



Toxic Air Pollutant Analysis Fact Sheet

When is a Toxic Air Pollutant Analysis Required?

New or modified air pollution sources with an increase in emissions of Toxic Air Pollutants (TAPs) are required to comply with the ambient impact review requirement in Washington's regulations Controls for New Sources of Toxic Air Pollutants under WAC 173-460-070. This regulation requires demonstration that increases in emissions of TAPs are sufficiently low to protect human health and safety from potential carcinogenic and/or other toxic effects. The regulation provides a tiered approach to review potential health and safety impacts from TAP increases starting with a screening-level TAP analysis referred to as a "first-tier" review.

The Department of Ecology maintains [a list of known TAPs](#).

The applicant should submit a first-tier review for their project if potential to emit (PTE) exceeds the de-minimis emissions rates specified in the WAC 173-460-150. The first-tier review should document that potential emission increases for each TAP are either below the Small Quantity Emission Rates (SQER), or that ambient impacts at the property line for the facility are less than the Ambient Source Impact Levels (ASIL). Small businesses may request assistance with conducting a first-tier review by contacting ORCAA's Engineering Department. ASILs, SQERs and de-minimis emissions rates for each TAP are listed in the regulation under WAC 173-460-150.

How Do I Complete a First-Tier Review?

1. Calculate potential to emit for each TAP consistent with specified averaging times for each TAP. For example: for a TAP with an annual ASIL, calculate the annual PTE.
2. Compare PTE of each TAP to its Small Quantity Emission Rate (SQER). If PTE of all TAPs are below their respective SQERs, then the ambient impact analysis is complete and compliance with WAC 173-460-070 has been demonstrated.
3. For TAPs that exceed their SQER, ambient air impacts must be compared to ASILs. For a first-tier analysis, ambient impacts must be determined using a screening level air dispersion model like AERSCREEN and using "regulatory default" modeling options. Compare the maximum off-property impact predicted for each TAP exceeding its SQER to its ASIL. If impacts for all TAPs exceeding their SQER are below their respective ASILs, then the ambient impact analysis is complete and compliance with the requirement in WAC 173-460-070 has been demonstrated.
4. For TAPs that exceed their ASIL based on a screening level modeling analysis, a refined modeling analysis using a model like AERMOD may be allowed to estimate ambient air impacts of the TAP. In these cases, we strongly encourage applicants to submit a modeling protocol to ORCAA prior to modeling the project.
5. For TAPs that exceed their ASIL after the refined modeling analysis, a second-tier analysis is required. Second-tier reviews involve more refined modeling and approval by the Washington Department of Ecology in addition to ORCAA's review.

Please submit the results of the first-tier analysis to ORCAA with your NOC application. ORCAA will review your first-tier analysis and assist you in beginning the second-tier review process with Department of Ecology if one is needed.