

Summary of Program Elements

Cleaner Air Oregon Advisory Committee

The following are potential elements for which DEQ and OHA are seeking additional discussion and input from the Advisory Committee. If there are additional elements not included below, please raise them.

Program Element 1: Include existing sources in program, or not?

| Potential Elements |
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| A. Regulate only new and modified sources? |
| B. Regulate new, modified and existing sources? |
| C. Regulate new/modified/existing sources and provide incentives to reduce air toxic emissions? |
| D. Regulate sources currently not required to have air permits? |
| E. Placeholder for elements developed by advisory committee members |

Program Element 2: Regulating pieces of equipment in a facility versus regulating the whole facility

| Potential Elements |
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| A. Regulate air toxics from new/modified individual pieces of equipment |
| B. Regulate air toxics from new/modified whole facility |
| C. Regulate air toxics from existing individual pieces of equipment |
| D. Regulate air toxics from existing whole facility |
| E. Any combination of the above elements |
| F. Placeholder for elements developed by advisory committee members |

Program Element 3: Categorical exemptions

| Potential Elements |
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| A. Use categorical exemptions from one or all of the programs reviewed in depth |
| B. Use categorical exemptions with on-ramps back into the regulatory program for extenuating circumstances |
| C. Evaluate whether DEQ’s Title V categorical exemptions list is appropriate to use for air toxics |
| D. Do not use categorical exemptions |
| E. Placeholder for elements developed by advisory committee members |

Program Element 4: What air toxics should be included in the program?

| Potential Elements |
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| A. Use 52 Oregon Ambient Benchmark air toxics http://www.deq.state.or.us/air/toxics/benchmark.htm |
| B. Use 187 Federally listed Hazardous Air Pollutants (Includes 50 Oregon Ambient Benchmark air toxics, but not diesel particulate matter or hydrogen sulfide) https://www.epa.gov/haps/initial-list-hazardous-air-pollutants-modifications |
| C. Include Oregon’s toxic chemical focus list http://www.deq.state.or.us/toxics/docs/focuslist.pdf |
| D. Use a list composed of 187 federally listed Hazardous Air Pollutants plus other air toxics shown to be a concern in OR, WA or CA |
| E. Use NY’s very inclusive air toxics list http://www.dec.ny.gov/docs/air_pdf/dar1.pdf |
| F. Michigan model: broad and inclusive definition. No list. Guidance documents help facilities assess the risk associated with potential air toxics emissions, and the burden is on the facility to assess the risk. There are many exemptions for low toxicity, criteria pollutants, if the facility has a NESHAP residual risk standard in place. |
| G. South Coast model: use different lists of chemicals for different program functions. Establish classes of toxics – high, medium and low toxicity, with different requirements for the high versus low. For example, low toxicity compounds might require reporting only. |
| H. Propose that the Environmental Quality Commission delegate adding, removing or changing the threshold or levels of an air toxic to the DEQ Director |
| I. Placeholder for elements developed by advisory committee members |

Program Element 5: Method for setting health risk-based concentrations (RBCs)

| Potential Elements |
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| A. Comprehensive review and evaluation of primary research by agency |
| B. Use of established list of authoritative bodies from among which to select RBCs with discretion as to which of the RBCs is based on the best science (52 from Air Toxics Science Advisory Committee, EPA Integrated Risk Information System, Office of Environmental Health Hazard Assessment, Agency for Toxic Substances and Disease Registry) |
| C. Use of rigid hierarchy or algorithm to select from among risk based concentrations developed by an established list of authoritative bodies |
| D. Use of other program's values |
| E. Establish hybrid approach that can use combination of methods listed above depending on situation for individual air toxics |
| F. Incorporate cross-media impact potential into the risk based air concentration goal itself* |
| G. Account for cumulative risk from multiple air toxics by setting very low acceptable risk level for individual air toxics to leave estimated buffer for cumulative effect.* |
| H. Review and update the list of air toxics every 5 years |
| I. Placeholder for elements developed by advisory committee members |

*Please see the discussion paper on Cumulative Risk and Background for discussion of cross-media exposure and cumulative risk

