current URF's & RELs
 - > OEHHA
 - > CARB
- Output
 - > GIS compatible

Tentative Schedule

Period	Item
12/03 – 4/04	Develop meteorological data acquisition protocol and procedures
4/04-ongoing	Develop and analyze daily met fields
1/04-6/04	Test alternate modeling platforms
5/04 – 9/04	Forecasting/analysis ozone field monitoring
7/04	Finalize modeling protocol
4/04-3/05	Develop toxic emissions data
4/05-6/05	Micro-scale meteorological data base development
4/05 - TBD	Regional and micro-scale modeling and risk assessment
TBD	GIS conversion of model output
TBD	Final report