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OPEN-ENDED WORKING GROUP OF THE PARTIES TO  
THE MONTREAL PROTOCOL ON SUBSTANCES THAT  
DEplete THE OZONE LAYER

Seventeenth meeting  
Geneva, 7-9 July 1998

ISSUES BEFORE THE OPEN-ENDED WORKING GROUP  
AT ITS SEVENTEENTH MEETING

Note by the Secretariat

I. STATUS OF IMPLEMENTATION OF A LICENSING SYSTEM (DECISION IX/8,  
PARAGRAPH 2) (ITEM 3 OF THE PROVISIONAL AGENDA)

1. Following the adoption of decision IX/8 by the Ninth Meeting of the Parties, the Secretariat requested each Party to submit the name and contact details of the officer to whom information on the implementation of a licensing system should be directed. Those details, as received from various Parties by 1 March 1998, have been compiled into a single list and communicated to all Parties. This list will be updated and circulated to all Parties during the seventeenth meeting of the Working Group and, periodically thereafter.

2. Under its OzonAction programme, the United Nations Environment Programme (UNEP) has undertaken a number of activities related to the establishment of import/export licensing systems by developing countries, namely:

(a) The organization of three subregional workshops on the control and monitoring of the consumption of ODS. A total of 12 countries attended these workshops and all three host countries have started their efforts to establish such systems. So far Cameroon has completed the establishment of its licensing system in place following the workshop for its subregion;

(b) The organization of three regional workshops on the control and monitoring of ODS consumption, for English-speaking Africa, West Asia and Latin America. A total of 49 countries attended the three workshops, and all countries have developed action plans for the establishment of new ODS import/export licensing systems or the improvement of existing ones. A fourth workshop, for the Caribbean region, will be held in June 1998;

(c) The development of a resource module on import/export licensing systems: The module was used as the main reference document during the three regional workshops referred to in subparagraph (b) above. It will soon be translated into four languages: Arabic, Chinese, French and Spanish.

(d) Publication of monitoring imports of ODS: A Guidebook: The UNEP Industry and Environment Centre (UNEP/IE), in cooperation with the Stockholm Environment Institute and Swedish International Development Cooperation Agency, compiled and published this guidebook to assist Article 5 countries in establishing a system for monitoring imports.

II. MEASURES ADOPTED BY PARTIES TO REGULATE IMPORT AND EXPORT OF  
~~PRODUCTS, EQUIPMENT, COMPONENTS AND SUBSTANCES WHOSE CONTINUING~~  
OF THE PROTOCOL AND BY NON-ARTICLE 5 PARTIES TO CONTROL THE  
EXPORT OF USED PRODUCTS AND EQUIPMENT WHOSE CONTINUING  
FUNCTIONING RELIES ON SUPPLY OF SUBSTANCES LISTED IN  
ANNEX A AND ANNEX B OF THE PROTOCOL (DECISION IX/9)  
(ITEM 4 OF THE PROVISIONAL AGENDA)

3. The Secretariat communicated decision IX/9 to all Parties after its adoption. No reports have been received from Parties with respect to its implementation.

III. FINAL REPORT OF THE TECHNOLOGY AND ECONOMIC ASSESSMENT PANEL ON A  
TRANSITION TO NON-CFC TREATMENTS OF ASTHMA AND CHRONIC OBSTRUCTIVE  
PULMONARY DISEASE IN PARTIES NOT OPERATING UNDER ARTICLE 5  
(DECISION IX/19, PARAGRAPH 2) (ITEM 5  
OF THE PROVISIONAL AGENDA)

4. The 1998 report of the Technology and Economic Assessment Panel has been communicated to all the Parties. A summary of the report by the Secretariat of TEAP, designed to highlight issues for consideration by the Working Group, may be found below. The Parties are encouraged to read the full report for complete information. The salient points are as follows:

(a) One reformulated CFC-free salbutamol metered-dose inhaler (MDI) has been on the market for three years and is now available in more than 40 countries. A second salbutamol product and two reformulated inhaled steroids became available in a few countries in early 1998. These and other reformulated products have been submitted for approval by regulatory authorities in some countries. It is likely that a wide range of reformulated products will be available in many developed nations, and the transition will be progressing well by the year 2000. Minimal need for CFCs for MDIs is envisaged by the year 2005 in non-Article 5 Parties. Remaining technical, patent, safety and regulatory issues for some commonly used drugs still make it difficult to predict with precision, the schedule for full phase-out;

(b) A rigid global transition strategy may not be appropriate in view of the widely differing circumstances of individual Parties. However, the Parties may wish to consider the benefits of a "global transition framework", which would underpin national strategies and ensure that they are complementary. The process of transition to non-CFC alternatives is complex, involving the need for dialogue between health authorities, environmental agencies and other interested groups. No single national strategy will be applicable to all countries. All Parties, including the countries with economies in transition (CEITs) and Article 5 Parties, should be encouraged to develop their own transition strategies;

(c) Any global transition framework should contain certain principles, but should also be sufficiently flexible to allow each Party to develop a national transition strategy that protects patient needs while conforming to that Party's unique legal and regulatory system. These principles include:

- (i) The specification of a target date for completing the transition;
- (ii) The addressing of transition issues that transcend national boundaries, such as the flow of CFC-based MDIs and CFC-free products from exporting to importing countries;
- (iii) The complete cessation of approvals of new CFC-containing MDIs;
- (iv) The clarification of what constitutes a reasonable strategic CFC reserve;

