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TABLE 1: COMPARISON OF BENEFITS AND COSTS OF CFC CONTROL STEPS

Step	BENEFITS*		COSTS**	
	(billions of dollars)		(billions of dollars)	
	Discount Rate		Discount Rate	
	4%	6%	4%	6%
(No action) to (Freeze)	\$739	\$131	\$1.6 - \$3.3	\$1.0 - \$1.4
(Freeze) to (Freeze + 20%)	34	6.4	3.5 - 7.0	2.2 - 3.0
(Freeze + 20%) to (Freeze + 50%)	58	11	9.2 - 18.7	5.8 - 8.0

*Assumptions for Benefits Calculations:

- (1) Deaths averted and scenarios for "Freeze" and cuts correspond to deaths averted and scenarios for health effects estimates. E.g., "Freeze" is a "Protocol Freeze," not a true global freeze, etc.
- (2) Benefits and costs as shown in Table are incremental benefits and costs of indicated steps. Present values of marginal benefits are averaged over ranges of parameters reported by Working Group Subcommittee on Benefits and Costs:
 - Value of life initially: \$2,000,000; \$4,000,000
 - Increase in value of life over time: growth at 2% per year; value of life constant.
 - Four different time profiles for deaths averted
- (3) Benefits calculated for premature skin cancer deaths averted only. Benefits for preventing non-fatal skin cancers, cataracts, and other economic damages would be additive.

no estimate on crop losses, etc.

**Assumptions for Cost Calculations:

- (1) Low ends of ranges: marginal costs grow at .625% per year forever.
- (2) High ends of ranges: marginal costs grow at 2.5% per year forever.

TABLE 2: SENSITIVITY ANALYSIS--COMPARISON OF BENEFITS AND COSTS UNDER DIFFERENT ASSUMPTIONS

<u>Step</u>	<u>Percent of cases in which benefits exceed costs</u>	<u>Percent of cases in which benefits approximately equal costs</u>	<u>Percent of cases in which benefits are less than costs</u>
(No Action) to (Freeze)	100%	0%	0%
(Freeze) to (Freeze 20%)	78%	3%	19%
(Freeze + 20%) to (Freeze + 50%)	56%	19%	25%

Assumptions: Same as Table 1.

32 cases
 2 initial values of life - 2m - 4m
 x 2 values of increase in value of life over time
 x 2 discount rates
 x 4 time profiles

 32

HD

49-344

ALLIANCE FOR RESPONSIBLE CFC POLICY

1901 N. FT. MYER DRIVE, SUITE 1204

ROSSLYN, VIRGINIA 22209

(703) 841-9363

C. Anderson

May 19, 1987

The President
The White House
Washington, D.C. 20500

Dear Mr. President:

On behalf of the members of the Alliance for Responsible CFC Policy, I am writing to urge that the United States not support any reduction measures as part of the United Nations Environment Programme (UNEP) negotiations on a protocol to protect the ozone layer by restricting chlorofluorocarbons (CFCs).

encl
Any reduction measures at this time are scientifically and environmentally unnecessary, and may place U.S. industries at a significant competitive disadvantage worldwide. Our industries will support, however, a freeze on the emissions of these compounds as part of the UNEP negotiations so long as the agreement incorporates a long-term management process for the assessment of scientific, economic and technological information as a basis for any additional control measures in the future.

An emissions freeze is an effective environmental protection step in the near-term, but it will also impose significant costs on the U.S. economy. Based on our analysis, the freeze will impose more than \$1 billion in costs on the U.S. economy from CFC price increases alone between 1988 and 2000. Near-term reduction measures will impose far greater costs on our industries, the impacts of which have not yet been properly evaluated by anyone in or out of government.

Page Two

Mr. President

CFCs are relied upon by several critical industries including air conditioning and refrigeration, automobile, electronics, food processing and foam manufacturing. We have estimated direct employment related to CFC use is in excess of 715,000 jobs with the annual value of goods and services in the U.S. of \$28 billion. (A representative list of Alliance members is attached.)

The industry has supported the negotiations of the protocol for protection of the ozone layer. An international agreement to freeze emissions accompanied by a long-term management and assessment process is a dramatic environmental protection step and one that will protect the competitiveness of U.S. industries worldwide.

We urge you to oppose U.S. support for any reduction measures as part of this international agreement at this time.

Sincerely,

A handwritten signature in cursive script that reads "Richard Barnett".

Richard Barnett
Chairman

Enclosure

RB:sct



MEMBER COMPANIES, ALLIANCE FOR RESPONSIBLE CFC POLICY

A
 Abbott Laboratories
 Chicago, IL
 Aco Refrigeration Supply
 Corp.
 Long Island, NY
 CR/Peerless Pacific
 Portland, OR
 ACR Supply Company, Inc.
 Durham, NC
 ACR Supply, Inc.
 Miami, FL
 A/C Supply, Inc.
 Harahan, LA
 Acoustical Spray Insulators, Inc.
 Allentown, PA
 Acto-Kleen Company, Inc.
 Pico Rivera, CA
 Aetna Supply Company, Inc.
 Bronx, NY
 A.I.A. Waterproofing &
 Insulation, Inc.
 N. Miami, FL
 Alm Insulation Company, Inc.
 Bay City, MI
 Air Cold Supply, Inc.
 Los Angeles, CA
 Air Comfort Corporation
 Broadview, IL
 Air Conditioning Contractors of
 America
 Washington, DC
 Air Conditioning &
 Refrigeration Institute
 Arlington, VA
 Air Conditioning &
 Refrigeration Wholesalers
 Field Beach, FL
 Air Conditioning Suppliers, Inc.
 Richmond, VA
 ARCO Refrigeration, Inc.
 Montreal, Quebec, CANADA
 Airflow Company
 Galtersburg, MD
 Airtemp Corporation
 Edison, NJ
 Airtrol Supply, Inc.
 Corpus Christi, TX
 Air World
 Grand Prairie, TX
 Alco Controls
 St. Louis, MO
 All Air Conditioning Supplies,
 Inc.
 St. Petersburg, FL
 Allen Equipment Company
 Houston, TX
 Allied Chemical
 Morristown, NJ
 Allied Protective Coating, Inc.
 Minneapolis, MN
 Allied Supply Company, Inc.
 Dayton, OH
 Allred's, Inc.
 Salt Lake City, UT
 Harry Alter Company
 Chicago, IL
 Amana Refrigeration Co.
 Amana, IA
 American Air Filter Company,
 Inc.
 Louisville, KY
 American Association of Meat
 Processors
 Elizabethtown, PA

American Bakers Association
 Washington, DC
 American Convenience Pro-
 ducts Inc.
 Milwaukee, WI
 American Frozen Food Institute
 McLean, VA
 American Meat Institute
 Arlington, VA
 American Petroleum Institute
 Washington, DC
 American Society for Hospital
 Center Personnel
 Chicago, IL
 Amoco Foam Products
 Company
 Atlanta, GA
 Anchor Foam Systems, Inc.
 Waukesha, WI
 Anco Insulations, Inc.
 Baton Rouge, LA
 Anderson Bros. Refrigeration
 Service, Inc.
 Rutler, WI
 Anscott Chemical Industries,
 Inc.
 Wayne, NJ
 Applied Roofing Technology,
 Inc.
 Orlando, FL
 ARCO Chemical Company
 Philadelphia, PA
 ARCO Supply, Inc.
 Puerto Rico
 Arizona Refrigeration Supplies
 Phoenix, AZ
 Arjay Equipment Corporation
 Winston-Salem, NC
 Arrow-Risco, Inc.
 Los Angeles, CA
 Ashland Chemical Company
 Columbus, OH
 ASHRAE
 New York, NY
 Associated Supply Company,
 Inc.
 Sacramento, CA
 Association of Home Appliance
 Manufacturers
 Washington, D.C.
 Association of Home Appliance
 Manufacturers
 Chicago, IL
 Authorized Supply Corporation
 Los Angeles, CA

B
 Baker Bros., Inc.
 Jacksonville, FL
 Bally Case & Cooler, Inc.
 Bally, PA
 Bard Manufacturing Company
 Bryan, OH
 BASF Wyandotte Corporation
 Parsippany, NJ
 Basic Industries, Inc.
 Baton Rouge, LA
 Bells Supply Company, Inc.
 Wilmington, DE
 Beltway Heating & Air
 Conditioning
 Forestville, MD
 B&H Pizza Company, Inc.
 Hershey, PA
 B&H Urethane Systems, Inc.
 Las Vegas, NV

