

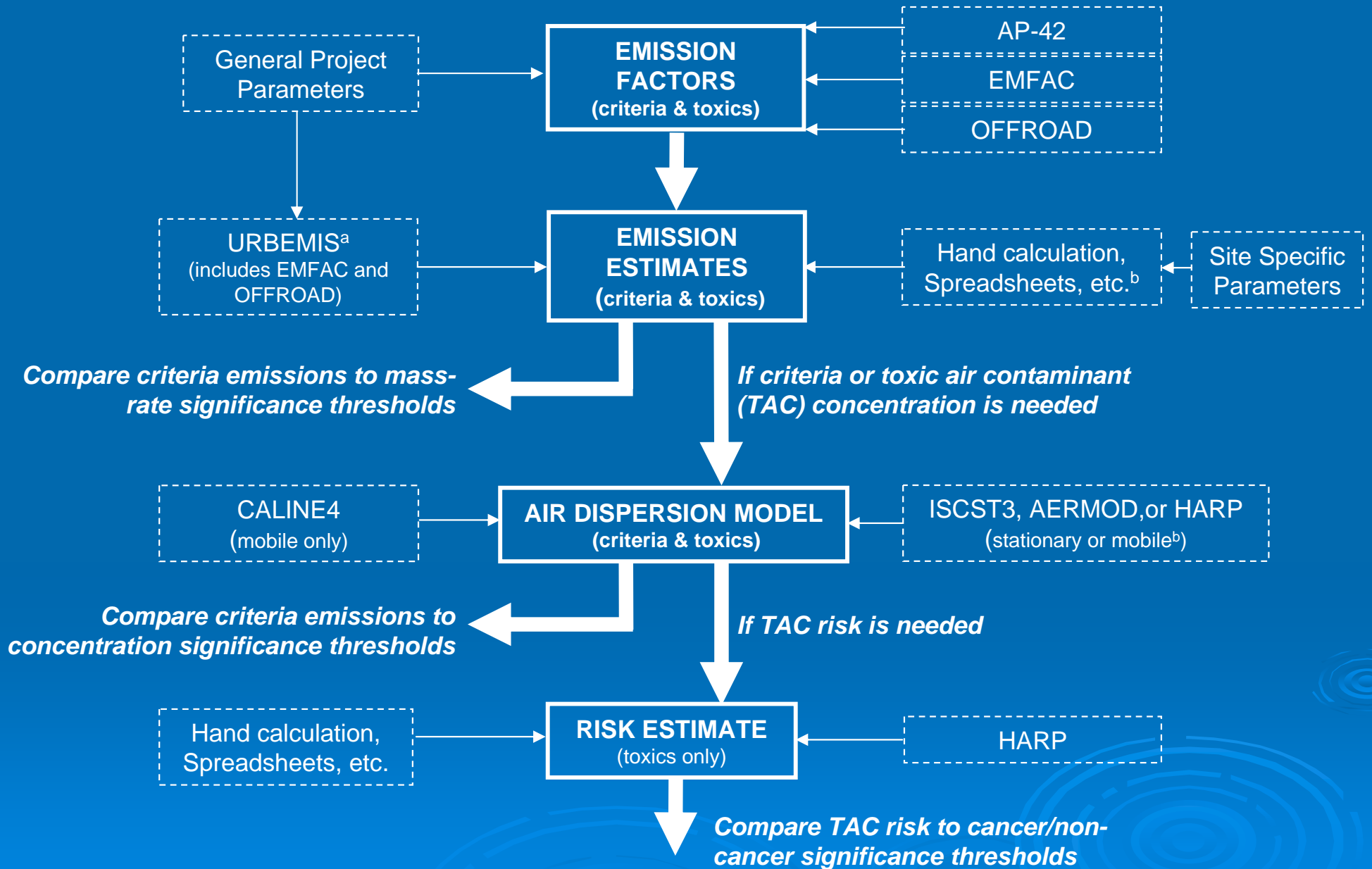
South Coast Air Quality Management District

Proposed Rule 2301
Working Group Meeting
March 6, 2008

URBEMIS2007
Background Information

James Koizumi

Air Quality Analysis Flowchart for California Recommended Models



^a URBEMIS is conservative and results should be compared to mass rate significance thresholds.

^b Site specific information should be used to develop emission inventories by hand calculation for air dispersion modeling.

^c Use ISCST3, AERMOD or HARP for mobile sources for projects with both mobile and stationary sources.

Purpose of URBEMIS

- Goal - Estimating mass rate emissions from land-use projects
- Means – Land-use/planning data
- Purpose – Compare to mass rate AQ significance thresholds

URBEMIS2007 Background

- Urban Emissions (URBEMIS) model originally developed by CARB in the 1980s
 - Designed to calculate emissions from a variety of land use projects
 - Periodically updated by CARB
 - Early updates calculated only operational emissions – primarily mobile source emissions
 - Updates associated with CARB's update of motor vehicle emission factors (EMFAC)
 - Calculates daily or annual emissions

URBEMIS7G Update

- Updated to include EMFAC7G EFs
- Allowed user to calculate construction & area source emissions for first time
- Allowed user to select mitigation measures for construction & area source impacts
- Added additional land uses
- Updated trip rates (ITE Trip Generation Manual V. 6.0)
- A second update to Windows OS

Subsequent URBEMIS Upgrades

- In mid-1990s local air districts assumed responsibility for model upgrades
- URBEMIS2002
 - Incorporated EMFAC2002 emission factors
 - Incorporated CARB's OFFROAD emission factors for construction equipment
 - Added additional land uses
 - Updated trip rates (ITE Trip Generation Manual V. 7.0)
 - Added mitigation to support SJVAPCD's ISR rule

URBEMIS2007

- A major revamping of model
 - Transition from Visual Basic 6.0 to Visual Basic.Net – enhanced model's flexibility
 - Incorporated EMFAC2007 EFs by county/air basin
 - Incorporated OFFROAD2007 EFs
 - Revised screens – more intuitive for new user
 - Revised construction module based on SCAQMD construction site surveys
 - Enhanced construction phasing
 - Enhanced mitigation measures for construction
 - Calculates PM2.5 & CO2 emissions

Future Upgrades

- Phase 1 upgrade (3rd quarter 2008)
 - Add on-road mitigation measures
 - Add demolition phase mitigation measures
 - Improve architectural coating calculations
 - Add ability to taper construction analysis – provides more accurate total construction emissions estimate
 - Add county/basin-specific OFFROAD2007 EFs
- Phase 2 upgrade (1st quarter, 2009)
 - Develop comprehensive GHG analysis module