

chemical and empirical parameters to calculate the transport of a given pollutant to a sensitive area. To date the models have been successful in describing sulfur deposition on an annual basis. Hydrogen and nitrate ion deposition, two important factors in acid rain, have not yet been successfully incorporated in the models. Initial source-receptor relationships for sulfur have been determined using model calculations.

If the models are to be useful to satisfy the requirements of the Memorandum of Intent, a quantitative relationship between pollution emissions and deposition in sensitive areas must be established. To do this, a transfer matrix approach has been adopted. Theoretically, by using this method, a change in a source strength can be tied to a change in the deposition amount of the given pollutant in a sensitive area. Preliminary transfer matrix results are discussed in this report, but these results are subject to future changes, possibly significant, as modeling techniques are refined. Though preliminary in nature, the report sets up the needed framework to produce a more accurate transfer matrix during Phase II.

In order to check the accuracy of the models, field measurements of the deposition from the existing monitoring networks in both countries are required. At present, wet deposition/acid rain is being measured reasonably well.