Blue M. Electric Company
 Blue Island, IL
 Bon Air Service Company, Inc.
 Grand Prairie, TX
 A.E. Borden Company, Inc.
 Woburn, MA
 Borg-Warner Corporation
 Decatur, IL
 Borg Warner - York Division
 York, PA
 Bramec Corporation
 Sioux City, IA
 Bristol Compressors
 Bristol, VA
 W.A. Brown & Son, Inc.
 Salisbury, NC
 Builders World
 Cassopolis, MI
 Building Owners and Manufac-
 turers Association International
 Washington, DC
 Burke Engineering Company
 South El Monte, CA
 Burton-Dixie Corporation
 Blacksburg, SC
 Burton Plating Company
 Los Angeles, CA

C
 California Cooling Supply
 Company
 El Cajon, CA
 Capitol Refrigeration Company,
 Inc.
 Albany, NY
 Cassidy Supply Company, Inc.
 Columbus, OH
 Celotex Corporation
 Tampa, FL
 Cetylite Industries, Inc.
 Pennsauken, NJ
 Chase Supply Company
 Alsip, IL
 Chem Central Corporation
 Chicago, IL
 Chemical Manufacturers
 Association
 Washington, DC
 Chemical Specialties Manufac-
 turers Association
 Washington, DC
 Chemtech Roofing & Insulation
 Systems, Inc.
 Mt. Airy, NC
 Circle Arrow Urethane Systems,
 Inc.
 San Bernardino, CA
 Clean Way Industries, Inc.
 Keene, NH
 Climate Engineering, Inc.
 Denver, CO
 Climatrol Sales Co.
 Edison, NJ
 Clinton Chemical Company
 Leonard, MI
 Coating Specialists
 San Antonio, TX
 Commercial Distributing Co.
 Salt Lake City, UT
 Commercial Refrigerator Manu-
 facturers Association
 Washington, DC
 Cook Paint and Varnish Co.
 Kansas City, MO

Cooperative Food Distributors
 of America
 Washington, DC
 Copeland Corporation
 Sidney, OH
 The Corneliuss Company
 Anoka, MN
 County Insulation Company
 New Castle, DE
 Creative Urethanes, Inc.
 Purcellville, VA
 Crescent Manufacturing
 Company
 Seattle, WA
 Crest Systems, Inc.
 Phoenix, AZ
 The Crown Refrigeration Supply
 Company
 Baltimore, MD
 The Crump Company
 Englewood, CA
 Cyclops Corporation
 Pittsburgh, PA

D
 Dairy & Food Industry Supply
 Association
 Washington, DC
 Davidson Rubber Division
 Dover, NH
 Davidson Supply Company
 San Francisco, CA
 Day Supply Company
 Hartford, CT
 DeHart's Foam Insulation, Inc.
 Bradenton, FL
 Del Monte Corporation
 Washington, DC
 Dennis Supply Company
 Sioux City, IA
 Deshler Mechanical Contrac-
 tors, Inc.
 Hendersonville, TN
 Discount Insulation & Roofing
 Middletown, NY
 Distributors Incorporated of
 Colorado
 Denver, CO
 Dolco Packaging Corporation
 Sherman Oaks, CA
 Douglas Barrels, Inc.
 Charleston, WV
 Dow Chemical Company
 Midland, MI
 Draper Canning Company
 Milton, DE
 H.C. Duke & Son, Inc.
 East Moline, IL
 E.V. Dunbar Company
 Atlanta, GA
 Duncan Supply Company, Inc.
 Indianapolis, IN
 Dunham-Bush, Inc.
 West Hartford, CT
 E.I. duPont de Nemours &
 Company
 Wilmington, DE

E
 Eaton Corporation
 Athens, AL
 EBCO Manufacturing Company
 Columbus, Ohio
 S. Eisenberg & Company
 Bridgeview, IL

The Electromotive Corporation
Dallas, TX

Elliott Company of Indianapolis
Indianapolis, IN

Ellis-Williams Company, Inc.
Indianapolis, IN

Emerson Electric Company
Louis, MO

Empire Foam Corporation
Minneapolis, MN

Empire Freezers of Syracuse, Inc.
Syracuse, NY

Engineering and Refrigeration,
Inc.

Jersey City, NJ

En-Tech, Inc.
Louisville, KY

Essex (Racon) Inc.
Wichita, KS

F

F.C.I. Sprayfoam Ltd.
Richmond, B.C., CANADA

Falcon Safety Products, Inc.
Mountainside, NJ

Fedders Corporation
Edison, NJ

Fixturcraft, Inc.
Nashville, TN

Flexible Polyurethane Foam
Manufacturers Association
Southfield, MI

Flex-O-Lators, Inc.
High Point, NC

Florida Containers, Inc.
Sebring, FL

Foamco Systems International
Louisville, CO

Foam Insulation Contractors
Kansas City, KS

Foamseal, Inc.
Jaxford, MI

Foam Systems Company
Riverside, CA

Food Marketing Institute
Washington, DC

Follett Corporation
Easton, PA

Fomo Products, Inc.
Akron, OH

Forma Scientific
Marietta, OH

Forsyth Urefoam
Winston-Salem, NC

Fox Appliance Parts, Inc.
Augusta, GA

Fox Service Company, Inc.
Austin, TX

Free-Flow Packaging
Corporation
Redwood City, CA

G

G&O Thermal Supply Company
Chicago, IL

Gabriel Manufacturing Com-
pany, Inc.

Stony Point, NY

GAF Corporation
New York

Galileo Electro Optics
Corporation

Sturbridge, MA

Ganser, Inc.
Bozeman, MT

J. "Red" Gaskins Company
Lake City, SC

G.B.H. Fabricating & Packaging,
Inc.

Swedesboro, NJ

Gebauer Chemical Company
Cleveland, OH

Geldbach Refrigerator Com-
pany, Inc.
Sparta, NJ

General Coatings, Inc.
St. Paul, MN

Gene Conreux & Company,
Inc.

Indianapolis, IN

General Electric Company
Louisville, KY

General Fiberglass Supply, Inc.
West Allis, WI

General Foods Corporation
White Plains, NY

General Heating & Cooling
N. Kansas City, MO

General Radio & Electronic
Company

Wilkes-Barre, PA

General Refrigeration Supply
Company, Inc.

Lafayette, IN

Genesee Refrigeration Sup-
plies, Inc.

Rochester, NY

Gilbert Foam Insulation Com-
pany, Inc.

Jersey Shore, PA

The Gilman Corporation
Gilman, CT

Goettl Air Conditioning, Inc.
Phoenix, AZ

B.F. Goodrich Chemical Group
Cleveland, OH

The Goodyear Tire & Rubber
Company

Lagrange, IN

The Goodyear Tire & Rubber
Company, Luckey Plant

Luckey, OH

W.L. Gore & Associates, Inc.
Newark, DE

Gould, Inc.

Chicago, IL

Great Lakes Systems, Inc.
Jenison, MI

Greenberg Supply Company,
Inc.

Wilmington, DE

Grocery Manufacturers of
America

Washington, DC

GTE Products Corporation
Woburn, MA

Gulf & Western Manufacturing
Company

Danville, IL

Gusmer Corporation
Lakewood, NJ

H

Hackney Brothers Booy
Company

Wilson, NC

Halocarbon Products
Corporation

Hackensack, NJ

Halsey Supply Company, Inc.
Brooklyn, NY

Halstead & Mitchell
Scottsboro, AL

Hanover Distributing Company,
Inc.

Charlotte, NC

John F. Harkins Company, Inc.
Landsdowne, PA

Harris Environmental Systems,
Inc.

Andover, MA

Harris-Teeter Supermarkets
Charlotte, NC

Hart & Cooley
Holland, MI

Sid Harvey Industries, Inc.
Garden City, NY

Health Industry Manufacturers
Association

Washington, DC

Heating & Cooling Wholesalers,
Inc.

Grand Rapids, MI

Heying Foods, Inc.
West Union, IA

Highside Chemicals, Inc.
Gladstone, NJ

Hill Refrigeration
Trenton, NJ

Hinshaw Supply Company
San Francisco, CA

Hobart Corporation
Troy, OH

Honeywell, Inc.
Minneapolis, MN

Hormel, Inc.
Austin, MN

Hosier Refrigeration Supply,
Inc.

