THE STATUS OF METHYL BROMIDE UNDER THE CLEAN AIR ACT AND THE MONTREAL PROTOCOL

HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY AND AIR QUALITY

OF THE

COMMITTEE ON ENERGY AND COMMERCE

HOUSE OF REPRESENTATIVES

ONE HUNDRED EIGHTH CONGRESS

FIRST SESSION

JUNE 3, 2003

Serial No. 108–55

Printed for the use of the Committee on Energy and Commerce

Available via the World Wide Web: http://www.access.gpo.gov/congress/house

U.S. GOVERNMENT PRINTING OFFICE

87–491PDF WASHINGTON : 2004

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2250 Mail: Stop SSOP, Washington, DC 20402–0001

COMMITTEE ON ENERGY AND COMMERCE

W.J. "BILLY" TAUZIN, Louisiana, *Chairman*

MICHAEL BILIRAKIS, Florida
JOE BARTON, Texas
FRED UPTON, Michigan
CLIFF STEARNS, Florida
PAUL E. GILLMOR, Ohio
JAMES C. GREENWOOD, Pennsylvania
CHRISTOPHER COX, California
NATHAN DEAL, Georgia
RICHARD BURR, North Carolina
Vice Chairman
ED WHITFIELD, Kentucky
CHARLIE NORWOOD, Georgia
BARBARA CUBIN, Wyoming
JOHN SHIMKUS, Illinois
HEATHER WILSON, New Mexico
JOHN B. SHADEGG, Arizona
CHARLES W. "CHIP" PICKERING, Mississippi
VITO FOSSELLA, New York
ROY BLUNT, Missouri
STEVE BUYER, Indiana
GEORGE RADANOVICH, California
CHARLES F. BASS, New Hampshire
JOSEPH R. PITTS, Pennsylvania
MARY BONO, California
GREG WALDEN, Oregon
LEE TERRY, Nebraska
ERNIE FLETCHER, Kentucky
MIKE FERGUSON, New Jersey
MIKE ROGERS, Michigan
DARRELL E. ISSA, California
C.L. "BUTCH" OTTER, Idaho

JOHN D. DINGELL, Michigan
HENRY A. WAXMAN, California
EDWARD J. MARKEY, Massachusetts
RALPH M. HALL, Texas
RICK BOUCHER, Virginia
EDOLPHUS TOWNS, New York
FRANK PALLONE, Jr., New Jersey
SHERROD BROWN, Ohio
BART GORDON, Tennessee
PETER DEUTSCH, Florida
BOBBY L. RUSH, Illinois
ANNA G. ESHOO, California
BART STUPAK, Michigan
ELIOT L. ENGEL, New York
ALBERT R. WYNN, Maryland
GENE GREEN, Texas
KAREN MCCARTHY, Missouri
TED STRICKLAND, Ohio
DIANA DEGETTE, Colorado
LOIS CAPPS, California
MICHAEL F. DOYLE, Pennsylvania
CHRISTOPHER JOHN, Louisiana
TOM ALLEN, Maine
JIM DAVIS, Florida
JAN SCHAKOWSKY, Illinois
HILDA L. SOLIS, California

DAN R. BROUILLETTE, *Staff Director*
JAMES D. BARNETTE, *General Counsel*
REID P.F. STUNTZ, *Minority Staff Director and Chief Counsel*

SUBCOMMITTEE ON ENERGY AND AIR QUALITY

JOE BARTON, Texas, *Chairman*

CHRISTOPHER COX, California
RICHARD BURR, North Carolina
ED WHITFIELD, Kentucky
CHARLIE NORWOOD, Georgia
JOHN SHIMKUS, Illinois
Vice Chairman
HEATHER WILSON, New Mexico
JOHN SHADEGG, Arizona
CHARLES W. "CHIP" PICKERING, Mississippi
VITO FOSSELLA, New York
STEVE BUYER, Indiana
GEORGE RADANOVICH, California
MARY BONO, California
GREG WALDEN, Oregon
MIKE ROGERS, Michigan
DARRELL ISSA, California
C.L. "BUTCH" OTTER, Idaho
W.J. "BILLY" TAUZIN, Louisiana
(Ex Officio)

RICK BOUCHER, Virginia
(Ranking Member)
ALBERT R. WYNN, Maryland
THOMAS H. ALLEN, Maine
HENRY A. WAXMAN, California
EDWARD J. MARKEY, Massachusetts
RALPH M. HALL, Texas
FRANK PALLONE, Jr., New Jersey
SHERROD BROWN, Ohio
BOBBY L. RUSH, Illinois
KAREN MCCARTHY, Missouri
TED STRICKLAND, Ohio
LOIS CAPPS, California
MIKE DOYLE, Pennsylvania
CHRIS JOHN, Louisiana
JOHN D. DINGELL, Michigan
(Ex Officio)

CONTENTS

THE STATUS OF METHYL BROMIDE UNDER THE CLEAN AIR ACT AND THE MONTREAL PROTOCOL

TUESDAY, JUNE 3, 2003

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ENERGY AND COMMERCE,
SUBCOMMITTEE ON ENERGY AND AIR QUALITY,
Washington, DC.

The subcommittee met, pursuant to notice, at 2 p.m., in room 2322, Rayburn House Office Building, Hon. Joe Barton (chairman) presiding.

Present: Representatives Barton, Whitfield, Norwood, Shimkus, Radanovich, Bono, Issa, Otter, Boucher, Allen, Hall, McCarthy, Strickland, and Capps.

Also Present: Representatives Bilirakis and Stearns.

Staff Present: Andy Black, policy coordinator, and Bob Meyers, majority counsel; Peter Kielty, legislative clerk; Michael Goo, minority counsel, and Bruce Harris, minority professional staff member.

Mr. BARTON. The subcommittee will come to order. We are going to begin as soon as we have a quorum and the quorum is at least one Republican and one Democrat. We are expecting Congressman Boucher shortly. So as soon as he gets here we will start. And if our witnesses will go ahead and be seated, we will start very quickly.

Subcommittee will come to order. Without objection, the subcommittee will proceed pursuant to Committee Rule 4(e), which governs opening statements by members, the opportunity to defer them for extra questioning time. Is there any objection?

Mr. BOUCHER. No.

Mr. BARTON. Hearing none, so ordered.

Prior to recognition of the first witness for testimony, any member when recognized for an opening statement may completely defer his or her 3-minute opening statement and instead use those 3 minutes during the initial round of questioning. The Chair is going to recognize himself for an opening statement.

I want to welcome all of our witnesses here today. This is a very popular hearing. We have several Congressmen from other committees who are here to monitor the hearing. We have excellent administration witnesses and excellent private sector witnesses. The issue of methyl bromide is important to many members of the committee and subcommittee. Congressmen Radanovich, Issa, Blunt, Bilirakis, Stearns, Upton, Hall and others have taken a vital inter-

est in this matter. Also want to thank Congressman Boucher, my ranking member, for his assistance in putting together the hearing.

The members outside this committee, as I have already mentioned, are very concerned regarding the impact that a phaseout of methyl bromide could have on agriculture, port and other operations affecting their districts and the Nation at large.

We are going to hear from the administration what their issues are concerning the upcoming meetings of the parties to the Montreal Protocol at which these issues will be discussed. Committee staff has reviewed the most recent documents concerning the report of the Technology and Economic Assessment Panel on Critical Use nominations for methyl bromide as well as the 2002 assessment for the Methyl Bromide Technical Options Committee. The committee is aware of the criticisms in these reports, including the length of time which was spent reviewing the U.S. Critical Use nominations, large amount of such nominations for which the TEAP has not cited to recommend approval but for which it has requested more information.

It is obvious that the uncertainty over future availability of methyl bromide has caused great concern in many corridors. We hope today to gain a fuller understanding of the current status of methyl bromide under the Montreal Protocol and the Clean Air Act. To initiate that process, I have sent several questions to the EPA requesting information relevant to the issue, and I would ask that when those answers are available they will be made part of the record.

After today's hearing, I fully expect there will be additional questions and members of the panel will have additional questions. It would be my intention to leave the record open for a reasonable period of time to accommodate the receipt of answers in writing to these requests as well as other information and testimony the subcommittee may receive.

We need to let the facts tell the story and we need to let any policy judgments flow from accurate information. In the House of Representatives the matter of the Montreal Protocol and Title VI of the Clean Air Act is within the sole jurisdiction of the Energy and Commerce Committee, and this subcommittee to be specific.

This matter is unique since it represents a treaty commitment of the United States. The commitment was initially ratified by the Senate in 1986 and in 1988 and then further amended again by Senate ratification in 1991 and 1994 of 2 of the 4 amendments which the Montreal Protocol parties have since adopted.

To put it in Texas terms, this is no small matter. Serious business. You can be assured that this subcommittee will approach this issue and any other issue respecting the treaty and the Clean Air Act with the requisite thoroughness and seriousness of purpose and also with the requisite detail to the Protocol in working with treaty obligations of the U.S. Government.

So I am very happy to have these witnesses and I look forward to hearing their testimony, and I would like to recognize the ranking member from Virginia, Mr. Boucher, for an opening statement.

Mr. BOUCHER. Thank you, Mr. Chairman. I want to commend you for convening today's hearing on the status of methyl bromide

use and the impending phaseout of the product in the United States.

Methyl bromide has been used for many years primarily as a pesticide and herbicide in agricultural activities. While the substance is extremely effective as a soil fumigant, post harvest fumigant and structural fumigant, methyl bromide is also recognized as an ozone depleting substance. As a result of that clarification, the reduction of methyl bromide use was addressed by the Montreal Protocol on substances that deplete the ozone layer and the substance was placed on a phaseout schedule, with the United States expected to reach zero percent production and consumption in January of 2005. Under the Montreal Protocol, the United States agreed to a phaseout schedule which would result in reductions of 25 percent in 1999, 50 percent in the year 2001, 70 percent in the year 2003, going to 100 percent by the year 2005.

In 1998, as part of the appropriations process, the Congress amended the Clean Air Act to harmonize the phaseout schedule for methyl bromide in the United States with the schedule that was set forth in the Montreal Protocol.

Under the treaty, nations may apply for critical use exemptions from the phaseout schedule, and in February of this year the United States applied for a total of 54 exemptions for methyl bromide. The protocol's Technical and Economic Assistance Panel is reviewing the applications for exemption that have been filed by the United States and by other nations that are parties to the treaty, and it is expected that by November of this year the parties to the Protocol will make final decisions with respect to the applications that have been filed by the United States and by other countries.

Today's hearing offers a timely focus on whether reliable non-ozone depleting alternatives to methyl bromide are being developed and whether those alternatives after development will be made commercially available in time to permit the 2005 phaseout schedule to occur without injury to the many users in the United States of methyl bromide. If alternatives are not expected for all current methyl bromide applications in time to prevent harm to the agricultural and other users of the chemical, today's hearing will develop a record of those facts which can then be used to support the application for exemptions that have currently been filed by the U.S. And potentially could support the taking of other steps that will prevent harm to the current users.

This truly is a timely hearing, and I want to commend the chairman for scheduling this and for inviting the participation of outstanding witnesses, and I would like to join with the chairman in welcoming our witnesses today.

Mr. BARTON. Does the gentleman from Illinois wish to make an opening statement?

Mr. SHIMKUS. I would, Mr. Chairman.

Mr. BARTON. The gentleman is recognized for 3 minutes.

Mr. SHIMKUS. I would like to take this opportunity to welcome one of my constituents, Rich Siemer of Siemer Miller, which has a plant in my district, which is Teutopolis, Illinois, and we flew in this morning together. They also have facilities in Hopkinsville, Kentucky, and Gainesville, Missouri, which is Roy Blunt's district.

