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09/22/1987 (11:00pm) Domestic Policy Council Meeting re  
NAPAP and Stratospheric Ozone (TGM Attended)

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DOMESTIC POLICY COUNCIL

MINUTES

September 22, 1987

11:00 a.m.

208 Old Executive Office Building

Participants: Messrs. Meese, Bowen, Pierce, Smart, Martin, Wright, Ms. Risque, Messrs. Bauer, Bledsoe, Hill, Ms. King, Messrs. Gibson, Green, Moore, Rona, Wallis, Campbell, Galebach, Kulp.

National Acid Precipitation Assessment Program (NAPAP)

Attorney General Meese turned the meeting over to Mr. Hill, who introduced Mr. Kulp, the director of research for the NAPAP. Mr. Kulp reviewed the status of the NAPAP effort, pointing out that the 10-year project is at its half-way point. A final report will be due in 1990. He said the project was undertaken because of problems that arose over uncertainties about the scientific aspects of acid rain. He said the interim report to be discussed at this meeting reflects a scientifically sound effort by the U.S., including Canadian participation. He felt the criticisms appearing in the press are ill-founded and not generally supported throughout the scientific community.

Mr. Kulp reviewed, using a series of slides, the major conclusions contained in the interim report. These included findings that acid rain effects have been less than expected on crops, forests, aquatics, materials, and human health. He said the report concludes that emerging technology can help ensure even fewer adverse effects on the above, in addition to improving visibility. He described the use of pH factors for measuring aquatic effects, mentioning that a pH level of 5 was used as the point below which acidic levels become unacceptable.

Mr. Kulp also described some of the precursors to acid rain, including SO<sub>2</sub>, NO<sub>x</sub>, VOCs, and their sources. He reviewed the historical levels of emissions of these precursors between 1900 and the present time. He also projected future emissions of SO<sub>2</sub> from utilities in the U.S., and described a wet deposition pH contour map. He cited the growing ozone pattern in rural parts of the country, and said the effects of both ozone and acidic deposition are relatively less harmful to crops. Mr. Kulp said the ozone and acidic deposition effects on tree seedlings are also minimal, and that except for some forests at high altitude levels there is little danger to forests. He reviewed acidic

deposition profiles in two Adirondack lakes to illustrate that there have been no major effects on these bodies of water, again except for lakes at high altitudes. He cited statistics about the percentage of lakes with pH levels of less than 5.0 in the areas studied.

Mr. Kulp reviewed several of the remaining uncertainties, such as the development of emerging technology which could ensure control over emissions that might cause acid rain. He said that some of these uncertainties are probably resolvable by 1990, while others will not be. The Council members thanked Mr. Kulp for the very informative briefing, and said they would expect the conclusions contained in the report to be helpful in developing future acid rain and related policies.

THE WHITE HOUSE  
WASHINGTON

BWS  
CC TGM  
MLM  
BH

CABINET AFFAIRS STAFFING MEMORANDUM

Date: 9/21/87 Number: 490,696 Due By: \_\_\_\_\_

Subject: Domestic Policy Council Meeting -- Tuesday, September 22, 1987 --  
11:00 a.m. -- Room 208 OEOB.

ALL CABINET MEMBERS	Action	FYI		Action	FYI
Vice President	<input type="checkbox"/>	<input type="checkbox"/>	<u>CEA</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
State	<input checked="" type="checkbox"/>	<input type="checkbox"/>	CEQ	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Treasury	<input checked="" type="checkbox"/>	<input type="checkbox"/>	OSTP	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Defense	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Justice	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Interior	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Agriculture	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Commerce	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Labor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Carlucci	<input checked="" type="checkbox"/>	<input type="checkbox"/>
HHS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Cribb	<input checked="" type="checkbox"/>	<input type="checkbox"/>
HUD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Bauer	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Transportation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dawson (For WH Staffing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Energy	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Education	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Chief of Staff	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
OMB	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
UN	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
USTR	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
CIA	<input type="checkbox"/>	<input type="checkbox"/>	Executive Secretary for:		
EPA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DPC	<input checked="" type="checkbox"/>	<input type="checkbox"/>
GSA	<input type="checkbox"/>	<input type="checkbox"/>	EPC	<input type="checkbox"/>	<input checked="" type="checkbox"/>
NASA	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
OPM	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
SBA	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
VA	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

REMARKS: The Domestic Policy Council will meet on Tuesday, September 22, 1987 at 11:00 a.m. in Room 208 of the Old Executive Office Building. The agenda and background materials are attached for your review.

RETURN TO:

☒ Nancy J. Risque  
Cabinet Secretary  
456-2823  
(Ground Floor, West Wing)


☐ Associate Director  
Office of Cabinet Affairs  
456-2800  
(Room 235, OEOB)

THE WHITE HOUSE

WASHINGTON

September 21, 1987

MEMORANDUM FOR THE DOMESTIC POLICY COUNCIL

FROM: RALPH C. BLEDSON   
SUBJECT: Council Meeting on September 22, 1987

Attached are an agenda and materials for the Domestic Policy Council meeting scheduled for Tuesday, September 22, 1987 at 11:00 a.m. in Room 208 of the Old Executive Office Building. The topic to be discussed is the National Acid Precipitation Assessment Program (NAPAP) report.