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- (v) The continued availability of essential-use allowances should be made conditional on satisfactory progress in transition, and a rapid introduction of CFC-free inhalers and technologies in Article 5 and CEIT Parties should be encouraged;
- (d) Individual Parties may wish to consider the following issues and principles when developing national strategies for CFC phase-out:
  - (i) Phasing out CFCs as rapidly as possible while maintaining patient safety;
  - (ii) Availability of sufficient technically and economically feasible alternatives to assure an uninterrupted supply of medications in that country;
  - (iii) One or more separate formulations of each therapeutic substance may need to be available;
  - (iv) Sufficient post-marketing surveillance of the reformulated products;
  - (v) Sufficient choice to ensure that patient subgroups, especially children, are served by alternatives (ie. full range of doses);
  - (vi) Adequate availability of supply of alternative non-CFC products;
  - (vii) Stopping approvals of new CFC-containing MDIs;
  - (viii) Availability of sufficient time and resources for health-professional and patient education;
  - (ix) The regulatory framework for drug approval;
  - (x) The legal and economic framework in the country;
  - (xi) The level of company commitment regarding reformulation efforts;
  - (xii) How national strategies may impact on the transition occurring in other Parties;
  - (xiii) How to control imports of CFC-containing MDIs once transition has occurred.
- (e) The Technology and Economic Assessment Panel noted that the United States of America, the European Union, the United Kingdom of Great Britain and Northern Ireland, Australia, Canada and New Zealand are developing or have developed transition strategies;
- (f) There are a variety of approaches that an individual Party might take to facilitate the transition from CFC-containing MDIs. These include a brand-by-brand, drug-by-drug, category-by-category or

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volume reduction approach, or a combination of these approaches. Each of these approaches have their own advantages and disadvantages;

(g) There are several potential impediments to the rapid transition to CFC-free MDIs. These include: lack of national transition strategies, continued regulatory approval of CFC-containing MDIs, the lack of prioritized regulatory review of CFC-free MDIs, lack of acceptance by local drug formulators, no perceived therapeutic advantage to patients, and the potential oversupply of CFCs in stockpiles, resulting in continued manufacture of CFC-containing MDIs. The positive factors include ongoing research and development by many companies and education and awareness campaigns;

(h) Education in the transition, at the government and the professional and patient-association levels, has an important role.

5. In its report, the Technology and Economic Assessment Panel requested Parties to consider the following issues:

(a) The CFC producers in Article 5 Parties may be a potential source of supply of CFC for essential uses. Manufacturers and pharmaceutical companies are investigating this possibility. The Parties may wish to clarify whether such sourcing is acceptable under the Protocol;

(b) With regard to Article 5 Parties, the following points need attention:

(i) The importance of maintaining supplies of the necessary range of inhaled medication during transition in non-Article 5 Parties;

(ii) It is anticipated that in most Article 5 Parties and some CEITs, there will be an increase in the number of patients newly receiving MDI therapy, and it would be preferable for them to start on the CFC-free products;

(iii) The essential-use criteria in decision IV/25 preclude essential-use allocations after alternatives are commercially available. Because it is anticipated that alternatives will be available worldwide by the year 2005, it is unlikely that Article 5 Parties could qualify for this essential use after their phase-out in the year 2010. The Article 5 Parties may wish to consider the advantage of planning now for the transition, allowing more than the 10-year period (1996-2005) estimated to be necessary for the non-Article 5 phase-out of CFC-containing MDIs. It may be far less expensive to implement CFC-free MDI technology soon to accommodate the anticipated growth in MDI use in Article 5 and some CEIT Parties;

(iv) The need to encourage Article 5 Parties to start work on preparing their national transition strategies.

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6. The Working Group may wish to discuss the principles of a global strategy and actions that need to be taken with respect to Article 5 Parties.

~~IV. REPORT OF THE SECRETARIAT ON THE INFORMATION RECEIVED FROM NON-ARTICLE 5 PARTIES ON THE USE OF NON-CFC METERED-DOSE INHALERS (MDIS), TAKING INTO CONSIDERATION THE AVAILABILITY AND PRICE OF TREATMENTS FOR ASTHMA AND CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) IN COUNTRIES CURRENTLY IMPORTING CFC MDIS (DECISION IX/19, PARAGRAPH 5) (AGENDA ITEM 5 (B) OF THE PROVISIONAL AGENDA)~~

7. In accordance with paragraph 5 of decision IX/19, non-Article 5 Parties submitting essential-use nominations for CFCs for the treatment of asthma and COPD should present to the Ozone Secretariat an initial national or regional transition strategy by 31 January 1999 for circulation to all Parties. Of the 42 non-Article 5 Parties, three Parties, namely: Australia, New Zealand and the United States of America, have so far developed draft transition strategies, and Canada and European Union have informed the Secretariat that they are in the process of doing so.

V. REPORT OF THE TECHNOLOGY AND ECONOMIC ASSESSMENT PANEL ON NOMINATIONS BY THE PARTIES FOR ESSENTIAL-USE EXEMPTIONS FOR CONTROLLED SUBSTANCES (ITEM 6 OF THE PROVISIONAL AGENDA)

8. The following six Parties have submitted essential-use nominations for approval in 1998 by the Tenth Meeting of the Parties: Australia, Canada, European Community, Poland, the Russian Federation and United States of America.

9. The Technology and Economic Assessment Panel and its Technical Options Committees (TOCs) unanimously recommended:

(a) The essential-use exemptions requested for CFCs for MDIs from Australia, European Community, Poland and United States for the years 1999 and 2000, but not for 2001-2004, with the condition that Parties dispense the CFCs as needed, report all stockpiles suitable for use (whether produced prior to 1996 or as an essential use allocation), and continue to comply with the conditions specified in previous decisions of the Parties;

(b) The quantities nominated by the Russian Federation of halon 2402 for 1999, with the condition that the Russian Federation fully reports to the Secretariat the produced quantities used and technical progress towards the introduction of alternatives;

(c) The quantities nominated by the European Community for use in coating cardiovascular

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surgical material for 1999 and 2000;

(d) The request by the United States to reschedule the remaining authorized quantity of methyl chloroform for use in manufacturing solid rocket motors until such time that the allowance is depleted or until such time that safe alternatives are implemented for remaining essential uses. The Solvents TOC will continue to monitor progress.

10. The essential-use recommendations, broken down by substance, quantity and Party, appear in tabular form in annex I below.

11. The Panel was unable to recommend:

(a) The nomination by Canada for 1999 for CFC intended for the introduction of seven new CFC-containing MDI products, because the nomination did not justify the quantities requested and because the nomination did not provide adequate information on the intended markets;

(b) The use nominated by Poland for maintenance of torpedoes on submarines, because the nomination did not provide adequate information.

