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DOCUMENTS "COM"

COM (83) 284

Vol. 1983/0114

Historical Archives of the European Commission

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COMMISSION OF THE EUROPEAN COMMUNITIES

COM(83) 284 final

Brussels, 31 May 1983

COMMUNICATION FROM THE COMMISSION TO THE COUNCIL

Chlorofluocarbons in the environment :
Reexamination of the situation

11/5

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Chlorofluorocarbons in the environment :

Reexamination of the situation

I. Introduction

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I. INTRODUCTION

The emission of chlorofluorocarbons (CFCs) into the atmosphere is one of the potential sources of disturbance to the equilibrium of the atmosphere. Community policy in this area has focused on precautionary measures that seek a balance between the possible dangerous effect on man and the environment and the socioeconomic impacts of reducing the use of CFCs.

The steps taken until now by the Community are the following :

1. Council Resolution of 30 May 1978 (1)
2. Council Decision 80/372/EEC of 26 March 1980 (2)
3. Council Decision 82/795/EEC of 15 November 1982 (3)

The Commission has sent to the Council a number of Communications on this matter, the last one on 7 June 1982 (4). The last Council Decision maintained the cap on production capacity of CFC 11 and 12 instituted by the previous Decision, called for action in the non-aerosol sectors, and required (art.3) that:

"The measures taken in pursuance of Decision 80/372/EEC and this Decision shall be reexamined not later than 30 June 1983 in the light of the scientific and economic data available. To this end, Member States shall, subject to considerations of commercial confidentiality, provide the Commission with the results of any study or research available to them. The Council shall adopt, as soon as possible and in any event not later than 31 December 1983, on a proposal from the Commission, such further measures as may be necessary in the light of reexamination."

This Communication is intended to provide basic elements for such a reexamination.

(1) O.J. C 133, 7.6.1978

(2) Decision 80/372/EEC - O.J. L 90, 3.4.1980

(3) Decision 82/795/EEC - O.J. L 329, 25.11.1982

(4) COM (82) 307 final, 7.6.1982

II. CURRENT SCIENTIFIC SITUATION

A number of scientific assessments have come to the attention of the Commission, the most recent of which is the one done by the UNEP Coordinating Committee on the Ozone Layer (CCOL) during the meeting held in Geneva on 5 - 11 April 1983.

The Committee concluded that the ozone layer can be affected by a number of man-made and natural processes in a complex manner. If one considers only CFC 11 and 12 releases at their present rates, current calculations estimate an eventual reduction in the total ozone column of about 3 to 5 percent, compared to about 5 to 10 percent estimated in the last CCOL report.

Multiple scenario calculations involving also other substances such as CO₂, N₂O, NO_x, CH₄ estimate little change in the total ozone column over the next decades, but do predict substantial redistribution of the atmospheric ozone with possible attendant climatic effects.

III ECONOMIC DATA

Since 1976, the Commission has been receiving total Community annual figures of production and sales of CFC 11 and 12 which the European chlorofluorocarbon producers provide using the CFC data collection mechanism described in the Communication of 26 May 1981 (1).

The data collected since 1976 is summarized in Annex I.

(1) COM (81) 261 final 26.5.1981

It is worth pointing out that in 1982 the use in aerosols was 111,712 tonnes (including Greece) i.e. it continued to decline: the achieved reduction is about 37 % with respect to the levels of use in 1976, thus surpassing the 30 % reduction required by the Council Decision 80/372/EEC.

Conversely, the use of CFC 11 and 12 continued to increase in the areas of use other than aerosols, especially in the foam plastics area. Finally, the production of CFC 11 and 12 including imports declined to 288,979 tonnes in 1982, a decrease of 11.5% since 1976, while the total sales in the Community were 206,762 in 1982, a decrease of 15.3% since 1976.

Using the same data collection mechanism it was reported that the total production of CFC 113 and 114 in the EEC was less than 45,000 tonnes in 1982.

IV. THE ACTION PROGRAMME IN THE SECTORS OF REFRIGERATION, FOAM PLASTICS AND SOLVENTS

The Council Decision 82/795/EEC recognized the need for taking action to reduce the emissions of CFCs where practicable in the sectors of refrigeration, foam plastics and solvents. Consequently, the Commission undertook an action programme towards this goal with the help of national and industry experts. The following results have been achieved to date :

- a) Refrigeration : A code of good practice on the design, manufacture, use and servicing of refrigeration equipment.

The code describes the best technology available at this moment in order to reduce emission of chlorofluorocarbon refrigerants in the atmosphere during use, servicing and eventual disposal.

- b) Solvents : A code of good practice on the design, manufacture, use and servicing of equipment in which CFCs are used as solvents. The code includes instructions about the recycling of used CFC either by the correct operation of the equipment as a distillation unit or using a distillation unit designed for this purpose, or employing a specialized outside company. Solvent that is too heavily contaminated should be sent to a solvent disposal organization for disposal.