Program Element 6: Default toxicity values

| Potential Elements |
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| A. Do not use default toxicity values |
| B. Use a tiered system of default RBCs based on any available information about whether an air toxic has generally high, medium, or low toxicity. There could be a default RBC for each toxicity category. |
| C. Develop and use different default RBCs for air toxics that may cause cancer and those that do not. |
| D. Develop a single default RBC that is very conservative to use for any toxic air pollutant for which there is inadequate information to develop a chemical specific RBC. |
| E. Placeholder for elements developed by advisory committee members |

Program Element 7: Risk based concentration averaging times

| Potential Elements |
|---|
| A. Chronic: Annual |
| B. Chronic: 8-hour (for nearby workers, schoolchildren, or other populations) |
| C. Acute: 1-hour |
| D. Acute: 24-hour |
| E. Intermediate: Two weeks up to a year |
| F. Placeholder for elements developed by advisory committee members |

Program Element 8: Cumulative risk from multiple air toxics from a single facility

Please note that if cumulative risk from multiple air toxics from a single source is included, the permitting program could address cumulative risk many different ways. It could be included in an early screening step or at a later step in the risk assessment process. These elements are discussed in the “Screening and Risk Assessment” and the “Setting Risk Based Concentrations” discussion paper.

| Potential Elements |
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| A. Sum the individual cancer risks for multiple air toxics from a single source to estimate cumulative cancer risk |
| B. Sum the organ-specific risks for multiple non-carcinogen air toxics from a single source |
| C. Do not include assessment of cumulative risks from multiple air toxics |
| D. Placeholder for elements developed by Advisory Committee members |

Program Element 9: Cumulative risk from multiple sources within an area

Please note that if cumulative risk from multiple sources is included, the permitting program could address this in many different ways. It could be included in an early screening step or at a later step in risk assessment. These elements are discussed in the “Screening and Risk Assessment” discussion paper.

| Potential Elements |
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| A. Include industrial facilities within a set distance (for example, WA uses 1.5 km) |
| B. Include facilities nearby – determined on a case-by-case basis |
| C. Use monitoring to try to determine contributions from other industrial facilities in an area |
| D. Do not include nearby industrial facilities |
| E. Placeholder for elements developed by Advisory Committee members |

Program Element 10: Use of Background Concentrations in the Assessment of Risk

Please note that if consideration of background air toxics concentrations is included, the permitting program could address this in many different ways. It could be included in an early screening step or at a later step in risk assessment. These elements are discussed in the “Screening and Risk Assessment” discussion paper.

| Potential Elements |
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| A. Calculate background levels using National Air Toxics Assessment data |
| B. Calculate background levels using monitoring data if available |
| C. Calculate background levels using local model if available (e.g., Portland Air Toxics Assessment) |
| D. Calculate background levels by modeling sources within 1.5 km |
| E. Do not include consideration of background levels |
| F. Placeholder for elements developed by Advisory Committee members |

Program Element 11: Cross-media exposure pathways

Please note that if cumulative risk from cross-media exposure pathways is included, the permitting program could address this in many different ways. It could be included in an early screening step or at a later step in risk assessment. These elements are discussed in the “Screening and Risk Assessment” discussion paper.

| Potential Elements |
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| A. Include bioaccumulative, persistent chemicals |
| B. Include cross-media considerations for all chemicals |
| C. Analyze potential for cross-media impacts chemical by chemical |
| D. Do not include cross-media impacts |
| E. Placeholder for elements developed by Advisory Committee members |

Program Element 12: Past exposure to air toxics

| Potential Elements |
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| A. Acknowledge there are previous exposures that we may not technically be able to quantify |
| B. Discuss past exposure to air toxics qualitatively in the uncertainty section of a risk assessment |
| C. Do not address past exposures to air toxics |
| D. Placeholder for elements developed by Advisory Committee members |

Program Element 13: Setting the initial screening levels for allowable cancer and non-cancer risk

| Potential Elements |
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| F. 1 in 1 million cancer risk and hazard quotient of one for non-cancer risk |
| G. Placeholder for elements developed by advisory committee members |