12. The Panel further recommended that:

(a) All Parties should ensure that future nominations fully comply with the requirements of the Handbook on Essential Use Nominations 1997;

(b) Parties may wish to consider that future nominations should seek to reduce their strategic reserves to a maximum of 12 months;

(c) Parties may wish to consider developing a process that allows movement of CFCs between MDI manufacturers of different countries, provided they have an authorized essential-use exemption;

(d) Current and future nominations may be assessed and recommended for total CFC volumes with flexibility between CFCs of each group;

(e) Parties should provide justification for essential use exemptions for the quantities nominated, taking into account the impact of the introduction of dry powder inhalers (DPIs);

(f) Parties should request companies to provide information on export markets and provide greater justification for the quantities being requested for those markets;

(g) Parties may consider the advantages of avoiding oversupply of CFC-containing MDIs by prohibiting allocations in all such situations;

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13. The Panel reviewed the essential-use exemptions for MDIs for asthma and COPD in terms of the decision VII/28 and concluded that they remain essential for patients' health until an adequate range of feasible alternatives are available. They were unable to review the quantities already sanctioned since the accounting frameworks only provide information for one year.

14. The Working Group may wish to discuss the recommendations of the Panel on essential-use nominations.

VI. ANY TRANSFER OF ESSENTIAL-USE AUTHORIZATIONS FOR CFCS FOR MDIS  
(DECISION IX/20, PARAGRAPH 1) (ITEM 6) OF THE PROVISIONAL AGENDA)

15. Under decision IX/20, the Secretariat has been allowed to authorize a Party to transfer some or all of its authorized levels of CFCs for essential use in MDIs to any Party subject to certain conditions. Since the adoption of that decision, no such requests have been received by the Secretariat.

VII. THE FEASIBILITY OF EARLY DECOMMISSIONING IN NON-ARTICLE 5 PARTIES OF  
~~REDEFINITION OF HALON SYSTEMS AND REQUESTS FOR SUBSEQUENT DESTRUCTION OF~~  
THAT HAVE NO IDENTIFIED SUBSTITUTES OR ALTERNATIVES, BEARING IN  
MIND THE NEEDS OF ARTICLE 5 PARTIES FOR HALON (DECISION IX/21)  
(ITEM 6 OF THE PROVISIONAL AGENDA)

16. In decisions VIII/17 and IX/21, the Technology and Economic Assessment Panel and the Halon Technical Options Committee (HTOC) were requested to report on the feasibility of early decommissioning of halon systems. The 1998 report of the Panel contains detailed notes on this issue. The findings of the Panel and its HTOC may be summarized as follows:

(a) Halon-1211. HTOC estimates that up to 80 per cent of all halon-1211 applications can be taken out of service. Surplus halon-1211 can be taken out of service through voluntary management programmes or mandatory decommissioning, incorporating collection, storage and destruction. Both approaches will require considerable expense and extensive management. Very little experience from destruction programmes is available;

(b) Halon-1301. The global supply and demand for halon-1301 are currently in balance and will remain so over the next 30 years. Halon-1301 is shifting towards more critical applications through decommissioning and recycling processes. This shift is a result of free-market forces with varying degrees of government assistance or intervention. International trade helps in reducing marginal surpluses in many countries. The halon banks are being well managed. HTOC concludes that there is no need for additional efforts by the Parties to facilitate early decommissioning;

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(c) Halon-2402. Halon-2402 is used mainly in the countries with economies in transition. There is a current shortfall in availability of halon-2402 to meet critical needs. HTOC does not have information as to where a potential exists for early decommissioning of halon-2402 systems to support critical needs.

17. The Working Group may wish to discuss the findings of the Panel and its HTOC.

VIII. NEW SUBSTANCES WITH OZONE-DEPLETING POTENTIAL (DECISION IX/24)  
(ITEM 6 OF THE PROVISIONAL AGENDA)

18. The Solvents Technical Options Committee (Solvents TOC), in their progress reports of April 1997 and of April 1998, informed the Parties that two substances with likely ODPs were being globally marketed - chlorobromomethane (CBM) and its derivative borothene, and n-propyl bromide. Subsequent to decision IX/24, the Government of the Netherlands notified the Secretariat that n-propyl bromide was likely to have substantial production.

19. The Secretariat wrote to the Co-Chairs of the Scientific Assessment Panel and the Technology Economic Assessment Panel requesting information and an assessment of the ozone-depleting potential (ODP) of these chemicals. In response, the Co-Chairs provided the following details:

(a) Chlorobromomethane ( $\text{CH}_2\text{ClBr}$ ) has an atmospheric lifetime of 0.4 years (146 days). However, oceanic losses are likely to be important for this substance. This results in a total lifetime of 0.21-0.25 years. The ODP, including the effects of the ocean sink, is 0.11-0.13. There are additional uncertainties in these values due to ambiguities in measured reaction rates and in the model treatment of atmospheric processes;

(b) The substance n-propyl bromide (1-bromo-propane) has an atmospheric lifetime of 0.03 years (11 days). The ODP is evaluated to be 0.006;

(c) The important issue is that the emission of brominated organic compounds is particularly problematic because bromine is estimated to be 40 to 50 times more destructive to stratospheric ozone than is chlorine. An additional point of concern is that halogenated compounds often strongly absorb infrared radiation and contribute to "greenhouse" radiative forcing;

(d) In May 1997, the United States Environmental Protection Agency proposed banning chlorobromomethane as a substitute for methyl chloroform and CFC-113 in solvent cleaning. This determination was based on the belief that CBM has a significant ODP similar to that of methyl chloroform, as well as the consideration of potential toxicological effects. N-propyl bromide is also under review by the Agency as an ODS replacement in solvent cleaning;

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(e) The Panel has learned that the use of n-propyl bromide is also under consideration as an ODS replacement in fire suppression, aerosols, adhesives, coatings and inks applications.