So I bring welcomes from all three members who all actually serve on the full committee in the Commerce Committee. And I have had a chance to tour the plant in Teutopolis and learned a lot about soft wheat, which I didn't know much of until I got a chance to tour. And since I am an aficionado of Hostess cupcakes, it is good to know that that it is all soft wheat and it is milled right there in my congressional district.

We all know the issue of debate. The issue is the 2005 time line for the elimination of methyl bromide, the fact that there is really no alternative out there as we speak and that it has been a very successful fumigant against bugs, not just ones we have now but ones that will be coming across our country borders, which we know is happening all around the country. So this is a very, very important hearing.

There is also going to be debate and discussions on the fund and exemptions maybe some countries are receiving versus exemptions that the United States may be receiving, and I hope we get a chance to fully address some of these concerns. I think there is going to be a concerted effort here in Washington, DC. To address the critical use aspect of methyl bromide and a very concerted effort to make sure that we don't throw the baby out with the bath water and do more harm, especially to the agricultural sector, because of some policies.

And, Mr. Chairman, I thank you for giving me that time to welcome one of my constituents and I yield back.

Mr. BARTON. Does the gentlelady from California wish to make an opening statement?

Mrs. CAPPS. I do, Mr. Chairman.

Mr. BARTON. The gentlelady is recognized for 3 minutes.

Mrs. CAPPS. Mr. Chairman, I thank you for your interest in this important subject and for holding this very timely hearing. There are a number of people in the room will testify to the importance of this topic and I want to acknowledge Bill Pauli from the California Farm Bureau, who is here, among many others.

These are difficult issues which face our farming and growing communities with the coming phaseout of methyl bromide. Methyl bromide is very important for the production of many current farm products, especially strawberries and cut flowers, and I cite two examples. Strawberries are the highest growing product in my district, the 23rd Congressional District in California, and cut flowers are also very significantly affected with methyl bromide.

I am a public health nurse as well and I do worry about the highly toxic nature of methyl bromide and the harmful effects its continued use creates. And I picture in my mind fields abutting school yards and suburban encroachment into agriculture areas, so that creates even more agricultural hazards.

First, according to the Environmental Protection Agency, the pesticide may be hazardous to the health of those exposed, notably farm workers who work in the field where it is applied. In fact, last month the National Cancer Institute linked methyl bromide to increased rates of prostate cancer among agricultural workers and pesticide applicators.

Second, the drift, as I mentioned, of methyl bromide fumes into nearby communities, including school yards, is very problematic. It

can cause irritation to the eyes and skin, dizziness and headaches and other health related harms, like kidney, heart and lung problems.

In addition to endangering human health, the use of methyl bromide contributes to the destruction of the ozone layer. According to scientists, methyl bromide is at least 50 times more destructive to the ozone layer than CFCs, which are already banned from production, and it is probably responsible for between 5 and 10 percent of the worldwide ozone depletion, which affects agricultural communities as well.

More than 180 countries have signed the Montreal Protocol and agreed to a global phaseout of the pesticide. I believe the United States must stick to its goal of 100 percent phaseout of methyl bromide by 2005. To meet the phaseout goal, further investment in research is critical and crucial. This would lead to the development of safe pesticides to minimize harm to the environment while keeping our Nation's farmers and growers employed and productive. And after the complete phaseout of methyl bromide in 2005 we must allow for the fair application of critical use exemptions when no safer alternatives are available.

Mr. Chairman, since coming to Congress I have been working to find a balance between agriculture's need and public health concerns. I have worked with other rural representatives and farm groups regarding safer post-harvest uses of methyl bromide like clarifying that walnut growers can spray the pesticide after the crops are picked but before they are shipped to consumers, thus decreasing the amount used. Crop management techniques are also available to assist growers with the transition away from methyl bromide. And I look forward to working with all members of the committee in exploring this issue further.

Again I want to thank you, Mr. Chairman, for holding this hearing, and I look forward to the testimony of our witnesses. I yield back.

Mr. BARTON. I thank the gentlelady. Mr. Issa wish to make an opening statement?

Mr. ISSA. Yes, I do.

Mr. BARTON. The gentleman is recognized for 3 minutes.

Mr. ISSA. Thank you, Mr. Chairman, and I will submit an official opening statement for the record so I won't say again what has been said already on both sides of the aisle. I am going to enjoy listening to this panel, and I have the privilege of having one of my own constituents and a major grower of cut flowers in the next panel. It has been my experience working with Dr. Mellano and many of the other growers in my district to have a keener understanding of the competitive environment that also fits into play with our hearing today and our final decision on whether or not to allow the United States to find themselves at a competitive disadvantage to their neighbors.

Mr. Chairman, as you know, I was a businessman for 20 years before coming to Congress, so I consider that one of the few unique rights I have is to second guess bad business decisions made on behalf of the United States by people negotiating, not the least of which what happened in Montreal. To have an industry like cut flowers, the largest agricultural employer in my district and rep-

resenting $6.5 billion in California, keenly in competition with South and Central America, plus Mexico, be told that without a substitution they are going to find themselves phased out in 2005 while the yields in productivity of neighbors just literally walking distance to the south of my district will have a competitive advantage is unheard of and unthinkable.

I very much support finding an alternative to methyl bromide. I certainly share with Ms. Capps her concerns and a desire to phase the use of this product out as soon as possible. But if I can give an analogy that I think is appropriate here, the internal combustion engine depletes the ozone layer. It puts out a great many harmful substances. And although we have made a concerted effort to reduce the emissions from all forms of fossil fuel burners, we have not sought either to ban it outright without an alternative or, worse than that, to say Americans should walk while the rest of the world rides.

Mr. Chairman, I hope as we go through this hearing we can keep in mind that this is as much about competitive advantage for the United States or disadvantage as it is about the core question of how to replace methyl bromide. I yield back the balance of my time.

[The prepared statement of Hon. Darrell E. Issa follows:]

PREPARED STATEMENT OF HON. DARRELL ISSA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. Chairman, I want to thank you for holding today's oversight hearing on the status of methyl bromide under the Clean Air Act and the Montreal Protocol. Today's hearing is especially important to my district and home state, where agriculture plays such an important role in our local and state economy.

California is the nation's leader in the production of fresh fruits, vegetables, dried fruits and nuts, as well as many other field crops. California is also one of the largest users of methyl bromide in the United States. Methyl bromide is used to produce disease and pest-free planting material and to comply with regulatory requirements in California. Methyl bromide is a highly effective fumigant used to control insects and weeds. Its primary uses are for soil fumigation, post-harvest protection, and quarantine treatments. At this time, farmers throughout the United States and in most parts of the world do not have an acceptable alternative to methyl bromide.

In California, nursery plants are the fourth largest crop—accounting for $6.5 billion in sales each year. This industry is the largest crop in my congressional district. Currently, only methyl bromide has shown the ability to penetrate dense tissue such as bulbs to assure effective control of soil-borne diseases and pests. The existence of this industry depends on the availability of this fumigant. Without methyl bromide or suitable substitutes, both domestic and foreign markets could be closed to California agricultural products, causing our agricultural industry to suffer immense financial losses.

A few years ago, the United States agreed to ratify the Montreal Protocol with the understanding that alternatives for methyl bromide would be available to our farmers and growers. At this time, there is no viable alternative. Our agricultural industry is in a very difficult predicament. Later this year, the countries associated with the Montreal Protocol, including the U.S., will decide whether exemptions for the phase-out of methyl bromide will be authorized for 2005 alone or for more than one year.

Mr. Chairman, I would like to thank you for including one of my constituents on today's witness list. Michael Mellano, owner of Mellano and Company, will be sharing the difficulties that the floral industry will be facing if methyl bromide is eliminated without an alternative. Mr. Mellano has a Ph.D. in Plant Pathology from University of California, Riverside and has been actively involved in the floral industry for over fifty years. Mellano and Company farms more than 625 acres in Southern California, producing more than four million bunches of fresh flowers and foliage from their fields. His testimony will provide a growers' perspective regarding the Montreal Protocol's mandatory phase-out of methyl bromide and explain why a critical use exemption is needed.

I encourage the Administration to become engaged in the methyl bromide debate and play a more active role in representing the interest of U.S. agriculture. The U.S. must have a sensible alternative to methyl bromide before its use is banned.

Again, I thank the chairman for holding this hearing on this important issue.

Mr. BARTON. Does the gentleman from Maine wish to make an opening statement?

Mr. ALLEN. I do, Mr. Chairman.

Mr. BARTON. The gentleman is recognized for 3 minutes.

Mr. ALLEN. Thank you, Mr. Chairman. Thank you for holding this hearing.

The Montreal Protocol is one of the most successful international environmental regimes ever created. The 1987 treaty aimed at phasing out the use of chemicals known to damage the ozone layer has conclusively helped the Earth's stratospheric protective shield to recover. However, we are by no means out of the woods. According to the most recent United Nations environment program report, concentrations of ozone depleting gases in the atmosphere remain extremely high. The Montreal Protocol depends on its 183 ratifying countries to comply with mandatory phaseouts of ozone depleting substances, but little enforcement mechanism. If any single party fails to comply with the regime, the regime may fail.

The treaty allows for exemptions to its chemical use bans in situations where the chemicals are considered of critical use. Clearly it makes sense to allow some exceptions to an all out ban. We should not ban asthma inhalers because they still use chlorofluorocarbons, but exemptions have the potential to be abused, defeating the effectiveness of the entire regime. For instance, the Clean Air Act exempts old dirty power plants from many of its requirements and as result dirty air in this country still accounts for thousands of deaths and hospitalizations a full 33 years after the act was passed.

Methyl bromide has some critical uses, but it is a powerful ozone depleting gas. U.S. Businesses have requested that 62 percent of methyl bromide consumption in the United States be considered critical and the administration presented a critical use nomination requesting exemptions for 39 percent of consumption. At such a high percentage, the exception would become the rule.

The threat of ozone depletion is known, it is real and we must uphold our commitment to address it. We should not back out of our commitments to reduce emissions at this time without very good reason. We should make every effort to meet the deadline set within the Montreal Protocol.

Mr. Chairman, I thank you for holding the hearing, and I thank the witnesses and I look forward to their testimony.

Mr. BARTON. Does the gentlelady from California wish to make an opening statement?

Mrs. BONO. Thank you, Mr. Chairman. I will just submit my written remarks for the record, but I would like to thank you for holding this hearing, which is very important to my district, and I want to thank our witnesses in advance for being here today and yield back my time.

[The prepared statement of Hon. Mary Bono follows:]

PREPARED STATEMENT OF HON. MARY BONO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Thank you Mr. Chairman for holding this hearing today. As agriculture is the number one industry in California's 45th Congressional District, I am especially concerned about the matter at hand.

Methyl bromide, a soil fumigant, is critical to the production of over 100 crops in the U.S. as a combatant of weeds, fungal pathogens and other pests. The agriculture industry is combating a probable 70% reduction in methyl bromide production since 1998. Additional phase outs will further burden the industry.

Since 1992, even with extensive agricultural research being conducted, there have been no feasible alternatives developed to replace methyl bromide in fruit and vegetable production practices. As you can see, we need to consider allowing our growers be able to continue use of methyl bromide as we actively continue to search for alternatives that are equally affective and available.

I appreciate the need to improve upon and live up to the current Clean Air Act as well as the Montreal Protocol. It is critical to be mindful of taking the appropriate and meaningful steps to improve our air quality. So, it is my hope that we can find a balance between preventing pests from invading our crops and protecting America's agriculture industry with that of working to find alternatives that will be better for our environment.

Thank you Mr. Chairman and I yield back the balance of my time.

