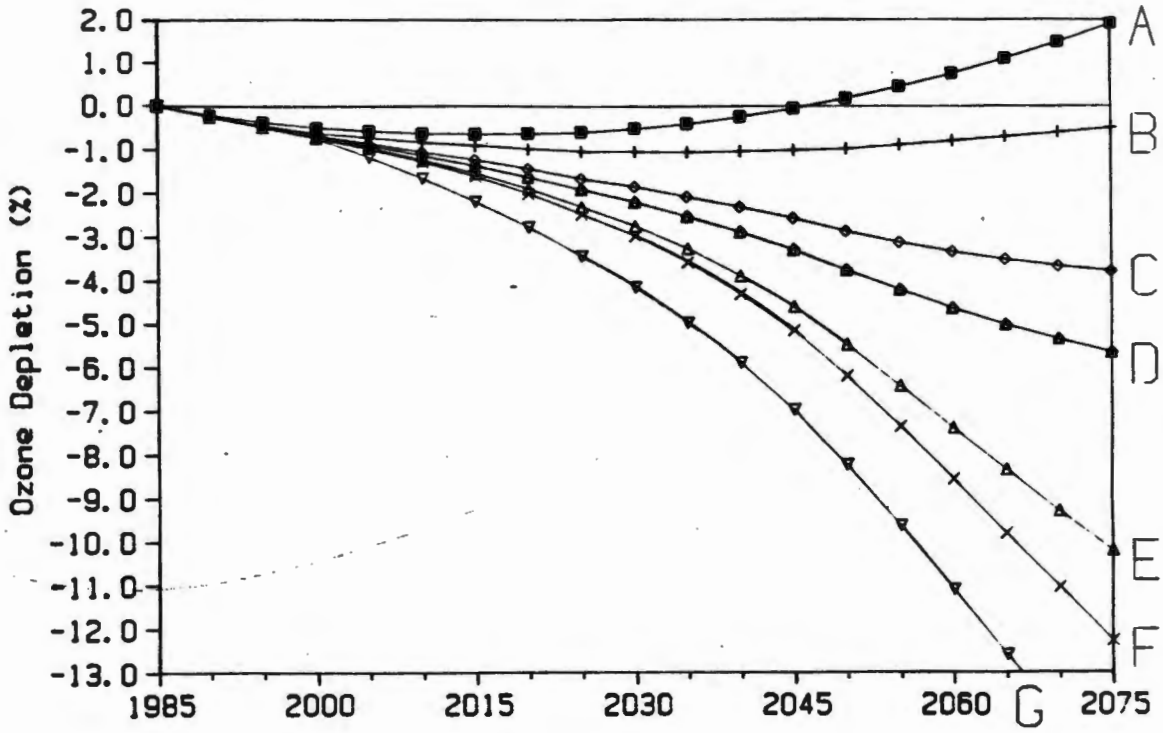

A = Freeze of all Cl-containing compounds at 1986 levels.
- 100% compliance globally
- CH_4 @ 1%/yr
- N_2O @ 0.25%/yr
- CO_2 @ 0.8%/yr (per Wuebbles et al., 1984)

} This is similar to WMO (1986), and looks ≈ same.

B = Freeze all Cl-containing compounds at 1986 levels
- 100% Compliance
- CH_4 @ 0.019 ppm/yr
- N_2O @ 0.20%/yr
- CO_2 @ 0.7%/yr (per NAS 50th percentile)

C = Same as B, except CH_3CCl_3, Halon 1211 and Halon 1301 allowed to grow @ 2.5%/yr from 1985 to 2050 (constant thereafter)

D = Same as C, except CFC-113 allowed to grow @ 2.8%/yr from 1985 to 2050 (constant thereafter)

E = Same as D, except developing nations allowed to grow to current global average use per capita

F = Same as E, except 80% compliance globally. (Note: baseline rate for CFC-11 and CFC-12 is 2.5%/yr 1985 to 2050, constant thereafter).

G = No controls or 2.5%/yr growth, 1985 to 2050; constant thereafter.

Jim Losey "Their piece"

DRAFT

UNEP OZONE LAYER PROTOCOL NEGOTIATIONS

SCOPE OF CONTROL: A "THREE-TIERED" APPROACH

I. INTRODUCTION

The question of which ozone depleting chemicals should be subject to control was a devisive one at the December 1986 UNEP protocol negotiations. Positions ranged from including only CFC 11 and 12 (Japan, USSR) to including all fully-halogenated alkanes (U.S.). At the December session, this "scope" question tended to be viewed as a binary decision (e.g., a particular chemical was either in the protocol, or out) and was also considered separate from the "stringency" question (how much should emissions be reduced). The following proposal is suggested as a way of bridging the gap between the disparate positions on the question of scope, as well as providing an opportunity for compromise on the stringency question.

II. PROPOSAL

This proposal is an attempt to combine the Japanese suggestion at Leesburg for a two-phased control approach with the three-list system of the London Dumping Convention (LDC). In the LDC, the relevant substances are divided into three categories which are listed in an annex to the Convention. The stringency of control to which a particular chemical is subject depends on which category it is in. The LDC Parties periodically review the categories and, in light of new scientific data, may move a chemical from one category to another.

An analogous structure could be easily created for the ozone layer protocol by dividing the two control article into two parts: the first with more stringent control, (e.g., current Article II of U.S. proposed text); the second with less stringent control (e.g., a freeze). All potential ozone-depleters would then be divided into categories A, B, and C: category A substances would be subject to the more stringent control; category B substances would be subject to the less stringent controls. Substances in category C would not be subject to controls, but Parties would be charged with conducting a periodic review to determine whether any of these substances should be moved to category A or B.

An example of how this might look in legal text is shown at Tab A. In this example, Article II paragraph 1 is the same as the U.S. proposed text, but without the first step; paragraph 2 is an emissions freeze. Obviously, there are any number of ways to structure the two controls: paragraph 1 could have a different starting point, ending point, and number of phases; paragraph 2 could also have a series of steps to approach the end point. In addition, although it would make no substantive difference, the order of the two parts (and the corresponding categories) could be reversed for "optical" reasons.

III. ADVANTAGES

1. The basic structure could incorporate a broad spectrum of current positions. The attached example text would be

essentially consistent with positions as diverse as that of the Nordics (Norway, Finland, Sweden) and the European Community -- depending only on which chemicals are placed in which category. For example, if all fully-halogenated alkanes are placed in category A, nothing in category B, and any other potential ozone-depleters in category C, the protocol would reflect the Nordic position. Similarly, if no chemicals were in category A, CFC 11 and 12 (and possibly 113) were placed in category B, and everything else in category C, the protocol would reflect the EC position. Although the substantive differences in positions would remain, having a single (albeit bracketed) negotiating text could greatly facilitate the negotiating process.

2. It would provide more flexibility for addressing the scope question. If this "three-tiered" system were accepted as the negotiating text, we would no longer be limited to a binary "control/no control" decision for each chemical. This would broaden our own room for bargaining: e.g., if we are unsuccessful in getting agreement to include a particular chemical in category A, we can then fall back to category B. Under the current text, our only fall-back is to the equivalent of category C (i.e., listed but not controlled) or, worse, not mentioned in the protocol at all. Furthermore, by moving away from an "either-or" structure, the opportunity for a compromise between disparate positions increases. For example, Table 1 illustrates a hypothetical compromise between two widely separated initial positions. In

this example, Country X agrees to move CFC 113 and 114 down to category B and the halons to category C, in return for Country Y conceding to put CFC 11 and 12 in category A and 114 in category B.

3. The "worst case" outcome is better under this structure than with other texts. To illustrate this, suppose all delegations agreed to negotiate from a "three-tiered" text, and then U.S. unilaterally conceded to the weak version of the current EC position: 11 and 12 in category B; all others in category C. Such an outcome, although not optimal, would still be better than if we had made the same concession within other frameworks, because: (a) by having a reduction schedule in the protocol we would have at least established the principle of phased reductions; (b) putting the other potential ozone depleters in category C would at least signal industry that these chemicals are candidates for A or B type controls, which might elicit some voluntary restraint on their part with respect to production of these chemicals.

4. A whole new protocol would not have to be negotiated in order to add new chemicals. If all potential ozone depleters are included one of the categories in the annex, the process for expanding or contracting scope of control (i.e., periodic assessment and possible amendment by the Parties) would be built right into the protocol. Procedurally, the process of moving substances from one category to another at a future meeting of the Parties would be much simpler

TABLE 1

	Country X's Initial Position	Country Y's Initial Position	Possible Compromise
CATEGORY A	CFC 11, 12, 113, 114 halon 1211, 1301		CFC 11, 12
CATEGORY B		CFC 11, 12, 113	CFC 113, 114
CATEGORY C		CFC 114; halons	halons

than the alternative: convening subsequent ad hoc negotiations, negotiating new substantive (and possibly new institutional and financial) provisions, then holding another Diplomatic Conference, then waiting for the new protocol to enter into force, etc. -- with the attendant uncertainties for governments and industries during this whole process.