20. The Working Group may wish to further consider the potential threat to the ozone layer from these new chemicals.

#### IX. PROGRESS OF ALTERNATIVES TO THE OZONE DEPLETING SUBSTANCES (ITEM 6 OF THE PROVISIONAL AGENDA)

21. The 1998 report of the Technology and Economic Assessment Panel provides an update of the progress in the transition to alternatives in each of the sectors. The updates may be summarized as follows:

(a) Aerosols, solvents, miscellaneous uses and carbon tetrachloride. The 1997 consumption of CFCs in the aerosols sector was less than 15,000 tonnes in Article 5 Parties and some countries with economies in transition (CEIT), excluding uses in metered-dose inhalers exempted by the Meetings of the Parties. The phase out of the remaining CFCs in the aerosols sector is dependent upon the availability of hydrocarbon aerosol propellants. The specific problems of industrial/technical aerosols and pharmaceutical products require technical assistance. Conversion of small and very small uses has problems which need a solution;

(b) Sterilants. In non-Article 5 Parties, CFC-12 use for sterilants has virtually disappeared. HCFCs remain important as transitional substances for sterilization technology;

(c) Carbon tetrachloride. Carbon tetrachloride is used as a feedstock for production of other chemicals, as a process agent, as a solvent, in miscellaneous applications and as a laboratory chemical. The emissions in 1996 are estimated at 41,000 tonnes, mainly from the feedstock use;

(d) Rigid and flexible foam. All CFC uses in non-Article 5 Parties (except for some CEITs) has been eliminated. In several markets and for certain applications, HCFCs are necessary for rigid thermal insulating foams until other long-term zero ODP solutions are proven. Zero-ODP alternatives are available for many foam types and applications;

(e) Halons. Significant measures have been put in place to reduce actual and potential emissions of halons in Article 5 Parties. The Russian Federation reported progress in the development and implementation of halon banking programmes. Continuing research is under way to expand the applicability of commercialized halon alternatives. The Halons TOC remains concerned regarding the significant production of halon in some Article 5 Parties;

(f) Methyl bromide. A full review of alternatives and their implementation will be provided in the 1998 assessment. The Methyl Bromide TOC has raised a number of questions and provided a number

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of clarifications, namely:

(i) The Methyl Bromide TOC clarified that the definition of quarantine in decision VII/5 is very strict and conforms to the current concept of quarantine by FAO;

(ii) The term pre-shipment application is restricted to officially authorized but non-quarantine treatments fulfilling official requirements of the importing or exporting country at the time of export. It was not intended to cover informal or contractual or commercial arrangements not required under official regulations;

(iii) The definition in decision VII/5 is silent on the quarantine application in intra-country trade;

(iv) The pre-shipment application is applied to export trade between countries and the application must be made shortly before export to qualify for exemption;

(v) The Technology and Economic Assessment Panel suggests that the Methyl Bromide TOC should further consider the scope of the quarantine and pre-shipment exemptions. The Panel suggests to Parties that the exemptions should be well defined and should promote the implementation of alternatives in non-exempt areas;

(vi) Decision IX/7 provides for the use of up to 20 tonnes of methyl bromide for emergency use by a Party. The Methyl Bromide TOC notes that a quantity of 20 tonnes is sufficient to treat about 50 hectares of soil, a large storage area or a large structure;

(g) Refrigeration, air conditioning and heat pumps. The use of ODS in domestic refrigeration has been phased out in the non-Article 5 countries by using HFC 134A and isobutane. Energy efficiency is the main issue in this sector. HCFCs, HFCs are used in many sectors of refrigeration. Hydrocarbons and carbon dioxide are promising candidates;

(h) Solvents. There is a need to control alternatives which contain new ODS;

(i) Military progress. The number of non-Article 5 and a few Article 5 countries provided information to the Panel regarding military ODS uses and efforts to find alternatives. The North Atlantic Treaty Organization (NATO), some non-Article 5 Parties and the Technology and Economic Assessment Panel sponsored three workshops during 1997 on, inter alia, the military role in implementing the Montreal Protocol. Many Article 5 Parties participated in these workshops. The Panel's report gives a detailed account of the progress in phasing out ozone-depleting substances in many military areas.

22. The Working Group may wish to discuss the progress in the phase out of ozone-depleting substances and the points raised by the Technology and Economic Assessment Panel and Methyl Bromide

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Technical Options Committee.

#### X. LABORATORY AND ANALYTICAL USES (ITEM 6 OF THE PROVISIONAL AGENDA)

23. In its decision IX/17, the Ninth Meeting of the Parties exempted, under certain conditions, the production and consumption of substances in Annexes A and B of the Protocol for laboratory and analytical uses for the year 1999. The Technology and Economic Assessment Panel has considered this issue and suggested the following two options for future:

(a) Option 1. The global exemption would be discontinued after 1999, and individual Parties would utilize the essential-use process for any needed exemptions; and

(b) Option 2. The global exemption would be allowed to continue for a specified number of years, but up to three specific uses with identified alternatives and substitutes would be prohibited, namely:

- (i) The testing of oil, grease and total petroleum hydrocarbons in surface and sea waters and industrial and domestic aqueous waste, including the testing of water that is separated from oil and discharged from offshore drilling and production platforms;
- (ii) The testing of tar in road-paving material by dissolving tar and separating it from the aggregate;
- (iii) Forensic finger-printing.

24. The Working Group may wish to consider the suggestions of the Panel.

#### XI. MIXTURES CONTAINING OZONE-DEPLETING SUBSTANCES (ITEM 6 OF THE PROVISIONAL AGENDA)

25. In response to decision IX/28, paragraph 4, the Technology and Economic Assessment Panel has prepared a list of mixtures known to contain controlled substances. The Panels report points out some difficulties in identifying the mixtures precisely since the ingredients differ occasionally even in mixtures under the same name. The meeting may wish to discuss the report of the Technology and Economic Assessment Panel on the subject.

XII. NOTE BY THE SECRETARIAT ON ACTION BY THE WORLD CUSTOMS ORGANISATION (WCO) REGARDING CUSTOMS CODES FOR ODS (DECISION IX/22) (ITEM 7 OF THE PROVISIONAL AGENDA)

A. Background <sup>1/</sup>

26. In paragraph 3 of its Decision IX/22, the Ninth Meeting of the Parties to the Montreal Protocol decided:

"In order to facilitate cooperation between customs authorities and the authorities in charge of ODS control and ensure compliance with licensing requirements, to request the Executive Director of UNEP:

"(a) To request the World Customs Organization (WCO) to revise its decision of 20 June 1995, recommending one joint national code on all HCFCs under subheading 2903.49, by instead recommending separate national codes under subheading 2903.48 for the most commonly used HCFCs (e.g., HCFC-21; HCFC-22; HCFC-31; HCFC-123; HCFC-124; HCFC-133; HCFC-141b; HCFC-142b; HCFC-225; HCFC-225ca; HCFC-225cb);

"(b) To further ask the World Customs Organization to work with the major ODS suppliers to develop and provide the Parties to the Montreal Protocol, through UNEP, with a check-list of relevant customs codes for ODS that are commonly marketed as mixtures, for use by national customs authorities in charge of control of ODS to ensure compliance with import licensing requirements."