Mr. BARTON. The gentlelady will get 3 additional minutes on the question period. Does the gentleman from Georgia wish to make an opening statement?

Mr. NORWOOD. Thank you, Mr. Chairman, for having this hearing. I look forward to it and I will submit for the record.

Mr. BARTON. The gentleman gets 3 additional minutes. Does the gentleman from Idaho wish to make an opening statement?

Mr. OTTER. I will submit mine.

[The prepared statement of Hon. C.L. "Butch" Otter follows:]

PREPARED STATEMENT OF HON. C.L. "BUTCH" OTTER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF IDAHO

Thank you, Mr. Chairman, for holding this hearing today. As our economy begins to recover, it is more important than ever that the United States maintain an abundant and reliable energy supply. While the Energy Policy Act passed earlier this year will go a long way toward achieving this goal, hearings like the one we're conducting today will help us to see what additional effort must be taken, if any.

Over the past several years, government policies have seemed to encourage the use of natural gas for environmental reasons as well as for energy efficiency. But those policies have not been updated to reflect new exploration and production technologies, most of which minimize environmental disruption while maximizing resource recovery. A consequence of these out-of-date policies has been to constrain the supply of gas despite growing market demand.

It is my understanding that there are plentiful natural gas supplies throughout the United States and Canada. However, many of the existing wells that have provided so much natural gas at reasonable prices are becoming depleted. Production must migrate to new areas and we must have the federal policies in place to allow the development of new sources.

Mr. Chairman, I look forward hearing from our witnesses today, to gain a better understanding of the outlook for natural gas in the United States.

Mr. BARTON. So he gets 3 additional minutes.

[Additional statements submitted for the record follow:]

PREPARED STATEMENT OF HON. W.J. "BILLY" TAUZIN, CHAIRMAN, COMMITTEE ON ENERGY AND COMMERCE

I want to welcome our witnesses today and thank Chairman Joe Barton for scheduling this hearing concerning the legal status of methyl bromide.

I also want to acknowledge the strong interest of several members of this Committee in having today's hearing. I understand that many of my colleagues have constituents who have used methyl bromide in farming and other agricultural uses for many years and who are greatly concerned with the prospect that this broad-

spectrum fumigant may be phased out under the Montreal Protocol and the Clean Air Act.

As many of you in this room know, the roots of this situation extend back to 1986 when the United States ratified the Vienna Convention. This action was followed by ratification of the Montreal Protocol in 1988 and enactment of Title VI of the Clean Air Act in 1990. These actions set the legal table, so to speak, for subsequent decisions and actions respecting methyl bromide.

Many have taken issue with the implementation of the Protocol and this committee has played a vital and consistent role in overseeing these matters. In August 1995, the Subcommittee on Oversight and Investigations held a hearing with respect to science of ozone depletion and the overall implementation of Title VI. This hearing was followed hearings held by the former Health and Environment Subcommittee in January 1996, July 1997 and May 1998. At each of these hearings, Members of this Committee questioned Administration witnesses concerning the positions taken by our country in the Montreal Protocol negotiations and examined the impact of these decisions on U.S. law and regulations.

Today, we are back, looking again at the interaction of the Montreal Protocol and the Clean Air Act. We are well aware that upcoming decisions may be critical regarding methyl bromide use in this country. But we are equally aware that these decisions have not yet been made. So now is the time to ask questions and to probe deeply. We need to get all the facts on the table and to hear from our Administration and a variety of perspectives in the private sector. This committee has done that in the past, will do it today, and indeed, will continue its review after today's hearing has concluded. This is the committee of sole jurisdiction over this matter in the House of Representatives and it takes that responsibility seriously. I look forward to the testimony of our witnesses.

PREPARED STATEMENT OF HON. ALBERT R. WYNN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MARYLAND

Mr. Chairman, I look forward to hearing witness testimony addressing alternatives to methyl bromide and the status of finding an environmentally safe alternative. In the mid 1980's, scientists became concerned that emissions of methyl bromide, a pesticide widely used in agriculture could become a major pollutant that could contribute to the depletion of the earth's ozone, a shield that protects the earth's surface from harmful ultraviolet radiation.

About 76,000 metric tons of Methyl Bromide are manufactured globally each year primarily for agricultural uses. Used extensively for pre-planting, post-harvest, quarantine and pre-shipping treatments, Methyl Bromide plays an important economic role in United States' agricultural commerce.

In response to concerns over the ozone, the United States and other governments signed the Montreal Protocol on Substances that Deplete the Ozone Layer. Consequently, industrialized countries agreed in this treaty to phase out Methyl Bromide production by January 1, 2005. There would be interim production cutbacks of 25% by 1999, 50% by 2001 and 75% by 2003.

Many domestic users of methyl Bromide have petitioned Congress to amend the Clean Air Act to extend United States phase out of its production from January 1, 2005 to January 1, 2015. Before this extension is granted, I believe that there are some significant questions to ask about alternatives to Methyl Bromide. At this time, there is no single alternative to replace Methyl Bromide. However, there are several alternatives to replace Methyl bromide based upon specific agricultural crops. Unfortunately, these alternatives are not yet fully developed and may be costly to produce. We need to examine ways to make the alternatives to methyl bromide more cost effective.

While Methyl Bromide does not pollute the ground, some of these substitutes do have the potential to pollute the ground. We should examine whether additional funding is needed for research to find a more viable environmentally friendly alternative.

Mr. Chairman, I appreciate your attention to this matter. I look forward to hearing from the day's witnesses.

PREPARED STATEMENT OF HON. JOHN D. DINGELL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. Chairman, I commend you for holding this hearing today and find it timely, given the important decisions that will be made in the coming months over the use of methyl bromide in this country.

Implementation of the Montreal Protocol has been successful with regard to the phase-out of ozone-depleting substances and there are indications the ozone hole is no longer growing. But methyl bromide presents us with difficult challenges. There is no doubt that methyl bromide is indeed extremely toxic and that it has a well-demonstrated negative effect on the ozone layer. The question remains as to how quickly we can move U.S. agriculture away from its use without causing undue harm.

If one reviews the hearings held in the Committee in the 104th Congress, the challenges cited then and those cited now are essentially the same. Technically and economically viable alternatives remain crucial to U.S. agriculture's ability to move beyond methyl bromide use. While testimony that we will hear today indicates that great progress has been made, it is also evident that we still have work to do, which brings me to the critical use exemptions that the United States has submitted for review.

I understand that there is disagreement over the number of exemptions that the United States has asked for and I hope that the testimony of our witnesses will enlighten us as the appropriateness of the U.S. requests and their current status. Wherever one comes down on the question of how much is enough, however, we all recognize that a good many U.S. farmers depend on the responsible use of methyl bromide and that in many cases, viable alternatives are not yet available. Therefore some critical use exemptions must be granted.

I thank the Departments of Agriculture and State, and the Environmental Protection Agency, for working together to submit a credible proposal for exemptions. I am, however, dismayed that many of these applications have resulted in requests for further information and that this has led to considerable uncertainty for our farmers. This Subcommittee should be vigilant in monitoring the very important decisions that will be made in the coming months to ensure that both our farmers and our environment receive appropriate protection.

PREPARED STATEMENT OF HON. LEE TERRY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEBRASKA

Chairman Barton, Ranking Member Boucher, and Members of the Subcommittee:

Thank you for holding this important hearing. As this Subcommittee examines the potential effects of a phase-out of methyl bromide—and efforts to find a viable replacement—I wish to highlight the importance of this product to my State of Nebraska.

Methyl bromide is an extremely effective crop protection tool. Nationwide, it is used as a fumigant on more than 100 crops. In Nebraska, methyl bromide is used primarily as a grain fumigant to control such pests as the Indian meal moth, the granary weevil, red flower beetle and the sawtooth grain beetle. While it is mostly used on the commercial side of the grain industry, it is also important to farmers who store their crops in grain elevators and feed mills, assuring the finest quality to our ultimate customers.

As I understand it, methyl bromide is one of a number of gases linked to the depletion of the atmosphere's ozone layer. Under the Montreal Protocol, it is to be phased out by the United States by January 1, 2005, while less industrialized countries, such as Mexico, are not forced to ban its use until 2015. This puts our food producers and processors at a severe disadvantage.

Nebraska ranks sixth in the U.S. in total agricultural exports and is one the top cattle feeding states. We must permit some reasonable degree of methyl bromide use until viable alternatives are found. Our competitive edge in world markets will again be damaged if the product is allowed in other countries but not in the United States.

Farmers and food processors across the country are becoming increasingly aware of the issues surrounding the ban on methyl bromide—now only 19 months away from its scheduled implementation. One such issue is the strength of science behind the phase-out of this product. Recent scientific findings suggest that methyl bromide is, at most, a very small contributor to any ozone depletion.

A second issue is the lack of alternatives to methyl bromide. According to experts in entomology and nematology, none of the alternatives to methyl bromide have performed as well. These experts predict sizable loss in productivity if methyl bromide is phased out completely. I support the funding of research to find viable alternatives. But before we completely eliminate methyl bromide, its replacement must meet the economic and effective thresholds our agricultural producers require.

Because of these concerns, I am hopeful that the Administration will initiate a prompt extension of the phase-out. If this does not happen, legislation may be nec-

essary to a freeze the phase-out level. While we must protect the environment, we should do so in a manner than does not harm the nation's farmers and food processors, or give an advantage to their competitors.

Again, I commend the Chairman for examining this issue. Thank you.

Mr. BARTON. Seeing no other members present, we are going to welcome our first panel, administration officials. Understand that Mr. Holmstead is going to speak for the group and we are going to give you such time as you may consume, and we are told that is about 10 minutes.

Mr. HOLMSTEAD. I hope it will be less than that.

Mr. BARTON. We are all ears and welcome to the subcommittee.

STATEMENTS OF HON. JEFFREY R. HOLMSTEAD, ASSISTANT ADMINISTRATOR FOR AIR AND RADIATION, ENVIRONMENTAL PROTECTION AGENCY; ACCOMPANIED BY HON. JEFFREY M. BURNAM, DEPUTY ASSISTANT SECRETARY FOR ENVIRONMENT, BUREAU OF OCEANS AND INTERNATIONAL ENVIRONMENTAL AND SCIENTIFIC AFFAIRS, U.S. DEPARTMENT OF STATE; AND HON. RODNEY J. BROWN, DEPUTY UNDER SECRETARY FOR RESEARCH, EDUCATION AND ECONOMICS, U.S. DEPARTMENT OF AGRICULTURE

Mr. HOLMSTEAD. Thank you, Mr. Chairman, and thank you all for the opportunity to testify before you on the issue of methyl bromide. As you know, the Environmental Protection Agency has worked very closely with the Department of State and the Department of Agriculture. And so in the interest of time I will be presenting testimony today on behalf of not only EPA but also Rodney Brown from the Department of Agriculture and Jeff Burnam from the State Department. This may be the only chance I ever get to testify on behalf of the State Department, so if you have any questions about foreign policy issues, I would be happy to——

Mr. BARTON. Don't egg us on.

Mr. HOLMSTEAD. I would like to begin by putting methyl bromide in the context of our ongoing efforts to protect the ozone layer. While still a work in progress, the global phaseout of ozone depleting chemicals has been a tremendous success. Take this room for example. We are surrounded by things that were once made by ozone depleting substances: The foam on the chairs we are sitting on, the air conditioning that cools this building, the finishes that were used to laminate this table and those chairs. All of those things were made with CFCs. Today there are nonozone depleting alternatives that are available for each of these uses.