IV. DISADVANTAGES

1. It adds one more layer of complexity to the protocol structure. Given the number and diversity of participating countries at the negotiations, the simpler the protocol structure the better -- everything else being equal.

2. It would not allow for calculating aggregate emissions of all the controlled substances. Under this proposed structure, the Parties would calculate aggregate emissions for substances in categories A and B separately, thus losing some degree of implementation flexibility.

V. ASSESSMENT

There appear to be considerable advantages to the "three-tiered" approach. As to the disadvantages, the first may be more apparent than real: the concept itself is relatively simple, and once the rationale for it is understood, the legal drafting is straightforward. The concept's ultimate acceptance is probably more a function of how it is presented: e.g., perhaps have a small

ad hoc group (UK, US, Canada, and Norway?) draft a composite text based on this approach, and then present it to the whole meeting as a compromise.

However, the second disadvantage -- separate aggregation -- is a legitimate flaw in this approach. One way that has been suggested for rectifying it would be to have only two categories: "control" and "assess for possible control". The problem with this "solution" is that, given the lowest-common-denominator tendency of international negotiations, it is likely that the one control provision would look more like B (i.e., a freeze) than A (phased reductions). As noted above, such an outcome would be a weaker protocol than even a worse-case outcome under a three-tiered approach.

In addition, the "two-tiered" approach limits opportunities for compromise. For example, suppose there is movement toward some kind of phased reduction format and there is a growing consensus to include CFC 113 along with 11 and 12 in the controls, but there is one key country (e.g., Japan) that absolutely cannot agree to reductions of 113; then, in order to keep that country in the fold, other countries might -- under a "two-tiered" approach -- have to concede to having the one control measure be just a freeze -- thus losing the possibility of phased reductions of 11 and 12 as part of the initial controls. By contrast, under a three-tiered approach, a compromise could be struck whereby 113 is put in category B (freeze) and 11 and 12 in category A (reductions).

Another way to address the separate aggregation problem might be to add to Article II the notion that ".... the Parties shall take the above measures or the equivalent ...". This takes care of the separate aggregation problem and would provide even more flexibility for a given level of control. It could, however, exacerbate the concern about complexity.

A third response would be simply to view separate aggregation as a flaw, but not a fatal flaw -- and one that is acceptable in light of the other benefits which derive from the three-tiered approach.

J.Losey
EPA/OIA; 382-4894
1/21/87

TAB A

U.S. DRAFT PROTOCOL TEXT: OPERATIVE ARTICLES

Article II: Control Measures

2. For all substances listed in Category B of Annex 1:

a.1. Within [ ] year after entry into force of this Protocol, each Party shall ensure that its aggregate annual emissions of ~~fully-halogenated alkanes~~ these substances does not exceed its 1986 level.

1. For all substances listed in Category A of Annex 1:

a.2. Within [ ] years after entry into force of this Protocol, each Party shall ensure that its aggregate annual emissions of ~~fully-halogenated alkanes~~ these substances is reduced by [20] percent from its 1986 level.

b.2. Within [ ] years after entry into force of this Protocol, each Party shall ensure that its aggregate annual emissions of ~~fully-halogenated alkanes~~ these substances is reduced by [50] percent from its 1986 level.

c.2. Within [ ] years after entry into force of this Protocol, each Party shall ensure that its aggregate annual emissions of ~~fully-halogenated alkanes~~ these substances is reduced by [95] percent from its 1986 level.

3. ~~b~~. The right of any Party to adopt control measures more stringent than contained herein is not restricted by this Article.

Article III: Calculation of Aggregate Annual Emissions

1. For the purposes of Article II, each Party shall calculate its aggregate annual emissions by taking its:

   a. aggregate annual production;

   [b. plus aggregate annual bulk imports;]

   [c. minus aggregate annual bulk exports to other Parties;]

   [d. minus aggregate annual amount of ~~fully-halogenated alkanes~~ each substance which have been destroyed or permanently encapsulated.]

2. To calculate the aggregate amounts specified in the sub-paragraphs of paragraph 1, each Party shall multiply the amount of each ~~fully-halogenated alkane~~ substance by its ozone depletion weight, as specified in Annex ~~A~~ 2, and then add the products.

Article IV: Assessment and Adjustment of Control Measures

1. The Parties shall cooperate in establishing an international monitoring network for detecting, or aiding in the prediction of, modification of the ozone layer.

2. At least one year before implementing the reductions specified in paragraphs 1(a) ~~2~~ and 3(a) ~~4~~, respectively, of Article II, the Parties shall convene an ad hoc panel of scientific experts, with composition and terms of reference determined by the Parties, to review advances in scientific understanding of modification of the ozone layer and the potential health, environmental, and climatic effects of such modification.

3. In light of such scientific review, the Parties shall jointly assess ~~and may adjust~~ the stringency and timing ~~, and scope~~ of the control measures in Article II, and ~~the ozone depletion weights in Annex A.~~ *and may amend Article II in accordance with*

~~4. Any such adjustment shall be made by amending Article II and/or Annex A as provided in~~ Article 9 of the Convention, except that any such amendment would not be subject to the six month advance notice requirement of paragraph 2 of ~~that~~ Article 9.

4. *The Parties shall also jointly assess Annexes I and II in light of a scientific review conducted pursuant to paragraph 2, and may amend either annex in accordance with Article 10 of the Convention.*

Article V: Control of Trade

1. Within [ ] years after entry into force of this Protocol, each Party shall ban the import ~~of fully-halogenated alkanes~~ *any substance listed in categories A or B of Annex 1* in bulk from any state not party to this Protocol [, unless such state is in full compliance with Article II and this Article and has submitted information to that effect as specified in paragraph 1 of Article VI].

2. Within [ ] years after entry into force of this Protocol, each Party shall ban:
   a. the export of technologies to the territory of non-parties
   [b. direct investment in facilities in the territory of non-parties]

   for producing ~~fully-halogenated alkanes~~ *any substance listed in categories A or B of Annex 1* [, unless such state is in full compliance with Article II and this Article and has submitted information to that effect as specified in paragraph 1 of Article VI].

3. The Parties shall jointly study the feasibility of restricting imports of products containing or produced with ~~fully-halogenated alkanes~~ *any substance listed in categories A or B of Annex 1* from any state not party to this Protocol.

Article VI: Reporting of Information

1. Each Party shall submit annually to the Secretariat data showing its calculation of aggregate annual emissions ~~of fully halogenated alkanes~~ as specified in Article III, using the format developed by the Secretariat pursuant to paragraph 3a.

of all substances listed in Annex 1.

2. Each Party shall submit to the Secretariat appropriate information to indicate its compliance with Article V.

3. The Secretariat shall:

   a. develop and distribute to all Parties a standard format for reporting such data as indicated by paragraph 1;

   b. take appropriate measures to ensure the confidentiality of all data submitted to it pursuant to paragraph 1, except for the aggregate annual emissions figures;

   c. compile and distribute annually to all Parties a report of the aggregate annual emissions figures and other information submitted to it pursuant to paragraph 2.

Vicki

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

April 1, 1987

MEMORANDUM FOR:

VP - Linda Swacina
USDA - Orville Bentley
OPD - Jan Mares
DPC - Ralph Bledsoe/Vicki Masterman
CEA - Steve DeCanio
CEQ - Alan Hill/Coleman Nee
EPA - Craig Potter/Bill Long
State - Richard Benedick
NOAA - Joseph Fletcher/Barbara Moore
Commerce - Michael T. Kelley
USTR - Marian Barell Nelson/Pep Fuller
DOI - Martin Smith
DOI - Becky Norton Dunlop
DOE - Mary Walker/Ted Williams
NASA - Bob Watson
DOJ - Tom Hookano
DOD - David Tarbell
OSTP - Michael Johnson
Treasury - Stephen Entin

FROM: Dave Gibbons, Deputy Associate Director for Natural Resources

SUBJECT: Stratospheric Ozone Briefings

You and/or your representatives are cordially invited to attend a series of briefings being given to OMB on scientific and economic issues relating to stratospheric ozone. The first two briefings have been scheduled as follows:

Thursday April 2, 1987, 4:30 P.M., Room 10103, NEOB

Alliance for Responsible CFC Policy

Topic - Industry's Perspective on the Science and Economics

Friday, April 3, 1987, 2:30 P.M., Room 10103, NEOB

Dr. Robert Watson - Program Manager, Upper Atmosphere Research Program, NASA

Topic - Atmospheric Scientific Issues and Uncertainties

We plan to have EPA give us future briefings on 1) emissions modeling and 2) economics of potential controls. We will notify you of these briefings as soon as they are scheduled.