27. It will be recalled that, under the auspices of an international organization formerly known as the "Customs Cooperation Council" (CCC) (but now known as the "World Customs Organization", or (WCO)), an international system was developed for product or tariff classification, in order to facilitate international trade in merchandise. This work resulted in the "Harmonized Commodity Description and Coding System", or the "Harmonized System" (HS). It went into effect internationally on 1 January 1988, with the entry into force of the International Convention on the Harmonized Commodity Description and Coding System, or simply the Harmonized System Convention (HSC).

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<sup>1/</sup> see also: Monitoring Imports of Ozone-Depleting Substances - A Guidebook, 1996, UNEP Industry and Environment, the Multilateral Fund, Stockholm Environmental Institute, and Swedish International Development Agency.

28. The Harmonized System is a complete product classification system, which intends to cover all imported or exported merchandise. The HS was designed as a core system, so that countries that have adopted it can make further subdivisions according to their particular tariffs and statistical needs. The number of countries which have accepted the HS (i.e., are contracting parties to the HSC), as at the end of March 1998, was 91. However, many more countries that are not contracting parties use the HS as a basis of their tariff system.

29. The HS is periodically updated in light of developments in technology, patterns of trade, and in order to take into account the special needs of the HS users, generally once every four years. The updated HS reflects the amendments introduced to the HSC. Amendments to the HS nomenclature which relate to substances controlled by the Montreal Protocol (ODSs) were introduced in Chapters 29 and 38 (see para. 31 below) and became effective from 1 January 1996. The WCO Council may issue recommendations regarding national statistical subdivisions for substances not separately identified in the HS. However, only a contracting party that has adopted a given recommendation is committed to carrying it out. A recommendation regarding ODS was decided upon on 20 June 1995, and a proposal for a new recommendation to include certain HCFCs is currently under examination by WCO.

30. The basic obligation undertaken by the contracting parties to the HSC is that their custom tariffs and foreign trade statistical nomenclatures be in conformity with the HS. There is an exception for contracting parties that are developing countries, which are allowed to delay their application of some or all of the HS Subheadings (see para. 31 below) for such period of time as may be necessary with respect to their pattern of international trade or administrative resources. Moreover, the contracting parties are committed to using all the Headings and Subheadings together with their related numerical codes without addition or modification. In addition, contracting parties cannot decide unilaterally to move products categorized in the HS under one Heading or Subheading to another. Each contracting party, however, is permitted to adopt in its national tariff system further detailed subdivisions for classifying goods, so long as any such subdivision is added and coded at the level beyond the six-digit code provided by the HS. National classification beyond the HS six-digit level is usually done at the eight-digit level, and is generally known as "the national code level". These additional digits can be used by the contracting parties as they choose, to make the identification of the goods item more precise.

31. Goods in trade are categorized in the HS in Product Headings, designed at the broadest coverage level with four-digit codes called "Headings". Where deemed appropriate, these Headings are further subdivided into narrower categories that are assigned two additional digits called Subheadings, which comprise six-digit numerical codes. The first two digits of the codes always indicate the chapter of the HS in which the Heading or Subheading is to be found (e.g., Heading 38.24 is in Chapter 38; Subheading 2903.41 is in Chapter 29). The HS has a hierarchical structure which lists different types of goods in 21 sections and 96 chapters, with an increasing degree of complexity towards more and more complex manufactured products.

32. Merchandise may be specifically identified by its common, commercial or technical name that is

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described in the text included in the Heading or Subheading. This text is known as "Article Description" or "Product Description". When merchandise is not specifically identified in the HS, the Product Description covering such merchandise will generally use the wording "Not elsewhere specified or included" or simply "Other".

B. Codes for ozone-depleting substances (ODS) when traded as pure chemicals

33. The substances controlled by the Montreal Protocol when imported as pure chemicals, belong to chapter 29 "Organic Chemicals". The relevant Heading for all pure controlled substances under the Montreal Protocol is 29.03 (Halogenated derivatives of hydrocarbons) (meaning: hydrocarbons containing one or more halogen atoms, i.e., chlorine, fluorine, bromine or iodine). Only controlled substances that are imported as pure (not mixed) chemicals can be classified under Chapter 29. However, in the more general case, where the merchandise contains a mixture of controlled substances, or a mixture of controlled substances and non-controlled substances, the appropriate Heading according to the HS would be under one of the codes in chapters 30-38 of the section Mixed Chemicals (see paras. 39-42 below).

34. In 1989, the Parties to the Montreal Protocol requested WCO to create separate code numbers under the HS for each of the controlled substance of that time, i.e., five CFCs and three halons included in Annex A of the Montreal Protocol (see the report of the First Meeting of the Parties to the Montreal Protocol, Annex VII). In its decision dated 26 June 1990, WCO subdivided Subheading 2903.40 into eight subheadings. Thus, the HS provided four separate international codes for the five Annex A, Group I, substances (CFCs) and one additional code for the three halons together (see annex II below). These new codes entered into force six years later, on 1 January 1996. As an interim measure before the entry into force of the HS amendment, WCO also adopted a recommendation to create national statistical subheadings for the above substances.

35. In decision II/12, of the Second Meeting of the Parties to the Montreal Protocol, in 1990, the Parties decided to agree with this recommendation. A number of countries, among them Australia, Malaysia and New Zealand, have adopted the new Subheadings decided in 1990 as part of their national statistical nomenclatures. Brazil, Peru, Poland, Sri Lanka and Venezuela have reported to the Secretariat that their customs services have implemented the HS.