National Acid Precipitation Assessment Program (NAPAP) Report

A briefing on the interim report of the NAPAP will be presented by Dr. Lawrence Kulp, Director of Research for the Program. The NAPAP was authorized by Congress under the Acid Precipitation Act of 1980. The interim assessment is part of a ten-year research plan conducted by an interagency task force. The report was criticized by some environmental groups and some people in Canada because they felt it minimized the harmful effects of acid rain. A copy of the Executive Summary is enclosed.

Attachment

THE WHITE HOUSE

WASHINGTON

DOMESTIC POLICY COUNCIL

Tuesday, September 22, 1987

11:00 a.m.

Old Executive Office Building, Room 208

AGENDA

1. National Acid Precipitation    -- Dr. J. Laurence Kulp  
Assessment Program (NAPAP)       Director of Research  
National Acid Precipitation  
Assessment Program

\* 100 page book  
given to TGM

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THE NATIONAL ACID PRECIPITATION ASSESSMENT PROGRAM

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INTERIM ASSESSMENT  
THE CAUSES AND EFFECTS OF ACIDIC DEPOSITION

Volume I

EXECUTIVE SUMMARY

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THE WHITE HOUSE

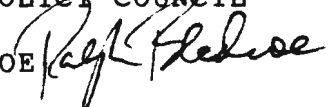
WASHINGTON

September 21, 1987

MEMORANDUM FOR THE DOMESTIC POLICY COUNCIL

FROM:

RALPH C. BLEDSOE



SUBJECT:

Stratospheric Ozone Protocol

For your information, attached is a copy of the final act, which includes the protocol on protection of the ozone layer that was signed in Montreal September 16, 1987 by Lee Thomas, head of the U.S. delegation. Lee briefly reviewed the features of the protocol at the Council meeting this afternoon. The ratification process for the protocol will begin as soon as practicable.

MONTREAL PROTOCOL ON  
SUBSTANCES THAT DEplete THE OZONE LAYER

FINAL ACT

1987

## FINAL ACT

1. The Conference of Plenipotentiaries on the Protocol on Chlorofluorocarbons to the Vienna Convention for the Protection of the Ozone Layer was convened by the Executive Director of the United Nations Environment Programme (UNEP) pursuant to decision 13/18 adopted by the Governing Council of UNEP on 23 May 1985.

2. The Conference met at the Headquarters of the International Civil Aviation Organization, Montreal, with the kind support of the Government of Canada, from 14 to 16 September 1987.

3. All States were invited to participate in the Conference. The following States accepted the invitation and participated in the Conference:

Algeria, Argentina, Australia, Austria, Belgium, Brazil, Burkina Faso, Byelorussian Soviet Socialist Republic, Canada, Chile, China, Colombia, Congo, Costa Rica, Czechoslovakia, Denmark, Democratic Yemen, Egypt, Finland, France, Germany, Federal Republic of, Ghana, Greece, Indonesia, Israel, Italy, Japan, Kenya, Korea, Republic of, Luxembourg, Malaysia, Mauritius, Mexico, Morocco, Netherlands, New Zealand, Nigeria, Norway, Panama, Peru, Philippines, Portugal, Senegal, Spain, Sweden, Switzerland, Thailand, Togo, Tunisia, Uganda, Ukrainian Soviet Socialist Republic, Union of Soviet Socialist Republics, United Kingdom of Great Britain and Northern Ireland, United States of America, Venezuela.

4. The European Economic Community also participated.

5. Observers from the following States attended the proceedings of the Conference:

Dominican Republic, Ecuador, Hungary, India, Kuwait, Poland.

6. Observers from the following United Nations bodies, specialized agencies, intergovernmental and non-governmental organizations also attended the Conference:

World Meteorological Organization (WMO), General Agreement on Tariffs and Trade (GATT), International Civil Aviation Organization (ICAO), Organization of African Unity (OAU), Council of the European Communities (CEC), Organization for Economic Co-operation and Development (OECD), International Chamber of Commerce (ICC), Federation of European Aerosol Associations, European Chemical Industry Federation, Chemical Manufacturers Association, Natural Resources Defense Council, World Resources Institute, Environmental Defense Fund, Greenpeace, Friends of the Earth, Seattle Foundation (Canada), Mammoth International Humanitarian Societies Square Projects Inc. (Canada), Watto Laboratories International (Canada), Dr. F.A. Homonnay and Associates (Canada), International Organization of Automobile Manufacturers, Alliance for Responsible CFC Policy, Air-Conditioning and Refrigeration Institute (USA), Environmental Protection Agency (USA), Institute for European Environment Policy, National Fire Protection Association, Dupont Canada, The Beloff Group (Canada), Produits Chimiques Allied Canada Inc., United States Air Force.