A recent study estimated that full implementation of the Montreal Protocol will result in millions of premature deaths avoided, lives saved that would otherwise perish as a result of skin cancer. Indeed, protecting the ozone layer is one of the most cost effective public actions ever taken by the world's environmental agencies. Our success is due to an overwhelming consensus within the science community and to widespread public and industry support. It is also due to the Montreal Protocol, which has provided the goals and the schedule to channel this support into real reductions.

However, our work is not yet done nor is our success assured. A recent review of the state of the ozone layer by hundreds of scientists from throughout the world found that today the ozone layer

is in its most susceptible state. The ultimate recovery of the ozone layer depends on the will of the global community to finish the job. For the U.S. This means enforcing the current phaseout and completing the phaseout of the remaining ozone depleters. This brings me to our topic today, methyl bromide.

As you know and as many of you have mentioned, methyl bromide is one of the most highly effective biocides available. It has been used for decades by the U.S. Agricultural community to control pests and weeds, and the U.S. Is the world's largest producer and consumer of methyl bromide. Methyl bromide is also a significant ozone depleting compound. Because of this, the 1990 Clean Air Act amendments required EPA to phaseout its production and import in the year 2001. Over the past decade, the U.S., led by our State Department, worked to move developed countries from their initial position of only a freeze at historic levels to a total phaseout by the year 2005.

In 1998, Congress amended the Clean Air Act to formally adopt this time line. We already have done a great deal to meet our commitment. In 1995, the U.S. Froze production and import of methyl bromide at 1991 levels. In 2002, we reduced those levels by an additional 50 percent. And this year, the U.S. Began implementing the required 70 percent reduction as a prelude to the ultimate phaseout in 2005.

Although we have significantly reduced methyl bromide use, it is not possible at this time to completely eliminate it. While there are alternatives available for some of the uses of methyl bromide, there is no single alternative that can operate as effectively as methyl bromide in every crop situation. Fortunately, the parties to the Montreal Protocol recognize both the importance of methyl bromide and the absence of alternatives. In response, the parties adopted three specific critical use exemptions for methyl bromide:

No. 1, a total exemption for methyl bromide used in trade to ensure that commodity shipments do not introduce harmful and invasive pests into new areas; No. 2, an emergency exemption for up to 20 tons of methyl bromide; and, finally, a critical use exemption which allows any party to seek an exemption from the 2005 phaseout based upon three things: First, a finding that an absence of methyl bromide would cause a significant market disruption; two, a finding there are no technically or economically viable alternatives for the use in the context of a specific application; and, No. 3, that the country seeking the exemption has made an effort and makes an ongoing effort to find alternatives and to reduce emissions.

To prepare for our critical use exemption request, the United States adopted a three-track approach. First, we developed a national application form that would enable us to provide the information required by the parties. Second, we initiated a series of sector specific meetings across the country to discuss specific user issues and to inform users of the detailed requirements of the critical use application.

Finally, EPA and USDA together developed a plan to ensure a robust and timely technical review of all critical use applications. In the end the U.S. Nominated 16 crops for methyl bromide use. The total amount of methyl bromide nominated by the U.S. For the

years 2005 and 2006 is equivalent to a little less than 40 percent of our 1991 baseline level.

In terms of where we stand today, the Protocol's technical groups have made a positive recommendation to approve an exemption of the full amount for 5 of the 16 uses that we submitted. For one use they recommended a reduction in the size of the exemption and for another use they expressed a belief that alternatives used in other countries could be used in our context. For the remainder of the uses, which constitute about 85 percent of our nomination, the technical groups have requested that we provide more information before they can make a recommendation.

Now the Protocol's Ozone Secretariat has made it clear that this request for more information is not a recommendation for denial of the nomination. Indeed, the request for further information is not unexpected given the complex nature of this issue and the size of our request. We believe that the opportunity to more fully explain our nomination should benefit our application and ensure that our farmers have all of the methyl bromide they need.

This process has emphasized the importance of finding viable alternatives for all methyl bromide uses. This requires work on many fronts, from the fields to the research labs, and on the part of both EPA and USDA. At EPA our Office of Pesticide Programs has made the registration of alternatives to methyl bromide their highest priority. The agency also has worked to reduce the burden of data generation while still ensuring that EPA's registration decision meets safety standards.

EPA also cochairs the Bromide Alternatives Work Group with USDA. This group has conducted six workshops in California and Florida, the States with by far the highest use of methyl bromide. These workshops are designed to identify potential alternatives, critical issues and grower needs. At the same time USDA's research arm continues to find new effective alternatives to methyl bromide. Through 2002 the USDA's Agricultural Research Service spent $135 million to implement an aggressive research program, which was augmented by $11.4 million spent by USDA's Extension Service. USDA has coordinated their work with the extensive private sector efforts, including those of farmers and academia. Our efforts have paid off in some areas.

Since 1997, EPA has registered a number of alternatives and there is still more in the queue. While no silver bullet has been registered, these alternatives that have already been approved will nonetheless help reduce the demand for methyl bromide.

Mr. Chairman, I hope that my testimony has conveyed how hard this administration is working to balance our obligation to protect the ozone layer with the need to preserve use of this important biocide until alternatives can be found. We are certain we can maintain our commitment to the Montreal Protocol while enabling ozone depleting compounds to continue to be available for critical uses where there are no viable alternatives.

On behalf of my colleagues from the Department of State and the Department of Agriculture, I thank you for this opportunity to testify, and any one of us would be pleased to answer any questions you may have.

[The prepared statement of Hon. Jeffrey Holmstead follows:]

PREPARED STATEMENT OF THE ENVIRONMENTAL PROTECTION AGENCY, DEPARTMENT OF STATE AND DEPARTMENT OF AGRICULTURE, DELIVERED BY JEFFREY HOLMSTEAD, ASSISTANT ADMINISTRATOR, OFFICE OF AIR AND RADIATION, U.S. ENVIRONMENTAL PROTECTION AGENCY

Mr. Chairman, Members of the Subcommittee, thank you for the opportunity to deliver this statement jointly prepared by the Environmental Protection Agency, the Department of State and the Department of Agriculture on an issue that I know is of great importance to you and to many of your constituents—that of methyl bromide (MeBr), and its phase out under the Clean Air Act (CAA) and Montreal Protocol.

The global phase out of ozone-depleting chemicals is an unparalleled triumph of the soundest possible science, economics, and diplomacy. It rests on an overwhelming consensus within the world science community, which garnered broad support in the effort to protect the ozone layer. In fact, any continuing doubts about the science were largely dispelled by the awarding of the Nobel Prize to Dr's Molina and Rowland for their ground breaking work in identifying the connection between manmade emissions of ozone depleting substances and ozone depletion.

The success of the Montreal Protocol rests on near universal participation. One hundred and eighty developed and developing nations are now Parties to the Montreal Protocol and have committed to the complete phase out of ozone depleting compounds.

From the beginning, the establishment of clear targets for all countries, and the allowable flexibility in implementation have contributed to broad bipartisan support at home for the Montreal Protocol's mission to protect the ozone layer. In fact, the U.S. was a global leader in negotiating the original Montreal Protocol under President Reagan. These efforts were continued in 1991 and 1992 by President George Bush who was responsible for accelerating the phase out of ozone-depleting substances. During his Administration, the list of regulated substances was expanded to include a number of new ozone depleters, including MeBr. In addition, a Multilateral Fund was created to assist developing countries in their efforts to phase out ozone depleting substances consistent with the requirements of the Montreal Protocol. The legacy of strong U.S. support for the Protocol has been maintained under President George W. Bush, who last year, worked with the Congress to help facilitate obtaining the advice and consent of the Senate on the long delayed Montreal and Beijing Amendments to the Protocol. These Amendments are expected to be formally deposited with the United Nations later this year, upon the completion of implementing regulations.

The successes of the Montreal Protocol to date in ending production all over the world of the chemicals that damage stratospheric ozone have been significant.

The goal of the Montreal Protocol and the Clean Air Act is the protection of public health. On that score, we are clearly moving in the right direction. In fact, the legislative evaluation required by section 812 of the CAA estimated that full implementation of the Montreal Protocol will result in 6.3 million U.S. lives being saved from skin cancer between 1990 and 2165. And, we are working with groups like the American Academy of Dermatology in public education programs like SunWise Schools to further reduce risks of sun exposure, especially for kids. Taken together, this makes protecting the ozone layer among the most cost-effective public health actions taken by the Agency under the CAA.

While the ozone layer has and will continue to benefit from these actions, our discussion about successes should not be taken as an indication that our task has been completed. In fact, I must share with you today the fact that scientists assembling the 2002 Scientific Assessment of Ozone Depletion, a comprehensive overview of the state of the ozone layer involving the work of hundreds of atmospheric chemists, life scientists, and researchers worldwide, agree that the ozone layer is susceptible to damage due to the fact that atmospheric concentrations of ozone depleting chlorine and bromine will be at their peak over the next several years. Ultimate recovery—and the consolidation of all the gains made so far—depends on the will of the global community to finish the job.

In the context of the Montreal Protocol, this means ensuring compliance with the agreed commitments of developed and developing countries alike. For the U.S., it means enforcing the current phase out, ensuring that no new ozone depleting compounds are brought to market, and completing the phase out of hydrofluorocarbons (HCFCs) and MeBr. And that brings us to the primary topic of today's hearing, MeBr. We know a number of things about this compound. First, it is a broad spectrum restricted use biocide that is highly effective at killing pests and weeds that are of concern to U.S. agriculture. Second, the U.S. has been the world's largest producer and consumer of this substance. Third, it has been in wide use in the U.S.

for decades, and users find it efficacious and are using it efficiently. Fourth, while there are alternatives available today for many uses in many situations, there is no single alternative that can operate as effectively as MeBr in all of the crop situations on which MeBr is used. And finally, MeBr is required to be phased out by the CAA and the Montreal Protocol because it is a significant ozone depleting compound. And for MeBr it means protecting both public health, and the concerns of U.S. agriculture by promoting compliance while ensuring the continued availability of MeBr for critical uses that do not yet have viable alternatives. In this regard, we intend to work aggressively to ensure that critical use process works as designed to enable an exemption for uses in countries without such alternatives.

Because of its significant ozone depleting properties, the 1990 CAA required EPA to phase out the production and import of this substance in 2001 (with no possible exemptions). This mandate was presented to EPA at a time before MeBr was even recognized as a global problem. Understanding the nature of this problem, the U.S. tried from 1992 to 1997 to push the global community toward our 2001 phase out date. In 1997, the U.S. succeeded in moving developed countries from their initial position of only a freeze in production and import at historic levels to a total phase out in 2005. Given that progress, and the desirability of ensuring harmonized requirements, Congress moved to amend the CAA requirements in 1998 to make them consistent with those of the Montreal Protocol resulting in the phase out schedule we have today.

There have been great strides in limiting the use of MeBr under the schedule. Specifically, with the exception of certain trade-related uses of MeBr (which are fully exempted under the Montreal Protocol and the CAA), the U.S. froze its production and import of MeBr in 1995 at 1991 levels, achieved a 25% reduction from those levels in 1999, as well as a 50% reduction in 2001. Further, the U.S. began implementing the 70% reduction in 2003 before the ultimate phaseout in 2005.

Regarding the exemption provisions of the Montreal Protocol, the existence of an appropriate safety valve has always been a provision of great importance to the U.S. The Montreal Protocol includes a provision to ensure that a Party may be considered for an exemption from the phase out for any chemical until such time as a viable alternative can be commercialized. So far, the Montreal Protocol's existing safety valve, known as the essential use process, has been used rationally, sparingly, and to important effect. In the case of CFCs, the U.S. and other countries have been granted exemptions to allow Metered Dose Inhalers, for those that suffer asthma, to continue to use CFC as a propellant until safe and effective alternatives are widely available. On that use, we have always gotten what we requested, and the U.S. industry is making significant strides in transitioning to alternatives. For other chemicals, we have also received exemptions: specifically for Titan rockets and the Space Shuttle. Other countries have also received exemptions for important items including cleaning torpedoes, and for fire-related uses.