36. In 1990, the Parties requested WCO to provide separate codes also for the Annex B Substances (10 more CFCs, carbon tetrachloride and methyl chloroform) and Annex C substances (34 HCFCs). WCO found that the importance to trade of most of the substances in that list was too limited to warrant specification, in particular with regard to HCFCs. As a compromise, WCO concluded a recommendation in June 1992 on separate national codes under Subheading 2903.45 for each individual substance in Annex B, Group I (Other fully halogenated CFCs), and under Subheading 2903.19 for methyl chloroform. Carbon tetrachloride was already separately classified in the international classification of the HS under code 2903.14, and methyl bromide was included in code 2903.30. On 20 June 1995, WCO rephrased its 1992 recommendation to introduce under code 2309.49 at the national level two separate codes, one for all the

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HCFCs and one for all the HBFCs. As at 15 February 1998, the June 1995 recommendation on separate national codes for ODSs has been accepted by only 23 Contracting Parties.

37. As noted in paragraph 26 above, the Ninth Meeting of the Parties to the Montreal Protocol requested WCO to revise its decision of 20 June 1995, recommending one joint national code for all HCFCs under Subheading 2903.49, by instead recommending national codes under Subheading 2903.48 for the most commonly used HCFCs. In response to that decision, on 27 October 1997, the Executive Director of UNEP requested WCO, on behalf of the Parties to the Montreal Protocol, to assist in assigning separate codes to each of the HCFCs. Following this request, a new recommendation for the consideration of the Contracting Parties to the Harmonized System Convention has been drafted that would provide six separate national codes for HCFCs, under Subheading 2903.49 (see annex II below). WCO clarified that using Subheading 2903.48, as proposed in decision IX/22, would require an amendment to the HS, and even if adopted now, would go into effect only in 2002. The proposal for a new recommendation is currently under examination by the Harmonized System Committee.

38. After the decision by WCO to adopt the new recommendation, the Parties to the Montreal Protocol may wish to make use of the new codes assigned to the HCFCs.

### C. Mixtures containing ODS

39. All mixtures of chemicals, whether they contain one ODS mixed with other non-controlled chemicals, or contain two or more ODSs, should be classified under one of the Chapters 30 to 38 of the HS. The code to be assigned to the product will depend on the function of the product. Chapter 38 covers "Miscellaneous Chemical Products" which do not, by their function, fall under any of the previous chapters. It is divided into 24 Headings, where the Product Description of Heading 38.24 is "Prepared Binders for Foundry Molds; Chemical Products and Preparations of Chemical or Allied Industries; Residual Products of Chemical or Allied Industries, Not elsewhere specified or included". The same applies here - Heading 38.24 should only be used if the product, by its function, does not fall under any previously specified Heading in chapter 38. In the decision to amend the HS effective 1 January 1996, a new one-dash Subheading 3824.7 "Mixtures Containing Perhalogenated Derivatives of Acyclic Hydrocarbons Containing Two or More Different Halogens" was added to cover mixtures containing ODS. This decision included also a single new two-dash subheading 3824.71 "Mixtures Containing Acyclic Hydrocarbons Perhalogenated only with Fluorine and Chlorine", to cover mixtures containing CFCs. Mixtures containing HCFCs, HBFCs, HFCs (not an ODS), carbon tetrachloride, methyl chloroform, or methyl bromide do not fit in the Product Description of Subheading 3824.71, and, if they do not fall under any previous Subheading based on their function, can be classified only under the very last subcategory of Heading 38.24, namely, Subheading 3824.90 "Other".

40. Codes under Heading 38.24 can be applied only if the mixture or product is "Not elsewhere specified or included". For example, preparations for fire extinguishers that contain halons have a separate code, namely, Heading 38.13 "Preparation and Charges for Fire Extinguishers;...". A second example are mixtures containing Methyl bromide which, depending on their use, could be classified under Heading 38.08 "Insecticides, rodenticides, fungicides, herbicides, antisprouting products and plant-growth regulators, disinfectants and similar products,... for retail sale or as preparations or articles". A third example are solvents in general (either containing or not containing ODSs) which, depending on their use, can be classified for instance under Chapter 34 "Soap, Organic Surface-Active Products, Washing Preparation, Lubricating Preparations, Waxes and Polishing or Scouring Preparations", or under Heading 38.14 "Organic Composite Solvents and Thinners, not elsewhere specified or included; Prepared Paint or Varnish Removers". According to the rules of the HS, customs officers who find that the description of a solvent that is a mixture containing ODS matches any of the Headings in Chapters 30 to 38, must use that Heading, and not use Subheading 3824.71.

41. As also noted in paragraph 26 above, the Ninth Meeting of the Parties to the Montreal Protocol, further requested the Executive Director of UNEP to ask WCO to work with major ODS suppliers to develop and provide the Parties to the Montreal Protocol, through UNEP, with a check-list of relevant customs codes for ODS that are commonly marketed as mixtures, for use by national customs authorities in charge of control of ODS to ensure compliance with import licensing requirements. The Executive Director of UNEP forwarded this request to WCO on 27 October 1997. In its response, WCO asked for a list of the mixtures containing ODS of importance in trade that should warrant specification in the HS, as well as the uses of these mixtures.

42. The Secretariat approached the major ODS suppliers, as well as the Technology and Economic Assessment Panel and the OzonAction Programme of UNEP/IE, for such a list of commonly marketed mixtures containing ODSs and their uses. The Technology and Economic Assessment Panel has investigated this issue and identified the use of some mixtures used primarily as refrigerants, blowing agents and fire extinguishers and pesticides for soil fumigation. Based on the information provided by the Technology and Economic Assessment Panel, the UNEP-IE, and the major ODS suppliers, the Secretariat has sent a list to WCO of six categories of mixtures containing ODS of importance in trade that should warrant specification in the HS, as well as their uses. A new recommendation for complementary national codes for mixtures containing ODS may now be prepared. An illustrative list of mixtures containing ODSs used in trade is presented in annexes III to V below.

43. The Working Group may wish to note and discuss the status of the issue.

XIII. STATUS REPORT ON THE WORK OF THE AD HOC WORKING GROUP OF  
LEGAL AND TECHNICAL EXPERTS ON NON-COMPLIANCE ESTABLISHED  
TO REVIEW THE NON-COMPLIANCE PROCEDURE (DECISION IX/35)  
(ITEM 8 OF THE PROVISIONAL AGENDA)

44. The Ad Hoc Working Group of Legal and Technical Experts on Non-Compliance established to review the non-compliance procedure is meeting in Geneva on 3-4 July 1998. The report of the Group will be presented by its Co-chairs at the seventeenth meeting of the Open-ended Working Group.