Des Moines, IA

Howard Refrigeration Company,
Inc.

Philadelphia, PA

Husmann Refrigerator Com-
pany, Inc.

Bridgeton, MD

I

ICI Americas, Inc.
Wilmington, DE

Igloo Corporation
Houston, TX

Impro, Inc.
Deer Park, TX

Industrial Coatings, Inc.
Rogers, MN

Industrial Paper Distributors
Long Beach, CA

Insaco Inc.
Quakertown, PA

Inscos Distributing
San Antonio, TX

Insopart Industries, Inc.
Williamsport, PA

Insta-Foam Products, Inc.
Joliet, IL

Institute of Heating & Air
Conditioning Industries

Los Angeles, CA

Insuldeck Corporation
Bath, PA

International Association of
Refrigerated Warehouses

Washington, DC

International Cold Storage
Company, Inc.

Andover, KS

International Mobile Air
Conditioning Association

Landsdale, PA

ITT Continental Baking
Company

Charlottesville, VA

ITT Telecommunications
Corinth, MS

J

Jamison Door Company
Hagerstown, MD

Johnson Controls, Inc.
Oak Brook, IL

George L. Johnston Company
Detroit, MI

Jones Supply, Inc.
Kennewick, WA

Charles D. Jones Company
Denver, CO

Jon Pierce, Inc.
Fort Worth, TX

Jordan Supply Company, Inc.
Buffalo, NY

K

Kaiser Aluminum & Chemical
Corporation

Oakland, CA

Kern Thermal Equipment
Limited

Rexdale, Ontario, CANADA

Keyes Fibre
Stamford, CT

Keyes, Inc.
Grand Rapids, MI

King Radio Corporation
Olathe, KS

King Shrimp Company, Inc.
Brunswick, GA

King Weyler Equipment
Company, Inc.

Fort Wayne, IN

W.B. Knox & Associates, Inc.
Lithonia, GA

Koldaire Supply Company
Fort Worth, TX

Kraco-Dyplast, Inc.
Miami, FL

Kuss Corporation
Findlay, OH

Kysor/Warren-Sherer
Conyers, GA

L

Lamb-Weston, Inc.
Portland, OR

F.H. Langsenkamp Company
Indianapolis, IN

Larkin Coils, Inc.
Atlanta, GA

The Larsen Company
Green Bay, WI

Larson Supply Company, Inc.
Allentown, PA

Lear Siegler, Inc./Transport
Dynamics Division

Santa Ana, CA

Lear Siegler, Inc., Mammoth
Division

Minneapolis, MN

Lennox Industries, Inc.
Carrollton, TX

Lewis Corporation
Oxford, CT

Liniflow Manufacturing
Company

Erie, PA

Lyon Brokerage Company, Inc.
Minneapolis, MN

M

Majestic Weaving Company, Inc.
 Cornwall, NY
 R.D. Marshall & Company, Inc.
 Albany, NY
 Martin Insulation, Inc.
 Ephrata, PA
 Marvco Market Developers
 Pompton Lakes, NJ
 Master-Bilt Products
 New Albany, MS
 McCombs Supply Company
 Denver, CO
 McCoy Electronics Company
 Mt. Holly Springs, PA
 McGee Industries, Inc.
 Asson, PA
 McKesson Chemical Company
 San Francisco, CA
 McQuay Group, McQuay
 Perlex Inc.
 Minneapolis, MN
 Mechanical Contractors Association of America
 Chevy Chase, MD
 Mechanical Maintenance Company
 E. Hartford, CT
 Mechanical Supply Company
 St. Louis, MO
 Meier Supply Company, Inc.
 Binghamton, NY
 Melco Refrigeration & Air Conditioning
 Ridgefield, NJ
 Metal Building Maintenance Company
 Walkerton, IN
 Michiana Urethanes, Inc.
 Sturgis, MI
 Mid-City Supply Company, Inc.
 Elkhart, IN
 Mid-State Industrial Insulation, Inc.
 Oildale, CA
 Milk Industry Foundation
 Washington, DC
 Miller-Stephenson Chemical Company, Inc.
 Danbury, CT
 Mobay Chemical Corporation
 Pittsburgh, PA
 Morristown Foam Company
 Morristown, TN
 Motor Vehicle Manufacturers Association
 Washington, DC
 Mueller Brass Company
 Port Huron, MI
 Murray Corporation
 Cockeysville, MD
N
 Nabisco
 East Hanover, NJ
 NAHB Research Foundation, Inc.
 Rockville, MD
 National American Wholesale Grocers Association
 New York, NY
 National Association of Convenience Stores
 Falls Church, VA

National Association of Homebuilders
 Washington, DC
 National Association of Retail Grocers
 Washington, DC
 National Commercial Refrigeration Sales Association
 Philadelphia, PA
 National Fisheries Institute
 Washington, DC
 National Meat Association
 Washington, DC
 NI-TEC, Inc.
 Niles, IL
 Nohle Refrigeration Supplies
 Rochester, NY
 Norel Paper Corporation
 Bogota, NJ
 Norfield, Division of Faltek Chemical Company
 Danbury, CT
 North American Heating & Air Conditioning Wholesalers Association
 Columbus, OH
 Northern Packaging Products Company
 Cleveland, OH
 Norton Company
 Granville, NY
 William F. Nye, Inc.
 New Bedford, MA
O
 Oeverage-Air
 Spartanburg, SC
 Olin Corporation
 Stamford, CT
 Orb Industries, Inc.
 Upland, PA
 Orchard Hill Farms, Inc.
 Red Hook, NY
 Ore-Ida Foods, Inc.
 Boise, ID
 Otis Industries, Ltd.
 Syracuse, NY
 Lilly Division, Owens-Illinois
 Toledo, OH
P
 Paramount Electrical Supply Company, Inc.
 New York, NY
 Parker Hannifin Corporation
 Lyons, NY
 Pasky & Company, Inc.
 Farmington Hills, MI
 Patterson Frozen Foods, Inc.
 Patterson, CA
 Pennwalt Corporation
 Philadelphia, PA
 Pensacola Refrigeration Supply, Inc.
 Pensacola, FL
 Perlev-Halladay Associates, Inc.
 Malvern, PA
 Pet Incorporated
 St. Louis, MO
 The Pillsbury Company
 LeSueur, MN
 Pioneer Supply Company
 Burlington, IA
 Plumb Supply Company
 Des Moines, IA

Polycold Systems, Inc.
 San Rafael, CA
 Precision Valve Corporation
 Yonkers, NY
 Pride Solvents & Chemical Company, Inc.
 West Babylon, NY
 Pritchett-Stephen Refrigeration Company
 Ft. Worth, TX
 Proctor & Associates
 Redmond, WA

