

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	1 Include existing sources in program, or not?	new/mod/existing	new/mod/existing	new/mod/existing	new/mod/existing	new/mod/existing	new/mod
	2 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
	3 Categorical exemptions	“trivial” & “insignificant” activities Rule 2.16	insignificant sources Rule 7:27-8.2	exceptions Rule 212-1.4	exemptions Rule 22.2.2	exemption categories Rule 219	NSR categorical exemptions WAC 173-400-110
Pollutant Scope and Setting Concentration Levels	4 What air toxics should be included in the program?	18 Category 1 TAC 19 Category 2 TAC 17 Category 3 TAC 136 Category 4 TAC	168 carcinogens, 133 chemicals with other long-term effects, 64 with short-term effects	1,091 air toxics 62 High Toxicity AC	258 air toxics	24 high risk pollutants 150-200 permit pollutants 450 Hot Spots chemicals 187 HAPs	398 air toxics
	5 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
	6 Default toxicity values	when a chemical does not have readily available toxicity information: URF default value = 0.0004 µg/m ³ . RfC default value = 0.04 µg/m ³ .	no default toxicity value	<ul style="list-style-type: none"> not high toxicity default = 0.1 µg/m³ low toxicity default = 1 µg/m³ high toxicity = 2 x 10⁻⁵ µg/m³ 	no default toxicity value	no default toxicity value	no default toxicity value
	7 Risk based concentration averaging times	<ul style="list-style-type: none"> annual 24-hour 8-hour 1-hour 	<ul style="list-style-type: none"> annual 24-hour 8-hour 1-hour 	<ul style="list-style-type: none"> annual 1-hour 	<ul style="list-style-type: none"> annual 24-hour 1-hour 	<ul style="list-style-type: none"> annual 8-hour 1-hour 	<ul style="list-style-type: none"> annual 24-hour 1-hour
Cumulative Risks and Background	8 Cumulative risk from multiple air toxics from a single facility	Cumulative risk for multiple TACs for all equipment: <ul style="list-style-type: none"> For new equipment is 3.8 in 1 million. For existing equipment is 7.5 in 1 million No guidance on cumulative risk from multiple contaminants for non-cancer risk.	Considers only risks and hazards related to individual chemicals.	Risk for individual chemicals assessed in screening step using Annual Guideline Concentrations; requires calculation of multi-chemical cumulative risk. Summing of risks required for pollutants emitted from process emission points	Cumulative effects of emissions of two or more air toxics that affect same organ system (i.e., indicates non-cancer effects) may be unacceptable even if Ambient Air Levels for the individual substances are not exceeded.	New/Modified: 1 in 1 million cumulative cancer risk from single equipment	Cumulative risk: 10 in 1 million
	9 Cumulative risk from multiple sources within an area?	<ul style="list-style-type: none"> HQ of 1 for individual TAC 10.0 in 1 million cancer risk for all TACs 	not included	included	not included	included	included
	10 Use of background/ambient concentrations in the assessment of risk?	not included	not included	background included when approaching annual guideline concentrations	not included	background included if monitoring data is available	background
	11 Cross-media exposure pathways	yes	no	yes	yes	Yes	no
	12 Past exposure to air toxics risk	no	no	no	no	described qualitatively	no

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Setting and Administering Allowable Risk Levels	13 Setting the initial screening level for allowable cancer and non-cancer risk	1 in 1 million cancer risk & hazard quotient of 1 for individual equipment & individual TAC; HQ of 1 for all equipment & individual TAC	1 in 1 million cancer risk & hazard quotient of 1	1 in 1 million cancer risk & hazard quotient of 1	1 in 1 million cancer risk & hazard quotient of 1	1 in 1 million cancer risk and hazard index of 1 for chronic and acute	1 in 1 million cancer risk & hazard quotient of 1
	14 Allowable risk levels	All Environmental Acceptability goals for ambient air on industrial property or public roadways shall be increased by: <ul style="list-style-type: none"> A factor of 10 for carcinogenic risks; and A factor of 3 for noncarcinogenic risks Sources can request modification of EA goal after TBACT installed	Permit applications with cancer risks greater than 100 in 1 million (1×10^{-4} , or 0.0001) will not be approved.	Source can submit toxicological information that would necessitate a revision to the AGC, SGC or an assigned Toxicity Classification	Total cancer risk cannot exceed 100 in 1 million and hazard quotient of 1	Alternate hazard index of 10 for chronic and acute	10 in 1 million or greater environmental benefit to the state & reduce community exposure, especially that subject to the greatest additional risk, to comparable toxic air pollutants
	15 Allow different risk levels for existing and new sources	Yes. See below in cumulative risk	not included	not included	Acceptable ambient level X 10 if LAER installed (for most air toxics)	New/Modified: 10 in 1 million cumulative cancer risk from single equipment with T-BACT Existing: 25 in 1 million cumulative “action risk levels” for entire facility and organ-specific hazard index of 3. Existing: “Significant risk levels” are 100 in 1 million cumulative risk for entire facility or an organ-specific hazard index of 5.	NA
	If risk higher than screening levels	Requires T-BACT if the cumulative risk levels are not met	Case-by-case review required for risk between 1 in 1 million and 100 in 1 million or hazardous quotient ≥ 1	If screening after T-BACT fails, 10 in 1 million cumulative cancer risk or hazard index of 2 is acceptable; ACG/SCG cumulative for all emissions units	Up to 10 in 1 million is acceptable	Requires TBACT for new sources; requires Risk Reduction Plan for existing sources	Requires TBACT for new/mod sources over de minimis
Risk to environment	included	not included	included	not included	included	not included	

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Screening and Risk Assessment	16 Setting and using de minimis emission rates	de minimis emission rates	de minimis reporting threshold	not included	not included	de minimis used for reporting	de minimis
	17 Setting and using significant emission rates	no explicit rates	significant emission rates	significant emission rates—cumulative for all process operations	significant emission rates	not included	significant emission rates
	18 Initial modeling Risk assessment and modeling once initial screening level is triggered (AERSCREEN)	factors and lookup tables to convert emissions to concentrations	excel spreadsheet to estimate concentrations and risk	sources ranked by toxicity of emission, location, and cumulative impact from nearby sources	modeling	multiple lookup tables of varying refinement and complexity	modeling
	19 Refined modeling Risk assessment and modeling once higher level of analysis is triggered (AERMOD)	yes	yes	yes	yes	yes	yes
	Modeling Receptors	Fenceline-ambient air	Fenceline-ambient air	Residential-sensitive	Residential-sensitive + onsite if public has routine access	Residential-sensitive	Fenceline-ambient air
Implementation	20 Phasing	new/mod/renewal	new/mod/renewal	new/mod/renewal	industry type	highest risk	new/mod
	21 Looking beyond current air permitting program for other sources of air toxics	-	-	-	-	-	-
	22 Community engagement	-	-	-	-	-	-
	23 Compliance	-	-	-	-	-	-
	24 Capacity - regulatory costs and fee structure	Title V + STAR fee	Title V + application fees	Title V fees	Title V + application fees	NSR Fees: fees for different types of equipment + special processing fees for health risk assessments Existing source fees: emissions fees, source category fees	\$10,000 for 109 hours + \$95/hour
	25 Evaluation	Toxics Release Inventory	NATA + monitoring	emissions inventory, NATA, monitoring	emissions inventory, NATA	monitoring, emissions inventory, modeling	emissions inventory