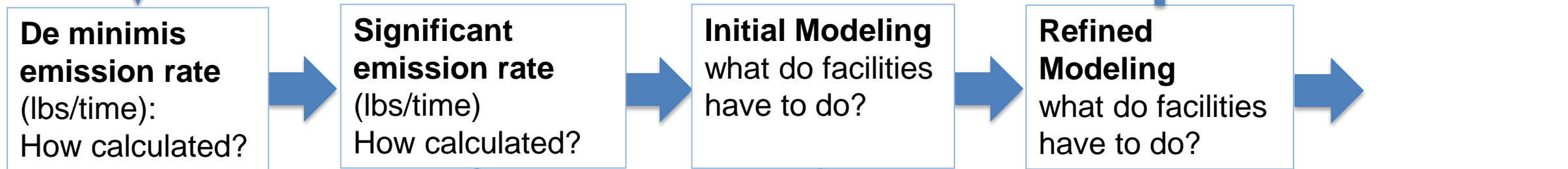


## **Air toxics permitting program general structure from other programs**

**October 18, 2016**

# Basic structure of other programs

1. Facility or proposed facility checks to see if rule applies to them
2. If it does, facility compares their emissions to an air toxic emission rate
3. If over that emission rate, the facility:
  - Conducts initial modeling or other analysis to determine health/risk impact
  - Reduces health risk (in some programs)
4. If modeling shows risk greater than a set amount, facility:
  - Conducts more robust analysis
  - Reduces health risk (in most programs)
  - No permit (in some programs)
5. Permit development (public engagement and notice) and issuance
6. Compliance, enforcement



Emissions greater than de minimis, less than significant emission rate  
  
What happens?

Emissions greater than significant emission rate, meets allowable risk levels  
  
What happens?

Initial modeling shows facility will not meet allowable risk levels.  
  
What happens?

Refined modeling shows facility will not meet allowable risk levels.  
  
What happens?



FACILITIES ENTER PROGRAM

**APPLICABILITY**

Program Element 1: Include existing sources in program or not?  
 Program Element 2: Regulating individual pieces of equipment or the whole facility  
 Program Element 3: Categorical exemptions

**POLLUTANT SCOPE AND SETTING RISK BASED CONCENTRATIONS**

What concentrations for each air toxic will be used in risk assessment and in setting the significant emission rates or de minimis rates?  
 Program Element 4: What Air Toxics Should Be Included in the Program?  
 Program Element 5: Method for Setting Health Risk-Based Concentrations  
 Program Element 6: Default Toxicity Values  
 Program Element 7: Risk Based Concentration Averaging Times

**CUMULATIVE RISK\***

Include cumulative risk? If so, there are several program elements where it could be addressed.  
 Program Element 8: Cumulative Risk from Multiple Air Toxics from a Single Facility  
 Program Element 9: Cumulative Risk from Multiple Sources within an Area  
 Program Element 10: Use of Background/Ambient Concentrations in the Assessment of Risk  
 Program Element 11: Cross-media Exposure Pathways  
 Program Element 12: Post Risk

**SETTING AND ADMINISTERING ALLOWABLE RISK LEVELS\***

What risk levels will be used in calculating risk based concentrations, de minimis, significant emission rates, and in risk assessment?  
 Program Element 13: Setting the Initial Screening Levels for Allowable Cancer and Non-cancer Risk  
 Program Element 14: Allowable Risk Levels  
 Program Element 15: Different Risk Levels for Existing and New Sources

Include cumulative risk? Background? Cross-media pathways?

Risk based concentrations are set using allowable risk levels

Decisions needed to set up program structure outlined in screening and risk assessment below

**SCREENING AND RISK ASSESSMENT\***

Initial Screening Level Purpose: screen out sources with low impact emissions (de minimis or significant emission rate) Modeling Purpose: Determine if facility will meet allowable risk levels

**DE MINIMIS EMISSION RATE (LBS/YEAR)**

Program Element 16: Setting and Using De minimis Emission Rates

What happens if facility emits at less than de minimis emission rate?

No further requirements?  
 Register & Report?  
 Emissions excluded from other source risk assessments?

Emissions greater than de minimis

**SIGNIFICANT EMISSION RATE (LBS/YEAR)**

Program Element 17: Setting and Using Significant Emission Rates

What happens if facility emits at more than de minimis emission rate?