Q

The Quaker Oats Company
Chicago, IL

R

Rawn Company, Inc.
 Spooner, WI
 Reeves Refrigeration & Heating Supply, Inc.
 Minot, ND
 Refrigerants Incorporated
 Chicago, IL
 Refrigeration & Electric Supply Company
 Little Rock, AR
 Refrigeration Engineering, Inc.
 Grand Rapids, MI
 Refrigeration Research, Inc.
 Brighton, MI
 Refrigeration Sales Company, Inc.
 Long Island City, NY
 Refrigeration Supplies Corporation
 Cleveland, OH
 Refrigeration Supply Company
 Richmond, VA
 Reichhold Chemicals Inc.
 White Plains, NY
 Remedial Insulation Barriers Company, Inc.
 Buffalo, NY
 R&H Supply Company
 Montgomery, AL
 Republic Refrigeration Wholesalers
 Davenport, IA
 Resco, Inc.
 Harrisburg, PA
 B.P. Rhinefort Company
 Fort Worth, TX
 Riker Laboratories, Inc.
 Northridge, CA
 RIP, Inc.
 Fort Worth, TX
 Ritchie Engineering Company, Inc.
 Minneapolis, MN
 Rmax, Inc.
 Dallas, TX
 R&R Supply Company, Inc.
 Orlando, FL
 R.L. Hartley Corporation
 Indianapolis, IN
 Robertshaw Controls Company
 Richmond, VA
 H.H. Robertson Company
 Pittsburgh, PA
 Robertson Electric Company
 Charlottesville, VA
 Robinair Manufacturing Corporation
 Montpelier, OH
 Roche & Hull, Inc.
 Baltimore, MD
 Rogers Refrigeration Company, Inc.
 Marlow Heights, MD
 Rogers Supply Company
 Champaign, IL
 W.A. Roosevelt Company
 La Crosse, WI
 Rovanco Corporation
 Joliet, IL
S
 Sanford, Semchak & Speights, Inc.
 Bakersfield, CA
 Sawyer Fruit & Vegetable
 Bear Lake, MI
 Scatena York Company
 San Francisco, CA
 Schroeder Refrigeration Corporation
 Oakland, CA
 Sealed Unit Parts Company, Inc.
 Allenwood, NJ
 Service Parts Company
 Melrose Park, IL
 Service Supply Company
 Phoenix, AZ
 Service Supply, Inc.
 Meridian, MS
 Service Supply of Victoria, Inc.
 Victoria, TX
 William B. Severn, Inc.
 Philadelphia, PA
 Sheet Metal & Air Conditioning Contractors National Association
 Houston, TX
 Sheet Metal & Air Conditioning Contractors National Association
 Vienna, VA
 Shelter Insulation, Inc.
 San Antonio, TX
 The Silna Corporation
 Moonachie, NJ
 The Joseph Simons Company
 Hartford, CT
 J.R. Simplot Company
 Caldwell, ID
 The Singer Company
 Carteret, NJ
 Single Service Institute
 Washington, D.C.
 SJC Corporation
 Elyria, OH
 Mrs. Smith's Frozen Food Company
 Pottstown, PA
 S & S Nonlimited, Inc.
 Hopatcong, NJ
 Society of the Plastics Industry
 New York, NY
 South Central Company, Inc.
 Columbus, IN
 South Texas Urethane, Inc.
 Edinburg, TX
 Southern Michigan Cold Storage Company
 Benton Harbor, MI
 Southwest Manufacturing
 Aurora, MO
 Spray, Inc.
 Bolton, MA

Sprayfoam Southwest, Inc.
Tempe, AZ
Spencer Insulation
New Albany, PA
Sporian Valve Company
St. Louis, MO
Square D Company, SunDial
Plant
Mesquite, TX
Standard Refrigeration Company
Melrose Park, IL
Stayton Canning Company
Cooperative
Stayton, OR
Stoelting, Inc.
Kiel, WI
Stokely-Van Camp, Inc.
Indianapolis, IN
Stouffer Foods Corporation
Solon, OH
Sundstrand Heat Transfer, Inc.
Dowagiac, MI
Superior Supply Company
N. Kansas City, MO
Superior Supply Company, Inc.
Wichita, KS
Superior Valve Company
Washington, PA
Supply Distributors Corporation
Medford, MA
Sweetheart Plastics, Inc.
Wilmington, MA

T

Taylor Freezer
Rockton, IL
Taylor Industries, Inc.
Des Moines, IA
Tech Spray, Inc.
Amarillo, TX
Tech-Service, Inc.
Midell, LA
Tecumseh Products Company
Tecumseh, MI
Tekni-Plex, Inc.
Somerville, NJ
Temple Division of Temple-
Eastex, Inc.
Diboll, TX
Tenney Engineering, Inc.
Union, NJ
Termicold Corporation
Portland, OR
Texaco Chemical Company
Bellair, TX
Tesco Distributors, Inc.
Irvington, NJ
Texas Instruments
Dallas, TX
Texas Instruments Inc.
Attleboro, MA
Texas Urethane, Inc.
Austin, TX
Textile Chemical Company,
Inc.
Reading, PA
Thermal Control Industries
Ellerbe, NC
Thermal Products, Inc.
Cerritos, CA
Thermal Supply, Inc.
Seattle, WA
Thermo-King Corporation
Bloomington, MN

Tobin Refrigeration Company
Denver, CO
Torin Corporation
Torrington, CT
The Trane Company
Arlington, VA
The Trane Company
LaCrosse, WI
Treasure Isle, Inc.
Tampa, FL
Truck Trailer Manufacturers'
Association
Washington, DC
Twin City Supply Company
Providence, RI
Tyler Refrigeration Corporation
Niles, MI
Tyler Refrigeration Corporation
Norwalk, CA

U

U.C. Industries
Parsippany, NJ
U.C.T., Inc.
Louisville, KY
Ugine Kuhlmann of America,
Inc.
Paramus, NJ
Union Carbide Corporation
New York, NY
Universal Applicators, Inc.
Hugo, MN
United Refrigeration, Inc.
Philadelphia, PA
The Upjohn Company
Kalamazoo, MI
Urethane Foam Contractors
Association
Dayton, OH
Urethane Chemical Company
Carrollton, TX
U.S. Urethane, Inc.
Bernardsville, NJ

V

Valcour Imprinted Papers, Inc.
Glen Falls, NY
Vanderbilt Export Corporation
Norwalk, CT
Van-Wall Urethane Contractors
Inc.
Mansfield, TX
Van Waters & Rogers Division
of Univar
San Mateo, CA
Vertec Corporation
Kirkland, WA
Virginia Chemical, Inc.
Dallas, TX
Vollrath Refrigeration, Inc.
River Falls, WI
Voltek, Inc.
Lawrence, MA
Vulcan Materials Company
Birmingham, AL

W

Warm Springs Enterprises, Inc.
Ketchum, ID
Warwick Operating Corporation
New York, NY
Wayne Dennis Supply Company
Des Moines, IA
Wei T'O Associates, Inc.
Matteson, IL

Westfield Refrigeration & Air
Conditioning Company
Westfield, NJ
Westinghouse Electric
Corporation
Pittsburgh, PA
Westinghouse Electric Company
Staunton, VA
The Whalen Company
Easton, MD
White Consolidated Industries,
Inc.
Cleveland, OH
White & Shaugher, Inc.
Paterson, NJ
The Williamson Company
Cincinnati, OH
William Wurzbach Company,
Inc.
Oakland, CA
Wilson Refrigeration & Electric,
Inc.
Anderson, SC
F.E. Winstel Company
Cincinnati, OH
Witco Chemical Corporation
New Castle, DE
Woodward Governor Company
Rockford, IL
Ralph Wright Refrigeration
Fort Worth, TX

Y

Young Supply Company
Detroit, MI



Alliance for Responsible CFC Policy
1901 N. Ft. Myer Drive, Suite 1204
Rosslyn, Virginia 22209
703/841-9363

ALLIANCE FOR RESPONSIBLE CFC POLICY

1901 N. FT. MYER DRIVE, SUITE 1204

ROSSLYN, VIRGINIA 22209

(703) 841-9363

May 18, 1987

The Honorable George P. Shultz
Secretary
Department of State
Main State Department Bldg.
2201 C Street, N.W.
Washington, D.C. 20520

Dear Secretary Shultz:

The Alliance for Responsible CFC Policy appreciates the opportunity to provide further input concerning the ongoing negotiations to obtain a protocol to the Vienna Convention for Protection of the Ozone Layer. In view of the recently completed Ad Hoc Working Group meeting, we felt it would be useful to reiterate the Alliance's position concerning the international agreement.

The most critical aspects in the United Nations Environment Programme (UNEP) negotiations are the broad coverage of chemical compounds, country participation and the establishment of a long-term management process for future decision making. Efforts to focus on attainment of reduction steps in this agreement are scientifically and environmentally unnecessary, economically unwise, and, we believe, imprudent from a negotiation standpoint.

We believe the current use or emission of CFCs for the near future does not present a threat to human health or the environment. The Alliance encourages that steps be taken to curtail additional growth in the production capacity of these compounds until such time as scientific analysis provides better information. Reduction steps, however, should be considered only as part of the future assessment process if deemed to be necessary at that time.

The Alliance has stated, however, that it will not oppose a freeze on the emission of the fully-halogenated compounds so long as it is accompanied by a periodic assessment of the scientific, economic and technological issues as a basis for future steps. An agreement to freeze the emissions of these compounds should be considered an effective environmental protection step. It should also be recognized as one that will impose significant costs on the U.S. economy.

According to a recently completed analysis of the CFC using and producing industries, a freeze on CFCs 11, 12 and 113 could lead to price increases of 300-400% by the mid-1990's. Costs to the economy would be approximately \$1 billion during the period 1988-2000. Annual costs would exceed \$180 million in the mid-1990's.