For the control of emissions during the operation of the equipment the possibility of using carbon absorption systems was examined. The proper evaluation of the feasibility of this process primarily for larger scale equipment would require its testing under actual plant conditions.

- c) Rigid foam plastics : A code of good practice dealing with the emissions of CFCs that can occur in the manufacture of slab polyurethane foam used in the construction industry.

These codes of practice have largely the acceptance of the relevant trade associations of manufacturers and users of such equipment with whose active cooperation they have been developed. These associations will provide shortly the Commission with a written form of their acceptance of the codes and of their cooperation in their application.

- d) Flexible foam plastics : A pilot plant has been established in Denmark during early 1983 with the support of a manufacturer of polyurethane foam, the manufacturer of control equipment and the Danish government. This plant will assess the feasibility of recovering CFCs from plant ventilation air by its absorption on active carbon. First results are expected in the second half of 1983.

For this type of foam, where very little CFC remains in the foam after its production, disposal presents no problem with respect to CFC emissions.

V. INTERNATIONAL ACTIVITIES

Following the authorization of the Council (1) the Commission has been participating on behalf of the Community in the negotiations for the elaboration of a framework convention for the protection of the ozone layer in the framework of UNEP. Three meetings for this purpose have been held to date in Stockholm and Geneva and the negotiations continue.

VI. CONCLUSIONS

The current scientific and economic information indicates that no change in the policy of precautionary measures that the Community has pursued so far is needed.

The Commission will continue to monitor the scientific, technical and economic developments in this field in cooperation with the Member States. A reexamination of all aspects of the situation with a view toward taking the appropriate measures at Community level could be done, under normal circumstances, by the end of 1985.

(1) Decision of the Council of 19.1.1982 (4132/82 ENV 4)

CFC 11 & 12 PRODUCTION AND SALES BY EEC PRODUCERS : 1976 - 1982

Tonnes CFCs 11 & 12

	1976	1977	1978	1979	1980	1981	1982
PRODUCTION (inc. imports)	326,433	319,107	307,033	304,238	295,718	300,144	288,979
Change tes		- 7,326	- 19,400	- 22,195	- 30,715	- 26,289	- 37,454
from 1976 %		- 2.2	- 5.9	- 6.8	- 9.4	- 8.1	- 11.5
SALES IN EEC MARKETS (excluding sales to co-producers)							
AEROSOLS	176,914	162,568	150,424	136,552	126,442	116,139	111,712
Change tes		- 14,346	- 26,490	- 40,362	- 50,472	- 60,775	- 65,202
from 1976 %		- 8.1	- 15.0	- 22.8	- 28.5	- 34.4	- 36.9
REFRIGERATION	20,773	20,293	20,416	20,300	21,174	21,451	21,245
Change tes		- 480	- 357	- 473	+ 401	+ 678	+ 472
from 1976 %		- 2.3	- 1.7	- 2.3	+ 1.9	+ 3.3	+ 2.3
FOAM PLASTICS	42,154	45,254	54,524	55,788	61,859	64,067	65,627
Change tes		+ 3,100	+ 12,370	+ 13,634	+ 19,705	+ 21,913	+ 23,473
from 1976 %		+ 7.4	+ 29.3	+ 32.3	+ 46.7	+ 52.0	+ 55.7
SOLVENTS/ OTHER USES	4,178	4,871	6,073	6,921	7,353	8,108	8,178
Change tes		+ 693	+ 1,895	+ 2,743	+ 3,175	+ 3,930	+ 4,000
from 1976 %		+ 16.6	+ 45.4	+ 65.7	+ 76.0	+ 94.1	+ 95.7
TOTAL SALES IN EEC MARKETS	244,019	232,986	231,437	219,561	216,828	209,765	206,762
Change tes		- 11,033	- 12,582	- 24,458	- 27,191	- 34,254	- 37,257
from 1976 %		- 4.5	- 5.2	- 10.0	- 11.1	- 14.0	- 15.3
TOTAL EXPORTS OUTSIDE EEC	83,578	81,187	82,236	81,636	79,361	88,243	81,999
Change tes		- 2,391	- 1,342	- 1,942	- 4,217	+ 4,665	- 1,579
from 1976 %		- 2.9	- 1.6	- 2.3	- 5.0	+ 5.6	- 1.9
TOTAL EEC AND EXPORT SALES	327,597	314,173	313,673	301,197	296,189	298,008	288,761
Change tes		- 13,424	- 13,924	- 26,400	- 31,408	- 29,589	- 38,836
from 1976 %		- 4.1	- 4.3	- 8.1	- 9.6	- 9.0	- 11.9
PRODUCTION LESS SALES	- 1,164	- 4,934	- 6,640	+ 3,041	- 471	+ 2,136	+ 218

NOTE : The 1981 and 1982 data includes Greece whereas the 1976 data does not.