If you and/or your representatives wish to attend, please phone Darlene Fleming (395-6827) to be cleared into the building. Individuals planning to attend will need to provide their birth date to Darlene to gain access to the New Executive Office Building.

We hope you are able to attend.

EPA-STATE DEPARTMENT INTERNATIONAL INITIATIVES ON STRATOSPHERIC OZONE NEGOTIATIONS

The following steps have been taken jointly by EPA and the State Department, following the December 1-5, 1986 negotiating session in Geneva, to build international support for early conclusion of an effective protocol to protect the ozone layer from potentially harmful chemicals.

1. Ozone layer issues raised by U.S. during U.S.-Soviet bilateral environmental meeting in Washington, Dec. 13-17, and agreement obtained to hold early consultations on science of ozone depletion in Moscow.

2. Engaged UNEP -- by cable, telecons with U.S. Permanent Representative to UNEP in Nairobi, and during Washington visit by senior UNEP official -- to urge adherence to original negotiating timetable, and that UNEP increase its staff support for the preparatory work to help ensure success.

3. EPA Administrator Thomas called U.K. Environment Minister Waldegrave to seek his help in keeping to the negotiating schedule, and to explore ways of elevating the importance of the issue in Europe. Agreement was reached that early visits by U.S. experts could help expand awareness and understanding.

4. Cable sent to EC capitals asking U.S. Mission EC and embassies to approach EC leadership to urge that steps be taken to ensure that EC negotiators come to Vienna with flexibility to negotiate across range of issues. U.S. Ambassador to EC met with EC Commissioner.

5. Issue has been placed on agenda of U.S.-EC bilateral discussion scheduled for Washington in late March.

6. Assistant Secretary of State Negroponte and Deputy U.S. Trade Representative Smith discussed ozone protocol with senior Japanese officials during separate visits to Tokyo. This followed cables requesting such consultations.

7. Issue also raised in Washington with Japanese Embassy officials, leading to invitation for U.S. team to visit Tokyo in March.

8. USIA "Worldnet" capability used for January 27 interactive briefing by State Department negotiator and NASA scientist for European experts and reporters in six capitals, with second briefing scheduled for February 11.

9. Consultation held with Canadian delegation, Jan. 29 in Washington, to exchange information and views about second negotiating session.

10. Ambassadors Negroponte and Benedick discussed ozone layer issue with Brazilian Minister of Environment.

11. Scientific team, involving representatives from NASA, NOAA and EPA, and including a prominent Norwegian modeller, was sent to Moscow for Feb. 3-8 discussions.

12. Second team, with similar composition plus the principal U.S. negotiator, was sent to Brussels, Paris and London, Feb. 2-5, to meet with senior policy makers from those countries plus the European Community (in advance of Feb. 13 meeting of EC Council). Meetings arranged by U.S. Embassies based on joint EPA and State requests.

13. Nordic nations advised that Feb. 3-6 meeting of ECE Working Group on Nitrogen Oxide Protocol (Geneva) can serve as forum for discussing status of ozone negotiations, and that EPA member of U.S. delegation will be prepared to participate in separate ad hoc meetings of interested parties.

OFFICE OF THE UNITED STATES
TRADE REPRESENTATIVE
EXECUTIVE OFFICE OF THE PRESIDENT
WASHINGTON
20506

January 14, 1986

MEMORANDUM

TO: CFC Trade Work Group

FROM: Amelia Porges AP
Associate General Counsel

SUBJECT: Trade Law Issues and Ozone Layer Negotiations

Negotiations have now begun on a Protocol to the Vienna Convention for the Protection of the Ozone Layer. This protocol would be the basis for an international regime for the regulation of production and trade in chlorofluorocarbons (CFCs). You have asked about trade law considerations relevant to the design of this regulatory regime. The following discussion is necessarily abstract at this point, and can only flag possible problems. Pep Fuller, Bob Reinstein and I will be glad to answer more concrete questions on trade policy and trade law as the negotiations develop.

As long as the trade restrictions imposed are related to the conservation of natural resources, or necessary to the protection of human, animal or plant health, nothing in the GATT will prevent their adoption as long as they are not a disguised restriction on international trade. Similarly, all that is required to satisfy the GATT Standards Code is that the standards set be scientifically valid. Thus, any rule that satisfies the requirements of U.S. law (the Clean Air Act) will probably satisfy the GATT and the Code (and bilateral FCN treaties).

A trade regime for CFCs may require that the parties discriminate against CFC trade from non-parties. This raises two technical issues worth thinking about: dealing with transshipment of goods from non-parties to parties, and designing a rule of origin for the products subject to the protocol. Both can be dealt with, in the protocol itself and/or in national implementation of the protocol.

GATT and the Standards Code

GATT (the General Agreement on Tariffs and Trade) regulates our trade relations with its ninety members. All of the current signatories of the Vienna Convention on the Protection of the Ozone Layer are also GATT contracting parties, with the exception of Morocco, which is in the final stages of GATT accession, and

the USSR and Byelorussian and Ukrainian SSRs. GATT confers rights and obligations on its members with respect to imports and exports of products from its member countries. It does not regulate government treatment of foreign firms, nor does it regulate services, investment or technology transfer.

The GATT generally bans quantitative restrictions on imports or exports, and prohibits import charges in excess of tariff concessions; these strictures would apply to any restriction on trade except if imposed under one of the exceptions provided in the GATT. However, GATT Article XX provides:

> Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures: ...
>
> (b) necessary to protect human, animal or plant life or health;
>
> (g) relating to the conservation of exhaustible natural resources if such resources are made effective in conjunction with restrictions on domestic production or consumption;...

Under Article XX, the members of the agreement could impose a ban or restriction or import fee on imports of CFCs (or products made with or containing CFCs) to the extent that such action is necessary to protect human, animal or plant life or health, and if the measure does not treat like cases differently. Similarly, we could certainly justify ozone-related trade measures as relating to the conservation of the ozone layer, an exhaustible natural resource, since the parties to the agreement would presumably be applying restrictions on domestic production or consumption.

Nothing in the GATT would prohibit a party from applying trade restrictions against all non-signers (regardless of whether they actually conform to agreement standards) on the basis that they have not formally acceded to the agreement. For instance, Japan and Norway have notified the GATT that they prohibit all imports of whalemeat from countries not signatories to the International Whaling Convention.[1]

The standard in Article XX(j) is a very broad one. It could

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[1]GATT/L/4814, L/5165.

conceivably permit sanctions against non-CFC trade of all non-signers, if such sanctions could be defended as environmentally motivated and as a functioning part of the agreement.: Note that measures under XX(j) need not be necessary to the conservation of exhaustible natural resources-- just related to such conservation. For GATT purposes, the closer the relation, the better.

In order to introduce greater discipline and transparency in national regulatory systems affecting trade, the Agreement on Technical Barriers to Trade[2] (commonly known as the Standards Code) was negotiated under GATT auspices in the Tokyo Round, and entered into force in 1980. All but a few developed countries are members of the Code, and many developing countries (although there are no members that are not GATT members).

The Code does not interfere with the adoption per se of regulations that meet real health and safety needs. Rather, it sets rules for setting standards and maintaining certification systems. One of these rules is that standards-setting and certification systems should not create unnecessary obstacles to international trade (this obligation is implemented with respect to USG regulatory activities in section 402 of the Trade Agreements Act of 1979 (19 U.S.C. 2532). The term "unnecessary obstacle" is not defined in the Code and has not been interpreted by the Standards Code Committee nor through disputes brought under the Code.

The Code covers the preparation, adoption and application of standards; determination of conformity with standards; and operation of certification systems. With regard to these activities, the Code generally requires that national and most favored nation treatment be accorded to products of other parties to the Code.[3] If a standard is scientifically justified (as U.S. law requires our standards to be), the Code will not stand in the way of its adoption as long as it imposes no unnecessary obstacles to trade.

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[2]Agreement on Technical Barriers to Trade (Standards Code), 31 UST 405, TIAS 9616, done at Geneva April 12, 1979, entered into force January 1, 1980.

[3]The Code does not cover regulation of processes and production methods, except where a party to the Code considers that Code obligations are being circumvented by the drafting of requirements in terms of processes and production methods rather than in terms of characteristics of products. See Standards Code Art. 14.25. A standard that prohibited the use of CFCs to clean electronics, and prohibited as well the importation of electronics that had been cleaned with CFCs, would be one example of regulation of processes or production methods.

Bilateral Treaties

The U.S. has entered into many bilateral friendship, commerce and navigation (FCN) treaties over the years. Most FCN treaties were negotiated by the U.S. from 1945-62, based on a standard draft text. There are two treaty provisions of concern in the context of a CFC regime: most-favored-nation treatment (which requires that we give products of the treaty partner treatment no less favorable than treatment given to products of any other party), and national treatment (which requires treatment no less favorable than treatment given our own products). These provisions are contained in almost all of the 1945-62 FCNs, and (in some form) in many other of our bilateral trade treaties.