When the Parties agreed to phase out MeBr, they understood that agriculture, related cost margins, regulatory barriers to market entry for alternatives, and MeBr were different in many respects from the industrial chemicals regulated in the past under the Montreal Protocol. Recognizing that, the Protocol Parties established three types of exemptions for MeBr, as well as broader criteria to define the critical use exemption of other chemicals.

First, the Parties recognized that MeBr is used in trade to ensure that shipments do not contain harmful and invasive pests that could be transported with commodities and introduced into new areas. Accordingly, they provided a total exemption for quarantine and preshipment uses. As a consequence, while countries have committed to find alternatives and to limit the emissions and use of MeBr to those applications where its use is necessary, the production and import for these uses can continue unabated during and after the phase out. EPA recently published a final rule fully activating this exemption that was allowed for the first time by the 1998 amendment to the CAA.

The second MeBr exemption, covering emergency situations, is an unusual broad-based exemption from the phase out for the production or import of 20 tonnes of MeBr. This exemption can be unilaterally activated by a Party to address what it considers to be an emergency. The Parties review the use of this exemption after the fact to determine if there are alternative measures to deal with similar emergencies in the future.

Finally, the Montreal Protocol Parties discarded the essential use criteria for MeBr, and created a critical use exemption. The new criteria allows a Party to seek an exemption from the 2005 phase out if it determined that the absence of MeBr would cause a significant market disruption. The Parties agree that the nominating Party has demonstrated that there are no technically or economically viable alternatives for the use in the context of the application and that the Party continues

to make efforts to find alternatives for the use and to limit emissions. I want to dwell on this exemption briefly today, because this is the first year that the U.S. and other countries have applied for this exemption. It is also the first year that the Montreal Protocol Parties will be considering national nominations.

Work on the U.S. critical use exemption process began in early 2001. At that time, we initiated a series of open meetings with stakeholders to inform them of the Montreal Protocol's critical use requirements and to understand the issues the agricultural community faced in researching and applying alternatives to MeBr. During those meetings, which were attended by State and association officials representing thousands of MeBr users, the provisions of the critical use exemption were reviewed in detail. The feedback from these meetings contributed to the Protocol Parties' efforts to establish initial international norms for the details to be in submissions and to facilitate standardization for a fair and adequate review.

Once the standardized information requirements became more clear, we took a three track approach to the critical use process. First, we worked to develop a national application form that would ensure that we had the information necessary to answer all of the questions posed by the Parties. At the same time, we initiated a series of sector specific meetings across the country. This included meetings with representatives of growers in several cities to discuss their specific issues, and to enable them to understand the detailed requirements of the critical use application. These sector meetings allowed us to fine tune the application so we could submit the required information in a meaningful fashion.

Finally, and concurrent with our preparation phase, EPA and USDA developed a plan to ensure a robust and timely technical review of any and all critical use applications we might receive. This technical effort, led at EPA by our Office of Pesticides programs, involved the assembly of more than 45 PhDs and other qualified reviewers with expertise in both biological and economic issues. These experts were divided into interdisciplinary teams to enable primary and secondary reviewers for each crop application received. As a consequence, each nomination received by the U.S. was reviewed by two separate teams. In addition, the work of these interdisciplinary teams was subject to a broader set of experts on all other sector teams to enable an additional third look at the information, and to ensure consistency in review between teams. The result was a thorough evaluation of the merits of each request.

Following our technical review, discussions were held with senior risk managers to go over the technical recommendations and assemble a draft package for submission to the Parties. As a consequence of all of this work, it is safe to say that each of the sector specific nominations submitted by the U.S. was the work of well over 50 experts both in and outside of the U.S. government.

In the end, the U.S. was one of 13 countries that submitted nominations for a critical use exemption. Some national requests were very small covering, only one use, and some were large, covering 10 or more uses. The U.S. nominated the following sixteen (16) crops/uses: tomatoes, commodity storage, cucurbit, eggplant, food processing, forest tree seedling nursery, ginger, orchard nursery, orchard replant, ornamental nursery, pepper, strawberry, strawberry nursery, sweet potato, nursery seed bed trays, and turfgrass. The total amount of methyl bromide nominated by the U.S. for these uses is 9,920,965 kilograms for 2005, and 9,722,546 kilograms for 2006—this translates into 39% and 37% of our 1991 baseline level.

In accordance with the Montreal Protocol procedures, the submission of the U.S. and all other countries was transmitted to the Montreal Protocol's Methyl Bromide Technical Options Committee, as well as to its Technical and Economic Assessment Panel. It is the responsibility of these groups to provide an expert review of all of the requests, and to make recommendations to the Parties about them. While these reviews are helpful, it should be understood that no formal decision will be taken on any exemptions by these groups. The Parties assembled in their meeting in November, are the only body empowered to take these decisions.

In terms of where we stand today, the Montreal Protocol's technical groups have done an initial review, and made recommendations regarding a number of countries nominations. On the U.S. nomination, they have made a positive recommendation to approve an exemption of the amount that we nominated for 5 of the 16 uses that we submitted. For one use, they recommended a reduction in the size of the exemption, and for another use, they found alternatives were available and being used in other countries. For the remainder of the uses, which in fact constitute almost 85% of our request, they have requested clarifications to enable them to more effectively understand and make recommendations. I want to make the import of that request as clear as possible by quoting from the transmittal letter from the Protocol's Ozone Secretariat—In transmitting these comments and questions, I would like to stress that the request for clarification or additional information is NOT a recommenda-

tion for denial of the nomination, and should not be construed as such by any Party. The request is being made solely to ensure that the review of your countries' nominations is based on a complete and accurate understanding. I want to note that it is our understanding that similar requests for clarifications were sent to several other Parties.

Indeed, the request for further information is not unexpected given the complex nature of the very large submission of the U.S. At the present time, we are still preparing a response to their questions, which we welcome. In fact, we believe that the opportunity to more fully explain our nomination will benefit both the uses still under review, and those for which a tentative recommendation that has been made for less than the level we requested.

After submitting our responses to the Montreal Protocol's technical bodies, we expect them to complete recommendations for those uses still outstanding, hopefully in time for them to be discussed at the July meeting of the Parties Open Ended Working Group. Again, the July meeting is just the first discussion by the Parties; decisions will not be made until the 15th Meeting of the Parties which is scheduled for November 10-14 in Nairobi Kenya.

Mr. Chairman, this process has been intensive, but it in no way ends the story. The vital work on MeBr continues on many fronts—from the fields, to the research labs—in efforts to find, register and commercialize viable alternatives for all MeBr uses. On that front, both EPA and USDA play critical roles.

At EPA, our Office of Pesticide Programs is responsible for registering pesticides including alternatives to MeBr. Understanding the importance of this role in the phase out of MeBr, they have since 1997 made the registration of alternatives to MeBr the highest registration priority. Because the Agency currently has more applications pending in its review than resources to evaluate them, EPA prioritizes the applications in its registration queue. Because it is the top registration priority, MeBr alternatives enter the review process as soon as EPA receives an application request. The average processing time for a new active ingredient, from date of submission to issuance of a registration decision, is approximately 38 months. In most cases, the registrant (the pesticide applicant) has spent approximately 7-10 years developing the data necessary to support registration.

As one incentive for the pesticide industry to develop alternatives to MeBr, the Agency has worked to reduce the burden of data generation, to the extent feasible while still ensuring that the Agency's registration decisions meet Federal statutory safety standards. Where appropriate from a scientific standpoint, the Agency has refined the data requirements for a given pesticide application, allowing a shortening of the research and development process for the MeBr alternative. Furthermore, EPA scientists routinely meet with prospective MeBr alternative applicants, counseling them through the pre-registration process to increase the probability that the data is done right the first time and rework delays are minimized.

EPA has also co-chaired the USDA/EPA Methyl Bromide Alternatives Work Group since 1993 to help coordinate research, development and the registration of viable alternatives. The work group conducted six workshops in Florida and California (states with the highest use of methyl bromide) with growers and researchers to identify potential alternatives, critical issues, and grower needs covering the major MeBr dependent crops and post harvest uses.

Our efforts have paid off in some areas. Since 1997, EPA has registered a number of chemical/use combinations as part of its commitment to expedite the review of MeBr alternatives. While there is no silver bullet among them, they will nonetheless help reduce demand for MeBr. They include:

2000: Phosphine to control insects in stored commodities
2001: Indian Meal Moth Granulosis Virus to control Indian meal moth in stored grains
2001: Terrazole to control pathogens in tobacco float beds
2001: Telone applied through drip irrigation—all crops
2002: Halosulfuron-methyl to control weeds in melons and tomatoes

In addition, EPA is currently reviewing several applications for registration as MeBr alternatives, with several registration eligibility decisions expected within the next year, including:

Iodomethane as a pre-plant soil fumigant for various crops
Fosthiazate as a pre-plant nematocide for tomatoes
Sulfuryl fluoride as a post-harvest fumigant for stored commodities
Trifloxysulfuron sodium as a pre-plant herbicide for tomatoes
Dazomet as a pre-plant soil fumigant for strawberries and tomatoes

While these activities appear promising, environmental and health issues with alternatives must be carefully considered to ensure we are not just trading one envi-

ronmental problem for another. In that regard, ongoing research on alternate fumigants is evaluating ways to reduce emission under various application regimes and examining whether commonly used agrochemicals, such as fertilizers and nitrification inhibitors, could be used to rapidly degrade soil fumigants.

At the same time EPA is working on registering alternatives, USDA continues its efforts (which began as early as 1992) to find new effective alternatives to MeBr. Finding alternatives for agricultural uses is extremely complicated compared to replacements for other, industrially used ozone-depleting substances because many factors affect the efficacy, such as: crop type, climate, soil type, and target pests, which change from region to region and among localities within a region.

Through 2002, the USDA Agricultural Research Service (ARS) alone has spent US$135.5 million to implement an aggressive research program to find alternatives to MeBr (see Table 1 below). Through the Cooperative State Research, Education and Extension Service, USDA has provided an additional $11.4m since 1993 to state universities for alternatives research and outreach. This federally supported research is a supplement to extensive sector specific private sector efforts, and that all of this research is very well considered. Specifically, the phase out challenges brought together agricultural and forestry leaders from private industry, academia, State governments, and the federal government to assess the problem, formulate priorities, and implement research directed at providing solutions under the USDA's Methyl Bromide Alternatives program. The ARS within USDA has 22 national programs, one of which is the Methyl Bromide Alternatives program (select Methyl Bromide Alternatives at this web site: http://www.nps.ars.usda.gov). The resulting research program has taken into account these inputs, as well as the extensive private sector research and trial demonstrations of alternatives to MeBr. While research has been undertaken in all sectors, federal government efforts have been based on the input of experts as well as the fact that nearly 80 percent of preplant MeBr soil fumigation is used in a limited number of crops. Accordingly, much of the federal government pre-plant efforts have focused on strawberries, tomatoes, ornamentals, peppers and nursery crops, (forest, ornamental, strawberry, pepper, tree, and vine), with special emphasis on tomatoes in Florida and strawberries in California as model crops. It is important to recognize that methyl bromide users have made generous contributions of field plots, plant material, and equipment for research trials on potential alternatives.

