

May 18, 1977  
C-080

MEMO TO: R.D. Siegel

FROM: K.H. Kennedy

SUBJECT: Estimate of hydrocarbon emissions from the proposed 3000 tons per day resource recovery facility in the Merrimack Valley.

A brief analysis was performed for the New England Council to estimate the hydrocarbon emissions from the proposed Universal Oil municipal resource recovery facility in the Merrimack Valley region. Based upon the hydrocarbon emission factor from the second edition of "Compilation of Air Pollutant Emission Factors" for an uncontrolled multiple chamber municipal refuse incinerator, the hydrocarbon emissions from the proposed 3000 ton per day facility would be 4500 pounds per day (821 tons per year). This, of course, is well above the upper limit for offset review exemption of 100 tons per year. However, the validity of employing this emission factor for the proposed facility is highly questionable. The multiple chamber incinerator is the only municipal refuse incinerator design with a well documented emission factor. The accuracy of this emission factor is considered excellent based on field measurements of a large number of sources. The proposed resource recovery facility, however, is a significantly different process than the multiple chamber incinerator and is likely to produce significantly different hydrocarbon emissions. There are very few examples of this proposed type of incinerator process in existence today and no technically reliable factor has yet been developed. Caution must be exercised in the application of other emission factors to this process until enough research is performed to develop a reliable emission factor. Several EPA Region I staff members involved in solid waste disposal are currently researching this process to develop an emission factor.

KHK/dmc