Require permit  
 Install TBACT?  
 Reduce emissions?  
 Emissions included from other source risk assessments?

Emissions greater than significant emission rate

**RATE INITIAL MODELING**

Program Element 18: Risk Assessment and Modeling once Initial screening level is triggered (AERSCREEN)

What happens if facility emits at more than the significant emission rate?

Install TBACT?  
 Reduce emissions?  
 Emissions included from other source risk assessments?  
 Other?

If initial modeling shows impacts higher than the allowable risk level

**REFINED MODELING**

Program Element 19: Risk Assessment and Modeling once Higher Level of Analysis is Triggered (AERMOO)

What happens if initial modeling shows that facility will not meet allowable risk levels?

Install TBACT?  
 Reduce emissions?  
 Emissions included from other source risk assessments? Other?

What happens if refined modeling shows that facility will not meet allowable risk levels?

Install TBACT?  
 Reduce emissions?  
 Risk Assessment with Risk Reduction Plan  
 Other?

LESS

EMISSIONS FROM FACILITY

MORE

How to calculate the de minimis emission rate

Include cumulative risk? Background? Cross-media pathways?

Use risk based concentrations

How to calculate the significant emission rate

Include cumulative risk? Background? Cross-media pathways?

Use risk based concentrations

Initial modeling: what do facilities have to do?

Include cumulative risk? Background? Cross-media pathways?

Use risk based concentrations

Advanced modeling: what do facilities have to do?

Include cumulative risk? Background? Cross-media pathways?

Use risk based concentrations

**IMPLEMENTATION\***

Program Element 20: Phasing  
 Program Element 21: Looking beyond current air permitting program for other sources of air toxics  
 Program Element 22: Community Engagement  
 Program Element 23: Compliance  
 Program Element 24: Capacity - regulatory costs and fee structure  
 Program Element 25: Evaluation

Permit decisions use allowable risk levels

\*Include environmental justice considerations

# Summary of Six Air Toxics Programs



## Summary of Six Air Toxics Programs by Program Element

| Issue Paper          |   | State and Local Air Toxics Programs   |   |   |  |   |  |
|----------------------|---|---|---|---|--|---|--|
| Program Element      |   | Louisville  | New Jersey  | New York                                | Rhode Island                           | South Coast   | Washington   |
| Applicability        | <b>1</b><br>Include existing sources in program, or not?                    | new/mod/existing  | new/mod/existing  | new/mod/existing                        | new/mod/existing                       | new/mod/existing  | new/mod  |
|                      | <b>2</b><br>Regulating individual pieces of equipment versus whole facility | new/mod/existing equipment only   | new/mod + existing whole facility upon notification   | new/mod equipment only                  | new/mod + existing whole facility      | new/mod + existing whole facility   | new/mod equipment + whole facility                         |
|                      | <b>3</b><br>Categorical exemptions  | “trivial” & “insignificant” activities <a href="#">Rule 2.16</a>                  | insignificant sources <a href="#">Rule 7:27-8.2</a>   | exceptions <a href="#">Rule 212-1.4</a> | exemptions <a href="#">Rule 22.2.2</a> | exemption categories <a href="#">Rule 219</a>   | NSR categorical exemptions <a href="#">WAC 173-400-110</a> |
| Concentration Levels | <b>4</b><br>What air toxics should be included in the program?              | 18 Category 1 TAC<br>19 Category 2 TAC<br>17 Category 3 TAC<br>136 Category 4 TAC | 168 carcinogens,<br>133 chemicals with other long-term effects,<br>64 with short-term effects | 1,091 air toxics<br>62 High Toxicity AC | 258 air toxics                         | 24 high risk pollutants<br>150-200 permit pollutants<br>450 Hot Spots chemicals<br>187 HAPs | 398 air toxics   |
|                      | <b>5</b><br>Method for setting health risk-based concentrations             | EPA, NTP, IARC, ATSDR   | EPA IRIS, ATSDR, CalEPA, NJDEP  | NYDEC, NYDH, EPA IRIS                   | ATSDR, CalEPA                          | CalEPA OEHHA  | EPA IRIS, CalEPA, ATSDR                                    |

# Questions?