A freeze will reduce aggregate projected CFC use by approximately 1.1 million metric tons by the year 2000, or the equivalent of about four years of current U.S. CFC production. This curtailment of CFC use over the next decade will create a significant market incentive for users and producers to search for substitute compounds and other environmentally effective processes.

Some EPA officials have acknowledged that a freeze will "eventually" spur the development of substitute compounds. The above economic analysis supports our assertion, however, that this development work will proceed rapidly.

The U.S. industry will have a more definitive answer concerning the availability of substitute compounds in 3-4 years. In our view, no agreement on a reduction step should be signed, assuming a freeze is achievable, until after the next scientific assessment is completed.

To our knowledge, neither EPA nor anyone else has completed an economic or environmental impact analysis of the reduction steps currently being considered at UNEP. Although, we do understand that EPA currently has a study in progress.

Furthermore, an agreement to reduce CFC use and emissions prior to the known availability of acceptable substitute compounds may actually prove counterproductive. A reduction timetable that does not allow user industries the time to wait for development of appropriate long-term CFC substitutes may leave no other choice but to begin planning based on the currently available, but less desirable substances. Once such a commitment is made on the part of the user industries the desire for both users and producers to pursue development of new compounds will be greatly diminished.

These concerns greatly necessitate the need for a long-term management process for proper decision making.

Page Three

Finally, if we continue to seek reduction steps in the negotiation process without a proper focus on the trade and developing-nations issues, we may lose the opportunity to obtain a fair and reasonable agreement that protects both the environment and U.S. competitiveness in the world market. In our view the U.S. has placed too much emphasis on reduction steps rather than on a well-rounded agreement in the UNEP negotiations.

We urge you to consider these points as you give consideration to the U.S. position and hope to meet with you and your staff soon to discuss our economic analysis.

Sincerely,

(S)

Richard Barnett
Chairman

Enclosures

RB:sct

IDENTICAL LETTER SENT TO:

The Honorable George Bush
Vice President of the United States
Old Executive Office Building
17th Street & Pennsylvania Avenue, N.W.
Washington, D.C. 20501

The Honorable Edwin Meese III
Attorney General
Department of Justice
Main Justice Building
10th and Constitution Avenue, N.W.
Washington, D.C. 20530

The Honorable Clayton Yeutter
U.S. Trade Representative
600 17th Street, N.W.
Room 209
Washington, D.C. 20506

The Honorable James C. Miller III
Director
Office of Management and Budget
Old Executive Office Building
17th Street & Pennsylvania Avenue, N.W.
Washington, D.C. 20503

The Honorable Lee Thomas
Administrator
Environmental Protection Agency
401 M Street, SW
Suite 1200, West Tower
Washington, D.C. 20460

The Honorable George P. Shultz
Secretary
Department of State
Main State Department Bldg.
2201 C Street, N.W.
Washington, D.C. 20520

The Honorable Caspar W. Weinberger
Secretary
Department of Defense
The Pentagon
Washington, D.C. 20301

Page Two

The Honorable Malcolm Baldrige
Secretary
Department of Commerce
Herbert C. Hoover Bldg.
14th Street and Constitution Ave., N.W.
Washington, D.C. 20230

The Honorable Elizabeth Hanford Dole
Secretary
Department of Transportation
Nassif Building
400 Seventh Street, S.W.
Washington, D.C. 20590

The Honorable Donald P. Hodel
Secretary
Department of the Interior
Interior Building
18th & C Street, N.W.
Washington, D.C. 20240

The Honorable John S. Herrington
Secretary
Department of Energy
Forrestal Building
1000 Independence Avenue, S.W.
Washington, D.C. 20585

1+D

491441

C. Anderson

May 21, 1987

President Ronald Reagan
The White House
1600 Pennsylvania Avenue
Washington, D.C. 20500

Dear Mr. President:

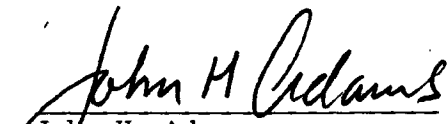
The depletion of stratospheric ozone by halocarbon compounds presents one of the most important environmental challenge of our time. The consequences of inaction would be unprecedented - millions of new cases of skin cancer, millions of dollars in damage every year to crops and materials, increasing air pollution, and a powerful stress on our forests and oceans.

Recognizing the singular nature of the threat, more than two dozen nations have been negotiating a protocol under the sponsorship of the United Nations Environment Programme to limit the emissions of halocarbons. E.P.A. Administrator Lee Thomas took an important leadership role in this process when he announced the U.S. position calling for a 95% phaseout of emissions with interim reductions of 20% and 50%. A large near term reduction of 50% is needed to provide the incentive for the development of substitute chemicals, which the industry says can be available in quantity in five years. The 95% phaseout is needed for two reasons. First, just to stabilize concentrations in the atmosphere at current values, an 85% reduction in emissions is required. Secondly, only a strong commitment by the industrialized nations to wean themselves from dependence upon these chemicals will create the credibility necessary for the rest of world to cooperate in the Vienna Convention. Increasing per capita consumption in the less developed countries is sure to offset reductions in the U.S., Japan, and Europe if the commitment to an eventual phaseout is absent.

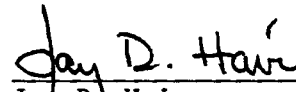
Decisions are currently being made within the Domestic Policy Council as to the final U.S. position. An automatic interim 50% target and a commitment to the longterm phaseout are the critical elements of the U.S. position. The wisdom of that position was reaffirmed at a Senate hearing last week when scientists for the first time stated that halocarbons are the likely cause of the ozone hole over Antarctica. The existence of the hole underscores the urgent need to act. With this new evidence in hand, the Europeans and Japanese have been moving toward the U.S. position, so this is no time to compromise on these two critical elements.

As leaders of the major environmental organizations in this country, we commend the strong leadership exercised by your E.P.A. on this issue, the most critical environmental issue of our time. Successful negotiation of a strong protocol to protect the ozone layer would make a distinguished and lasting landmark for your Presidency. We urge that you lend your personal support to the position developed by the E.P.A.

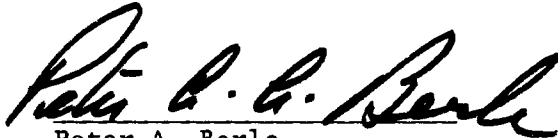
Respectfully,


John H. Adams
Executive Director

Natural Resources Defense Council


Jay D. Hair

Executive Vice President
National Wildlife Federation



Peter A. Berle
President
National Audubon Society



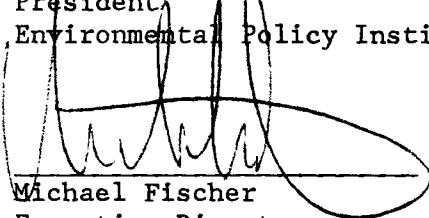
Frederic D. Krupp
Executive Director
Environmental Defense Fund



Michael S. Clark
President
Environmental Policy Institute



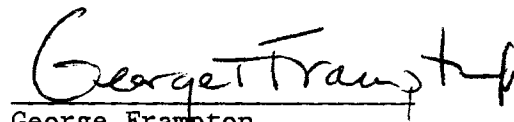
Jack Lorenz
Executive Director
Izaak Walton League of America



Michael Fischer
Executive Director
Sierra Club



Paul C. Pritchard
President
National Parks & Conservation Assoc.



George Frampton
President
The Wilderness Society



Cynthia Wilson
Executive Director
Friends of the Earth

WHITE HOUSE STAFFING MEMORANDUMDATE: 06/10/87 ACTION/CONCURRENCE/COMMENT DUE BY: ----SUBJECT: DOMESTIC POLICY COUNCIL MEETING -- THURSDAY, JUNE 11; 11:00 a.m.
ROOSEVELT RM.

	ACTION FYI			ACTION FYI	
VICE PRESIDENT	☐	☐	FITZWATER	☐	☐
BAKER	☐	☐	GRISCOM	☐	☐
DUBERSTEIN	☐	☐	HENKEL	☐	☐
MILLER - OMB	☐	☐	HOBBS	☐	☐
BALL	☒	☐	KING	☐	☐
BAUER	☐	☐	MASENG	☐	☐
CARLUCCI	☐	☐	RISQUE	☐	☐
CRIBB	☐	☐	RYAN	☐	☐
CRIPPEN	☒	☐	SPRINKEL	☐	☐
CULVAHOUSE	☐	☐	TUTTLE	☐	☐
DAWSON	☐ P	☐ SS	<u>THICK</u>	☒	☐
DONATELLI	☐	☐	<u> </u>	☐	☐

REMARKS: Please inform Patsy Faoro (x2800) in the Office of Cabinet Affairs if you will attend.