7. The Conference was formally opened by Dr. Mostafa K. Tolba, the Executive Director of UNEP. In the course of the inaugural ceremony, the Conference heard a welcoming address by the Honourable Tom McMillan, P.C., M.P., Minister of the Environment, on behalf of the Government of Canada.

8. Dr. Mostafa K. Tolba served as Secretary-General of the Conference and Dr. Iwona Rummel-Bulska (UNEP) served as Executive Secretary.

9. The Conference unanimously elected Ambassador W. Lang (Austria) as its President.

10. The Conference also elected the following officers:

Vice-Presidents:       Ambassador E. Hawas (Egypt)  
                              Dr. V. Zakharov (Union of Soviet Socialist Republics)

Rapporteur:             Mr. C.R. Roque (Philippines)

11. The Conference adopted the following agenda:

1. Opening of the Conference.

2. Organizational matters:

- (a) Adoption of the rules of procedures;
- (b) Election of the President;
- (c) Election of Vice-Presidents and Rapporteur;
- (d) Adoption of the agenda;
- (e) Appointment of the members of the Credentials Committee;
- (f) Appointment of the members of the Drafting Committee;
- (g) Organization of the work of the Conference.

3. Consideration of the draft Protocol to the Vienna Convention for the Protection of the Ozone Layer.
4. Report of the Credentials Committee.
5. Adoption of the Protocol to the Vienna Convention for the Protection of the Ozone Layer.
6. Adoption of the Final Act of the Conference.
7. Signature of final instruments.
8. Closure of the Conference.

12. The Conference adopted as its rules of procedure document UNEP/IG.79/2 proposed by the secretariat.

13. In conformity with the rules of procedure, the Conference established the following Committees:

Committee of the Whole:

Chairman: The President of the Conference

General Committee:

Chairman: The President of the Conference

Members: The Vice-Presidents of the Conference, the Rapporteur and the Chairman of the Drafting Committee

Drafting Committee:

Chairman: Mr. Jon J. Allen (Canada)

Members: Argentina  
Australia  
France  
Japan  
United Kingdom  
United States

Credentials Committee:

Chairman: Ambassador Jose M. Bustani (Brazil)

Members: Finland  
Germany, Federal Republic of  
Indonesia  
Kenya  
Mexico  
Norway

14. The main documents which served as the basis for the deliberations of the Conference were:

- Seventh Revised Draft Protocol on [Chlorofluorocarbons] [and Other Ozone Depleting Substances], UNEP/IG.93/3 and Rev. 1;
- Reports of the Ad Hoc Working Group of Legal and Technical Experts for the Elaboration of a Protocol on Chlorofluorocarbons to the Vienna Convention for the Protection of the Ozone Layer (Vienna Group), UNEP/WG.151/L.4, UNEP/WG.167/2 and UNEP/WG.172/2.

15. In addition, the Conference had before it a number of other documents that were made available to it by the Secretariat of UNEP.

16. The Conference approved the recommendation of its Credentials Committee that the credentials of the representatives of the participating States as listed in paragraph 3 should be recognized as being in order.

17. On the basis of the deliberations of the Committee of the Whole, the Conference, on 16 September 1987, adopted the Montreal Protocol on Substances that Deplete the Ozone Layer. The Protocol, which is appended to this Final Act, will be open for signature at the Ministry for External Affairs of Canada in Ottawa from

17 September 1987 to 16 January 1988 and at the United Nations Headquarters in New York from 17 January 1988 to 15 September 1988.

18. The Conference also adopted the following resolutions which are appended to this Final Act:

1. Resolution on the Montreal Protocol.
2. Resolution on the exchange of technical information.
3. Resolution on the reporting of data.
4. Tribute to the Government of Canada.

IN WITNESS WHEREOF the representatives have signed this Final Act.

DONE at Montreal, this sixteenth day of September one thousand nine hundred and eighty seven in one original in the Arabic, Chinese, English, French, Russian and Spanish languages, each language version being equally authentic. The original text will be deposited with the Secretary-General of the United Nations.

## 1. RESOLUTION ON THE MONTREAL PROTOCOL

The Conference,

Having adopted the Montreal Protocol on Substances that Deplete the Ozone Layer,

Noting with appreciation that the Protocol was opened for signature in Montreal on 16 September 1987,

Recalling the Vienna Convention for the Protection of the Ozone Layer, adopted on 22 March 1985,

Bearing in mind the Resolution of the Conference of Plenipotentiaries on the Protection of the Ozone Layer adopted on the same day which urged in the sixth operative paragraph "all States and regional economic integration organizations, pending entry into force of a protocol, to control their emissions of CFCs, inter alia in aerosols, by any means at their disposal, including controls on production or use, to the maximum extent practicable",

1. Calls upon all States and regional economic integration organizations that have not yet done so to implement the sixth paragraph, bearing in mind the special situation of the developing countries;
2. Appeals to all States to become Parties to the Vienna Convention for the Protection of the Ozone Layer;
3. Urges all States and regional economic integration organizations, including those that have not participated in this Conference, to sign and become Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer;
4. Requests the Executive Director of the United Nations Environment Programme to forward this Resolution to the Secretary General of the United Nations and to circulate it to all States and regional economic integration organizations.

