

# NATA: What South Carolina Learned as Related to Emission Inventories

Lynn Barnes

SC Dept. of Health & Env. Control

Phone: (803) 898-4298

E-mail: [barnesls@dhec.state.sc.us](mailto:barnesls@dhec.state.sc.us)



# NATA Review Group

- Emissions Inventory Section
- Air Toxics Section (112(r) and MACT)
- Toxics Release Inventory
- Air Monitoring Laboratory
- Health Hazard Evaluation
- Outreach Section

# Purpose of Review Group

Upper Management charged the group with the task of reviewing the website and developing a state response for inquiries about the site.

# Data Evaluation Steps

- Emissions Inventory Section reviewed data before NATA modeling occurred
  - Little experience with area and mobile sources
  - Not all point sources had toxics included in their inventory
  - Toxics data submittal voluntary

## Data Evaluation Steps (cont.)

- NATA review group reviewed maps from ASPEN model run and HAPEM4 model run
- Evaluated each of the 34 pollutants included in NATA
  - Pollutants exceeding “1 in a million cancer risk”
  - Pollutants exceeding “10 in a million cancer risk”
  - Counties involved

# Counties Exceeding “1 in a Million Cancer Risk”

- Greenville (11 pollutants)
- Richland (10 pollutants)
- Spartanburg (10 pollutants)
- York (10 pollutants)
- Aiken (9 pollutants)
- Anderson (9 pollutants)
- Berkeley (9 pollutants)
- Charleston (9 pollutants)
- Cherokee (9 pollutants)
- Lexington (9 pollutants)
- Sumter (9 pollutants)
- Dillon (8 pollutants)
- Dorchester (8 pollutants)
- Pickens ( 8 pollutants)
- Hampton (7 pollutants)
- Lancaster (7 pollutants)
- Marlboro (7 pollutants)
- Oconee (7 pollutants)
- All other counties (6 pollutants)

# Pollutants Exceeding “1 in a Million Cancer Risk”

- Acetaldehyde (8 counties)
- Benzene (all counties)
- Chloroform (all counties)
- Chromium Compounds (13 counties)
- Ethylene Dibromide (all counties)
- Ethylene Dichloride (all counties)
- Formaldehyde (all counties)
- Perchloroethylene (2 counties)
- Polycyclic Organic Compounds (POMs) ( 17 counties)
- 1,3 Butadiene (11 counties)
- Carbon Tetrachloride (all counties)

# Pollutants Exceeding “10 in a Million” Cancer Risk

- Benzene (Greenville & Richland Counties)
- Formaldehyde (Greenville, Richland, and York Counties)
- Carbon Tetrachloride (all counties)

# Counties Exceeding Reference Concentration (Hazard Quotient >1.0)

- Acrolein (all counties)

# Data Evaluation Steps (cont.)

- Identify sources of higher values
  - Background concentrations
  - Mobile sources explained by major highways
  - Other sources
- What sources can we investigate?

# What can we improve?

- Area source information
  - Better activity data
  - Better location data
  - Relative size information
- Types of Sources
  - Municipal Solid Waste Landfills (MSW landfills)
  - Public Owned Treatment Works (POTWs)
  - Drycleaners

# MSW Landfills

List of Landfills and the Correct  
Location Data from Bureau of Land  
and Waste Management

# POTWs

Worked with Bureau of Water to  
obtain size information and some  
location data

# Dry Cleaners

- Received original list from EPA; contained locations but not mailing addresses
- Better list from Dept. of Revenue
- Sent questionnaire to all drycleaners when MACT came out
- Initial notifications contained purchased gallons
- Currently working with Bureau of Land and Waste Management to reconcile our list with their list. Ours is currently smaller.

## Dry Cleaners (cont.)

- Submitted drycleaner data to EPA contractor
- Updated data was not used to correct 1996 emission estimates but was used to help generate 1999 emission estimates

# Conclusions

- We feel we had more control over our estimates
- Our POTWs and MSW landfills are now part of point source inventory
- Working to obtain better activity data for other area sources
- South Carolina's 1999 inventory will be significant improvement over 1996