However, Article XXI, paragraph 3 of the standard FCN draft permits any action that is specifically permitted by the GATT. Thus, any action permitted by GATT Article XX is permitted under the standard FCN text.

The treaty question should be re-examined when it is clearer what the obligations of the protocol are likely to be, and who the participants and non-participants are likely to be.

Transshipment and Rules of Origin

A trade regime for CFCs could require agreement members to discriminate in their trade between the products of members and non-members. This raises two questions: first, how to deal with transshipment or diversion, and second, how to determine the origin of imports. These are both essentially technical issues that you may wish to raise in a later stage, when the trade aspects of the protocol have taken shape.

Transshipment is an issue whenever there is a trade regime that discriminates by origin. For instance, the International Coffee Agreement[4] provides that in times of oversupply and low coffee prices, exporting members are to be subject to export quotas, and importing members are to enforce these quotas through limiting their imports from ICA members to coffee that has a an export license issued by an exporting member.[5] Where a country has filled its export quota (and, under the ICA, therefore ceases issuing export licenses) its exporters may be tempted to transship

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[4]International Coffee Agreement, 1983, TIAS ___-, done at London Set. 16, 1982, entered into force definitively Sept. 11, 1985.

[5]A limited amount of imports from non-members is permitted, but the level of imports is set low enough to provide a strong incentive for coffee exporting countries to join.

coffee through a country that has not filled its quota and mislabel the coffee as being from the country of transshipment.[6] However, the customs laws of the United States and most countries provide substantial penalties for acts of this sort, which constitute customs fraud[7] through false labeling of origin. If exporters or importers of CFCs were to transship CFCs or CFC products in order to evade restrictions on imports from non-agreement countries, this would almost certainly constitute customs fraud.

The other issue is determining where goods are from, for the purposes of the regime that would govern trade in CFCs and/or products. If this regime does significantly restrict trade, the rule of origin may be an important issue.

If the products to be regulated here are produced in such a manner that the entire chain of production takes place in one country, determination of origin may be relatively straightforward. However, origin may not be so simple to decide for products of a multi-stage manufacturing process. Also, trade restrictions may lead producers to change the "origin" of products: after a U.S. antidumping order on televisions from Japan, for instance, the TV exporters shipped TV kits to Taiwan for assembly and export to the U.S. If CFC technology lends itself to this kind of evasion, and if such evasion would undermine the effectiveness of the agreement in practice, you may want to consider origin questions carefully in the protocol negotiations, and perhaps provide a uniform origin rule.

Cleared: Pep Fuller

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[6]Preferably, unused export quotas are redistributed to other member coffee exporting countries that are a position to use them.

[7]Entry of goods into the U.S. by means of false statements, regardless of whether the U.S. government is defrauded of duties, is punishable under 19 USC 1592 (civil customs fraud--subject to forfeiture of merchandise); 18 USC 542 (criminal customs fraud--$500 fine/2 years prison); and 18 USC 1001 (false statements to the Federal government).

United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs

Washington, D.C. 20520
January 29, 1987

To: See attached list

From: OES/ENH - Suzanne Butcher SB

Subject: Meeting on trade aspects of ozone protection protocol, Thursday, February 5, 1987, 10:30 a.m.-1:00 p.m., Room 6226, State Department

Any protocol to control ozone-depleting chemicals will have trade implications. U.S. interests in encouraging open trade, protecting U.S. industry and achieving an effective and broadly acceptable protocol will come into play and perhaps into competition. We believe it would be useful to have an exchange of views and information among interested parties and would appreciate your participation. Here is a proposed agenda. If you have other items you would like to discuss, please let me know before the meeting. Please call (647-9312) to let us know who will attend.

We hope to distribute before the meeting discussion papers on several of the topics. Any materials you can provide to all the participants for review before the meeting would be helpful.

Discussion Topics

1. Are options under consideration consistent with GATT and other international legal obligations?

2. Evaluation of options for calculating national limits (production vs. adjusted production).

3. Is restriction of exports of technology and/or investment necessary? advisable? enforceable?

4. Should the protocol restrict trade in bulk CFC's, products containing CFC's, and/or products made with CFC's? Can such restrictions be used to:

   (a) Make the agreement more effective by providing incentives to join?

   (b) Make the agreement as fair as possible to U.S. manufacturers competing in the U.S. and third country markets?

   (c) Discourage movement of capital offshore by restricting markets for the products of non-party production?

   Would the benefits of trade restrictions outweigh the administrative costs to government and industry? To address this, we need to analyze what the costs to the effectiveness of the agreement and to U.S. industry would be of not imposing trade controls -- what the value of trade is, what the effect on relative costs of U.S. manufactured vs. imported goods would be, how much this is likely to affect the various U.S. manufacturers.

Distribution:

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	Mike Kelly/Pat Coslett
EPA:	Jim Losey
	Steve Anderson
State:	Kevin McGuire/Alex Sundquist
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United Nations Environment Programme

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4 March 1987

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Ad Hoc Working Group of Legal and Technical Experts for the preparation of a Protocol on Chlorofluorocarbons to the Vienna Convention for the Protection of the Ozone Layer (Vienna Group)

Second Session
Vienna, 23-27 February 1987

REPORT OF THE AD HOC WORKING GROUP ON THE WORK OF ITS SECOND SESSION

PART I REPORT OF THE PLENARY SESSIONS

I. INTRODUCTION

1. The second session of the Ad Hoc Working Group on Legal and Technical Experts for the Preparation of a Protocol on Chlorofluorocarbons to the Vienna Convention for the Protection of the Ozone Layer (Vienna Group) was held at the Vienna International Centre, Vienna, Austria from 23 to 27 February 1987. The purpose of the session was to enable the Vienna Group to continue its work, begun at its first session in Geneva, Switzerland in December 1986 on the elaboration of a Protocol of Chlorofluorocarbons.

II. ORGANIZATIONAL MATTERS

A. Opening of the Meeting

2. The second session was opened on behalf of the Executive Director of UNEP by the Deputy Executive Director, Mr. W.H. Mansfield III.

Mr. Mansfield thanked the Government of Austria for its generous support towards the holding of the session. He referred to the work of the Vienna Group at its earlier session and urged the group to continue its efforts to set out the governmental actions that will prevent damage to the ozone layer. Mr. Mansfield referred to the differences of opinion among different delegations which emerged at Geneva and he urged participants to reach out to find a solution to these. Mr. Mansfield enumerated some of these issues; on the substances that should be regulated; on the levels of limitations to be chosen; on the cost-effectiveness of regulations and on how the burden of costs relative to the regulatory process would be shared among governments.

He stressed the need to quickly determine if controls should be based on either production or emissions and said that proponents of each of the strategies proposed should be prepared to demonstrate the advantages of their choice relative to the others so that it could be judged whether emissions or production control best met the criteria for effectiveness, efficiency and equity.

Mr. Mansfield reminded the Vienna Group of its obligation under the relevant UNEP Governing Council decision to develop a protocol that addresses both short and long term strategies for the equitable control of fully halogenated CFCs.

Mr. Mansfield concluded by expressing appreciation for the large measure of progress achieved by the Vienna Group at its first session which indicated that the elaboration of a protocol was only a matter of time. However, he reminded the Group, time was neither unlimited nor uncostly in human and financial terms. Mr. Mansfield said that the responsibility for maintaining the integrity of the planets atmosphere through the protection of the ozone layer had been charged to the Group and it should not then be ungenerous in answering that challenge.

3. On behalf of the Government of Austria, the Director General of the Ministry of Health and Environment, Dr. Ernst Bobek, welcomed participants to Vienna and expressed a hope that the session would ensure a major step towards the development of a protocol on CFCs. He said that success in the initiative for the protection of the ozone layer could only be achieved through close international co-operation. Director General Bobek stressed that a policy of precaution and prevention was preferable to measures aimed at

repairing damages caused by neglect. In referring to the different approaches to CFC regulations which had been suggested at the first session of the Vienna Group he asked that the experts should see them as not the cause of unassailable dissent but, instead, as the basis for a substantial consent. Director General Bobek noted with satisfaction that the protocol under consideration had as its basis the Vienna Convention for the Protection of the Ozone Layer. He concluded by extending, on behalf of the Government and people of Austria, good wishes for the success of the negotiations.