## 2. RESOLUTION ON THE EXCHANGE OF TECHNICAL INFORMATION

The Conference,

Having adopted the Montreal Protocol on Substances that Deplete the Ozone Layer,

Realizing the importance of reducing as quickly as possible the emissions of these substances,

Recognizing the need for an early exchange of information on technologies and strategies to achieve this,

1. Requests the Executive Director of the United Nations Environment Programme (UNEP), pending the first meeting of the Parties, to make appropriate arrangements to facilitate the exchange of information on technology referred to in Articles 9 and 10 of the Protocol;

2. Appeals to interested States and regional economic integration organizations to sponsor, at the earliest opportunity, in cooperation with UNEP, a workshop with the aim of:

- (a) exchanging information on technologies and administrative strategies for reducing emissions of the substances listed in Annex A to the Protocol and for developing alternatives, taking into account paragraph 2 of Annex II to the Vienna Convention for the Protection of the Ozone Layer; and
- (b) identifying areas in which further research and technical development are required,

3. Urges all interested parties to participate in and contribute to such a workshop and to make expeditious use of the information so gained in order to reduce the emissions of those substances and to develop alternatives.

### 3. RESOLUTION ON REPORTING OF DATA

The Conference,

Having adopted the Montreal Protocol on Substances that Deplete the Ozone Layer,

Convinced that the timely reporting of complete and accurate data on the production and consumption of controlled substances is critical to the effective and efficient implementation of this Protocol,

1. Calls upon all Signatories to take, expeditiously, all steps necessary to acquire data and report on the production, import and export of controlled substances in a complete and timely fashion in accordance with Article 7 of the Protocol and taking into account paragraph 1 of Article 4 of the Vienna Convention for the Protection of the Ozone Layer;
2. Invites Signatories to consult with other Signatories, and to seek advice and assistance from the United Nations Environment Programme (UNEP) and other relevant international organizations, as necessary, in designing and implementing data reporting systems;
3. Calls upon the Executive Director of UNEP to convene, within six months of the adoption of this Resolution, a meeting of governmental experts with the assistance of experts from relevant international organizations to make recommendations for the harmonization of data on production, imports and exports to ensure consistency and comparability of data on controlled substances.

#### 4. TRIBUTE TO THE GOVERNMENT OF CANADA

The Conference,

Having met in Montreal from 14 to 16 September 1987 at the gracious invitation of the Government of Canada,

Convinced that the efforts made by the Government of Canada and by the civic authorities of Montreal in providing facilities, premises and other resources contributed significantly to the smooth conduct of its proceedings,

Deeply appreciative of the courtesy and hospitality extended by the Government of Canada and the City of Montreal to the members of the delegations, observers and the secretariat attending the Conference,

Expresses its sincere gratitude to the Government of Canada, to the authorities of Montreal and, through them, to the Canadian people and in particular to the population of Montreal for the cordial welcome which they accorded to the Conference and to those associated with its work and for their contribution to the success of the Conference.

# MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete THE OZONE LAYER

The Parties to this Protocol,

Being Parties to the Vienna Convention for the Protection of the Ozone Layer,

Mindful of their obligation under that Convention to take appropriate measures to protect human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer,

Recognizing that world-wide emissions of certain substances can significantly deplete and otherwise modify the ozone layer in a manner that is likely to result in adverse effects on human health and the environment,

Conscious of the potential climatic effects of emissions of these substances,

Aware that measures taken to protect the ozone layer from depletion should be based on relevant scientific knowledge, taking into account technical and economic considerations,

Determined to protect the ozone layer by taking precautionary measures to control equitably total global emissions of substances that deplete it, with the ultimate objective of their elimination on the basis of developments in scientific knowledge, taking into account technical and economic considerations,

Acknowledging that special provision is required to meet the needs of developing countries for these substances,

Noting the precautionary measures for controlling emissions of certain chlorofluorocarbons that have already been taken at national and regional levels,

Considering the importance of promoting international co-operation in the research and development of science and technology relating to the control and reduction of emissions of substances that deplete the ozone layer, bearing in mind in particular the needs of developing countries,

HAVE AGREED AS FOLLOWS:

## ARTICLE 1: DEFINITIONS

For the purposes of this Protocol:

1. "Convention" means the Vienna Convention for the Protection of the Ozone Layer, adopted on 22 March 1985.
2. "Parties" means, unless the text otherwise indicates, Parties to this Protocol.
3. "Secretariat" means the secretariat of the Convention.
4. "Controlled substance" means a substance listed in Annex A to this Protocol, whether existing alone or in a mixture. It excludes, however, any such substance or mixture which is in a manufactured product other than a container used for the transportation or storage of the substance listed.
5. "Production" means the amount of controlled substances produced minus the amount destroyed by technologies to be approved by the Parties.
6. "Consumption" means production plus imports minus exports of controlled substances.
7. "Calculated levels" of production, imports, exports and consumption means levels determined in accordance with Article 3.
8. "Industrial rationalization" means the transfer of all or a portion of the calculated level of production of one Party to another, for the purpose of achieving economic efficiencies or responding to anticipated shortfalls in supply as a result of plant closures.

