

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Air Permits Division Permit Reviewers **Date:** REVISED - April 7, 2005

From: Richard A. Hyde, P.E., Director
Air Permits Division

Subject: Highly-reactive Volatile Organic Compound Allowable Limits for Sites Located in the Houston/Galveston/Brazoria Nonattainment Area

This memo is to address a change in Air Permits Division policy to specifically identify allowable limits for highly-reactive volatile organic compound (HRVOC) emissions within the maximum allowable emission rate table (MAERT) for all permits issued to sites located in the Houston/Galveston/Brazoria (HGB) nonattainment area. Currently, emissions of HRVOCs, while represented within the permit application on a speciated basis, are generally listed as VOC within the permit's MAERT. This change would require Air Permit Division permit reviewers to list within the MAERT, on an emission point basis, an annual and hourly allowable limit for each specific HRVOC emitted.

There are two primary reasons for this change in policy. First, the most recent revision to the HGB state implementation plan (SIP) incorporates a control strategy centered around reductions in both short-term and annual HRVOC emissions from four key industrial sources: fugitives, flares, process vents, and cooling towers. HRVOC emissions from sites in the HGB area will be restricted on a site-wide basis to a not-to-exceed limit of 1200 lbs/hr and an annual limit enforced through a cap and trade program. The HRVOC control strategy also emphasizes reductions in short-term emissions from scheduled maintenance, startup, shutdown, and emission events by including emissions from these activities in determining compliance with both the short-term and annual HRVOC limits. Just as APD has indicated a specific allowable limit for compounds of interest in cases such as restrictions based on health effects, the division at this time recognizes the importance of indicating specific allowable limits for HRVOCs to support current and future HGB SIPs.

The second reason for this policy change is necessitated by the need to establish enforceable limits on HRVOC emissions for those sites within the seven counties surrounding Harris County. Affected industries from Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, and Waller Counties have indicated to the commission that representations for HRVOC emissions within their respective permits are well below the annual cap for that area. Based on this information, the commission has exempted sites in these counties from participation in the HRVOC cap and trade program. In order to provide an annual limit based on these representations for HRVOC emissions, affected industries in the seven county area are required under the HRVOC Emissions Cap and Trade rules to establish enforceable limits on HRVOC emissions at levels represented in their most recent application for a permit. This may be initially accomplished through the certification of emissions on a PI-8, OP-CRE1, or the new APD-CERT, but must eventually be incorporated into each respective permit.

The specific compounds to be identified within the MAERT will be consistent with the definition of an HRVOC under §115.10 and should be identified on an emission point basis for all process vents, flares, and cooling towers authorized by the permit. For MAERTs within a flexible permit, the HRVOC emissions from all process vents, flares, and cooling towers under the VOC cap should be separated into individual caps for each specie of HRVOC. For permits issued to sites located in Harris County an hourly and annual limit should be identified for emissions of each of the following: ethylene, propylene, 1,3-butadiene, and all isomers of butene. Permits issued to sites located in Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, and Waller Counties will only need to have an hourly and annual limit identified for emissions of ethylene and propylene. The allowable emission rates for each HRVOC specie emitted at an emission point should be listed below the total VOC limits for that emission point and included in the total VOC emission rates. In addition, the MAERT should be footnoted to indicate that allowable emission rates listed for individual HRVOC species are included in the total VOC emission rates. The attached MAERT has been provided as an example of the proper formatting.

This policy change will become effective on June 1, 2006 for all new construction permits, renewals, and amendments that seek to modify a process vent, flare, or cooling tower in HRVOC service. Every effort should be taken to update all permits to reflect this change in policy. However, should a permit authorizing multiple sources of HRVOC be amended, the permit reviewer is only responsible for identifying HRVOC allowable emissions in the MAERT for those emission points being affected by the amendment. For example, a permit authorizing five process vents and a flare that are in HRVOC service is being amended. The amendment only seeks to modify three of the process vents. Therefore, the permit reviewer is only responsible for identifying HRVOC allowable emissions for the three process vents being modified by the amendment application and not all six emission points.

This policy change is not intended to impede the issuance of those permitting actions nearing final issuance and staff should consult with their management to determine the appropriateness of identifying HRVOCs in their pending permit projects. Any exceptions to this policy must be approved by the appropriate section manager.

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 0000

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
EPMF	Main Flare (5)	CO	0.48	2.12
		NO _x	0.16	0.72
		VOC (4)	0.94	4.10
		ethylene	0.68	3.00
		propylene	0.19	0.85
EPBF1	Backup Flare (5)	CO	0.48	2.12
		NO _x	0.16	0.72
		VOC (4)	0.94	4.10
		ethylene	0.68	3.00
		propylene	0.19	0.85

- (1) Emission point identification - either specific equipment designation or emission point number (EPN) from plot plan.
- (2) Specific point source name. For fugitive sources use area name or fugitive source name.
- (3) CO - carbon monoxide
 NO_x - total oxides of nitrogen
 PM₁₀ - particulate matter equal to or less than 10 microns in diameter. Where particulate matter is not listed, it shall be assumed that no particulate matter greater than 10 microns in emitted.
 SO₂ - sulfur dioxide
 VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- (4) The allowable emission rates listed for individual VOC species from this EPN are included in the total VOC emission rates.
- (5) Flare emission rates are based on routine operations as represented in the permit application.
- * Emission rates are based on and the facilities are limited by the following maximum operating schedule:

_____Hrs/day _____Days/week _____Weeks/year or 8,760 Hrs/year