

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To:	Air Permits Division Technical Staff	Date:	October 31, 2008
Thru:	Dom Ruggeri, P.E., Manager Technical Program Support Section		
From:	Lori Wilson, Team Leader Air Dispersion Modeling Team		
Subject:	Refining Predicted Modeling Exceedances		

This memorandum supercedes exceedance guidance given in the technical memo [Air Dispersion Modeling Dockside Marine Vessels and Related Activities, August 12, 2002](#), “Estimating the likelihood of exceedance in the review process.”

An applicant may need to refine the number of hours that the model predicts concentrations could exceed a threshold to address impacts from sources of emissions that do not operate simultaneously and/or continuously. In addition, an applicant may need to consider multiple operating scenarios other than the scenario that predicts the maximum concentration for a contaminant when sources do not occur simultaneously and the frequency of exceedance is above a “screening” level of potential concern. These screening levels may be those contained in documents such as the [Air Permit Reviewer Reference Guide \(APDG\) 5874, Modeling and Effects Review Applicability](#), or those provided by the Toxicology Section staff for a specific permitting project.

There are several different methods to refine these predictions. The following are suggested ways to refine exceedances. All refinements must be supported by a technical justification whether the method is in this memorandum or proposed and approved during the impacts review process.

- 1. Consider operating hours of culpable sources.** Use the operating hours instead of the model predicted hours of exceedance. For example, the maximum number of hours exceeding an effects screening level (ESL) is 156. If the activity is limited to 50 hours per year, then the maximum number of exceedances is 50.
- 2. Consider operation schedule.** Limit the hours modeled to represent an operation with a set operating schedule. For example, if an applicant has limited production and maintenance, startup, and shutdown activities (MSS) to 8 a.m. to 5 p.m., then only those hours should be evaluated in the modeling analysis to predict hours of exceedance as well as the maximum ground level concentration (GLC_{max}).
- 3. Examination of MAXIFILE.** Examine the MAXIFILE for the ALL source group and MAXIFILES for each modeled source group included in the analysis. Evaluate the modeled exceedances relative to how production and MSS activities would operate in practice. For example, if the activity is

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completed within one hour, cannot occur again for several more hours, and the modeled exceedances occur in sequential hours, all but one of those hours of exceedance can be removed from consideration.

Another refinement is to determine the contribution of each source to an exceedance during a certain time of day. If the applicant limits which sources can operate simultaneously in order to prevent a predicted exceedance, that exceedance can be removed from consideration.