## ARTICLE 2: CONTROL MEASURES

1. Each Party shall ensure that for the twelve-month period commencing on the first day of the seventh month following the date of the entry into force of this Protocol, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Group I of Annex A does not exceed its calculated level of consumption in 1986. By the end of the same period, each Party producing one or more of these substances shall ensure that its calculated level of production of the substances does not exceed its calculated level of production in 1986, except that such level may have increased by no more than ten per cent based on the 1986 level. Such increase shall be permitted only so as to satisfy the basic domestic needs of the Parties operating under Article 5 and for the purposes of industrial rationalization between Parties.

2. Each Party shall ensure that for the twelve-month period commencing on the first day of the thirty-seventh month following the date of the entry into force of this Protocol, and in each twelve month period thereafter, its calculated level of consumption of the controlled substances listed in Group II of Annex A does not exceed its calculated level of consumption in 1986. Each Party producing one or more of these substances shall ensure that its calculated level of production of the substances does not exceed its calculated level of production in 1986, except that such level may have increased by no more than ten per cent based on the 1986 level. Such increase shall be permitted only so as to satisfy the basic domestic needs of the Parties operating under Article 5 and for the purposes of industrial rationalization between Parties. The mechanisms for implementing these measures shall be decided by the Parties at their first meeting following the first scientific review.

3. Each Party shall ensure that for the period 1 July 1993 to 30 June 1994 and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Group I of Annex A does not exceed, annually, eighty per cent of its calculated level of consumption in 1986. Each Party producing one or more of these substances shall, for the same periods, ensure that its calculated level of production of the substances does not exceed, annually, eighty per cent of its calculated level of production in 1986. However, in order to satisfy the basic domestic needs of the Parties operating under Article 5 and for the purposes of industrial rationalization between Parties, its calculated level of production may exceed that limit by up to ten per cent of its calculated level of production in 1986.

4. Each Party shall ensure that for the period 1 July 1998 to 30 June 1999, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Group I of Annex A does not exceed, annually, fifty per cent of its calculated level of consumption in 1986. Each Party producing one or more of these substances shall, for the same periods, ensure that its calculated level of production of the substances does not exceed, annually, fifty per cent of its calculated level of production in 1986. However, in order to satisfy the basic domestic needs of the Parties operating under Article 5 and for the purposes of industrial rationalization between Parties, its calculated level of production may exceed that limit by up to fifteen per cent of its calculated level of production in 1986. This

paragraph will apply unless the Parties decide otherwise at a meeting by a two-thirds majority of Parties present and voting, representing at least two-thirds of the total calculated level of consumption of these substances of the Parties. This decision shall be considered and made in the light of the assessments referred to in Article 6.

5. Any Party whose calculated level of production in 1986 of the controlled substances in Group I of Annex A was less than twenty-five kilotonnes may, for the purposes of industrial rationalization, transfer to or receive from any other Party, production in excess of the limits set out in paragraphs 1, 3 and 4 provided that the total combined calculated levels of production of the Parties concerned does not exceed the production limits set out in this Article. Any transfer of such production shall be notified to the secretariat, no later than the time of the transfer.

6. Any Party not operating under Article 5, that has facilities for the production of controlled substances under construction, or contracted for, prior to 16 September 1987, and provided for in national legislation prior to 1 January 1987, may add the production from such facilities to its 1986 production of such substances for the purposes of determining its calculated level of production for 1986, provided that such facilities are completed by 31 December 1990 and that such production does not raise that Party's annual calculated level of consumption of the controlled substances above 0.5 kilograms per capita.

7. Any transfer of production pursuant to paragraph 5 or any addition of production pursuant to paragraph 6 shall be notified to the secretariat, no later than the time of the transfer or addition.

8. (a) Any Parties which are Member States of a regional economic integration organization as defined in Article 1(6) of the Convention may agree that they shall jointly fulfil their obligations respecting consumption under this Article provided that their total combined calculated level of consumption does not exceed the levels required by this Article.
- (b) The Parties to any such agreement shall inform the secretariat of the terms of the agreement before the date of the reduction in consumption with which the agreement is concerned.
- (c) Such agreement will become operative only if all Member States of the regional economic integration organization and the organization concerned are Parties to the Protocol and have notified the secretariat of their manner of implementation.