Program Element 14: Allowable risks levels

| Potential Elements |
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| A. Allow higher cancer risk levels for entire facility if control technology such as TBACT is installed. Other programs have allowed risk in the range of 3.8 in 1 million to 100 in 1 million. Some program do not have a limit on allowable risk levels. |
| B. Require control technology, without considering cost or energy in the decision (Lowest Achievable Emission Rate - LAER) if entire facility risk of cancer or non-cancer effects is above a specified level. |
| C. Allow higher hazard index for non-cancer effects if control technology such as TBACT is installed. Other programs have allowed from a 1 to 5 hazard index. Some program do not have a limit on allowable non-cancer effects levels. |
| D. Require LAER if entire facility hazard index is: <ul style="list-style-type: none"> a. Above 1 b. Above 5 c. Above some other level |
| E. Require LAER if entire facility hazard index is: <ul style="list-style-type: none"> a. Above 1 b. Above 5 |
| F. Do not require LAER. Allow 1 in 1 million for cancer risk from each piece of equipment at a facility or up to a facility-wide risk of 10 in 1 million, whichever is lower |
| G. Allow 0.5 non-cancer risk from each piece of equipment at a facility or up to a facility-wide risk of 5, whichever is lower |
| H. Allow a non-cancer Hazard Index of 0.5 from each piece of equipment at a facility or up to a facility-wide hazard index of 5, whichever is lower. Require pollution prevention plan at some level of risk or hazard index. (e.g., require a facility to perform an alternative chemical analysis to substitute less toxic chemicals). |
| I. Require pollution prevention plan at some level of cancer risk or hazard index. (e.g., require a facility to perform an alternative chemical analysis to substitute less toxic chemicals). Use a lower allowable risk (more stringent) for sensitive populations, overburdened communities, or communities with environmental justice concerns. |
| J. Placeholder for elements developed by advisory committee members |

Program Element 15: Different risk levels for existing and new sources

| Potential Elements |
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| A. Allow existing facilities higher cancer risk levels, up to 10 in 1 million risk. Other programs have allowed between 7.5 in 1 million and 100 in 1 million risk levels. Some programs do not have a limit on the allowable risk. |
| B. Do not allow existing facilities higher risk than new or modified sources |
| C. Placeholder for elements developed by advisory committee members |

Program Element 16: Setting and using de minimis emission rates

Please note that these elements might be affected by other program elements, such as whether to include existing facilities, regulating by whole facility or by individual equipment, and whether cumulative impacts are included in this particular program element.

| Potential Elements |
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| A. Do not use a de minimis emission rate threshold |
| B. Include a de minimis threshold. If sources emit at levels below the de minimis, exempt sources from further evaluation requirements, and are not included in other source cumulative analysis |
| C. Include a de minimis threshold. If sources emit at levels above the de minimis, include emissions in cumulative analysis of nearby sources |
| D. Include a de minimis threshold. If sources emit at levels above the de minimis, require registration (for unpermitted facilities) and reporting requirements (every 5 years). These emissions would also be incorporated into the statewide emissions inventory. |
| E. Include a de minimis threshold. If sources emit at levels above the de minimis, require further evaluation to determine if source emits at above the significant emission rate or not. |
| F. Include a de minimis threshold. If sources emit at levels above the de minimis, require TBACT |
| G. Derive de minimis emission rates from the significant emission rate (for example add a safety factor to account for potential multiple air toxics or other cumulative risk) (For WA it is significant emission rate divided by 20) |
| H. Include cumulative risk from multiple air toxics: Sum the ratios of each air toxic's emission rate: significant emission rate. If the sum of these ratios is > 1 (or other chosen value), then refined modeling may be necessary. |
| I. To use de minimis emission rates to evaluate an increase resulting from a modification or from new sources: add the increase to existing emissions and compare to de minimis |
| J. Require permit applicants to provide an emission inventory, dispersion model and demographic overlay in advance of or concurrent with the permit application (Based on the Minnesota PCA and New York DEC approaches) |

| Potential Elements |
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| K. Require a cumulative impact assessment and enhanced community engagement when the demographic emissions overlay shows a potential disparate impact within or adjacent to an Environmental Justice community (as defined by regionally-significant thresholds) |
| L. Placeholder for elements developed by advisory committee members |