B. Attendance

4. The second session of the Vienna Group was attended by experts from Argentina, Australia, Austria, Belgium, Brazil, Canada, Columbia, Denmark, Egypt, Finland, France, Germany, Federal Republic of, Italy, Japan, Kenya, Malaysia, Mexico, Netherlands, New Zealand, Nigeria, Norway, Philippines, Poland, Spain, Sweden, Switzerland, Thailand, Union of Soviet Socialist Republics, United Kingdom, United States of America, and Yugoslavia. Representatives were also present from the World Meteorological Organization, European Economic Community, International Institute for Applied Systems Analysis, Organization for Economic Cooperation and Development, European Council of Chemical Manufacturers' Federations, European Environmental Bureau, Federation of European Aerosol Associations, International Chamber of Commerce, International Council of Scientific Unions, Institute for European Environment Policy, Natural Resources Defense Council and the World Resources Institute.

III. ADOPTION OF THE AGENDA AND ELECTION OF OFFICERS

5. The Working Group adopted the following agenda:

1. Opening of the session.
2. Adoption of the agenda and election of officers.
3. Review of the progress made at the first session.
4. Consideration of the fifth revised draft protocol on the control of chlorofluorocarbons.
5. Adoption of the report and plans for future work.
6. Other matters.
7. Closure of the session.

6. The Working Group re-elected by acclamation the Chairman of its first session in Geneva, Mr. Winfried Lang (Austria). In the absence of the two Vice Presidents and the Rapporteur, elected at the first session in Geneva, the session elected Mr.Essam Hawas (Egypt), Mr. Yuri Sedanov (USSR) and Mr. Paul Mungai (Kenya) respectively to the above offices.

IV. REVIEW OF PROGRESS MADE AT THE FIRST SESSION

7. Mr. Winfried Lang resumed the chairmanship of the Vienna Group and thanked participants for their expression of confidence in him. He said that the second session of the Vienna Group would have to be one of give and take with participants being willing to renegotiate on positions adopted in Geneva. He warned that refusal to be flexible would be to assume the burden of failure to protect the ozone layer and said that it was the duty of the experts present to help prevent deterioration of the environment for the sake of future generations. Mr. Lang noted the modest successes of the first session and outlined the common elements which had been agreed at that time. He then addressed the issues which still had to be resolved which included whether regulatory measures should be based on emissions or production of CFCs; trade matters, particularly with respect to non-participatory states in the convention, which might seek advantages over the parties to the convention and protocol; and the special situation of developing countries requiring an assurance that their development needs were not prejudiced by the regulatory measures to be agreed.

8. Mr. Lang then introduced the report of the first session of the Vienna Group contained in document UNEP/WG.151/L.4. In particular, he drew attention to the work of the Ad Hoc Working Group on Institutional and Financial Matters contained in Annex II to the report which had brought many of the matters concerned with finance and administration of the proposed protocol close to agreement, and also the work of the Ad Hoc Working Group on Scientific Matters contained in the body of the report.

9. The Chairman then turned to the organization of work of the session. He suggested that a brief plenary session be held in order to discuss developments since the holding of the first session of the Vienna Group in December 1986 in Geneva, which might contribute to the solution of outstanding

matters, to be followed by the establishment of working groups to address unresolved major issues. He proposed that four working groups be constituted.

(a) An Ad Hoc Scientific Working Group which would address:

(i) How a periodic review and assessment of scientific and technical issues could be organized?

(ii) Which substances represented the greatest potential threat to the ozone layer?

(iii) Technological progress in the recovery and destruction of used CFCs.

(b) An Ad Hoc Working Group to determine the special needs of developing countries in respect of regulatory measures.

(c) An Ad Hoc Working Group on control measures to continue dialogue on Article II regulatory measures, of the protocol on chlorofluorocarbons.

(d) An Ad Hoc Working Group on trade issues.

10. Participants endorsed the Chairman's proposals for the organization of work and praised him for his clear assessment of the issues before the Group.

11. The representative of Egypt in welcoming the Chairman's statement said there should be no delay in agreeing a protocol on CFCs through attempting to regulate other substances at the same time. He said that the protocol should be fair to both developed and developing countries with attention being paid to the particular needs of the latters. He said that his country's position was always consistent that both the Convention and the Protocol should follow a "Global Approach". This would mean that efforts should be made to identify global "red line" and other factors that lead to equity when applying control measures according to whether a country's production was far below the line or had already exceeded it. His country has also emphasized the need to consider all the factors involved, such as production, emission, import, export. He therefore saw the US "adjusted production" formula as being helpful in that direction and worth further study. He thought also that more attention should be given to the problem of disposals, long neglected, as the threat to the ozone was recognized only recently. The representative of the United Kingdom stressed the importance of scientific review and assessment as part of the protocol process which would ensure that potential ozone depleting substances not subject to regulation, could be considered for subsequent control. In this connection, information on the trade and production of such substances also needed to be obtained. The representative of Sweden noted that a number of elements to be included in a protocol were at hand and he stressed the need

to arrive at considerable results at this meeting. The point of departure must be an immediate freeze of the current level of production of CFCs world-wide. Every country should ensure at least to freeze its emissions of CFCs at the current levels. He noted the intention of his country to substantially cut its use of CFCs but suggested that developing countries should be allowed increased use of these chemicals. Even so, he said, such increases should also have limitations placed upon them.

12. The representative of the United States called for the development of a strong protocol and pointed out that in the intervening months since the Vienna Group last met a further quarter million tons of CFCs had been released to the atmosphere. The representative warned of reliance on methane as a mitigator of ozone depletion in view of the uncertainties connected with methane emissions and the shortness of its atmospheric residence time compared with that of the ozone-depleting CFCs. He referred to the adverse effects of ozone depletion and climate warming and conveyed the opinion of the public in his country which was one of dissatisfaction with the slowness of negotiations on a protocol, the limited number of ratifications of the Vienna Convention and the reluctance of some delegates to address the need for long term reductions. He noted that many in the U.S. felt that some other nations were more concerned with short-term economic gains instead of the well-being of future generations - as evidenced by the presence of industry representatives on their delegations. By contrast, he noted the willingness of the chemical industry in the United States to develop substitutes and support control measures. He cited the US proposal as a prudent plan for the future based not on panic but on rational concern. Using the analogy of bridge building, he said it was not necessary to prove with certainty that the bridge would collapse in order to build in safeguards. If we are to err, the representative concluded, let us err on the side of caution.

13. The representative of Japan said that in considering concrete regulatory measures it should be ensured that they are realistic, flexible and soundly based on scientific knowledge. He said it would be realistic to establish immediate measures such as regulations on CFCs 11 and 12 and to consider to control other substances to be determined on the basis of scientific review. The representative of Argentina noted his country's concern regarding the adverse effects of ozone layer depletion, particularly with respect to the

11 & 12

currently observed ozone depletion over Antarctica which extended almost to the southern borders of Argentina. He called for flexibility in the development of a protocol to ensure concensus. He noted that most of the chemical pollution affecting the ozone layer came from industrialized countries and said that developing countries could not be expected to control emissions to the same extent as developed countries. It is thought that the proposal establishing a global limit on emission discriminates against the developing countries which are in point of fact those that produce the least contamination, since more than 80 per cent of the contamination which produces or can produce a reduction in the ozone layer originates from the industrialized countries. It is not possible, therefore to seek to control the emission of the developing countries to the same degree as those of the industrialized countries which have achieved per capita levels several times higher than those of the developing countries. The system that is established should not exclude the developing countries, since to do so would promote the installation of production facilities in these countries. Special clauses must be drafted for the developing countries that take into account their particular situation and that, at a minimum, permit them to continue their production and emission at current levels, since these countries are not in a position to replace these substances, in addition to which they are experiencing a very difficult economic situation. Assistance must be provided to the developing countries for monitoring the ozone layer. The representative of Thailand said his country shared the common concern for the risks posed for the ozone layer. However, in addressing the problem there was a need to balance national development needs against other concerns and welcomed suggestions for special consideration to be given to developing countries. The representative of Australia referred to the high incidence of skin cancer in his country and the consequential interest there in having the ozone layer protected. He hoped that a protocol could be concluded as early as possible and that this would have the flexibility to be adapted as developing scientific knowledge indicated.

14. The delegate from the Commission of the European Communities expressed to the Working Group the latest position of the Community which was based on consideration of the particularly helpful informal note prepared by the Chairman at the Geneva session. The Community now supported the idea of an

early production freeze at current levels for producing countries and an import freeze for non-producing countries, together with a total ban on imports from countries not party to the Protocol. The Community also agreed that there should be a study into the feasibility and desirability of controlling adjusted production. It also recognised that, given the length of time needed for a first full review of the control measures, some reduction in production could be a desirable precautionary measure, provided that industry has a suitable time in which to adjust.

15. A representative of the European Environmental Bureau presented a statement on ozone depletion and climate changes on behalf of non-governmental organizations (NGOs). He observed that since the original introduction of this statement it has been joined by a total of more than 100 NGOs, located in more than 26 nations. The statement summarized NGO's views on the need for a rapid phase-out of emissions of CFCs and related substances and suggested a specific schedule (30% reduction within 18 months; 85% reduction within five years; near complete phase-out within 10 years) to protect public health and the environment and to create adequate incentives for development of safe substitutes, conservation techniques, etc.

