Texas Natural Resource Conservation Commission

INTEROFFICE MEMORANDUM

To:	Air Permits Division (APD) staff	**Date:**	February 25, 2000
From:	John Steib, Director, Air Permits Division		
Subject:	Policy for Road Emissions Evaluation		

Background

The Texas Clean Air Act (TCAA) and 30 Texas Administrative Code (TAC) Chapter 116 state that the TNRCC may issue permits for the construction of facilities which may emit air contaminants. The TCAA §382.003(6) and 30 TAC Chapter 116, §116.10(3) define a "facility" as "a discrete or identifiable structure, device, item, equipment, or enclosure that constitutes or contains a stationary source, including appurtenances other than emission control equipment. A mine, quarry, well test, or road is not a facility." There are several standards which must be met by facilities emitting particulate matter (PM), including the National Ambient Air Quality Standards (NAAQS) for particulate matter less than 10 microns (PM_{10}) for 24-hours and annually, and the 30 TAC Chapter 111, §111.155 (Reg I) standards for total suspended particulate (TSP) for 1-hour and 3- hours.

This memo serves to document the agency's approach to road emissions evaluations, as well as an historical summary of the issue.

Policy

Road dust will be evaluated for only those types of applications where the facilities deal with road construction, materials handling, and related industries (concrete batch plants, asphalt concrete plants, rock crushers, coal handling, etc.). Road dust emissions should be calculated and impacts evaluated for long-term periods (annual) only. Since there is no reliable calculation methods for shorter time periods (24-hour, 3-hour, 1-hour), emissions from road dust should not be calculated or impacts analysis performed. Instead, all project reviews should include the application of Best Management Practices (BMP) to minimize the creation of road dust and prevent nuisance conditions. This practice follows previous precedent and current guidance from the Commissioners and also strictly follows the definition of "facility" as outlined in the Texas Clean Air Act and 30 TAC 116. In all cases where road dust is a potential nuisance issue, BMP will be applied.

HISTORICAL BACKGROUND

Since the late seventies, EPA has developed road emission calculation methods for particulate matter(PM) state implementation (SIP) development and implementation and included these equations in the "Compilation of Air Pollutant Emission Factors" (commonly known as "AP-42"). These equations have used numerous variables to estimate emissions from road traffic on paved and unpaved surfaces and focus on emissions for long term estimates (quarterly, annually). There have been no extensive studies by EPA on short-term (1-hour, 3-hour) emission estimates, but these equations can be used to estimate short-term emissions with a corresponding drop in their reliability ratings. EPA has periodically updated these equations as more information has become available. The most recent updates have occurred in 1988, 1993, 1995, 1997, and most recently, 1998.

During the review of air permit applications, staff performed road emissions calculations on a limited basis for over two decades. In the early 1990's it became standard practice of the Mechanical Section to estimate long-term particulate (TSP and PM_{10}) emissions from traffic at sites where material handling activities, and associated emissions, were similar in character or would contribute to those generated by road traffic. The main focus of these reviews was in road construction, materials handling, and related industries (concrete batch plants, asphalt concrete plants, rock crushers, coal handling, etc.). These emission estimates were included on maximum allowable emission rate tables (MAERTs) as emission allowable limits since the traffic activities were associated with permitted facilities' operations. As the reviews of these permits became more standardized and thorough (1992-1996), dispersion modeling began to be used on a regular basis to determine whether the off-property impacts would meet the national ambient air quality standards (NAAQS). During this time, short-term estimates were not performed on a regular basis as there was little, if any, confidence in the AP-42 emission estimates for roads for these time frames. In 1997, it was determined that since roads could not be considered facilities and the TNRCC had no permitting jurisdiction over these sources, roads would not be calculated for inclusion on MAERTs or used in modeling exercises. Instead, basic traffic information would be requested and BMPs employed on all relevant permit reviews to help ensure compliance with 30 TAC Chapter 101 (General Rules), §101.4 (Nuisance Rule).

Over the years, the issue of how and when to evaluate road dust emissions has been raised several times to APD management and TNRCC upper management. During the Exemption Protectiveness Review Work Session, the Commissioners agreed that since roads were not facilities, their emissions did not have to be evaluated for impacts and regulatory compliance against NAAQS and Rag I standards as long as BMP were employed by the exemption conditions (1997-1998). During this Work session, the issue of nuisance and Reg I violations at concrete batch plants was discussed and data was presented which showed that, although there is a perception that road dust is considered to be a common nuisance problem, only 94 total nuisance NOVs have been issued from 1979-1996 (17 years) for over 1036 concrete batch plants in the state as of 1996.

Later, during the Ingram Ready Mix Exemption Registration hearing (December 1998-January 1999) the State Office of Hearings Examiners (SOAH) Administrative Law Judge (ALJ) determined that road emissions should be considered as contributing sources of PM. Against staff recommendations, the applicant chose to include short-term emissions information. Due to the overlapping issues and on-going discovery issues with Ingram, the Exemption Protectiveness Review for concrete batch plants review was suspended until the Ingram Ready Mix hearing was resolved. During the Ingram hearing, the ALJ required some method of quantification to be used and accepted extensive evidence on how emissions should be calculated with the highest probable reliability. Although hesitant to put any values to short-term road emissions the TNRCC staff presented evidence which was ultimately accepted by the ALJ as being the best estimate of these emissions.

Air Permits Division staff has continued to review the available information on quantification of road dust emissions and has determined that there is little confidence in short-term emission estimates, and dispersion models cannot accurately predict what occurs in "real world" circumstances. However, there is a high level of confidence in annual emission estimates and modeling exercises. Air Permits Division (APD) staff had several meetings with Division management and agency upper management to confirm how current and future evaluations of road dust emissions will be performed. During those meetings the current policy was confirmed.