AGENDA: Stratospheric Ozone

RESPONSE:

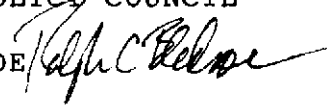
Rhett Dawson
Ext. 2702

THE WHITE HOUSE

WASHINGTON

June 10, 1987

MEMORANDUM FOR THE DOMESTIC POLICY COUNCIL

FROM: RALPH C. BLEDSOE 
SUBJECT: Domestic Policy Council Meeting on June 11, 1987

Attached are an agenda and materials for the Domestic Policy Council meeting scheduled for Thursday, June 11, 1987 at 11:00 a.m. in the Roosevelt Room. The agenda item to be discussed is Stratospheric Ozone.

This will be a continuation of the discussion at the May 20 meeting, at which additional information was requested on the legal and legislative, health, climatic, and cost/benefit aspects of this issue. The attached paper contains a brief description of these, and includes additional points for discussion about the U.S. positions that should be taken during the international negotiations.

Attachments

THE WHITE HOUSE

WASHINGTON

DOMESTIC POLICY COUNCIL

Thursday, June 11, 1987

11:00 a.m.

Roosevelt Room

AGENDA

1. Stratospheric Ozone -- Lee M. Thomas
Administrator
Environmental Protection Agency

Beryl W. Sprinkel
Chairman
Council of Economic Advisers

THE WHITE HOUSE

WASHINGTON

June 10, 1987

MEMORANDUM FOR THE DOMESTIC POLICY COUNCIL

FROM: THE ENERGY, NATURAL RESOURCES & ENVIRONMENT
WORKING GROUP *RCB*

SUBJECT: Stratospheric Ozone

On May 20, 1987, the Council met to discuss the international protocol negotiations currently underway to limit emissions of ozone depleting chemicals. Several questions were raised and the Working Group was asked to provide answers. The questions were:

- * What are the legislative and legal impacts of an international ozone protocol?
- * What are the most up-to-date scientific data on climatic and health effects of ozone depletion?
- * What is the cost/benefit effect of an international protocol restricting ozone depleting chemicals?

The following has been summarized by the Working Group after discussion of detailed presentations by experts in each area.

Climatic and Atmospheric

- o Since 1960 the natural variability of the total global column of ozone has been about 3%.
- o Observations have shown (1) a decrease in ozone of about 7% during the last decade in the upper part of the stratosphere; and (2) a 40% decrease in total column ozone over Antarctica in the spring season since the mid-1970's. Whether the recent changes in column and upper stratospheric ozone are due to natural phenomena or in part to CFCs remains an open question.
- o Continued growth of CFC and Halon emissions at 3% per year is predicted to yield a globally averaged ozone depletion of 6% by the year 2040, and more thereafter, which would be greater than natural variability. In contrast, a true global freeze on emissions of CFCs and Halons (i.e. full international participation, full chemical coverage, and full compliance) is predicted to yield a maximum global average column ozone depletion of less than 1%. Ozone depletions at high latitudes are predicted to be 2-3 times larger than the global average.
- o A true global freeze would limit column ozone depletion to less than the natural variability. A protocol freeze would fall short of a true global freeze as it would have less than

full compliance among developed countries and would most likely allow for limited growth in CFC usage in developing countries.

- o Ozone depletion in the upper part of the stratosphere greater than 25% is predicted to occur even in the case of a true global freeze. This would lead to a local cooling greater than natural variability. The consequences of this cooling for the earth's climate cannot be predicted at this time.
- o There is an uncertainty factor of two to three in the predictive abilities of the theoretical models used to simulate the present atmosphere.
- o If there is environmental damage due to CFCs and Halons, their long atmospheric lifetimes would mean that recovery would take many decades even after complete cessation of emissions.

Health and Ecological Effects

- o Projected ozone depletion will increase health effects of ultraviolet radiation (UVB)
 - Without ozone depletion, projections show UVB is a serious problem, and will cause:
 - 2,977,000 skin cancer deaths of Americans born before 2075,
 - 165 million skin cancer cases,
 - 426,516,000 cataracts.
 - If the predicted 25% depletion of ozone in the upper stratosphere occurs by 2075, UVB related health effects would increase by:
 - 2 million additional skin cancer deaths,
 - 98 million additional skin cancer cases,
 - 43 million additional cataracts.
 - If upper stratospheric depletion of 7.7% occurs instead (as predicted to result from a protocol freeze with less than full compliance and limited emissions growth in developing countries),
 - 1.6 million additional American deaths would be averted,
 - 79 million additional skin cancer cases would be averted,
 - 32 million additional cataracts would be averted.
 - If upper stratospheric depletion of 6.1% occurs (as predicted to result from a 20% emissions reduction protocol with less than full compliance and limited emissions growth in developing countries) incrementally,
 - 80,000 additional American deaths would be averted,
 - 4 million additional skin cancer cases would be averted,

- 2 million additional cataracts would be averted.

-- If upper stratospheric depletion of 3.2% occurs (as predicted to result from a 50% emissions reduction protocol with less than full compliance and limited emissions growth in developing countries) incrementally,

- 130 thousand additional American deaths would be averted,
- 7 million additional skin cancer cases would be averted,
- 7 million additional cataracts would be averted.

-- Uncertainties include future ozone depletion, the action spectra and estimates of dose-response coefficients.

- The analysis assumes no behavioral changes.
- Considering quantifiable uncertainties, there is a 50% chance that the actual damages will be between 50% and 125% of the above estimates.
- There is a 90% chance that the actual damages will be between 20% and 260% of the above estimates.

-- Laboratory studies link UVB with suppression of the immune system.

- Evidence suggests a relationship to infectious disease.
- A relationship has been demonstrated in herpes simplex and the tropical disease, leishmanias.

- o Evidence supports the conclusion that ozone depletion would exacerbate existing environmental problems.

-- Photochemical air pollution in places like Los Angeles would probably worsen.

-- The lifetime of outdoor plastics and latex paints would be shortened.

- o Evidence supports the conclusion that ozone depletion could seriously influence crops and aquatics.

-- Knowledge is limited, but experimental data indicate crop production may be reduced and ecosystems disturbed.

-- Field experiments have not been done, but laboratory data indicate aquatic organisms are sensitive to higher UVB, especially during critical breeding seasons.

- o Higher emissions of CFCs and its indirect effects of vertical ozone re-distribution will raise global temperatures and change climate.

Cost/Benefit

- o Cost/benefit analysis has been carried out for known health effects (skin cancer deaths, non-fatal skin cancers, cataracts) based on EPA's Risk Assessment.
- o Potential effects of ozone depletion on plants, aquatic life, the human immune system, ground-level ozone concentrations, polymer degradation, and sea level rise were not quantified.
- o A range of assumptions were used in the analysis to reflect economic uncertainties and lack of inter-agency consensus on the values of key parameters.
- o The analysis is based on EPA models which attempt to project health impacts through year 2165 and assume no changes in technology, medicine or human behavior.
- o Conclusions:
 - The economic benefits from a protocol freeze (at 1986 levels with less than full international participation) of CFC emissions are substantially greater than the costs over all plausible assumptions and ranges of uncertainty.
 - The economic benefits of a protocol freeze plus a 20% reduction in CFC emissions are also in almost all cases substantially in excess of the costs.
 - The incremental benefits of the additional 20% reduction beyond the freeze are in most cases in excess of the incremental costs of the cut.
 - The benefits of an additional 30% reduction (beyond the freeze plus 20% reduction) appear in some cases to be greater than the incremental costs, and in other cases to be less. Further scientific, technical, and economic review will be valuable in evaluating benefits and costs before implementing this step.

