

LONG RANGE TRANSPORT OF AIR POLLUTANTSInitiation of the preparatory programme in 1971INTRODUCTION

1. At the meeting of experts in June this year at OECD it was agreed, that before participation in the Long Range Transport of Air Pollutants project was finally decided upon by the end of 1971, some countries might be interested to start preparation for the project this autumn on a strictly voluntary basis. A preliminary programme for such activities was drawn up at the meeting. An unofficial advance copy of this paper (ref. NR/ENV/71.39) is enclosed for your information.

It was left to the Central Project Administration (CPA) at the Norwegian Institute for Air Research to follow up this suggestion and coordinate the efforts.

2. A main point of the preparatory programme is to start standardization and testing of the methods for chemical analysis. This necessarily includes standardization of certain details in the sampling procedures, such as the selection of filter type, suction rates, materials to be used etc. The responsibility for these preparations was left with the CPA, and other laboratories would assist.
3. When the preparatory programme was put on paper in June, it was assumed that a preliminary procedure for measuring pH in precipitation could be ready by the end of July and that other procedures could be ready by the end of August. It has not been possible to work quite as fast as that. The delay has not been due to any particularly serious obstacles, but merely to an underestimate of the time needed to deal with minor details and the impact of summer vacations. Therefore the necessary preparatory work has not been completed before now.

4. PROGRAMME

Specifications of the methods recommended for the preparatory work in 1971 are given in separate documents (no. 2.3.4.5.6). The specifications are preliminary in the sense that it is highly probable that procedures will be modified when they have been tested in other laboratories of the OECD-member countries.

5. From the mentioned papers you will note that limits for the assumed useful measuring range of the methods and their accuracy are given. It remains to be seen from the preparatory studies if these limits are correctly estimated.

Thus, the question is not whether a method is useful or not, but what is the useful range of the method, its sensitivity and reproducibility when measurements from different laboratories are compared.

6. This information is fundamental for a proper evaluation of the data. Conversely, a proper measurement programme is a programme which with a minimum effort produces the information needed by the data evaluation group. On this basis the requirements are that the methods in the range above background values should preferably give values reliable to  $\pm 10\%$ , but data with an uncertainty of  $\pm 20\%$  will also be useful.

7. The enclosed technical papers give detailed prescriptions and test procedures for:

- a. determination of sulphur dioxide in the atmosphere, using a bubbler and the Thorin method for analysis;
- b. determination of sulphur in particulates, using a filter and X-ray fluorescence;
- c. determination of acidity in precipitation, by a coulometric titration method (a procedure for volumetric titration will be distributed).
- d. determination of sulphate ions in precipitation, using ion exchange and the above mentioned Thorin method.

Methods for determination of other components in the samples will be distributed later, when the above programme is going.

8. The technical papers give information about the equipment needed for this programme, and how exchange of samples and standards is to take place. You are asked to study these papers and reply to the CPA as soon as possible whether you are able to participate in the programme or not. You will note that if you are not able to participate in the whole programme, you may select some of the items. For each item there is a questionnaire which you are asked to fill out if you want to participate. As soon as this questionnaire is received at the CPA, standard samples etc. will be sent you as specified in the questionnaire.
9. If the procedures given in the technical papers for some reason have to be modified to suit your working facilities, it is important that the CPA is made aware of this as soon as possible, as any modification of a procedure which we try to standardize, may have an impact on other parts of the test programme.
10. To a limited extent, it is possible for people from the CPA to visit laboratories participating in this work. If you think that this will be of value, it would be an advantage if the CPA was notified at an early stage, as it will then be more easy to coordinate such visits.

#### REPORTING

11. Frequent reporting is essential to maintain an active programme. The participating laboratories are therefore asked to send at the end of each month a brief summary of the work carried out. As it is important for the CPA to know what the status in each country is, the participating laboratories are asked to send this message even if it does only tell in two lines that no work has been carried out and the reason for this.

12. In return the CPA will for your orientation regularly distribute to all participants brief surveys of the status of the project. In addition reports on special topics will be distributed as appropriate.
13. Whenever the Norwegian language is not applicable, the CPA prefers to use English in reports and letters. Written material in French and German is, however, readily understood. Dutch and Italian can easily be translated. If essential to save time, letters and reports may therefore be written in these languages.
14. When sufficient experience from the preparatory programme has been obtained, a conference should be arranged to discuss technical details of the methods in relation to future plans. According to the preparatory programme suggested by the expert committee in June, this conference should take place towards the end of 1971. The usefulness of this will of course depend on the progress made in the months to come.

ACTION

15. With reference to points 8, 9 and 11 you are asked to reply to this letter at your earliest convenience. The CPA will then follow up your reply with the required actions, and the voluntary work of the preparatory phase of 1971 then hopefully starts moving.