9. (a) Based on the assessments made pursuant to Article 6, the Parties may decide whether:
- (i) adjustments to the ozone depleting potentials specified in Annex A should be made and, if so, what the adjustments should be; and
  - (ii) further adjustments and reductions of production or consumption of the controlled substances from 1986 levels should be undertaken and, if so, what the scope, amount and timing of any such adjustments and reductions should be.
- (b) Proposals for such adjustments shall be communicated to the Parties by the secretariat at least six months before the meeting of the Parties at which they are proposed for adoption.
- (c) In taking such decisions, the Parties shall make every effort to reach agreement by consensus. If all efforts at consensus have been exhausted, and no agreement reached, such decisions shall, as a last resort, be adopted by a two-thirds majority vote of the Parties present and voting representing at least fifty per cent of the total consumption of the controlled substances of the Parties.
- (d) The decisions, which shall be binding on all Parties, shall forthwith be communicated to the Parties by the Depositary. Unless otherwise provided in the decisions, they shall enter into force on the expiry of six months from the date of the circulation of the communication by the Depositary.
10. (a) Based on the assessments made pursuant to Article 6 of this Protocol and in accordance with the procedure set out in Article 9 of the Convention, the Parties may decide:
- (i) whether any substances, and if so which, should be added to or removed from any annex to this Protocol; and
  - (ii) the mechanism, scope and timing of the control measures that should apply to those substances;
- (b) Any such decision shall become effective, provided that it has been accepted by a two-thirds majority vote of the Parties present and voting.
11. Notwithstanding the provisions contained in this Article, Parties may take more stringent measures than those required by this Article.

### ARTICLE 3: CALCULATION OF CONTROL LEVELS

For the purposes of Articles 2 and 5, each Party shall, for each Group of substances in Annex A, determine its calculated levels of:

- (a) production by:
  - (i) multiplying its annual production of each controlled substance by the ozone depleting potential specified in respect of it in Annex A; and
  - (ii) adding together, for each such Group, the resulting figures;
- (b) imports and exports, respectively, by following, mutatis mutandis, the procedure set out in subparagraph (a); and
- (c) consumption by adding together its calculated levels of production and imports and subtracting its calculated level of exports as determined in accordance with subparagraphs (a) and (b). However, beginning on 1 January 1993, any export of controlled substances to non-Parties shall not be subtracted in calculating the consumption level of the exporting Party.

### ARTICLE 4: CONTROL OF TRADE WITH NON-PARTIES

1. Within one year of the entry into force of this Protocol, each Party shall ban the import of controlled substances from any State not party to this Protocol.
2. Beginning on 1 January 1993, no Party operating under paragraph 1 of Article 5 may export any controlled substance to any State not party to this Protocol.
3. Within three years of the date of the entry into force of this Protocol, the Parties shall, following the procedures in Article 10 of the Convention, elaborate in an annex a list of products containing controlled substances. Parties that have not objected to the annex in accordance with those procedures shall ban, within one year of the annex having become effective, the import of those products from any State not party to this Protocol.
4. Within five years of the entry into force of this Protocol, the Parties shall determine the feasibility of banning or restricting, from States not party to this Protocol, the import of products produced with, but not containing, controlled substances. If determined feasible, the Parties shall, following the procedures in Article 10 of the Convention, elaborate in an annex a list of such products. Parties that have not objected to it in accordance with those procedures shall ban or restrict, within one year of the annex having become effective, the import of those products from any State not party to this Protocol.

5. Each Party shall discourage the export, to any State not party to this Protocol, of technology for producing and for utilizing controlled substances.
6. Each Party shall refrain from providing new subsidies, aid, credits, guarantees or insurance programmes for the export to States not party to this Protocol of products, equipment, plants or technology that would facilitate the production of controlled substances.
7. Paragraphs 5 and 6 shall not apply to products, equipment, plants or technology that improve the containment, recovery, recycling or destruction of controlled substances, promote the development of alternative substances, or otherwise contribute to the reduction of emissions of controlled substances.
8. Notwithstanding the provisions of this Article, imports referred to in paragraphs 1, 3 and 4 may be permitted from any State not party to this Protocol if that State is determined, by a meeting of the Parties, to be in full compliance with Article 2 and this Article, and has submitted data to that effect as specified in Article 7.

#### ARTICLE 5: SPECIAL SITUATION OF DEVELOPING COUNTRIES

1. Any Party that is a developing country and whose annual calculated level of consumption of the controlled substances is less than 0.3 kilograms per capita on the date of the entry into force of the Protocol for it, or any time thereafter within ten years of the date of entry into force of the Protocol shall, in order to meet its basic domestic needs, be entitled to delay its compliance with the control measures set out in paragraphs 1 to 4 of Article 2 by ten years after that specified in those paragraphs. However, such Party shall not exceed an annual calculated level of consumption of 0.3 kilograms per capita. Any such Party shall be entitled to use either the average of its annual calculated level of consumption for the period 1995 to 1997 inclusive or a calculated level of consumption of 0.3 kilograms per capita, whichever is the lower, as the basis for its compliance with the control measures.
2. The Parties undertake to facilitate access to environmentally safe alternative substances and technology for Parties that are developing countries and assist them to make expeditious use of such alternatives.
3. The Parties undertake to facilitate bilaterally or multilaterally the provision of subsidies, aid, credits, guarantees or insurance programmes to Parties that are developing countries for the use of alternative technology and for substitute products.

## ARTICLE 6: ASSESSMENT AND REVIEW OF CONTROL MEASURES

Beginning in 1990, and at least every four years thereafter, the Parties shall assess the control measures provided for in Article 2 on the basis of available scientific, environmental, technical and economic information. At least one year before each assessment, the Parties shall convene appropriate panels of experts qualified in the fields mentioned and determine the composition and terms of reference of any such panels. Within one year of being convened, the panels will report their conclusions, through the secretariat, to the Parties.