16. In accordance with plans for the organization of work (noted earlier in the report) four Ad Hoc Working Groups met to discuss particular issues related to the development of a protocol. The reports of the Working Groups submitted to the Plenary Session of the Vienna Group follow in Part 2.

V. CONSIDERATION OF THE FIFTH REVISED DRAFT PROTOCOL ON THE CONTROL OF CHLOROFLUOROCARBONS

17. The Chairman then suggested that the plenary continue in structured debate and he posed two sets of four questions which he asked the experts to answer.

The first set of questions were:

1. What potential ozone-depleting substances should be the subject of regulatory measures?

2. What mechanism should be instigated for the inclusion of substances additional to those specified for initial regulatory action?
3. What is meant by 'production' and 'emission' relative to strategies to limit CFC releases to the atmosphere. How are each calculated and monitored, and how feasible is the implementation of each method of regulation?
4. Upon what base production figure should regulatory measures be established?

A summary of the responses to each of the above questions follows.

Question 1.

What potential ozone depleting substances should be the subject of regulatory measures?

There was a mixed response to this question. All experts agreed that CFC 11 and 12 should be subject to regulation. Some considered that perhaps initial regulatory measures should be restricted to these chemicals adopting a simple regulatory approach which could be quickly implemented in view of the seriousness of the situation. However, one expert in suggesting this approach said that it would not make sense to control some chemicals while ignoring others which had similar effects on the ozone layer and thus eventually all such substances must be candidates for regulation. Other experts suggested that a broader range of substances should become part of the initial regulations with one noting that he could provide figures to prove that regulation of CFC 11 and 12 alone was insufficient for ozone layer protection even with an eventual 95 per cent phase out. Many permutations were suggested from a list which included CFCs 11, 12, 113, 114, 115 carbon tetrachloride, methyl chloroform, methylene chloride, Halons 1211 and 1301. Several experts said that it might be necessary to draw up two lists of potential pollutants - one containing substances to be regulated in the short term, the other containing substances which might be regulated at a later time. As knowledge increased and particular risks were confirmed then substances could be transferred from one list to the other. The expert from Canada offered a specific approach for the consideration of the Vienna Group which provided a

longer term solution to ozone layer protection through control measures. The formula proposed called for the drawing up of a schedule of chemical substances as follows:

Schedule A: Chemicals with a significant impact on the ozone layer which should be immediately regulated.

Schedule B: Chemicals whose impact should be quantified with a view to regulation.

Schedule C: Chemicals subject to review to determine their potential to modify the ozone layer.

The expert suggested that should, for example, the manufacture and use of a chemical in Schedule C exceed 0.5 per cent of annual global emission limits (≙5 kilotons) it would be reclassified to Schedule B and likewise, if production and use of a Schedule B substance exceeds 2.0 per cent of global emission limits (≙20 kilotons) then it would move to Schedule A. The Group was informed that based on a calculation of production in kilotons multiplied by the ozone depletion weight the following substances contributed most to ozone depletion: CFC 12 33.6%, CFC 11 31.6%, CFC 113 10.1%, Halons 1211 and 1301 each 8.4%, methyl chloroform 6.7% and carbon tetrachloride which, although difficult to assess, probably exceeded 2% of ozone depletion, the limit suggested by Canada for substances to be included in Schedule A.

Question 2.

What measures should be instituted for the inclusion of substances additional to those specified for initial regulatory action?

A specific approach to the problem of identifying and including potential ozone depleting substances in a regulatory list was suggested by Canada and described in the previous section. Many experts found merit in the Canadian suggestion. Some, while not indicating what specific measures should be taken urged a flexibility of approach which would allow the inclusion of substances additional to those to be initially regulated under a protocol to the Vienna Convention. One expert said there was no bar to having several protocols but another said it was not desirable to renegotiate further protocols on other substances as it was time consuming and costly. Instead it would be prudent to anticipate ozone depletion effect of other chemicals now.

Question 3.

What is meant by 'production' and 'emission' relative to strategies to limit CFC releases to the atmosphere. How are each calculated and monitored, and how feasible is the implementation of each method of regulation?

One expert said it was essential to address both 'production' and 'emissions'; the former by an immediate freeze at current production and emission control based on what is used. He noted the willingness of his own country to instigate cuts in uses of chlorofluorocarbons.

A representative of the Commission of European Communities said that it preferred regulations to be based on production control. Other methods such as 'Adjusted Production' advocated by some and based on a formula: Production + imports - exports - substances recycled and destroyed, was in the Communities' opinion too complicated to implement effectively. He said that it would be necessary to examine the feasibility of an 'emission system' under the protocol to determine whether it could be incorporated into the regulatory measures at a later time. He considered that the text of Article 9 of the Vienna Convention, suitably adapted, could provide justification for this approach.

One expert suggested adoption of the term 'consumption' based on 'production + imports - exports'. He noted similarities of his suggestion with those previously proposed and defined as 'emissions' or as 'adjusted production'. The expert asked for more information on mechanisms for the destruction or collection of CFCs which was one of the elements of the adjusted production formula. The same expert later said that there appeared to be no existing technology for the destruction of used CFCs and to include such a term in the adjusted production formula was misleading. However, another expert said that although such technology did not at present exist, solvent destruction systems were technologically possible. If credit was given for substances recovered and destroyed it would provide a stimulus for technological advance. He drew the attention to the fact that there was not in the past a recongized potential threat to the ozone layer. Once this is now widely recognized, efforts should start to find new substitutes and to enforce appropriate linkage-proof standards and measures for disposal.

A representative of a developing country appealed for flexibility in the application of any agreed formula as, for example, in the case of 'adjusted production'. For his country, all factors in the equation were zero apart from that relating to imports. Most other experts answering this question favoured an approach based on emissions or adjusted production as a basis for regulatory measures. None, other than the European Commission, referred to the feasibility of implementation of its preferred regulatory approach relative to other methods. Several experts stressed the need for the development of acceptable substitutes for CFC 11 and 12.

Question 4.

Upon what base production figure should regulatory measures be established?

There was near unanimity in the responses to this question which was that initial regulations should be based on the best estimation of current (1985 or 1986) production figures. One expert said a three year average might be chosen and another said that in view of there being little precision in current scientific calculations any convenient year could be chosen as the base year. Another, however, said it preferred the base figure set significantly below current levels and would support any solution of this type suggested but would, however, reserve its position on actual figures until the convening of a diplomatic conference to adopt a protocol.

The Chairman then posed a second set of questions to participants as follows:

5. How can it be ensured that a protocol on CFCs will be fair to developing countries?
6. How is the question of trade dealt with?
7. Should sanctions be applied to non-compliers with the protocol consistent with international law?
8. How will the protocol be financed and administered?

The following is a summary of the answers given to the Chairman.

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Question 5.

How can it be ensured that a protocol on CFCs will be fair to developing countries?

One expert said it was important to encourage less-developed countries to involve themselves in ozone protection measures but also ensure that there remains a right for them to benefit from the use of the chemicals subject to regulation. It was necessary, said the expert, to quantify the potential ozone depletion caused by developing countries. However, another said that the contribution to ozone modification by developing countries was minimal and it was consequently not important to stress CFC use in developing countries and, in the development of a protocol, developing country needs could be met by excluding them from regulation. He said criteria could be established to determine the level where regulatory measures might be applied to developing countries. Another said that although developed countries should bear the initial costs of regulatory measures, eventually all nations had to assume the responsibility for ozone layer protection. Several experts said that it was important that a protocol ensures new technology and substitute chemicals are not denied to developing nations. Regional ozone monitoring networks should also be expanded said one. The same experts stressed the importance of developing countries being allowed additional use of the regulated chemicals consistent with their development plans and that adjustments to national emissions of developed countries should be made to maintain global emissions at an agreed level. One suggested that national emission limits should be based on country size and population and that degree of industrialization should not be a factor. Another expert drew attention to the problems faced by small countries which might suffer increased costs or reduced availability of chemicals if producing nations restricted exports in favour of continued domestic consumption under regulatory measures. He noted that small country industry had, of necessity, to follow larger countries in introducing new technology and that the time lag involved should be recognized in the application of regulations. He too, stressed the importance of ensuring the sharing of information on new technology and substitute chemicals. This view was supported by other experts.

Question 6.

How is the question of trade dealt with?

Proponents of emission controls suggested trade would not be an issue under their formula as a component for imports/exports was included and allowed a trade-off between domestic consumption and exports.

Question 7

Should sanctions be applied to non-compliers with the protocol? need to restrict exports from nonptes

Most experts stressed the need to restrict imports from non-parties to the protocol and that it was important to discourage movement of capital and facilities outside the protocol areas.

