

SANTA BARBARA COUNTY
AIR POLLUTION CONTROL DISTRICT
POLICIES AND PROCEDURES

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Topic:	<u>Converting Existing Hourly Mass Emission Rates to Daily Mass Emission Rates</u>		
Distribution:	<u>Engineering Division Staff</u>		

1.0 APPLICABILITY

This Policy and Procedure applies to all APCD permits.

2.0 INTRODUCTION

With the 1997 NSR rule changes from hourly-based to daily-based New Source Review mass emission thresholds, guidance was required on how to convert the existing permit limits from an hourly to daily basis. This policy and procedure documents that guidance, as well as guidance on the process for implementing the emission basis change.

3.0 CONVERSION - GENERAL

Existing permits (up to 1997) either had hourly mass emission limits or both hourly and daily mass emission limits. For existing permits which had daily mass emission limits, no further analysis is required: the existing daily mass emission limits are to be used in future permits. When only hourly mass emission limits were present, the permit engineer shall convert the hourly limits to a daily basis using the concept of *Potential to Emit* (PTE):

“Potential to Emit” means the maximum capacity of the stationary source to emit a pollutant, including fugitive emissions, under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitation is legally and practically enforceable. Secondary emissions do not count in determining the potential to emit. (*ref.: Rule 102*)

Policies and Procedures Memoranda are intended to provide agency staff, applicants and the public guidance relative to standardized APCD procedures. These policies and procedures shall not be interpreted in conflict with APCD Rules and Regulations or administrative policies, and may be modified or updated periodically without advance notice.

This will typically require taking the hourly rate and multiplying by 24 hours to obtain the daily calculated rate. Sources may wish to have the APCD use a number smaller than 24 hours per day to calculate their daily emissions. However, before a smaller number may be used, the source must accept permit condition(s) that allow an APCD Inspector to verify that the lower emission limit is not being exceeded. In other words, the daily emission limit must be practically enforceable. If a practically enforceable method cannot be designed, then the APCD shall default to a 24 hour per day calculation. For example, simply requiring in a permit condition that a boiler will operate eight hours per day is not practically enforceable. To be practically enforceable, the permit would need to have a condition that ensures enforceability of the daily PTE limit, such as requiring a calibrated fuel meter with an accompanying 24-hour chart recorder. Depending on how the hourly emissions are converted, long-term emissions (e.g., annual emissions) may need to be reduced accordingly or they may not be affected by the conversion. In any event, long-term emissions cannot increase due to the conversion from hourly to daily limits.

4.0 CONVERSION - SOLVENT SOURCES

Most small- and medium- sized solvent sources have existing permits that are based on monthly emission estimates. To assess compliance with the prior hourly NSR thresholds, the APCD typically assumed a standard operating schedule (174 hours per month, based on 8 hr/day, 5 days per week, 52 weeks per year). This APCD standard operating schedule provided for a “reasonable worst case” scenario, and not simply a monthly average (actual hours of operation of any specific source could be different). To convert these source permits to a daily basis, we again determine whether a daily emissions limit already exists. If a daily limit exists, then that limit is used and no further analysis is required. If a daily limit doesn’t exist, the basis for the permit’s hourly limit is determined. If the APCD’s standard operating schedule was used in creating the existing permits, then the hourly emission rate is multiplied by 8 hours per day to arrive at the new daily emission rate. If the APCD’s standard operating schedule was not used, then the permit engineer will present their findings to their Supervisor regarding the method(s) used and the Supervisor will provide guidance as to how the daily emissions will be calculated.

The new APCD standard operating schedule for small- and medium- sized solvent sources is 21.7 days per month. Again, this method provides a “reasonable worst case” scenario for determining the daily emissions limits. APCD staff shall use this operating schedule for all NSR applications involving solvent sources where monthly emissions form the basis for the emissions calculation. Sources that do not wish to use standard operating schedule for the NSR application(s) have the option of basing permitted emissions on a daily (not monthly) basis. Along with the daily emission basis, APCD staff must ensure that the permit assesses compliance on a daily basis via practically enforceable recordkeeping and reporting methods.

5.0 CONVERSION - TIMING

The following approach for changing the permitted values to a daily basis is used:

- (a) If a NSR application is received, the permit engineer will assess whether all or part of the existing stationary source’s permitted emissions need to be converted to a daily basis. For *small* and *medium* stationary sources (as defined by Rule 102), the permit

engineer will typically convert all the source emissions to a daily basis. For *large* or complex stationary sources, the permit engineer should convert all emission units during the first application unless time constraints prevent conversion, in which case the conversion shall take place at the next permit reevaluation.

- (b) If no NSR permit applications are received for a source needing conversion to daily limits, use the triennial permit reevaluation process to convert the emissions to a daily basis.

6.0 PERMITS THAT REQUIRE HOURLY MASS EMISSION RATES

There are cases in which hourly mass emission rates must be maintained in the permit. For these cases, the hourly mass emission rate limits shall be explicitly stated in a permit condition. Examples include:

- (a) Emission units that are subject to BACT and where source testing is required;
- (b) Emission units subject to air quality modeling and where the modeling shows that the source has the potential to violate either a 1-hour ambient air quality standard or lead to the violation of any air quality increment if the hourly mass emission limit were not in place;
- (c) Emission units subject to health risk assessments and where the health risk assessment shows that the source has the potential to cause a significant health risk if the hourly mass emission limit were not in place;
- (d) Emission units that have their PTE limited based on assumed hourly mass emission rates and where source testing is or may be required to confirm the assumed hourly limit(s).

It is the responsibility of the permit engineer to recognize when hourly mass emission limits must be used.