Attachment 4
IPAC Submission to UNFCCC

July 1999 ECN-RX--99-029

Meeting Report of the Joint IPCC/TEAP Expert Meeting on Options for the Limitation of Emissions of HFCs and PFCs

[Excerpt Section 1.1]

The justifications for use of HFCs are limited to thermal efficiency, product performance and process safety. It is recognised that one of the key measures to reduce HFC emissions is not to use them in unjustified applications and this is reflected by the inclusion of options 1 and 2 in Table 3.1. An additional four abatement options are also included and their advantages and disadvantages listed.

Up to approximately 50% of potential emissions subsequently arising from consumption in 2010 could be abated by the introduction of options 4, 5 and 6. However, the majority of these savings will depend on incineration procedures (see Annex B) which, whilst technically proven, may not be logistically or economically viable. Accordingly, a target of 25% destruction may be more realistic unless evidence emerges to the contrary.

1.1 Aerosol Products

1.1.1 Non-Medical Uses

Working Group Highlights

The UNEP Aerosols Technical Options Committee has estimated that use of HFCs (HFC-134a and HFC-152a) in 1998 does not exceed 15,000 metric tonnes globally. Data voluntarily reported by companies based in Europe, Japan and North America for HFC-134a sales into 'short-term' emission- applications (which include sterilants, non-medical aerosols, one component polyurethane foam and open-cell foam) were 9,342 metric tonnes in 1996 /AFE99/ (sales into all short term uses, with the exception of medical aerosols was 6,293 tonnes in 1997 /AFE99/). With the assumptions that CFC use in non-medical aerosols have been almost entirely replaced by alternatives and that non-critical uses are likely to be constrained in the future, it is unlikely that use/emission in 2010 will exceed 20,000 metric tonnes.

Major Findings

The working group concluded that one option is currently available to limit HFC emissions in non-medical aerosols:

- the development of criteria, either at a national or international level which determine the criticality of the use and the availability of viable alternatives, based on real safety concerns, and adoption of these 'responsible use' criteria by corporations and industry to ensure that the use of HFCs is limited to those meeting pre-determined criteria.

1.1.2 Medical Uses - MDIs

Working Group Highlights

CFC-containing metered dose inhalers (MDIs) are reliable and effective therapy for asthma and Chronic Obstructive Pulmonary Disease (COPD), such as chronic bronchitis and emphysema. CFC propellants are now being replaced with HFC-134a and HFC-227ea. Both have been approved by health authorities as acceptable and safe propellants for use in MDIs. The transition from CFC to HFC MDIs is likely to continue into the first decade of the 21st century. Alternatives to MDIs in some cases are dry powder inhalers (DPIs) and nebulisers, which do not use a propellant.

Major Findings

Compounds identified as potential substitutes for CFCs must meet particularly strict requirements for use in MDIs. After extensive investigation, only two compounds emerged as acceptable substitutes: HFC-134a and HFC-227ea. At present, there are no other known alternative propellants for use in MDIs. CFC-free MDIs will use approximately 30% less propellant, on average, than CFC based MDIs.