

San Joaquin Valley Unified Air Pollution Control District

Exempt Compounds - VOC Emissions

Approved By: _____ Signed _____ Date: <u>7/10/96</u> Seyed Sadredin Director of Permit Services

Purpose: The purpose of this policy is to establish the procedure for calculating VOC emissions after exclusion of certain compounds from the definition of VOCs, and to address related issues concerning the application of New Source Review (NSR) and Emission Reduction Credits (ERCs) banking provisions.

I. Background:

Following the lead of the United States Environmental Protection Agency (EPA) and California Air Resources Board (CARB), on May 16, 1996, the District's Governing Board amended Rule 1020 (Definitions) to exempt ethane and acetone from the definition of volatile organic compounds (VOCs). EPA and CARB have determined that acetone, ethane, parachlorobezotrifluoride (PCBTF), and volatile methylated siloxanes (VMS) have negligible photochemical reactivity and should be exempt from the VOC definition.

EPA officially exempted ethane on July 8, 1977, PCBTF and VMS on December 5, 1994, and acetone on June 16, 1995. CARB exempted all four materials on September 29, 1995 in connection with its rulemaking for consumer products. The District exempted PCBTF and VMS on April 13, 1995.

Until May 16, 1996, the District had treated ethane and acetone as VOCs and permitting and enforcement actions were taken accordingly. Currently, the District's ERC bank contains unused VOC deposits that include these newly exempt compounds and current active permits contain terms and conditions that limit VOC emissions based on the old VOC definition.

II. NSR Implications and Impact on Banked ERCs

The District's permitting and banking actions will be guided by the following principles:

A. Past Permitting Actions

Previous VOC emission reductions which included ethane and/or acetone will not be recalculated if such reductions have already been banked and used, onsite or offsite, to mitigate previously calculated VOC emission increases.

All permitting actions completed by the District prior to May 16, 1996 are final and will not be reopened or revised to reflect the new VOC definition, except for the following:

1. The permit conditions on existing permits allow for VOC emissions in excess of the source's current potential to emit, when the revised VOC definition is used. If the VOC emissions limitation for a permitted emissions unit is in excess of its physical or operation design capacity to emit, the emission limitation shall be reduced such that it is no greater than the unit's maximum design capacity to emit. Any physical or operational limitation on the capacity of the source to emit VOCs, including 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 if the limitation is incorporated in the existing permit.

B. New Permitting and Banking Actions

1. The revised VOC definition shall be used for all new and modified emissions units, and for all new banking actions.
2. At the next permitting action, the facility's Stationary Source Potential to Emit (SSPE) shall be recalculated to exclude all exempt compounds. This will be accomplished by recomputing each permitted emissions unit's potential to emit VOCs.

C. Unused Banked ERCs

1. In accordance with the provisions of District Rule 2201 (New and Modified Stationary Source Review), section 4.2.5.3, in no case shall exempt compounds or other compounds excluded from the definition of VOCs be used as offsets for VOCs.

2. For current, valid ERC certificates for VOCs, the portion that represents newly exempt compounds must be segregated. Separate ERC certificates will be issued for VOCs, acetone, ethane, and other exempt compounds.
3. Consistent with the provisions of District Rule 2201 (New and Modified Stationary Source Review), section 4.2.5.3, non VOC credits may be used as interpollutant offsets for pollutants other than VOCs.

III. Quantification of Exempt Compound Emissions

When available, appropriate source-specific emission data must be used to calculate the exempt compound fraction of the VOC emissions. Examples of acceptable source specific emissions data are emission test results or material formulation from Material Safety Data Sheets. In the absence of representative source-specific emissions data, the CARB's latest **Manual of Volatile Organic Compounds Speculation Profiles** must be used to quantify the exempt compound emissions.

A. Common Sources of Ethane Emissions

The primary sources of ethane emissions are refineries and oil and gas production facilities. Ethane is not commercially available in the United States.

A small amount of ethane is also emitted as a combustion product from combustion devices. Based on the information from CARB's Manual of Volatile Organic Compounds Speculation Profiles, ethane emissions from the following combustion devices are not significant, and shall be deemed negligible for the purpose of implementing this policy: (i.e. Need not calculate ethane fraction for emissions from devices listed below.)

1. Boilers and steam generators fired on PUC quality natural gas, distillate fuel oil, or residual fuel oil
2. Internal combustion engines fired on diesel (Source specific emissions data or VOC speciation data should be used for natural gas fired IC engines.)

B. Common Sources of Acetone Emissions

Acetone is a popular solvent used in surface coating, paint manufacturing, and fiberglass manufacturing operations.

IV. Procedures

A. Permit Revisions

The current District's Rules and Regulations, and the applicable permitting policies and procedures will be used. Authority to Construct (ATC) applications will be required for all revisions to existing permits, except for those described under section II.A.1 of this policy. (Such revisions may be incorporated at the time of annual permit review.)

B. Adjustments to Unused Banked ERCs

The following steps shall be followed:

1. The District will identify existing unused ERCs that may be affected by the new VOC definition.
2. The District will prepare a written analysis documenting the method by which the non-VOC fraction of the ERC was identified.
3. A copy of the District's written analysis will be forwarded to the holder of the ERC.
4. The District will allow 30 days for written comments by the holder of the ERC.
5. After considering all comments received, the District will adjust ERCs and issue separate ERC certificates for VOCs and the each exempt compound, if necessary.
6. The holder of the ERCs may appeal the District's action to the Hearing Board.