Program Element 17: Setting and using significant emission rates

| Potential Elements |
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| A. Don't use significant emission rates. All sources must model. |
| B. Include a significant emission rate. If sources emit at levels below the significant emission rate, and there is no de minimis in use, exempt these sources from further requirements and from cumulative analysis of nearby sources. |
| C. Include a significant emission rate. If sources emit at levels above the significant emission rate, <ul style="list-style-type: none"> • Require TBACT; • Require screening or refined dispersion modeling; and • Include emissions in cumulative analysis of nearby sources. |
| D. Require permit applicants to provide an emission inventory, dispersion model and demographic overlay in advance of or concurrent with the permit application (Based on the Minnesota PCA and New York DEC approaches) |
| E. Require a cumulative impact assessment and enhanced community engagement when the demographic emissions overlay shows a potential disparate impact within or adjacent to an EJ community (as defined by regionally-significant thresholds) |
| Methods to Calculate Significant Emission Rates |
| F. Derive significant emission rate by backward modeling of risk based concentrations. Do not consider cumulative risks until a later step. |
| G. Include cumulative risk from multiple air toxics: Sum the ratios of each air toxic's emission rate: significant emission rate. If the sum of these ratios is > 1 (or other chosen value), then refined modeling may be necessary. |
| H. In addition to the significant emission rate, require an assessment of nearby sources to address cumulative risk from community sources or nearby industrial sources. |
| I. Allow plant-wide emission offsets in determining emissions for comparison to the significant emission rate. |
| J. Placeholder for elements developed by advisory committee members |

Program Element 18: Initial modeling - risk assessment and modeling once initial screening level is triggered (AERSCREEN)

| Potential Elements |
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| A. Default receptor location at fenceline for initial analysis |
| B. Default receptor location beyond fenceline to where people live and/or work. |
| C. In addition to running AERSCREEN, evaluate impact distance and presence of potential nearby sources. If significant other sources are present, require refined modeling, including cumulative impact analysis. |
| D. Facility-wide or single piece of equipment |
| E. Require an assessment of whether the facility is in an environmental justice area, and if so, require refined modeling |
| F. Require permit applicants to provide an emission inventory, dispersion model and demographic overlay in advance of or concurrent with the permit application (Based on the Minnesota PCA and New York DEC approaches) |
| G. Require a cumulative impact assessment and enhanced community engagement when the demographic emissions overlay shows a potential disparate impact within or adjacent to an Environmental Justice community (as defined by regionally-significant thresholds) |
| H. Placeholder for elements developed by advisory committee members |

Program Element 19: Refined modeling - risk assessment and modeling once higher level of analysis is triggered (AERMOD)

| Potential Elements |
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| A. Include multiple air toxics in the refined analysis |
| B. Include cumulative risk from air toxics that are prevalent in background or from nearby sources in the refined analysis |
| C. Default receptor location at fenceline for all levels of analysis |
| D. Choose receptor locations based on acute vs chronic/carcinogenic effects (fenceline or occupied area locations) |
| E. Locate specific receptors at locations with sensitive populations (schools, hospitals, etc.) to collect information about community impacts |
| F. Require permit applicants to provide an emission inventory, dispersion model and demographic overlay in advance of or concurrent with the permit application (Based on the Minnesota PCA and New York DEC approaches) |
| G. Require a cumulative impact assessment and enhanced community engagement when the demographic emissions overlay shows a potential disparate impact within or adjacent to an Environmental Justice community (as defined by regionally-significant thresholds) |

| Potential Elements |
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| H. Use Risk Assessment and environmental justice guidance to define sensitive and vulnerable populations |
| I. Use exposure concentrations (more realistic but less conservative), rather than modeled concentrations at higher screening steps |
| J. Use averaging time concentrations (for example 24-hr and annual) to compare acute and chronic RBCs, respectively |
| K. Address cross-media impacts in a case-by-case process |
| L. Placeholder for elements developed by advisory committee members |

Program Element 20: Phasing

| Potential Elements |
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| A. Implement at permit renewal |
| B. Prioritize by industry type |
| C. Prioritize by emissions |
| D. Prioritize by concern affecting most people |
| E. Prioritize by concern in each area or environmental justice areas |
| F. Prioritize by areas of the state |
| G. Start with new permits, then existing, then non-permitted sources |
| H. Placeholder for elements developed by advisory committee members |