Question 8.

How will the protocol be financed and administered?

On financing and administration of the protocol, certain experts drew attention to the work at the first session of the Group on Institutional and Financial Matters, and in particular to Article IX of the revised text (Annex II to the report UNEP/WG.151/L.4) which makes clear that, since the convention and protocol will not necessarily have the same parties, expenditure under the latter would be charged exclusively against contributions from the parties to the protocol.

With respect to the financing of the Protocol, a representative of Argentina wished to restate his view that this burden must be borne mainly by those countries that are major producers and consumers of chlorofluorocarbons, on the principle that "whoever contaminates must pay", which in turn is a corollary of the principle of the international responsibility of states. He also wished to enter his reservations regarding the text of Article IX of the fifth Revised Draft. On the question of which ozone-modifying substances should be included in the Protocol, Argentina's position favours including

only the totally halogenated CFC, leaving for future treatment other substances capable of producing modifications so as to gradually approach the protection of the ozone layer.

Other experts recalled the view expressed at the first session to the effect that responsibility for implementation of the protocol should rest on major CFC producers and users.

18. Several experts made general statements on the content of a draft protocol on chlorofluorocarbons, particularly on that concerning control measures to be adopted.

19. Some experts cautioned that a short list of substances to be controlled might meet with acceptance by a larger number of delegations than a more comprehensive list of potential ozone depleting chemicals. The same expert together with several others noted that the entry into force of the protocol depended upon the entry into force of the Vienna Convention for the Protection of the Ozone Layer. The experts noted with regret that, to date, only eight states had ratified the Convention and unless the situation radically changed, it appeared unlikely that the protocol could come into force within a six or seven year period and that reductions of CFC production under the protocol would not occur for a decade. The states, themselves Parties to the Convention, urged others to ratify it as soon as possible. Another expert said that a short list of ozone depleting substances to be controlled would not answer the risk to the ozone layer and a long list of all the main ozone depleting substances should be controlled.

20. Another expert considered the document a useful background document that might form the basis of an agreement among states as it opened up a possibility for a convergence of views and this might enable rapid agreement at the next Vienna Group Session. However, he said it was first necessary to study the political and economic consequences of the proposed strategy before any commitment could be made.

21. Several experts responded by congratulating the Chairman for his work and asked that the draft text be included in a sixth revised draft protocol on the control of chlorofluorocarbons and annexed to the report of the Second Session of the Working Group for further consideration before the convening of a third meeting of the Vienna Group to finalize the protocol on chlorofluorocarbons, it being understood that in annexing the draft protocol, it did not imply its endorsement by any of the delegations participating in the meeting of the Vienna Group. The Chairman confirmed that Article II would include language indicating that decisions as to possible reductions would be on the basis of the most recent scientific and technological information.

22. One expert expressed preference of option 4/A. He pointed out that option 4/A. gives an appropriate solution to avoid having several protocols each time a substance needed to be included. But on the other hand, there remains an important aspect of the problem related to other potential threats to the ozone such as "green houses" effect. He hoped that the group will not fail to find ways and means for addressing this important question and that the Council of UNEP might have an important role to play in that connection.

23. Several experts cautioned that a short list of substances to be controlled might meet with acceptance by a larger number of delegations than a more comprehensive list of potential ozone depleting chemicals. Other experts noted, however, that meaningful protection of the ozone layer required control of those substances with the most serious potential to damage the ozone layer. Several others noted that the entry into force of the protocol depended upon the entry into force of the Vienna Convention for the Protection of the Ozon Layer. The experts noted with regret that, to date, only eight states had ratified the Convention and unless the situation radically changed, it appeared unlikely that the protocol could come into force within a six or seven year period and that reductions of CFC production under the protocol would not occur for a decade. The states, themselves Parties to the Convention, urged others to ratify it as soon as possible.

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at the next Vienna Group Session. However, he said it was first necessary to study the political and economic consequences of the proposed strategy before any commitment could be made.

25. In accordance with plans for the organization of work (noted earlier in the report) four Ad Hoc Working Groups met to discuss particular issues related to the development of a protocol. The reports of the Working Groups submitted to and noted by the Plenary Session of the Vienna Group can be found in Part 2 of the report - Report of the Ad Hoc Working Groups.

VI. OTHER BUSINESS

April session *

26. As the Vienna Group did not conclude its work during the Session by elaborating a protocol to the Vienna Convention on the control of chlorofluorocarbons, it requested UNEP to convene a third session in order that its work might be completed. After discussion, it was decided to request the Executive Director of UNEP to arrgane a third session of the Vienna Group from 27 April to 30 May 1987.

27. The Secretariat noted the wishes of the Group but informed them that much of the finance reserved by UNEP to enable sessions of the Vienna Group to be convened and to support the participation of developing country experts in the sessions was now exhausted. The Secretariat appealed for additional support from interested states to meet the costs of a third session of the Vienna Group. It was also reported to the Group that it was planned to hold the Diplomatic Conference to adopt the draft protocol in Montreal in September at the kind invitation of the Government of Canada.

Diplomatic conf to adopt protocol in Montreal in Sept.

28. The representative of Finland informed the Vienna Group that in their meeting in Helsinki on 25 February 1987, the Nordic Ministers of Environment recommended that each country prepares the necessary background material enabling them to see if a 25% reduction of CFC consumption can be realized before 1991. The aim is to prepare a joint Nordic reduction plan. This material shall be at hand in the next Minister Meeting in autumn 1987.

29. Experts also requested that the Secretariat ask the Executive Director of UNEP to remind all States of the importance of the further ratification and/or accessions to the Vienna Convention for the Protection of the Ozone Layer for its early entry into force and to inform the States of the urgency of the matter in view of the significant risk to which the ozone layer was being subjected.

VII. CLOSURE OF THE SESSION

30. There being no other business, the Chairman thanked participants for participating in the Session and for their efforts in attempting to reach agreement on the form of a draft protocol on chlorofluorocarbons. He expressed a wish that a further session bring convergence of views leading to agreement on the form and content of a draft protocol that could be adopted by all states. He thanked the Secretariat for its work in assisting the Chair and on their and the participants behalf thanked the Government of Austria for hosting the Session.

31. Responding to the Chairman many delegations warmly thanked him for his guidance during the session which had resulted in much progress being made particularly with regard to addressing the difficult issues on trade and to providing the protocol with a mechanism whereby scientific and technical assessments could be made and provided to the Parties so as to aid the efficient management of the protocol.

32. Speaking on behalf of the members of the European Economic Community, the representative of Belgium in thanking the Chairman and the Secretariat said the meeting had provided an important basis upon which further agreement might be developed and a valuable achievement realized. He said that Europe would be willing to undertake certain commitments on CFC management provided there was flexibility by other Parties and informed the Group that the important and urgent issue of ozone layer protection was on the agenda of the soon to meet European Council on Environmental Business.

33. The Chairman then wished participants a safe journey home and declared the session closed at 2.00 p.m. on Friday 27 February 1987.

PART 2: REPORT OF THE AD HOC WORKING GROUPS

I. SUMMARY OF THE DISCUSSION OF THE SCIENTIFIC WORKING GROUP ON:

A. SCIENTIFIC ASSESSMENTS

The recommendations contained within this summary are consistent with Annex I, Research and Systematic Observations, of the Vienna Convention for the Protection of the Ozone Layer. The following summary provides additional detail on the nature of the scientific assessment needed to service the protocol.

In order to provide the parties to a protocol an updated scientific assessment in the future, an "enhanced" commitment by all nations party to the Vienna Convention (or to the CFC protocol) will be required to (i) research, (ii) systematic observations and (iii) international scientific assessments. I particular, emphasis must be placed on international cooperation on the following topics:

1. Research:
   - (I) Theoretical modelling
   - (II)* Systematic observations
   - (III) Atmospheric measurements to test models
   - (IV) Laboratory studies of molecular and chemical properties
   - (V) Studies of emissions of natural and anthropogenically produced chemicals
   - (VI) Data/information exchanged
   - (VII) Effects studies

2. Systematic Observations

The "vital" next step is to implement 1.II*, namely deployment of state-of-the-art well-calibrated instruemets at a network of ground-based stations designed to:

- (I) Detect any change in the chemical composition or physical structure of the atmosphere (troposphere and stratosphere).
- (II) Link "cause and effect" which will require utilization of multi-dimensional models.

This network would systematically observe the total column abundance of ozone, and the vertical distribution of temperature, ozone and a number of chemical species containing chlorine, nitrogen and hydrogen. This network of approximately 6-8 ground-based stations which does not currently exist is technically feasible, would require a significant effort to implement. This network will complement current and planned satellite observing systems which will provide the required global perspective.