Mr. Chairman, I hope that you can tell by my testimony today the level of importance the Administration places on taking action on MeBr in a manner that protects public health by protecting the ozone layer, while still preserving our ability to use this substance where there are no technically and economically viable alternatives. It is this Administration's belief that the . 30% of baseline allowed by the Clean Air Act, combined with stocks of Methyl Bromide carried over into 2003 from prior years, are sufficient to allow access to a level of methyl bromide over the next two years that is at least as high as the level of MeBr that the US consumed in 2001, when we were at 41% of our baseline.

Finally, I want to conclude my testimony today by once again noting that the global effort to protect the ozone layer has seen some spectacular successes. CFCs, halons, methyl chloroform, carbon tetrachloride—substances that were extraordinarily common in our daily lives have been phased out in developed countries, in the aggregate, have phased out over 25% more ozone depleting substances than is currently required by their obligations. That said, the job is not done. Protection of the ozone layer requires all countries to maintain their resolve, and complete the phase out consistent with their treaty obligations. We expect to do so in a manner that enables critical uses of ozone depleting compounds, consistent with the Montreal Protocol, to be used where there are no viable alternatives.

I thank you for this opportunity to testify before this Committee, and I would be pleased to answer any questions you may have.

Mr. BARTON. Thank you. The Chair recognizes himself for the first 5 minutes for questions. Mr. Brown, you represent the Department of Agriculture, I think; isn't that correct?

Mr. RODNEY BROWN. Yes.

Mr. BARTON. What is your opinion or the Department's opinion about there ever being a real alternative to methyl bromide? Is that possible?

Mr. RODNEY BROWN. To say ever being an alternative for methyl bromide is a very complicated question, and that is one of the problems with methyl bromide. Each crop, each climate, each soil type,

each combination of all of these requires a different alternative. We are trying with some model crops to find alternatives that work in more than one place. It has been very difficult. We have spent, as has been mentioned, over $150 million thus far.

Mr. BARTON. Is it a chemistry problem or just a traditional acceptance use problem? Does the agricultural community just not want to do it or is it just chemically very difficult in the laboratory to come up with a compound that works close to, or as well as methyl bromide?

Mr. RODNEY BROWN. It has been very difficult to come up with not just the chemical but the practices that have to be used. We have made progress in some areas. Some have been mentioned already. We do have a long way to go.

Mr. BARTON. Are you allowed to make an estimate on the record of how probable it is that we could come up with acceptable alternatives that come much closer to meeting the Protocol, or are we always going to have to have a waiver for some critical use?

Mr. RODNEY BROWN. I wouldn't say we will always have to have a waiver, but we will keep working at it until we get them all. With regard to the waivers, we are even working on the ones where we have waivers or where we have applied for waivers, and of course——

Mr. BARTON. Is there anybody in the international community that is a party to the Protocol that if we called them to testify that would say that the United States and USDA and the various laboratory investigators are not making a good faith effort to come up with alternatives?

Mr. RODNEY BROWN. I believe those who understand this problem in this country or anywhere in the world——

Mr. BARTON. So we are really trying. Mr. Burnam, you represent the State Department?

Mr. BURNAM. Yes.

Mr. BARTON. My understanding is that the parties to this agreement have never really had any formal votes on the agreement; is that correct, that we have this process but it is all kind of a touchy feely process?

Mr. BURNAM. I wouldn't describe it as a touchy feely process. I was over at the recent meeting in Rome. The Protocol does attempt, like many international protocols, to reach decisions by consensus. But in the absence of consensus, a two-thirds vote can be taken on substantive matters.

Mr. BARTON. How many votes have been taken?

Mr. BURNAM. I don't believe there have been any.

Mr. BARTON. I believe the number is zero.

Mr. BURNAM. We would be subject to protocol.

Mr. BARTON. If you have never taken a vote, I think touchy feely is a pretty good definition of how it works. It is not hanky panky. But we have got a problem here in that I am going to stipulate that we are really trying to come up with alternatives that the Bush administration, previous Clinton administration really wants to take methyl bromide off the market so that we can stop the ozone depletion, but it apparently is really difficult to do so. We have these 183 parties who signed the Protocol, but only two countries make methyl bromide and only 5 or 6 really use much of it.

So you got 183 decisionmakers, but you don't have that many really vested sufferers if it is taken off the market. So we have now this process for these exemptions, exceptions, and in all likelihood that is not going to go away by 2005. Do you agree with that or disagree with that?

Mr. BURNAM. No. I think the critical use exemption provision in the Protocol and the decision of the parties ought to be looked at carefully, because I think it does give us the right and the obligation on a continuing basis to file for methyl bromide if there is a need—if the farmers need it. I think if there is a need for this chemical in the United States, we have the right under the treaty and indeed I think the obligation, I would say, to our farmers to file for a critical use exemption. And all we need to prove to get that is that there is no feasible, economically feasible or technically feasible, alternatives. So I think as long as the evidence is as Mr. Brown suggests, I believe——

Mr. BARTON. My time has expired. We may have a few questions. But the dilemma that I am in is I believe we should honor our treaty obligations. I think the United States agriculture community is trying to find alternatives, but those alternatives haven't been found. We got this unwieldy international body that I think generally agrees that methyl bromide is a positive use in many applications, but it is hazardous in the environment. And we are probably never going to get anybody to ratify these exemptions so what do we do legislatively? We just act like this isn't a problem or we force our agricultural community to violate the treaty? We need by the end of this hearing to have some answers on what the Congress should do, if anything, because it is this subcommittee that has the responsibility to take action if action needs to be taken. With that, I recognize Mr. Boucher for 5 minutes.

Mr. BOUCHER. Thank you very much, Mr. Chairman. On the second panel of witnesses that we will have today, a number of the agricultural interests are going to make statements about the inadequacy of the process for them considering the applications the United States has filed. I would be interested in giving you this opportunity to respond to those comments. I am sure you have read their testimony.

Is the criticism valid based on the experience that you have had with this application process so far? How would you grade the process so far? Mr. Holmstead.

Mr. HOLMSTEAD. We have to acknowledge that the process has not been an easy one, in large part because of how complicated an issue this is. As Mr. Brown mentioned, the way the Protocol works, we actually are looking at specific applications, specific parts of the country, specific soil types, and we have developed what we think is a very robust and more than defensible request for these critical use exemptions. We are sort of in the middle of that process, so it is premature to say whether it has worked well or not worked well. We have been given an opportunity now to go back and to supplement our application with more information, information that for the most part we have. And I think we are confident based on our experience with the parties to the Protocol that this process will work, and I can understand from the farmers' perspective that they would like it to work more quickly. But we think it will work and

we will get from the parties the critical use exemption that will be necessary to keep the farmers doing what they need to do in this country.

Mr. BOUCHER. I notice in your testimony you say that the request from the panel for further information is not unexpected and that you did anticipate that some further request for information would be made. On the other hand, some of the other witnesses are going to say that the request for information is really tantamount to a denial of the application. I gather you disagree with that.

Mr. HOLMSTEAD. It is very clear that it is not tantamount to a denial of the application.

Mr. BOUCHER. So we should take confidence that the process is working. From your perspective, knowing it as well as you do, you believe it is a fair process, that it is calculated to lead to an equitable result? Is that a fair conclusion?

Mr. HOLMSTEAD. I believe that is absolutely right, and we do have some experience with other critical use exemptions where in fact in other uses, not for methyl bromide, but for other ozone depleting substances, we have been able to get the parties to agree. We think the process is working well.

Mr. BOUCHER. I want to pursue one other question. It relates to a specific crop. It is tobacco seedlings. With regard to tobacco, you had requested a critical use exemption. The recommendation of the panel, I guess at the staff level, is that the application be denied. And apparently that recommendation is based on the belief that there are alternatives for treating tobacco seedlings that are commonly used other places. And that recommendation, for example, mentions the use of chlorine irradiation, fungicide, steam and quantenary ammonia compounds. Are you familiar with this particular subject? Are you familiar with what the panel staff has recommended? And Mr. Brown, are you prepared to answer some questions about it?

Mr. RODNEY BROWN. I am not sure. I would like to have all the details.

Mr. BOUCHER. I may just ask you to provide a written statement, but let me state the question fully to you. First of all, does the United States agree with the assessment that has been made by the staff at the panel? Second, if you do not, and I hope you do not, could you give us some basis for which you disagree with that assessment and then some indication what you intend to do in terms of further proceedings on this subject with the Protocol panel, Mr. Brown?

Mr. RODNEY BROWN. First of all, the vote on all of these will be in November. All we have so far is feedback from the staff. So in every case we are looking at these, and we are actually looking at it as an opportunity to provide more information. We think that in each case that our request was not only thorough, but supportive and we expect that the full amount that was requested should be granted when the vote takes place.

Mr. BOUCHER. I take that as a disagreement with the recommendations made at the staff level with regard to tobacco; is that correct? You disagree with that?

Mr. RODNEY BROWN. I haven't seen enough of the details on the particular case to answer that.

Mr. BOUCHER. Mr. Brown, I will submit a question to you in writing. Mr. Chairman, with your permission I would ask that you respond in writing to that. Furthermore, I would ask, Mr. Chairman, that the record remain open for sufficient time in order to receive that.

Mr. BARTON. We already said that in the opening statement.

Mr. BOUCHER. Mr. Chairman, let me make a unanimous consent request that all members be permitted to submit opening statements for the record.

Mr. BARTON. Without objection. The gentleman from California, Mr. Issa. And I believe he has 5 minutes.

Mr. ISSA. Thank you, Mr. Chairman. Either Mr. Brown or Mr. Holmstead, would you say that it would be fair for Congress to act to protect growers in the absence of a decision by your organization, let us say, to mandate one growing season after you feel you have all the information and make a recommendation or something else so we don't have companies getting up to a deadline and then finding themselves essentially with no alternative and not even in a transition year?

Mr. HOLMSTEAD. I think we are a long way from that point. As you know, what we are talking about now is 2005-2006 growing season. So we really have a fair amount of time. In addition to that, one of the things that has been permitted explicitly under the Protocol is stockpiling of these substances, and we know there is quite a bit of stockpiled methyl bromide that is available out there. So first of all, we are quite confident that we will get through the process, the kind of critical use exemption that we need. And the whole protocol is designed to make sure that we don't find ourselves in a situation, as you suggest, where the agricultural community——

Mr. ISSA. Second, would it be fair if, let us say, France had granted an exemption for cut flowers and our growers believed that it was substantial similar evidence and theirs had been granted. Would it be a petition right to come before and say we don't care what the science says, what is good for the goose is good for the gander, or do you find you have to have independent science even if it differs with competing nations?

Mr. HOLMSTEAD. I believe I understand the question, and the answer is I think you can be certain that EPA and USDA and State Department would protect the competitive interests of growers in this country, and I think we have shown that we can be very effective diplomatically in doing that.

Mr. ISSA. So my next series of questions would be, then inherently, if you are an article 5 country and you have until 2015, isn't it true that two competitive disadvantages exist, one in which jobs and production may shift to those countries as a result of their being able to use a cheap and effective solution, should an alternative be available but not necessarily cheap; and two, inherently isn't the Protocol flawed because it shifts the burden of research development and solutions to countries like ours?

Mr. HOLMSTEAD. As I think you know, the Montreal Protocol did recognize that there are differences in countries both in terms of their technological capabilities and their economic situations. And so for all the chemicals that have been phased out, I think every-

body understood that there needed to be a phaseout of all countries, both developing countries and developed countries. And for all of the chemicals there was a recognition that developing countries needed to have more time.

Mr. ISSA. Developing countries?

