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Category: 37 – Jet Fuel

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

March 13, 1981

SUBJECT: Applicability of Fuel Storage Regulations
to JP-4 Jet Fuel

FROM: Edward F. Tuerk, Acting Assistant Administrator
for Air, Noise, and Radiation (ANR-443)

MEMO TO: Clyde B. Eller, Director
Enforcement Division, Region IX

This is in response to your memorandum of January 16, 1981 addressed to Ed Reich and Walter Barber concerning the applicability of fuel storage regulations to JP-4 jet fuel. This response has been coordinated with the Division of Stationary Source Enforcement. Specifically, you have requested that final determination be made with regard to the applicability of storage tank regulations to the storage of JP-4 in underground horizontal tanks.

The Air Force document attached with your memorandum entitled, "JP-4 Vapor Control: Regulatory and Technical Evaluation of Requirements to Control Vapor Emissions from JP-4 Storage and Dispensing Facilities," dated August 1980, cites the Air Force's basis for requesting an exemption from the control requirements of the currently applicable SIP.

As indicated in the report, JP-4 jet fuel used by military aircraft exhibits a "borderline" vapor pressure which generally exceeds 1.5 PSIA at storage temperatures above 70 degrees F. The jet fuel storage tanks which the Air Force desires an exemption for are large capacity, horizontal, underground operating storage tanks that are filled from above ground bulk storage tanks equipped with appropriate vapor controls.

Because of the following, we believe that it is unreasonable to require control on these horizontal, underground JP-4 jet fuel storage tanks.

The Air Force report indicates that the JP-4 storage tanks are filled and emptied quite rapidly and, in effect, are essentially surge tanks. This type of operation may not allow as frequent or as complete saturation of air as may be experienced in other storage tank situations and, thus, emissions would tend to be less.

Also, the report indicates that the vapor pressure of the JP-4 jet fuel should only, at times, exceed 1.5 PSIA during a one- to four-month period of the year.

For these reasons, the emissions from these tanks, which are typically 50,000 gallons, are likely lower than even the emissions from smaller

exempt storage tanks (< 40,000 gallons) which store more volatile fuels such as gasoline.

With regard to the safety of add-on control equipment, the Office of Air Quality Planning and Standards (OAQPS) advises that, based on existing data, add-on control equipment could be operating with the vapors vented from the underground JP-4 jet fuel storage tanks in the explosive range and that a potential safety problem may exist; however, it is probable that technical problems, such as these, could be alleviated and that vapor control could be utilized.

In summary, we recommend the exemption of JP-4 jet fuel (stored horizontal, underground tanks) from the requirements of applicable storage tank CTGs.

Should JP-4 jet fuel be stored aboveground, then it would be subject to the control requirements of the applicable CTG. Conventional upright, above ground storage tanks containing JP-4 are amenable to control and, therefore, should be controlled where the storage conditions cause the true vapor pressures to exceed 1.5 PSIA.

Should you have any questions on this matter, please contact OAQPS' Technical Guidance Section (Brock Nicholson or Bill Polglase, FTS 629-5516).

cc: Ed Reich, DSSE
Bob King, DSSE
Julie Anderson, Region IX