## ARTICLE 7: REPORTING OF DATA

1. Each Party shall provide to the secretariat, within three months of becoming a Party, statistical data on its production, imports and exports of each of the controlled substances for the year 1986, or the best possible estimates of such data where actual data are not available.

2. Each Party shall provide statistical data to the secretariat on its annual production (with separate data on amounts destroyed by technologies to be approved by the Parties), imports, and exports to Parties and non-Parties, respectively, of such substances for the year during which it becomes a Party and for each year thereafter. It shall forward the data no later than nine months after the end of the year to which the data relate.

## ARTICLE 8: NON-COMPLIANCE

The Parties, at their first meeting, shall consider and approve procedures and institutional mechanisms for determining non-compliance with the provisions of this Protocol and for treatment of Parties found to be in non-compliance.

**ARTICLE 9: RESEARCH, DEVELOPMENT, PUBLIC AWARENESS  
AND EXCHANGE OF INFORMATION**

1. The Parties shall co-operate, consistent with their national laws, regulations and practices and taking into account in particular the needs of developing countries, in promoting, directly or through competent international bodies, research, development and exchange of information on:

- (a) best technologies for improving the containment, recovery, recycling or destruction of controlled substances or otherwise reducing their emissions;
- (b) possible alternatives to controlled substances, to products containing such substances, and to products manufactured with them; and
- (c) costs and benefits of relevant control strategies.

2. The Parties, individually, jointly or through competent international bodies, shall co-operate in promoting public awareness of the environmental effects of the emissions of controlled substances and other substances that deplete the ozone layer.

3. Within two years of the entry into force of this Protocol and every two years thereafter, each Party shall submit to the secretariat a summary of the activities it has conducted pursuant to this Article.

**ARTICLE 10: TECHNICAL ASSISTANCE**

1. The Parties shall, in the context of the provisions of Article 4 of the Convention, and taking into account in particular the needs of developing countries, co-operate in promoting technical assistance to facilitate participation in and implementation of this Protocol.

2. Any Party or Signatory to this Protocol may submit a request to the secretariat for technical assistance for the purposes of implementing or participating in the Protocol.

3. The Parties, at their first meeting, shall begin deliberations on the means of fulfilling the obligations set out in Article 9, and paragraphs 1 and 2 of this Article, including the preparation of workplans. Such workplans shall pay special attention to the needs and circumstances of the developing countries. States and regional economic integration organizations not party to the Protocol should be encouraged to participate in activities specified in such workplans.

## ARTICLE 11: MEETINGS OF THE PARTIES

1. The Parties shall hold meetings at regular intervals. The secretariat shall convene the first meeting of the Parties not later than one year after the date of the entry into force of this Protocol and in conjunction with a meeting of the Conference of the Parties to the Convention, if a meeting of the latter is scheduled within that period.

2. Subsequent ordinary meetings of the Parties shall be held, unless the Parties otherwise decide, in conjunction with meetings of the Conference of the Parties to the Convention. Extraordinary meetings of the Parties shall be held at such other times as may be deemed necessary by a meeting of the Parties, or at the written request of any Party, provided that, within six months of such a request being communicated to them by the secretariat, it is supported by at least one third of the Parties.

3. The Parties, at their first meeting, shall:

- (a) adopt by consensus rules of procedure for their meetings;
- (b) adopt by consensus the financial rules referred to in paragraph 2 of Article 13;
- (c) establish the panels and determine the terms of reference referred to in Article 6;
- (d) consider and approve the procedures and institutional mechanisms specified in Article 8; and
- (e) begin preparation of workplans pursuant to paragraph 3 of Article 10.

4. The functions of the meetings of the Parties shall be to:

- (a) review the implementation of this Protocol;
- (b) decide on any adjustments or reductions referred to in paragraph 9 of Article 2;
- (c) decide on any addition to, insertion in or removal from any annex of substances and on related control measures in accordance with paragraph 10 of Article 2;

- (d) establish, where necessary, guidelines or procedures for reporting of information as provided for in Article 7 and paragraph 3 of Article 9;
- (e) review requests for technical assistance submitted pursuant to paragraph 2 of Article 10;
- (f) review reports prepared by the secretariat pursuant to subparagraph (c) of Article 12;
- (g) assess, in accordance with Article 6, the control measures provided for in Article 2;
- (h) consider and adopt, as required, proposals for amendment of this Protocol or any annex and for any new annex;
- (i) consider and adopt the budget for implementing this Protocol; and
- (j) consider and undertake any additional action that may be required for the achievement of the purposes of this Protocol.

5. The United Nations, its specialized agencies and the International Atomic Energy Agency, as well as any State not party to this Protocol, may be represented at meetings of the Parties as observers. Any body or agency, whether national or international, governmental or non-governmental, qualified in fields relating to the protection of the ozone layer which has informed the secretariat of its wish to be represented at a meeting of the Parties as an observer may be admitted unless at least one third of the Parties present object. The admission and participation of observers shall be subject to the rules of procedure adopted by the Parties.