XIV. MATTERS ARISING OUT OF THE MEETINGS OF THE IMPLEMENTATION  
COMMITTEE (ITEM 9 OF THE PROVISIONAL AGENDA)

45. The Implementation Committee is meeting on 6 July 1998. Its President will report to the Open-Ended Working Group at its seventeenth meeting.

Annex I

ESSENTIAL-USE EXEMPTIONS RECOMMENDED FOR 1999-2000  
(in metric tonnes)

Party	CFC-11		CFC-12		CFC-113		CFC-114		Halon-2402
	1999	2000	1999	2000	1999	2000	1999	2000	1999
1. Australia	45.0	63.0	90.0	153.7	--	--	--	3.3	--
2. European Community	--	1,415.0	--	2,057.0	0.1	6.1	--	292.0	--
3. Poland *	120.0	125.0	235.0	245.0	--	--	25.0	30.0	--
4. Russian Federation	--	--	--	--	--	--	--	--	160.0
5. United States **	--	1,013.0	--	2,391.0	--	--	--	331.0	--
TOTAL	165.0	2,616.0	325.0	4,846.7	0.1	6.1	25.0	656.3	160.0

\* One thousand seven hundred kilogrammes (1.7 metric tonnes) of CFC-113 for torpedo maintenance was authorized as an emergency use for 1997, by the Ozone Secretariat, in consultation with the Technology and Economic Assessment Panel and its Solvents Technical Options Committee.

\*\* It is not requested that the quantity of methyl chloroform already allocated be changed. It is requested and unanimously recommended by the TEAP and its TOC that the remaining authorized quantity of methyl chloroform be made available for use in manufacturing solid rocket motors until such time that the 1999-2001 quantity of 176.4 tonnes (17.6 ODP-weighted tonnes) allowance is depleted, or until such time as safe alternatives are implemented for remaining essential uses.

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## Annex II

SEPARATE IDENTIFICATION OF	MONTREAL	PROTOCOL	PURE OZONE-DEPLETING SUBSTANCES (ODS) UNDER THE HARMONIZED SYSTEM		
ODS Group	Substance	Formula	HS Code	HS Product Description	Comments
			<b>29.03</b>	<b>Halogenated derivatives of hydrocarbons</b>	HS International Classific.
A/I and A/II	Chlorofluorocarbons (CFCs) and Halons		2903.40	Halogenated derivatives of acyclic hydrocarbons containing 2 or more different halogens	Subheading deleted as at 1.1.96
<b>A/I</b>	CFC-11	CFCl <sub>3</sub>	2903.41	Trichlorofluoromethane	HS Amendment 26.6.90*
	CFC-12	CF <sub>2</sub> Cl <sub>2</sub>	2903.42	Dichlorodifluoromethane	HS Amendment 26.6.90*
	CFC-113	C <sub>2</sub> F <sub>3</sub> Cl <sub>3</sub>	2903.43	Trichlorotrifluoroethanes	HS Amendment 26.6.90*
	CFCs 114 and 115	C <sub>2</sub> F <sub>4</sub> Cl <sub>2</sub> and C <sub>2</sub> F <sub>5</sub> Cl	2903.44	Dichlorotetrafluoroethanes and Chloropentafluoroethane	HS Amendment 26.6.90*
<b>A/II</b>	Halons 1211, 1301 and 2402	CF <sub>2</sub> BrCl, CF <sub>3</sub> Br and C <sub>2</sub> F <sub>4</sub> Br <sub>2</sub>	2903.46	Bromochlorodifluoromethane, Bromotrifluoromethane and Dibromotetrafluoroethanes	HS Amendment 26.6.90*
	* Entered into force 1.1.96				
ODS Group	Substance	Formula	HS Code	HS Product Description	Comments

<b>B/I</b>	Other Fully Halogenated CFCs		2903.45	Other derivatives perhalogenated only with fluorine and chlorine	HS Amendment 26.6.90*
	CFC-13	CF3Cl	2903.45.--	Chlorotrifluoromethane	HS Recommendation 20.6.95
	CFC-111	C2FCI5	2903.45.--	Pentachlorofluoroethane	HS Recommendation 20.6.95
	CFC-112	C2F2CI4	2903.45.--	Tetrachlorodifluoroethanes	HS Recommendation 20.6.95
	CFC-211	C3FCI7	2903.45.--	Heptachlorofluoropropanes	HS Recommendation 20.6.95
	CFC-212	C3F2CI6	2903.45.--	Hexachlorodifluoropropanes	HS Recommendation 20.6.95
	CFC-213	C3F3CI5	2903.45.--	Pentachlorotrifluoropropanes	HS Recommendation 20.6.95
	CFC-214	C3F4CI4	2903.45.--	Tetrachlorotetrafluoropropanes	HS Recommendation 20.6.95
	CFC-215	C3F5CI3	2903.45.--	Trichloropentafluoropropanes	HS Recommendation 20.6.95
	CFC-216	C3F6CI2	2903.45.--	Dichlorohexafluoropropanes	HS Recommendation 20.6.95
	CFC-217	C3F7CI	2903.45.--	Chloroheptafluoropropanes	HS Recommendation 20.6.95
<b>B/II</b>			2903.1	Saturated chlorinated derivatives of acyclic hydrocarbons	HS International Classification
	Carbon tetrachloride	CCl4	2903.14	Carbon tetrachloride	HS International Classification
<b>B/III</b>			2309.19	Other	HS International Classification
	Methyl chloroform	C2H3CI3	2903.19.--	1,1,1-Trichloroethane (Methyl chloroform)	HS Recommendation 20.6.95
	* Entered into force 1.1.96				

