State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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From: _____ Date: _____

Interoffice Memorandum

To: Teresa Heron

From: Tom Rogers TR

Date: May 31, 1989

Subject: Metal Container Corp. -- Air Quality Assessment

I have completed an assessment of the potential air quality impacts due to Metal Container Corp. (MCC). The pollutants evaluated were Hexane and Heptane. The results indicate that the release of Hexane from this facility may result in concentration levels above the defined acceptable ambient concentration level on property outside the control of MCC.

The emissions of hexane and heptane from the facility were derived from information provided by the applicant. The facility-wide emissions were determined to be 22.22 lb/hr of hexane and 7.24 lb/hr of heptane. From drawings provided by the applicant, the emissions were released through 13 vents located on the roof. The total emissions for each pollutant were distributed among the 13 vents as weighted by the flow rates associated with each vent. This information was used to estimate the ground-level ambient concentrations of these substances using an air quality dispersion model. The EPA and Department-approved Industrial Source Complex (ISC) short-term model was run with one year of meteorological data (Tallahassee, 1985). Emissions from the vents were assumed to have no plume rise (i.e., gas temperatures were near ambient and gas velocities were zero) and occurred 24 hours per day. The building dimensions were input to the model to incorporate the effects of building wake downwash.

The acceptable ambient concentration levels for these pollutants are:

Pollutant	8-hr (ug/m^3)	24-hour (ug/m^3)
Hexane	3600	857
Heptane	32,000	7619

The predicted maximum concentrations are:

Pollutant	8-hr (ug/m^3)	24-hour (ug/m^3)
Hexane	2825	1617
Heptane	920	527

The 24-hour AAC for Hexane is exceeded. A reduction in emissions or hours of operation may be necessary. The results of this analysis should be used in conjunction with other environmental and engineering factors in making any final decision. Reasonable effort should be made to achieve the acceptable ambient concentration levels, however, predicted exceedance of these levels should probably not be used as the sole basis for permit denial.