Mr. HOLMSTEAD. Developing countries needed to have more time to phase these out. So for instance, the CFCs and most of the other high ozone depleting chemicals, there was about a 14-year grace period. For methyl bromide that period is less. It is about 10 years. And during those 10 years it is not true that they can use however much they choose to. Their ability to use methyl bromide is also restricted. So for instance, very few of the developing countries use significant amounts of methyl bromide today, and that use is not only capped but will have to come down over time as well.

So I am quite aware of the competitive issues and it is something we looked at. I know USDA and State has as well. We don't believe that is going to be a significant issue because of the caps that are in place even on the developing countries. So even though the full phaseout doesn't affect them for more than 10 years, they are subject to interim controls that will prevent them from expanding their use of methyl bromide, and that is true for all the developing countries.

Mr. ISSA. I can see that you are pretty happy with the Montreal Protocol. I wish I could share that happiness with you.

Last question, still on the Montreal Protocol. If there is a safe and effective alternative at a given time U.S. Producers are mandated to use it, what is the justification once the R&D has occurred, there is a safe and effective alternative, what is the justification for not at that moment triggering the automatic acceleration of other countries? What is the basis saying you have 10 more years if there is a safe and effective alternative, if that has been pioneered and paid for by Americans or other developed nations?

Mr. HOLMSTEAD. Just to clarify, it is not just safe and effective, it needs to be economically feasible, not just technically feasible.

Mr. ISSA. If we crossed all those thresholds, why is there 10 years left?

Mr. HOLMSTEAD. Our experience has been that once that is identified then we can accelerate that in the developing countries. For instance, there has been a number of cases with other chemicals that once we have identified effective alternatives that those other countries have agreed to phaseout more quickly than that 10-year period, and I would be happy to provide you more information. But the experience historically has been that once a chemical is widely accepted in the developed world that that is introduced much more quickly in the developing world as well. So in many cases they haven't taken advantage of those 14 years.

Mr. BARTON. Gentleman's time has expired. The gentlelady from California is recognized for 5 minutes.

Mrs. CAPPS. Thank you, Mr. Chairman. I would like to refer to the written testimony that will come up in the next panel, but I wanted to know, Mr. Holmstead, if you could comment on what Mr. Doniger suggests may be the case in his testimony in which he associates—tells us about other environmental issues associated with the methyl bromide being a carcinogen. Is this something you

would agree with or what is your take on the equation between methyl bromide and carcinogens?

Mr. HOLMSTEAD. I don't really know. We could certainly get you an answer from our research folks. I know there are other health effects, and I have heard of a study and I am not sure how conclusive it is.

Mrs. CAPPS. If I could repeat, in your work and in your presentation with us, you have not come across any evidence to that effect that it is a carcinogen or—I don't want to put words in your mouth.

Mr. HOLMSTEAD. The focus of our regulatory actions at this point have to do with its ozone depleting potential. There are a number of other programs not only under the Clean Air Act but under FIFRA and TSCA to deal with those sorts of issues, and I just don't deal with those programs. What I know about is the ozone depletion potential of methyl bromide and the phaseout under Title VI of the Clean Air Act.

Mrs. CAPPS. Well, maybe it is begging the question, but I am wondering if you have any knowledge or interest in worker safety issues, for example, connected with methyl bromide.

Mr. HOLMSTEAD. Absolutely. We have a great deal of interest in it. The way EPA is organized, I have a colleague named Steve Johnson whose job it is to deal with the pesticide issues and worker protection. And I know they have a very robust program in that area, but I am not familiar with it. But there is someone else in the agency that could answer those questions. And again, our folks are saying we could provide you with any information that you would like to and provide that for the record.

Mrs. CAPPS. Well, it is clear that this substance has a great many interests to various aspects of the EPA. So I am kind of pushing your specialty. You are here with the specialty strictly in ozone?

Mr. HOLMSTEAD. It is listed both under the Montreal Protocol and the Clean Air Act as an ozone depleting substance, and that is really the context in which I deal with methyl bromide.

Mrs. CAPPS. I think this topic calls for continued interest and hearings perhaps in some other aspects in perhaps some of the issues connected with methyl bromide. I just want to have one final question to ask of you and then maybe if either of the other two people want to comment, I would be happy to hear from them. And that has to do with the registration status of methyl bromide. What is that?

Mr. HOLMSTEAD. As you know, there are other statutes that have to deal with the registration of pesticides, Most recently the Food Quality Protection Act, or the FQPA. Under the FQPA existing pesticides have to be reregistered over a period of time, and my impression is that methyl bromide is currently going through the eregistration process. I don't know how close it is to the end of that process, but we would be happy to provide you with that information.

Other thing is obviously in terms of its possible potential to cause cancer, that is something that would be looked at in the registration process. So I am not aware that we consider it to be—I don't believe we consider it to be a carcinogen. If there are new studies, those would be looked at through the registration process.

Mrs. CAPPS. That aspect of being registered doesn't relate to your——

Mr. HOLMSTEAD. That is the Office of Pesticide Programs. We are divided into four separate offices, and the Office of Pesticide Programs deals with that suite of issues as it relates to agricultural or chemical.

Mrs. CAPPS. Maybe—I know you spoke in your opening statement for your two colleagues, but they have different job descriptions. Do any of you wish to comment on carcinogen-related matters?

Mr. RODNEY BROWN. I think your question brings up not only that direct point but even a broader issue, which is what I am hearing from everyone so far today. This is about balance. We have to think about ozone. We have to think about carcinogens. We have to think about economics. We talk a lot now about sustainability in agriculture, and usually we are referring to natural resources, the water, the soil, and so on. To the farmers, sustainability includes all of those things, but it certainly includes being in business next year.

Mrs. CAPPS. I understand that. Let me ask you a yes or no and I know the—do you consider methyl bromide a carcinogen?

Mr. RODNEY BROWN. I see nothing so far that would say that it is.

Mrs. CAPPS. Mr. Burnam, do you?

Mr. BURNAM. That is not a question the State Department ought to consider.

Mr. BARTON. State Department doesn't give yes or no answers. Gentleman from Illinois is recognized for 5 minutes.

Mr. SHIMKUS. Thank you, Mr. Chairman. To the State Department representative, we sent a letter and it was short notice so I didn't expect the letter to be answered as timely as we requested it, but I will bring your attention to a letter sent May 19 to Under Secretary Dobriansky with a lot of questions on this issue and it is signed by at least 12 Members of Congress and two of whom are serving on this committee. Mr. Issa signed it and I signed it. And if you would address that. You don't need to address it now, but just get that back to us as soon as possible because a lot of the questions we have here today deals with the compliance and aspects. That is the letter.

Mr. BURNAM. I do have a response to it.

Mr. SHIMKUS. Is there a date on it?

Mr. BURNAM. Today.

Mr. SHIMKUS. Could we have it? Do you all have a copy of it?

Mr. BURNAM. State Department does act quickly on all Congressional letters.

Mr. SHIMKUS. I appreciate that. Let me follow along and then I will page through page—in fact, Mr. Chairman, what I would like to do is yield back my time, with the opportunity based upon the answers to this letter, which may be at the end, to address some of their responses to our questions.

Mr. BILIRAKIS [presiding]. Without objection. Mr. Allen.

Mr. ALLEN. A couple of questions. I understand that in the mid-1990's, the United States basically actively encouraged the world community to agree to a specific and early timetable for the phase-

out of methyl bromide. So first question, has something changed in our position? Second issue, the critical—as I understand it, the critical use exemption is only available for the final phaseout of methyl bromide; that is, there is no critical use exemption for the interim 70 percent reduction in 2003 under the Montreal Protocol. I understand the administration has submitted a request for 39 percent of U.S. Consumption where my understanding is that it really should be 30 percent or lower. And I would—unless I am missing something here. So the question is, and I am happy to have any of you answer this if you would like to enlighten me, first, whether we have changed our position and, second, whether or why we have asked for a 39 percent exemption.

Mr. BURNAM. When we were in Rome last fall, we indicated to a number of countries that we didn't interpret the Protocol to have a 30 percent ceiling. I think it was very plain that the critical use exemption provision was meant to be objective and a country was meant to be entitled to the full amount of the critical use exemption so long as it could demonstrate it had a technical—there are no technically and economically feasible alternatives. If you look at Decision 96 of the parties adopting the critical use exemption, it makes no reference to any arbitrary percentage ceiling.

Mr. ALLEN. Just to test that, if I interpret that correctly, that you could ask and could receive a critical use exemption for 100 percent of the uses in the United States? You could document that they were all critical?

Mr. BURNAM. We weren't the only country to ask for more than 30 percent. Greece and Italy asked for more than 30 percent. Countries asked for what the farmers need, given the existence of alternatives and the alternatives must be safe as well as technically and economically feasible.

Mr. ALLEN. So the answer to that second question is that at least in your view, the way you interpret the Protocol, there is nothing in there that would prevent you from asking for 100 percent of the—for asking for a critical use exemption for 100 percent of the U.S. Use?

Mr. BURNAM. You could ask for 100 percent of what the farmers need given the status of the alternatives. But I am not going to go to your question.

Mr. ALLEN. I think I understand that a critical use exemption would be for those activities that are in some way unusual, and maybe I have that wrong. But the information that I have is that over 80 percent of the methyl bromide use in the United States is for soil fumigation for pre-plant activities. And so I am trying to figure out, we clearly knew what the common use was. We didn't ban it for that particular use. Am I correct in understanding that basically—you make no distinction when you ask for these exemptions between soil fumigation or other uses. I mean it is whatever people need, is that fair?

Mr. RODNEY BROWN. That is right. If we have a technically feasible and an economically feasible alternative with the third provision, that we haven't mentioned much thus far, that it doesn't result in significant market disruption, that is the basis upon which we ask for an exemption. When the target was set at 30 percent we didn't know nearly as much as we now know about our ability

to come up with alternatives. Actually, the 39 percent I believe drops to 37 percent the following year, and we have no intention of going toward 100 percent. We intend to cover every use where U.S. farmers need methyl bromide because there isn't an alternative.

Mr. ALLEN. All right. Thank you.

Mr. BILIRAKIS. The Chair thanks the gentleman. Ms. Bono for 8 minutes.

Mrs. BONO. Wow, 8 minutes. Thank you, Mr. Chairman.

Mr. BILIRAKIS. Eight big minutes.

Mrs. BONO. I promise you I won't—never mind. I don't promise anything. It is a rarity to have that much time. First of all, I just want to say that I think that the United States tries so hard to be the best neighbor in the world. There is no question we try to lead and whether it is this treaty or whether it is Kyoto or whatever we are doing our very best to lead the world to be a better place. But oftentimes we hurt the small guy. And the small guy in my instance is my family farmer in the Coachella Valley of my district. My question, first question is for Mr. Holmstead, and that is has the EPA or any other part of the administration done any analysis as to the possible market impact in the U.S. from increased penetration of foreign specialty crops into the U.S. due to the potential ability of article 5 countries to increase exports during the period 2005 to 2015?

Anybody who would like to answer that.

Mr. RODNEY BROWN. The Economic Research Service has studied the impact of, first of all, total phaseout of methyl bromide in the U.S. For example, the tomato, pepper, eggplant and strawberry production would decline for several years, especially in States where methyl bromide is required, which tends to be in the warmer and wetter places. The estimate is that just Florida and California initially would each lose $200 million annually in gross shipping point revenues. That is 20 to 30 percent of the revenues from these crops in those two States.

Mr. HOLMSTEAD. If I can interrupt my colleague I just want to make it clear that that is assuming that there is no methyl bromide available, and I don't think we believe that that is a possible outcome. We anticipate that for those critical uses that we will get through this process, the critical uses that we need.