ODS Group	Substance	Formula	HS Code	HS Product Description	Comments
<b>C/I and C/II</b>	HCFCs and HCFCs		2309.49	Other halogenated derivatives of acyclic hydrocarbons containing 2 or more different halogens	HS Amendment 26.6.90*
<b>C/I</b>	Hydrochlorofluoro-carbons (HCFCs)		2309.49.--	Derivatives of methane, ethane or propane, halogenated only with fluorine and chlorine	HS Recommendation 20.6.95
	HCFC-22	CHF <sub>2</sub> Cl	2903.49.--	Chlorodifluoromethane	**
	HCFC-123	CHCl <sub>2</sub> F <sub>3</sub>	2903.49.--	Dichlorotrifluoroethanes	**
	HCFC-124	CHFClCF <sub>3</sub>	2903.49.--	Chlorotetrafluoroethanes	**
	HCFCs 141 and 141b	CH <sub>3</sub> CFCl <sub>2</sub>	2903.49.--	Dichlorofluoroethanes	**
	HCFCs 142 and 142b	CH <sub>3</sub> CF <sub>2</sub> Cl	2903.49.--	Chlorodifluoroethanes	**
	HCFCs including 225, 225ca and 225cb	C <sub>3</sub> H <sub>2</sub> F <sub>5</sub> Cl <sub>2</sub> , CF <sub>3</sub> CF <sub>2</sub> CHCl <sub>2</sub> and CF <sub>2</sub> ClCF <sub>2</sub> CHClF	2903.49.--	Other dichloropentafluoropropanes	**
	HCFCs 21, 31 and 133	CHFCl <sub>2</sub> , CH <sub>2</sub> FCI and C <sub>2</sub> H <sub>2</sub> F <sub>3</sub> Cl	2903.49.--	Other derivatives of methane, ethane or propane halogenated only with fluorine and chlorine	**
<b>C/II</b>	Hydrobromofluoro-carbons (HBFCs)		2903.49.--	Derivatives of methane, ethane or propane halogenated only with fluorine and bromine	HS Recommendation 20.6.95
			2903.49.--	Other	

\* Entered into Force 1.1.96

\*\* A proposal has been submitted to the World Customs Organization for a new Recommendation for national subheadings for those substances. It is currently under examination by the Harmonized System Committee.

<b>ODS Group</b>	<b>Substance</b>	<b>Formula</b>	<b>HS Code</b>	<b>HS Product Description</b>	<b>Comments</b>
E/I	Methyl Bromide	CH <sub>3</sub> Br	2309.30	Fluorinated, brominated or iodinated derivatives of acyclic hydrocarbons	HS International Classification

Annex III

ILLUSTRATIVE LIST OF MIXTURES CONTAINING CFCs AND HCFCs USED PRIMARILY AS A REFRIGERANT\*

No.	Refrigerant Number (Trade Name) of Mixture	Composition							
		Component 1		Component 2		Component 3		Component 4	
1	R401A (MP 39)	HCFC22	53%	HFC152a**	13%	HCFC124	34%		
2	R401B (MP 66)	HCFC22	61%	HFC152a**	11%	HCFC124	28%		
3	R401C (MP 52)	HCFC22	33%	HFC152a**	15%	HCFC124	52%		
4	R402A (HP 80)	HFC125**	60%	HC290**	2%	HCFC22	38%		
5	R402B (HP 81)	HFC125**	38%	HC290**	2%	HCFC22	60%		
6	R403A (69S)	HC290**	5%	HCFC22	75%	FC218**	20%		
7	R403B (69L)	HC290**	5%	HCFC22	56%	FC218**	39%		
8	R405A (G2015)	HCFC22	45%	HFC152a**	7%	HCFC142b	6%	C318**	43%
9	R406A (GHG-12)	HCFC22	55%	HC600a**	4%	HCFC142b	41%		
10	R408A (FX55)	HFC125**	7%	HFC143a**	46%	HCFC22	47%		
11	R409A (FX56)	HCFC22	60%	HCFC124	25%	HCFC142b	15%		
12	R409B (FX 57)	HCFC22	65%	HCFC124	25%	HCFC142b	10%		
13	R411A (G2018A)	HC1270**	2%	HCFC22	88%	HFC152a**	11%		
14	R411B (G2018B)	HC1270**	3%	HCFC22	94%	HFC152a**	3%		
15	R412A (TP5R)	HCFC22	70%	FC218**	5%	HCFC142b	25%		
16	R414B(Hotshot)	HCFC22	50%	HCFC124	39%	HCFC142b	9.5%	HC600a**	1.5%
17	R500	CFC12	74%	HFC152a**	26%				
18	R501	HCFC22	75%	CFC12	25%				
19	R502	HCFC22	49%	CFC115	51%				
20	R503	HFC23**	40%	CFC13	60%				
21	R504	HFC32**	48%	CFC115	52%				
22	R505	CFC12	78%	HCFC31	22%				
23	R506	HCFC31	55%	CFC114	45%				
24	R509 (TP5R2)	HCFC22	46%	FC218**	54%				

\* A more extensive list of trade names for mixtures and pure substances can be obtained from the UNEP/IE OzonAction programme at email address: ozonaction@unep.fr, or at website: <http://www.unepie.org/ozonaction.html>.

\*\* Not an ozone-depleting substance.

Annex IV

ILLUSTRATIVE LIST OF MIXTURES CONTAINING CFCS AND HCFCs - UNNUMBERED MIXTURES\*

No.	Trade Name of Mixture	Composition							
		Component 1		Component 2		Component 3		Component 4	
1	FX20	HFC125**	45%	HCFC22	55%				
2	Di36	HCFC22	50%	HCFC124	47%	HC600a**	3%		
3	Daikin Blend	HFC23**	2%	HFC32**	28%	HCFC124	70%		
4	FRIGC	HCFC124	39%	HFC134a**	59%	HC600a**	2%		
5	Free Zone	HCFC142b	19%	HFC134a**	79%	Lubricant**	2%		
6	GHG-HP	HCFC22	65%	HCFC142b	31%	HC600a**	4%		
7	GHG-X5	HCFC22	41%	HCFC142b	15%	HFC227ca	40%	HC600a**	4%
8	NARM-502	HCFC22	90%	HFC152a**	5%	HFC23**	5%		
9	NAF-S-III*	HCFC22	82%	HCFC123	4.75%	HCFC124	9.5%	HC600a**	3.75%

\* A halon alternative

\*\* Not ozone depleting substances.

Annex V

ILLUSTRATIVE LIST OF METHYL BROMIDE MIXTURES

No.	Trade Name of Mixture	Composition			
		Component 1		Component 2	
1	methyl bromide with chloropicrin	methyl bromide	67%	chloropicrin*	33%
2	methyl bromide with chloropicrin	methyl bromide	98%	chloropicrin*	2%

\* Not an ozone-depleting substance

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