ISSUES AND DISCUSSION

At the May 20 Council meeting, the status of the international ozone negotiations was provided. It included a review of the November 28, 1986 Circular 175, which was approved by Under Secretary of State Allen Wallis, and which authorized the U.S. delegation to negotiate a protocol. The approval process for the Circular 175 has been criticized by some members of the Working Group, on the basis that numerous departments and agencies had not concurred on the Circular, or that concurrence was by individuals not at policy-making levels. The Circular 175 authorized

the U.S. delegation to negotiate a protocol providing for:

I. A near-term freeze on the combined emissions of the most ozone-depleting substances;

II. A long-term scheduled reduction of emissions of these chemicals down to the point of eliminating emissions from all but limited uses for which no substitutes are commercially available (such reduction could be as much as 95%), subject to III; and

III. Periodic review of the protocol provisions based upon regular assessment of the science. The review could remove or add chemicals, or change the schedule or the emission reduction target.

The international negotiations to date have resulted in a Chairman's Text, a proposed protocol to which negotiating countries have been asked to respond.

The Working Group recommends that the Council support continuation of negotiations pursuant to the current Circular 175. The Working Group also recommends however, that additional guidance be given to the U.S. negotiators, based on reviews by a wider range of agencies such as those represented on the Council.

The following are issues for which the Working Group feels additional guidance to the negotiators may be appropriate.

A. PARTICIPATION AND TRADE PROVISIONS

There are many complex issues pertaining to fair trade provisions and participation of developing countries in the protocol.

1. What should be the U.S. position regarding international participation in the protocol?

The Working Group feels that the U.S. delegation should seek maximum international participation in the protocol. To many, participation is the key issue, because growth of emissions from non-participating countries would offset the emissions reductions of those who are parties to the protocol, thereby hindering overall attainment of protocol objectives.

Developing countries are an important part of the participation issue. While the 48 countries participating in the protocol negotiations account for over 90% of the current production, substantial growth of production and consumption is anticipated in developing countries. The U.S. and the United Nations Environment Program (UNEP) have expended considerable effort to encourage broad participation by developing countries. However, only relatively few have shown the interest or the expertise to participate. Parties to the protocol would not be able to prevent non-joining countries from producing CFCs for their

internal market or from exporting to other non-parties, but, if the protocol provides for trade sanctions, parties could prevent non-parties from profiting through international trade with protocol parties.

A strong protocol, including the major producing and consuming countries, should lead to earlier development of substitute products, and might discourage non-joiners from investing heavily in CFC technology that would not generate trade with parties to the protocol. Further, some believe that the very existence of a protocol, as an expression of concern by the international community, increases the pressure on non-member countries to join; in essence, if they continue to produce CFCs, they are exposed as behaving irresponsibly on a matter of global import.

The following options are proposed for the Council's consideration:

- a. Give the U.S. delegation discretion for seeking maximum participation.
- b. Develop criteria for acceptable levels of participation, e.g. minimum participation of countries producing a specified percentage of the total global CFC/Halon production; or a formula requiring minimum participation of countries accounting for a specified portion of the world population.
- c. Wait to reassess the U.S. position after we know the extent of participation by other countries.

To encourage the participation of developing countries, some parties favor granting developing countries a limited grace period from compliance with protocol provisions. Such a grace period would be allowed in recognition of the importance of having global participation in the 21st century, and in recognition of the fact that developing countries have not received the benefits of CFC and Halon use. The length of the grace period and the levels of production/consumption that would be permitted are questions that would need to be resolved.

2. Voting among parties to the protocol.

Also at issue is the voting process for making future decisions under the protocol. This could include decisions on future reductions. The Working Group recommends that the U.S. delegation negotiate for a system of voting which would give due weight to the major producing and consuming countries.

3. The control formula and trade provisions

The Working Group recommends that the Council direct the U.S. delegation to continue to seek to include in the protocol an effective formula to control emissions with accountability, the

fewest possible restrictions on the flow of trade and capital among parties, the most favorable formula for U.S. industry, stimulation of substitutes and innovative emission controls, and with no greater restriction on trade involving the U.S. than will be adopted and enforced by other nations.

Trade: The U.S. has pushed for a strong protocol article on trade sanctions to be imposed on parties which have not signed the protocol. This would limit imports not only of the controlled chemicals but also of products containing these chemicals (e.g., air conditioners or foam insulation). The U.S. has pushed for a study of the feasibility of limiting imports of products manufactured using the controlled chemicals (e.g., electronic equipment). The intent of the trade article would be to provide a "stick" for encouraging others to join and to limit the impact on ozone depletion and the transfer of commercial benefits from parties to the protocol to countries which have not joined.

This would represent a major policy decision, as it could be an important precedent for using trade sanctions to enforce environmental regulations. Also to be decided is whether trade sanctions should be applicable to parties who materially violate their protocol obligations.

Control Formula: Since it is not possible to measure emissions directly, the negotiators have explored alternative formulas to control emissions which consider production, consumption, imports and destruction.

4. Should the U.S. seek protocol provisions for reporting, monitoring, verification and enforcement provisions?

There are many complex issues relating to enforcement of a protocol. Because of the enforcement roles of EPA and U.S. environmental groups, our compliance with the protocol is apt to be substantial. Most other nations do not have such enforcement mechanisms. No monitoring or verification system has been identified to date. A system of on-site inspections for the presence of new or expanded CFC-producing facilities would be expensive and probably ineffective because of the large land areas involved.

Some Working Group members believe the U.S. should insist upon strong monitoring and reporting provisions in a protocol. Some favor the U.S. negotiating for strong provisions, and exploring the feasibility and cost effectiveness of establishing ad hoc inspection teams to investigate any alleged violations of protocol requirements. Trade provisions could at least prevent entry of such production into international trade with parties to the protocol.

The following options are presented for the Council's consideration:

a. Give the U.S. delegation discretion for seeking such provisions.

b. Insist that the protocol include such provisions.

5. Should the U.S. attempt to receive "credit" for its 1978 unilateral voluntary ban on CFC-producing non-essential aerosols?

Some believe that in addition to a freeze, other nations should ban non-essential aerosols as the U.S. did in 1978. Otherwise, many nations might be able to meet their obligation to reduce CFC emissions through the simple expedient of banning such aerosols, while the U.S. is required to cut back on other products using CFCs. One form of recognition may be to require other countries to ban non-essential aerosols in addition to meeting other protocol requirements.

The U.S. attempted unsuccessfully to get such credit two years ago during the negotiation of the Vienna Convention on the ozone layer, and some believe that if the U.S. were to insist upon such credit as a condition of a protocol, the negotiations would come to a standstill as in 1985. Some argue that even with the aerosol ban, the U.S. remains responsible for most of the long-lived CFCs in the stratosphere, and the U.S. per capita CFC consumption is still the world's highest.

The Working Group recommends that the Council consider and provide guidance for the U.S. delegation as to whether or not we should attempt to gain credit for our previous actions.

B. AN EMISSIONS CONTROL PROTOCOL

The aforementioned Chairman's Text contains proposals related to (1) a freeze on emissions, and (2) emissions reductions beyond a freeze. The Working Group discussed these at length.

1. A Freeze on Emissions. The following are major questions:

a. What chemicals should the freeze cover?

The Chairman's Text provides for a freeze on emissions at 1986 levels which would cover CFCs 11, 12, 113, 114, and 115. Due to a technicality, Halons are not now included.

The Working Group consensus is that the freeze should include all of these CFCs as well as Halons 1201 and 1311. The U.S. delegation will be seeking to expand the protocol to include the Halons.

From a purely scientific perspective all chemicals containing chlorine and bromine, weighted by the ozone depleting potential, should be considered for the protocol, both for the freeze and for potential future reductions. The Chairman's Text is somewhat less than a purely scientific perspective because only the fully halogenated chemicals (CFCs 11, 12, 113, 114 and 115, and Halons 1201 and 1311) are being considered for inclusion. Chemicals such as CFC 22 and methyl chloroform which are only partially halogenated are not being considered as they are believed to be part of the solution and have relatively low ozone depleting potential.

Concern has been raised with regards to reductions in Halons 1201 and 1311 and CFC 113 because of their strategic value to the U.S., and the apparent lack of suitable substitutes. This is a legitimate concern but one that can be handled if controls are on the sum of the ozone depleting potential of all chemicals, rather than on individual substances. This will allow each individual country the flexibility to live within the internationally agreed protocol with the least interference on how a country wants to implement the protocol.

b. When should a freeze on emissions occur?

The Chairman's Text proposes that the freeze take effect within two years of entry into force. There is uncertainty as to when entry into force will occur, but the best estimate is that it will be in the 1988-90 time period. The Working Group consensus is that a freeze on emissions should go into effect within one to two years after entry into force of the protocol.