#### ARTICLE 12: SECRETARIAT

For the purposes of this Protocol, the secretariat shall:

- (a) arrange for and service meetings of the Parties as provided for in Article 11;
- (b) receive and make available, upon request by a Party, data provided pursuant to Article 7;
- (c) prepare and distribute regularly to the Parties reports based on information received pursuant to Articles 7 and 9;

- (d) notify the Parties of any request for technical assistance received pursuant to Article 10 so as to facilitate the provision of such assistance;
- (e) encourage non-Parties to attend the meetings of the Parties as observers and to act in accordance with the provisions of this Protocol;
- (f) provide, as appropriate, the information and requests referred to in subparagraphs (c) and (d) to such non-party observers; and
- (g) perform such other functions for the achievement of the purposes of this Protocol as may be assigned to it by the Parties.

#### ARTICLE 13: FINANCIAL PROVISIONS

1. The funds required for the operation of this Protocol, including those for the functioning of the secretariat related to this Protocol, shall be charged exclusively against contributions from the Parties.
2. The Parties, at their first meeting, shall adopt by consensus financial rules for the operation of this Protocol.

#### ARTICLE 14: RELATIONSHIP OF THIS PROTOCOL TO THE CONVENTION

Except as otherwise provided in this Protocol, the provisions of the Convention relating to its protocols shall apply to this Protocol.

#### ARTICLE 15: SIGNATURE

This Protocol shall be open for signature by States and by regional economic integration organizations in Montreal on 16 September 1987, in Ottawa from 17 September 1987 to 16 January 1988, and at United Nations Headquarters in New York from 17 January 1988 to 15 September 1988.

## ARTICLE 16: ENTRY INTO FORCE

1. This Protocol shall enter into force on 1 January 1989, provided that at least eleven instruments of ratification, acceptance, approval of the Protocol or accession thereto have been deposited by States or regional economic integration organizations representing at least two-thirds of 1986 estimated global consumption of the controlled substances, and the provisions of paragraph 1 of Article 17 of the Convention have been fulfilled. In the event that these conditions have not been fulfilled by that date, the Protocol shall enter into force on the ninetieth day following the date on which the conditions have been fulfilled.

2. For the purposes of paragraph 1, any such instrument deposited by a regional economic integration organization shall not be counted as additional to those deposited by member States of such organization.

3. After the entry into force of this Protocol, any State or regional economic integration organization shall become a Party to it on the ninetieth day following the date of deposit of its instrument of ratification, acceptance, approval or accession.

## ARTICLE 17: PARTIES JOINING AFTER ENTRY INTO FORCE

Subject to Article 5, any State or regional economic integration organization which becomes a Party to this Protocol after the date of its entry into force, shall fulfil forthwith the sum of the obligations under Article 2, as well as under Article 4, that apply at that date to the States and regional economic integration organizations that became Parties on the date the Protocol entered into force.

## ARTICLE 18: RESERVATIONS

No reservations may be made to this Protocol.

## ARTICLE 19: WITHDRAWAL

For the purposes of this Protocol, the provisions of Article 19 of the Convention relating to withdrawal shall apply, except with respect to Parties referred to in paragraph 1 of Article 5. Any such Party may withdraw from this Protocol by giving written notification to the Depositary at any time after four years of assuming the obligations specified in paragraphs 1 to 4 of Article 2. Any such withdrawal shall take effect upon expiry of one year after the date of its receipt by the Depositary, or on such later date as may be specified in the notification of the withdrawal.

ARTICLE 20: AUTHENTIC TEXTS

The original of this Protocol, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

IN WITNESS WHEREOF THE UNDERSIGNED, BEING DULY AUTHORIZED TO THAT EFFECT, HAVE SIGNED THIS PROTOCOL.

DONE AT MONTREAL THIS SIXTEENTH DAY OF SEPTEMBER, ONE THOUSAND NINE HUNDRED AND EIGHTY SEVEN

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# ANNEX A

## CONTROLLED SUBSTANCES

Group	Substance	Ozone Depleting Potential *
Group I		
	CFC1 <sub>3</sub> (CFC-11)	1.0
	CF <sub>2</sub> Cl <sub>2</sub> (CFC-12)	1.0
	C <sub>2</sub> F <sub>3</sub> Cl <sub>3</sub> (CFC-113)	0.8
	C <sub>2</sub> F <sub>4</sub> Cl <sub>2</sub> (CFC-114)	1.0
	C <sub>2</sub> F <sub>5</sub> Cl (CFC-115)	0.6
Group II		
	CF <sub>2</sub> BrCl (halon-1211)	3.0
	CF <sub>3</sub> Br (halon-1301)	10.0
	C <sub>2</sub> F <sub>4</sub> Br <sub>2</sub> (halon-2402) (to be determined)	

\* These ozone depleting potentials are estimates based on existing knowledge and will be reviewed and revised periodically.