Program Element 21: Looking beyond current air permitting program for other sources of air toxics

| Potential Elements |
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| A. DEQ hazardous waste generators as potential sources |
| B. Toxics Release Inventory (~660 chemicals) reporters as potential sources |
| C. Non-permitted businesses that have the same NAICS/SIC codes as permitted businesses as potential sources |
| D. State Fire Marshall (~800 chemicals) reporters as potential sources |
| E. Industrial NPDES Water Quality Permittees and those covered by the NPDES 1200-Z and 1200-COLS stormwater general permits with runoff that could include heavy metals |
| F. Placeholder for elements developed by advisory committee members |

Program Element 22: Community Engagement

| Potential Elements |
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| Elements for DEQ |
| A. Explore ways to reach out to the affected community in coordination with relevant staff, including permit writers, environmental justice coordinators, public affairs staff |
| B. Meet regularly with representatives from communities with environmental justice concerns |
| C. Identify and prioritize the most highly impacted communities based on criteria that are relevant to air quality, health, and demographic markers. Solicit potential partnerships among community and business members around air quality-related impacts and potential mitigation strategies. |
| D. Send regular notifications to communities with environmental justice concerns regarding application submissions and stack test results |
| E. Consult with the chief elected official or officials of the town or towns in which the affecting facility is proposed to be located or expanded to evaluate the need for a community environmental benefit agreement |
| F. Consider holding information meetings for the public in addition to formal public comment sessions. |
| G. Offer translation services for communities with multi-lingual populations, including interpreters at public meetings |
| H. Provide community awareness training to permit writers to increase their understanding of the community stressors, such as a community tour and discussion with community groups and other stakeholders. |
| I. Have inspectors use LanguageLink which is a phone language interpreter complete with 300 languages |
| J. Encourage the permit applicant to consult EPA guidance on environmental justice and other resources developed under Plan EJ 2014, including the <i>Actions that EPA Regional Offices Are Taking to Promote Meaningful Engagement in the Permitting Process by Overburdened Communities</i> and <i>Promising Practices for Permit Applicants Seeking EPA-Issued Permits: Ways to Engage Neighboring Communities</i> |
| Elements for sources |
| A. File an environmental justice public participation plan with and receive approval from DEQ prior to filing any application for such permit, |
| B. Applicants must hold public information meetings to keep the public informed about the proposed action and permit review status. Meetings should be held throughout the permit review process at locations and times convenient to the stakeholders to the project. |
| C. Sources must describe the results and recommendations of the public outreach efforts, such as: (1) establishing a complaint phone line; (2) organizing a community committee that periodically meets with the facility contact; and (3) identifying community groups that should be routinely included in important correspondence. |

| Potential Elements |
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| D. For sources that exceed an action risk level, require them to provide public notification and hold public meetings 12 months after approval of the risk reduction plan and every 12 months thereafter, until the total facility risk is below the action risk level. |
| E. Placeholder for elements developed by advisory committee members |

Program Element 23: Compliance

| Potential Elements |
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| A. Inspect sources with higher air toxics emissions more frequently than other sources |
| B. Inspect sources in overburdened communities or communities with environmental justice concerns more frequently than other sources |
| C. Provide additional resources and assistance to facilities in disadvantaged areas. |
| D. Require less frequent inspections for sources that reduce health impacts by pollution prevention or process changes |
| E. Require ambient monitoring for sources with the highest risk or in communities with environmental justice concerns |
| F. Shorter renewals to account for changing demographics, health science, and technology |
| G. Placeholder for elements developed by advisory committee members |

Program Element 24: Capacity - regulatory costs and fee structure

| Potential Elements |
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| A. Annual fee + activity fee |
| B. Annual fee + \$/ton fee |
| C. One-time base fee + activity fee or \$/ton fee |
| D. Equipment fee |
| E. Application fee |
| F. Risk fee |
| G. Permit applicant funds environmental justice activities |
| H. Environmental justice position at DEQ assists with environmental justice activities. Request and allocate sufficient resources to build trust with communities with environmental justice concerns and implement this approach. |
| I. Placeholder for elements developed by advisory committee members |

Program Element 25: Evaluation

| Potential Elements |
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| A. Track program effectiveness by air toxics emissions inventories |
| B. Track program effectiveness by air toxics ambient monitoring if funding is available |
| C. Placeholder for elements developed by advisory committee members |