5.2.3 Average Volatile Organic Concentrations Calculations

At least four samples are required to calculate the average volatile organic concentration. These values along with the mass of the sample are needed for the average VO concentration calculation as follows:

$$C_{ave} = \frac{1}{Q_T} x \sum (Q_j x C_j)$$

(Equation 5-1)

where: C_{ave} = average VO concentration of the hazardous waste at the point of waste origination in ppmw

Q_j = mass of the discrete quantity of the hazardous waste represented by C_j in kg

Q_T = total mass of the hazardous waste for the averaging period in kg

C_j = measured VO concentration by test run for discrete quantity, "j" for the hazardous waste in ppmw

If Method 25D is used to determine the VO concentration of a hazardous waste, the carbon content and the chloride content are added together. If data from a different method is used, fractioned measured (f_m) correction values may be applied. The f_m values are located in 40 CFR Part 63, Table 34 and in Appendix B of this handbook. Once the f_m values are applied, all detects in the data are added together to give a total

concentration value. This value along with the mass of the sample taken is placed into the equation defined above. The waste determination case study located in Appendix C presents a good comparison of Method 25D data and Method 8260 data. This case study presents how the four values are utilized and how the average VO concentration is calculated.