3. Scientific Assessments:

There was a concensus view that the current organizational structure involving UNEP and WMO has been, and would continue to be, satisfactory for developing timely, comprehensive and understandable scientific assessments. Therefore, the parties to the protocol (convention) could request UNEP and WMO seek means through which a scientific assessment described below might be performed 15 months prior to the time at which the information is needed. The assessment will be in two parts:

(I) Major international scientific assessment of the physical and chemical processes controlling ozone consistent with the scope and detail of the recent UNEP/NASA/WMO/CEC/BMFT/NOAA/FAA report every 4 years with broadened participation from the USSR, Japan and developing countries. This will involve the participation of 150-200 scientists. In addition a comparable assessment of the effects of ozone modification on human health, and the environment, including climate change.

(II) The reports discussed in 3.I should be summarized by the UNEP CCOL within 3 months. This would translate long and highly technical assessments into a more understandable short document for policymakers.

B. CFC DESTRUCTION AND COLLECTION

The Scientific Working Group discussed whether there were practical technologies for CFC destruction or collection. One expert said that it was better not to produce the chemicals rather than be concerned over how they should be destroyed. Information was given on the possible destruction of CFCs by incineration and by chemical destruction in rigid foam production.

Incineration of CFCs appears to be possible scientifically and has been achieved technologically on an experimental basis. It has not yet been applied on a wide spread operational basis. The energy efficiency and cost of such techniques is not yet known.

C. CHEMICAL COMPOUNDS CONTAINING CHLORINE WHICH MODIFY ATMOSPHERIC OZONES

Substances

The working group discussd which halogenated chemicals were most responsible for ozone depletion. Factors governing the relative efficiency of the compounds to deplete ozone are recognized to be:

(1) Rate of release of compound into the atmosphere

(2) Fraction of compound released at ground level that reaches the stratosphere

(3) Efficiency of the compound to destroy ozone once in the stratosphere

The working group agreed that the following list of chemicals currently represents, in priority order, the greatest potential threat to ozone depletion:

Substances in order of harmfulness

(1) CFC - 12

(2) CFC - 11

(3) CFC - 113

(4) Halons 1211 and 1301

(5) CH_3CCl_3

(6) CCl_4

(7) CFC - 22

(8) CFC - 114

(9) CFC - 115

However, predicting ozone changes in the future is very dependent upon the magnitude of future release rates into the atmosphere of each of these chemicals. Other chemicals may need to be considered in the future.

II. REPORT OF THE AD HOC WORKING GROUP ON TRADE ISSUES

The Sub-Group on Trade Issues considered the compatibililty of measures for controlling trade between parties to the Protocol, and trade between parties and non-parties, with the rules of international trade, especially the GATT. The Sub-Group provisionally concluded that, provided it was clearly demonstrated that the measures were not arbitrary or unjustifiable, any discrimination in the treatment between parties and non-parties would be permissible under the exceptions provided by Article XX paragraph (b) of the GATT (concerning protection of human, animal or plant life or health) and possibly also paragraph (g) (concerning conservation of exhaustible natural resources). However, it was the opinion of several experts that discrimination would not arise at all, if the trade restrictions regarding non-parties did not apply to non-parties that were able to demonstrate full compliance with the control measures provided for in the protocol. Reference was also made to certain precedents, namely the Convention on international Trade in Endangered Species of Wild Flora and Fauna and the London Dumping Convention Resolution 29 (10) on Export of Wastes for Disposal at Sea. Possible implications of the Protocol's trade measures in the light of UNCTAD guidelines concerning transfer of technology were also discussed. The issue of exports to non-parties was raised and it was agreed that the issue deserved further deliberation. The Sub-Group concluded that it would be important for all delegations to further consider these trade issues prior to the next session.

The Sub-Group has provided the following text, which they consider a useful aid to further deliberation on the subject by all delegations before the next session of the Working Group:

Article on Control of Trade

1. Within [ ] years after entry into force of this Protocol, each Party shall ban the import of the controlled substances in bulk from any state not party to this protocol [, unless such state is in full compliance with Article [ ] and this Article and has submitted information to that effect as specified in Article [ ]].

CFC's

2. Within [ ] years after entry into force of this Protocol, each Party shall [restrict] [ban] imports of products containing substances controlled by this Protocol from any state not party to this Protocol [unless such state is in full compliance with Article [ ] and this Article, and has submitted information to that effect as specified in Article [ ]]. At least one year prior to the time such measures take effect, the Parties shall elaborate in an annex a list of the products to be [restricted] [banned] and standards for applying such measures uniformly by all Parties.

Substances containing CFC's

3. The Parties shall jointly study the feasibility of restricting or banning imports of products produced with substances controlled by this Protocol from any state not party to this Protocol [, unless such state is in full compliance with Article [ ] and this Article and has submitted information to that effect as specified in Article [ ]].

4. Within [ ] years after entry into force of this Protocol, each Party shall [ban] [restrict] [discourage] the export of technologies [to non-parties] for the production and use of the controlled substances [, unless such state is in full compliance with Article [ ] and this Article and has submitted information to that effect as specified in Article [ ]].

5. The Parties shall not provide [to non-parties] bilateral or multilateral subsidies, aid, credits, guarantees, or insurance programs for the export of products, equipment, plants, or technology for the production or use of the controlled substances [, unless such state is in full compliance with Article [ ] and this Article and has submitted information to that effect as specified in Article [ ]].

[6. The provisions of paragraphs 4 and 5 shall not apply to products, equipment, plants or technologies which contribute to the protection of the ozone layer.]

LDC's

III. REPORT OF THE AD HOC WORKING GROUP ON THE SPECIAL SITUATION OF DEVELOPING COUNTRIES

1. There was an agreement within the Group that it had to focus its attention on the following topics:

Topic 1: Room to be allowed for developing countries in respect of activities controlled by this Protocol

Topic 2: Assistance to be received by developing countries

Topic 3: Financial questions

2. There were useful discussions conducted on each of these topics where a common ground was reached concerning Topics 2 and 3. On Topic 1 it was agreed that further consideration was required at a future time. This report reflects the results reached by the Working Group on each Topic:

Topic 1: Room to be allowed for developing countries for activities controlled by this report

3. After lengthy discussion, the Working Group agreed that the summing up by its Chairman who reflected the results reached, should be included in this report annexed to the informal working papers it had before it. Following is the text of the Chairman's summing up:

First: Useful and constructive discussions took place under this topic. Different views were expressed. The Group had before it an informal working paper submitted by the Chairman as a basis for discussion (Annex A)*. The Group also formulated a sub-group which produced another paper, discussed and amended (Annex B)**.

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* See Annex A to this report

Second: There was general awareness of the fact that this topic was being discussed at length, and in detail, for the first time since the work began in preparation for the Convention and the Protocol. It was also felt that discussion threw light on several ambiguous points. It revealed a need for additional time which would allow the members of the Group to go back to their capitals seeking advice and additional information. This would also allow the Group to follow the progress in the work of other related working groups such as the one concerned with control measures and the other concerned with trade implications.

Third: Discussions showed general understanding within the Group on some points which, it was agreed, should be reflected in the report. These points are:

1. The work of the Group has been carried out within the framework of the spirit and objectives of the Convention on the Protection of the Ozone Layer and taking account of the negotiations aimed at developing a protocol to the Convention.

2. The element of equity, in control measures, would encourage more countries to adhere to the protocol and would facilitate implementation.

3. There was general recognition that special consideration should be given to the situation of developing countries which did not contribute, due to the minimal level of their emissions, to the potential threat to the ozone layer.

The Group also recalled Resolution 2 of the Conference of Plenipotentiaries on the Protection of the Ozone Layer, dated 22 March 1985, which referred to the relationship between the level of industrialization of a state and its responsibilities for the protection of the ozone layer.

4. The Group recognized that there is a need to identify the real potential needs of the developing countries for chemical substances that

would be controlled by the Protocol. In this connection, it was felt that governments, assisted by UNEP, may be able to respond to that need.

5. It was obvious to the Group that there were still several questions which needed further study and more precision such as:

- Global Emissions Limit
- Actual Global Level of Emissions
- National Emissions Limit
- Actual National Limit of Emissions

Fourth: The Group recommended that this Report, together with its Annexes should be made available for possible use by Delegations, and for the future reference for the "Vienna Group".

Topic 2: Assistance to be received by developing countries

4. (See Annex C)

Topic 3: Financial questions

5. (See Annex D)

ANNEX A TO THE REPORT OF THE WORKING GROUP ON
THE SPECIAL SITUATION OF DEVELOPING COUNTRIES

1. Room to be allowed for developing countries for activities controlled by this protocol

In order to establish room for extended activities for developing countries in matters related to this protocol, there is a need to identify the following:

First A GLOBAL Limit for Activities Affecting the Ozone Layer (a red line)

Second An Actual Global Level of Activities