Texas Natural Resource Conservation Commission

INTEROFFICE MEMORANDUM

To: Interested Parties

Thru: Victoria Hsu, P.E., Director, New Source Review Division 3/27/96
Tammy Villarreal, Manager, Chemical Section, New Source Review Division

From: Tim Friday, Chemical Section, New Source Review Division
Dana Poppa Vermillion, P.E., Technical Specialist, Chemical Section, New Source Review Division

Subject: Petroleum Marketing Terminal Fugitive Emission Factors/Leak Detection and Repair Requirements

This memorandum replaces the memorandum on the same subject dated March 8, 1995.

The New Source Review Division has reviewed and approved the use of the Petroleum Marketing Terminal fugitive emission factors found in Environmental Protection Agency (EPA) document EPA-453/R-95-017, "Protocol for Equipment Leak Emission Estimates," for use in permitting actions.

The approved Petroleum Marketing Terminal fugitive emission factors are as follows:

Equipment Type	Equipment Service	Average Emission Factor (lb/hr Component)
Fittings (connectors and flanges)	Gas	9.26×10^{-5}
	Light/Heavy Liquid	1.76×10^{-5}
Other (compressors, relief valves, etc.)	Gas	2.65×10^{-4}
	Light/Heavy Liquid	$2.87 \times - 10^{-4}$
Pumps	Gas	$1.43 \times - 10^{-4}$
	Light/Heavy Liquid	$1.19 \times - 10^{-3}$
Valves	Gas	$2.87 \times - 10^{-5}$
	Light/Heavy Liquid	$9.48 \times - 10^{-5}$

The use of these factors shall be accompanied by an audio, visual, and olfactory leak detection and repair (LDAR) program performed on a monthly basis. A permit condition, similar to the following, shall be included in the final permit whenever the marketing terminal emission factors are used to estimate a unit's fugitive emissions:

Piping, Valves, Pumps, and Compressors in Petroleum Service

A. Audio, olfactory, and visual checks for petroleum product leaks within the operating area shall be made monthly.

B. Every reasonable effort shall be made to repair or replace a leaking component within 15 days after a leak is found. If the repair or replacement of a leaking component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired or replaced until a scheduled shutdown shall be identified in a list to be made available to representatives of the Texas Natural Resource Conservation Commission (TNRCC) upon request.

Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the TNRCC upon request.

The marketing terminal fugitive emission factors already include the appropriate credit for the monthly audio, visual, and olfactory LDAR program. Therefore, no reductions in the factors are necessary.

The decision to require a physical LDAR program instead of an instrument monitoring program is based on the EPA/API bagging study which included gasoline distribution facilities employing a variety of inspection and maintenance programs ranging from simple physical inspections to OVA instrument monitoring. The results of the study indicated little or no improvement in fugitive emission control was associated with inspection programs utilizing instrument monitoring to detect leaks. This finding was confirmed during conversations with both EPA and API representatives. Facilities required to perform instrument monitoring by state or federal regulation may substitute the required instrument LDAR program for this physical inspection program; however, no additional monitoring credit may be applied to the emission factors.

If you should have any questions, please contact on the individuals listed above.

cc: Chemical Section Engineers
Coatings/Combustion Section Engineers
Evette Alvarado, Emission Inventory Section
Cissy Boyle, Operating Permits Program
Don Duke, CORE Section
Stephen E. Anderson, CORE Section