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Category: 25 – Gasoline Tank Trucks

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

DATE: September 7, 1982

SUBJECT: Clarification of Memorandum Dated May 6, 1981
Concerning "Cost Effectiveness of Gasoline Tank Truck
Certification Program"

FROM: G.T. Helms, Chief
Control Programs Operations Branch (MD-15)

TO: John Hanisch, Chief
Mobile Source Emissions Section, Region I

In accordance with your telephone request of August 25, 1982, to Tom Williams, this memo is intended to clarify your uncertainties related to our memorandum of May 6, 1981, concerning "Cost Effectiveness of Gasoline Tank Truck Certification Program" from Darryl D. Tyler, Acting Director, Control Programs Development Division to Chief, Air Programs Branch, Regions I-X.

Estimated emissions during loading of gasoline (emission factors) included in the May 6 memo are as follows:

- 8 lbs/10(to third power) = Uncontrolled emissions from vapor balanced tank trucks (tank truck not vented to air pollution control equipment)
- 2.4 lbs/10(to third power)= Emissions to atmosphere from vapor balanced tank trucks without a tank truck certification program (tank truck vented to air pollution control equipment)
- 0.8 lbs/10(to third power)= Emissions to atmosphere from vapor balanced tank trucks with a tank truck certification program (tank truck vented to air pollution control equipment)

The emissions (2.4 lbs/10(to third power) gallons and 0.8 lb/10(to third power) gallons) are not related to emissions from the vapor control equipment. These emissions do not vent to the vapor control systems during the loading operation.

It has been our experience that, in many instances, during gasoline loading operations badly leaking trucks (vented to air pollution control equipment) emit audible sounds from large leak points and/or visual (vapor

waves) may be noted from leak points. Tank trucks are not under vacuum when loading gasoline while vented to vapor control equipment. As gasoline is loaded, vapors are forced out of the tank truck to vapor control equipment. There is a pressure drop in terminal vapor collection line and in the vapor control equipment that must be overcome; hence, the truck compartments are under pressure.

A partial list of potential leak points related to tank trucks are:

- Dome lid/base ring interface
- Base ring/tank interface
- P/V vent
- Compartment vapor vent cover
- Valves
- Vapor piping
- Vapor couplers
- Vapor transfer hoses
- Tank shell

The above are not related to any vapor leaks that may occur in the vapor lines from the loading rack to the vapor control equipment or leaks in the vapor control equipment.

It is hoped that this memorandum clarifies that our data indicate that emissions from tank trucks (vented to vapor control equipment) during gasoline loading operations can be significantly reduced with a tank truck certification program to ensure proper maintenance on the tank trucks. Please contact the Technical Guidance Section (Brock Nicholson or Bill Polglase, FTS 629-5516) should you have further questions.