2. Reductions Beyond a Freeze

a. What chemicals should the reductions cover?

The Chairman's Text proposes that the additional reductions beyond a freeze include CFCs 11, 12, 113, 114 and 115. The Working Group consensus is that any additional reductions should cover CFCs 11 and 12; however, there are questions about the coverage of CFCs 113, 114, 115, and Halons 1201 and 1311. National security concerns argue against including the Halons in any reductions. There is also a national defense and security concern with including CFC 113 in any reductions beyond a freeze, especially given 113's importance for certain high-technology electrical applications. The questions regarding coverage of CFCs 114 and 115 concern their potential use as substitutes for controlled chemicals and their present low usage.

b. How much and when?

The Chairman's Text provides for a 20% reduction to take effect 4 years after entry into force (1992-94) and an additional 30% reduction to take effect either 6 years (1994-96) or 8 years (1996-98) after entry into force.

With respect to any future reductions, the Working Group recognizes the importance of the future assessments of science, technology, economics and environment.

The Working Group identified distinct issues surrounding each potential reduction. With respect to the 20% reduction, some favor it because it can be accomplished with existing industrial processes and because reductions beyond a freeze may be needed to counterbalance less than full participation in a freeze. Yet others note there are uncertainties as to the need for any additional reductions.

Regarding the additional 30% reduction, some favor its inclusion on the basis of judgements about the science and potential adverse health effects. Others emphasize, however, the uncertainties about the need to commit at this time to this additional measure. One or more scientific reviews would be available prior to this reduction going into effect.

The Working Group recommends that the Council discuss and provide guidance on whether the U.S. position is to support:

1. A 20% reduction beyond a freeze.
2. An additional 30% reduction.
3. Additional reductions beyond 50%.

c. Should the reductions be automatic (subject to reversal by a 2/3 vote) or contingent upon a positive vote of a majority of the parties?

The Chairman's Text proposes an initial 20% reduction to take effect automatically (implicitly reversible by a 2/3 vote).

The Text provides two alternative implementing mechanisms for the next 30% reduction -- 6 years after entry into force if the majority of the parties so decide, or 8 years after entry into force unless reversed by a two-third majority of the parties.

There are strong views in the Working Group on the implementing mechanism for the additional 30% percent reduction. Many do not wish to commit to the reduction at this time unless it is contingent upon a positive vote of a majority of the parties. Others, however, believe the evidence warrants committing to this reduction at this time.

Most believe the future assessments of the science, technology, economics and environment are important to these reduction decisions. There are differing views, however, on how such future assessments ought to factor into reduction decisions. Some believe final reduction decisions ought to follow future

assessments, whereas others believe reductions should be scheduled now with an opportunity for reversal based upon future assessments.

The Working Group recommends that the Council provide guidance on whether the U.S. should support automatic reductions of:

- a. 20% beyond the freeze.
- b. an additional 30%.

C. ISSUES FOR LATER CONSIDERATION

The Working Group identified several related issues that will require further consideration. They include:

1. The relationship between international protocol and domestic regulations. Since the overall objective of the protocol is to avoid or reduce health and environmental risks, compliance with the international protocol will necessarily result in domestic regulation. There is legal precedent for such a linkage between international agreements and subsequent domestic regulations.

2. Non-Regulatory Approaches. There is no reason why the Nation's efforts to achieve the objectives sought in the protocol should be limited to a regulatory approach. The suggestion has been made that if the government imposes such regulatory burdens upon the people and the economy of the U.S., consideration should also be given to policies which may ease the regulatory burdens, including, but not limited to, possibly rendering unnecessary imposition of regulations beyond those necessary to assure U.S. compliance with the international protocol.

Such a domestic, non-regulatory supplement to the international protocol might, for example, contain elements intended to eliminate government barriers to, or facilitate, the development of: substitutes for covered chemicals, technology to mitigate or eliminate the adverse effects of chemical emissions upon stratospheric ozone, or medical advancements in the understanding and treatment of the problems caused by ozone depletion.

[NOTE: This paper attempts to portray the general flavor of the Working Group discussions on this very complex issue. It was not possible to include all of the important comments contributed by representatives of the participating agencies.]

THE WHITE HOUSE

WASHINGTON

UNCLASSIFIED WITH A CLASSIFIED ATTACHMENT

June 26, 1987

MEMORANDUM FOR KEN DUBERSTEIN
WILL BALL
GARY BAUER
FRANK CARLUCCI
KEN CRIBB

DAN CRIPPEN
A.B. CULVAHOUSE
RHETT DAWSON
MARLIN FITZWATER
TOM GRISCOM

FROM: NANCY RISQUE *Nancy*
SUBJECT: Stratospheric Ozone

The attached decision memorandum is for your information. The President has approved the issuance of the memorandum containing his decisions for the U.S. delegation.

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REMOVAL
OF SENSITIVE

dh 3/3/2017

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~~CONFIDENTIAL~~

THE WHITE HOUSE
WASHINGTON

June 25, 1987

State Waiver 1/6/15
3/3/17

MEMORANDUM FOR THE PRESIDENT

FROM: NANCY J. RISQUE

SUBJECT: Stratospheric Ozone Decision Memorandum

ISSUE: Communication of your decisions to the U.S. delegation.

BACKGROUND: On June 18, the Domestic Policy Council discussed with you their recommendations on the positions the U.S. delegation should take at the June 29 international negotiations on this issue. These negotiations will produce a draft agreement that the delegation will bring back for final approval prior to the plenipotentiary and signing meetings in Montreal in September 1987. Congress, numerous environmental groups, and other countries will be following closely the U.S. positions and results of these meetings.

DISCUSSION: The decisions you have made should permit the U.S. delegation to reaffirm strong measures for protecting the ozone layer, and should not result in major challenges to our past or current positions. However, Council members feel confidentiality is of vital importance in the final stages of the negotiating process. In this regard, the attached classified memorandum has been prepared for communication of your decisions to the State Department for the U.S. delegation, and the Cabinet principals.

One statement has been added for emphasis -- that you expect the U.S. delegation to seek participation in the protocol of "well above a majority of major producing/consuming countries." This was stimulated by the strong argument that a few countries not joining the protocol can easily spoil the efforts of those that do. Thus, this will stress the importance of the negotiators pursuing maximum participation by other countries. This more clearly defines your decision.

RECOMMENDATION: I recommend that you approve the issuance of the attached memorandum containing your decisions for the U.S. delegation, including the statement emphasizing maximum participation.

____ APPROVE

____ DISAPPROVE

____ MODIFY

Attachment

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

To achieve a majority of the health and environmental benefits derived from retention of the ozone layer, and to spur industry to develop substitutes for chemicals in question, the U.S. delegation will seek a freeze at 1986 levels on production/-consumption of all seriously ozone-depleting chemicals, including chlorofluorocarbons (CFCs) 11, 12, 113, 114, 115; and Halons 1201 and 1311, to take effect one or two years after the protocol entry into force. The earliest expected date for entry into force is 1988.

The U.S. delegation will also seek strong provisions for monitoring, reporting, and enforcement to secure the best possible compliance with the protocol, but they need not seek a system of credits for emissions reduction resulting from the 1978 U.S. ban of non-essential aerosols.

In addition to a freeze, the U.S. delegation will seek a 20% reduction from 1986 levels of CFCs 11, 12, 113, 114 and 115 four years after entry into force of the protocol, and following a 1990 international review of updated scientific evidence. The 20% reduction should take place automatically, unless reversed by a 2/3 vote of the parties. The U.S. delegation will seek a second-phase CFC reduction of an additional 30% from 1986 levels, which would occur about eight years after entry into force of the protocol, and following scientific review. This would occur automatically, unless reversed by a 2/3 vote of parties.

The U.S. delegation will seek a trade provision in the protocol that will best protect U.S. industry in world markets, by authorizing trade restrictions against CFC-related imports from countries that do not join or comply with the protocol provisions. It is our policy to insure that countries not be able to profit from not participating in the international agreement, and to insure that U.S. industry is not disadvantaged in any way through participation.

It is the U.S. position that the ultimate objective is protecting the ozone layer by eventual elimination of realistic threats from man-made chemicals, and that we support actions determined to be necessary based on regularly scheduled scientific assessments.