Health Risk Assessment (HRA) Guideline Revisions

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Outline

- Background
- History of Health Risk Assessment Guideline Revisions
- Impacts of Major Revisions
- Potential Implications
- Estimated Schedule
District’s Toxics Control Program

- Toxics New Source Review – permit new or modified sources
- Air Toxics Hot Spots (AB2588) – toxic emissions from all existing facilities
- California Environmental Quality Act (CEQA)

Cal/EPA’s Office of Environmental Health Hazard Assessment (OEHHA) develops Health Risk Assessment (HRA) guidelines

- As mandated under the Children’s Environmental Health Protection Act, current revisions include explicit consideration of children’s health protection

80% reduction in pollutants and health risk in the Bay Area
80% Reduction of Toxics & Health Risk in Bay Area

Lifetime Cancer Risk from Air Pollutants

- 1980: 1,330 in a million
- 2001: 625 in a million
- 2012: 300 in a million

- diesel PM
- benzene
- 1,3-butadiene
- Others
Health Risk Assessment Document History

- 2008: Noncancer Reference Exposure Levels (RELs) Derivation - protection of children’s health
- 2009: Cancer Potency Factors Derivation - includes increased sensitivity of early life exposure to carcinogens
  - 10X – 3rd Trimester to Age 2
  - 3X – Age 2 to 16
- 2012: Exposure Assessment Parameters
  - Breathing Rates
  - Resident and worker exposure durations
  - Multi-pathway exposures (e.g., ingestion, dermal, mother’s milk)
Impacts of Major Revisions

- Increase Risk Estimate:
  - Breathing rates
  - Multi-pathway exposure factors
  - Age Sensitivity Factors (ASFs) – *already in use by BAAQMD*

- Decrease Risk Estimate:
  - Exposure durations (resident – 30 years, worker – 25 years)

- Overall cancer risk may increase by 2 to 5 times for the same emissions
Potential Implications

- Increase Workload for District & Facilities
  - 150 new permit applications per year may require HRAs
  - Facilities may be required to adjust operations to comply
  - 750 existing facilities may require further prioritization analyses
  - 300 existing facilities may require AB2588 HRAs
Estimate Schedule

- CARB and CAPCOA are currently working on Air Toxics Risk Management Guidance - Implementation Guideline (Q3 – 2015)
- HRA Tools – Hot Spots Analysis and Reporting Program (HARP)
  - CARB updating software package and will provide training
- BAAQMD currently working on amending Regulation 2, Rule 5 (Q1 – 2016)