Mrs. BONO. Now my growers again are already still trying to get some equality, I guess, after NAFTA and constantly have to compete against the Mexican growers who have completely different standards, yet the consumer in the end knows none of this. But in Bill Pauli's statement, I would love it if you could comment on this, he says that—I know this is yet to come. I am being prescient here—but in the end American consumers will suffer most from the U.S. Loss of methyl bromide. The phaseout means the U.S. Will increasingly depend on imported international food sources that are less regulated, less reliable and less safe. A perfect example, recent outbreaks of hepatitis A in U.S. Consumers from eating imported strawberries and canteloupes. So between that and the staggering statistics you just listed for us I don't understand whose side we are on here, because it certainly isn't the side of my growers. And if anybody wants to comment on Mr. Pauli's statement here about

this, you know, the unintended consequence here is we are now buying food products from other countries that aren't as safe, and I have to give my country of origin labeling bill a plus here that if people, at least the consumers, knew where the produce came from it would be very helpful. But don't you believe that this would be true that the consumer would be buying these products, that other countries are still using methyl bromide and they are still—and I agree, you know, Mrs. Capps' comments about it being a carcinogen are entirely different from this discussion here and I understand that. But just as far as the ozone layer and depletion, we are not helping the guy who is not adhering to the Protocol and this is entirely unfair in my mind. If you want to comment on that.

Mr. HOLMSTEAD. If I could just comment.

Mrs. BONO. Please.

Mr. HOLMSTEAD. I am not aware that any one that is competing with the growers in your district are not subject to the Protocol.

Mrs. BONO. Mexico is?

Mr. HOLMSTEAD. Mexico certainly is subject to the Protocol. Now they have slightly different obligations than we do.

Mrs. BONO. How are they different?

Mr. HOLMSTEAD. The total phaseout in Mexico comes later than the total phaseout here. However, for instance, our critical use request is many times greater than the total amount allowed in Mexico. So I don't remember the——

Mrs. BONO. But the theoretical phaseout is one thing. Is the enforcement mechanism in place in Mexico to find out?

Mr. HOLMSTEAD. Mexico has been—you have to remember that methyl bromide is really only produced in three plants. Two of those are in the U.S. And we know a great deal about—and it is not easy to produce unless you have the right kinds of raw materials. So we are quite sure that there is no production in Mexico and so their only source of methyl bromide is what is produced in the U.S. at this point and Mexico has been actually very good in complying with its obligations under the Montreal Protocol.

Mrs. BONO. Mr. Shimkus was just quick to point out the 10-year difference between my growers and those 45 minutes away are going to be faced with. But 8 minutes is a lifetime, you guys. This is really nice.

Mr. BARTON. Would the gentlelady yield? I want to ask a question if she is——

Mrs. BONO. You see, 8 minutes was way too good to be true. If you will be quick, Mr. Chairman.

Mr. BARTON. All right. I will be quick. I can't talk fast but I can think fast. Do you see that there is always going to be an exemption, a critical exemption? Do you ever see, Mr. Holmstead, that the United States would go zero? Are we looking at in essence having to get a critical exemption forever from a treaty that is supposed to go to zero in 2005?

Mr. HOLMSTEAD. I don't think that is the case. I don't think we know exactly what the phaseout is but we do see alternatives coming on-line. People don't even worry about different ways to do it. So what we now know is that we believe that we will continue to need a certain amount of this pesticide through 2006. And that is the request that we have made and that is—and we believe that

we will achieve enough to satisfy and then we will need to look at that every couple of years or it may be a longer period of time that the parties decide on. But I think it is very much premature to say that we know exactly when it can go to zero. But I anticipate that we will get there. We certainly have with other chemicals.

Mr. BARTON. Okay.

Mrs. BONO. Thank you, Mr. Chairman. You actually asked my question, so pretty much, so——

Mr. BARTON. Well, you still have a minute and a half.

Mrs. BONO. Oh. Thank you. I will actually yield back at that point. Okay, I will take it. I have a really simple question to ask anybody. In reading all of this, I don't know what a nematode is and usually we just ask our staff. My staff didn't know either. Can you please explain what a nematode is?

Mr. RODNEY BROWN. These are little things that grow in the soil.

Mr. BARTON. That is not a very technical proficient answer. We call those weeds in Texas.

Mrs. BONO. Little things that grow in the soil. I had to ask at risk of seeming like I didn't understand. I am sorry, but nematode was well beyond my college biology remembrances. So I hate to disappoint you, Chairman. I am going to yield back.

Mr. BARTON. All right. The gentleman from Texas, Mr. Hall, is recognized for 5 minutes.

Mr. HALL. Mr. Chairman, I don't know what questions have been asked. I will wait and submit questions. Thank you.

Mr. BARTON. All right. The gentleman from Kentucky.

Mr. WHITFIELD. Thank you, Mr. Chairman. Since I came in late, I guess there is a possibility some of the questions I ask may have already been asked. But first of all, it is my understanding that the Department of Agriculture has already spent around $140 million trying to come up with an alternative to methyl bromide and it is my understanding that they have really not found anything. Is that correct or not?

Mr. RODNEY BROWN. No. It is not entirely correct. But the direction you are headed is—we haven't found solutions for every case, for everything we need to do. We do have a number of things where we have found things that work. But again, it relates to the time or the place, the climate, the soil, the crop, and all the combination of all these things. Most of the things that were covered by the Montreal Protocol were kind of mechanical things like Freon in refrigeration systems. It is a little bit easier to come up with a new chemical for a refrigeration system than in a biological system. So we continue to work on these and——

Mr. WHITFIELD. You know, we talk about the people in agriculture, we talk about the people in milling and the negative impact that this is going to have on them. And many Members of Congress today are discovering in their districts the dissatisfaction with all sorts of groups, manufacturing groups, small business people who feel like that they are at a tremendous disadvantage because of a lot of these internationally negotiated agreements. Now what is the rationale for giving these non-article 5 countries 10 or 15 years additional time to stop using methyl bromide?

Mr. HOLMSTEAD. Well, I think there is a couple of good reasons. The first is simply that they have neither the technical nor the eco-

nomic capacity that we do in terms of their ability to find substitutes, and that has been the basis for giving more time to the developing countries who are in a very different position than we are.

Mr. WHITFIELD. Well, we can spend $140 million and haven't come up with a substitute yet.

Mr. HOLMSTEAD. That is right. But the second thing is in order for this treaty to be effective we need to have them on board.

Mr. WHITFIELD. Well, you know that might be fine for the non-developing, or developing countries, non-article 5 developing countries. But what do you tell the farmer, small farmer, small miller who has significantly increased cost as a result of this and is trying to compete internationally and then you sit down and say, well, you have to understand that these other countries don't have as much money as our country and therefore we have to give them some advantages. What is the rationale for that?

Mr. HOLMSTEAD. We have the critical use exemption process that will provide them with that.

Mr. WHITFIELD. Who makes that decision? Who decides whether it will be granted or not?

Mr. HOLMSTEAD. In the end it is the parties to the Protocol. But again I would compliment our colleagues in the State Department who have proven that they are very——

Mr. WHITFIELD. Yeah, but I would like to know specifically who would make that decision to grant an exemption.

Mr. BURNAM. Well, that is a decision made by the parties that Congressman Barton mentioned, the consensus procedure that is generally followed. That is often to our advantage. I mean the U.S. often uses that to insist that it gets what it needs. So it can be an advantage to have a consensus procedure.

Mr. WHITFIELD. Well, you know I didn't hear Chairman Barton so I don't know what he was talking about, but——

Mr. BARTON. You may not have known even if you heard me.

Mr. WHITFIELD. I am sure that is not the case, Mr. Chairman.

Mr. BURNAM. Well, there has been a history of requests like this. This is the first time a critical use exemption has been considered but there used to be essential use exemptions. We got one for the space shuttle, for example. And our experience with those is that the parties have listened to the U.S. Request. They have examined the evidence and they have given us what we were able to show that we needed. So we have had a favorable experience with such requests. Now, to get back to your question.

Mr. WHITFIELD. Well, are these Europeans that will be making decisions? Are they Asians? Are these Africans?

Mr. BURNAM. There are 180 nations who are part of the Protocol, so it is virtually everyone in the world that makes these decisions.

Mr. WHITFIELD. So all 180 nations would have a representative on the decisionmaking body?

Mr. BURNAM. Well, we would go to the meeting in Nairobi this November and this would be like the No. 1 item on our negotiating list. We want the approval of our critical use exemption, so this would be a major aspect of the U.S. Negotiating position.

Mr. WHITFIELD. Well you know it is my understanding that our industries that use this product went to EPA to come up with a

quantity that they would need for their critical use exemption and that when EPA presented this or is going to present it in Nairobi or wherever, that they did not provide any input by the industry representatives, did not tell them anything about what they were asking for. And as it turns out, the EPA is even requesting a significantly smaller amount than is really needed. Is that wrong or is that right?

Mr. HOLMSTEAD. No, that is not really the way that the process works. It is the U.S. Government obviously that goes and makes the submittal so we have been working with a number of months with the agricultural community, with research organizations, with USDA, with the State Department, and it is actually the State Department that presents our request for a critical use exemption. Now, it is true that if you add up all the requests that came in those came to a larger number than we actually asked for through the Protocol. But that is largely because there was a lot of double counting in the way the request came in. For instance, for a particular piece of land, a request to use methyl bromide on that land may have come in directly from a company. It may have come in through a trade association. And so what we did was go through all of those requests to make sure that there was a technically sound justification for them.

So that is what we went to, collectively, the U.S. Government went to the parties with and as Mr. Burnam has mentioned, we expect that at the end of the day we will get the critical uses that we need for our farmers.

Mr. BARTON. The gentleman's time has expired. The gentleman from Ohio, Mr. Strickland, is recognized for 5 minutes.

Mr. STRICKLAND. Mr. Chairman, I apologize that I have been unable to be here and I just feel like it is inappropriate for me to ask questions that may have already been asked. But thank you for recognizing me.

Mr. BARTON. The gentlelady from Missouri is recognized for 5 minutes.

Ms. MCCARTHY. And I would like to second Mr. Strickland's wisdom on that having just arrived, and I would like to pass at this time.

Mr. BARTON. All right. All members of the subcommittee present have been given an opportunity to ask questions. The Chair would recognized the distinguished subcommittee chairman of the Health Subcommittee, Mr. Bilirakis, for questions.

Mr. BILIRAKIS. Thank you very much, Mr. Chairman. Thank you for allowing me the privilege of sitting in. And I first I would ask unanimous consent that my opening statement for the record plus a two-page letter dated May 29 of this year by the Florida Strawberry Growers be submitted for the record.

Mr. BARTON. We need to show that to the minority, but if there are no objections——

Mr. BILIRAKIS. I would ask that that be made a part of the record after the minority has taken a look at it.

[The prepared statement of Hon. Michael Bilirakis and the letter follow:]

PREPARED STATEMENT OF HON. MICHAEL BILIRAKIS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Thank you, Mr. Chairman. First, I want to commend you for scheduling today's hearing on the use of methyl bromide. I also appreciate you allowing me to participate in this hearing since I am not currently a member of the Energy and Air Quality Subcommittee. I would like to take a moment to welcome our witnesses from Florida.

The phase-out of methyl bromide is a major concern to many in Florida's agriculture industry. Some have estimated that the loss of methyl bromide would have a $ 1 billion impact on the U.S. winter vegetable industry, with Florida accounting for nearly all of this impact. I am pleased that a representative from the Florida Tomato Exchange will be testifying this afternoon.

Methyl bromide is also critical to Florida's strawberry industry. I'm not sure how many of my colleagues know that Florida has been a primary domestic source of fresh strawberries for over a century. In fact, the area around Plant City and Dover is known as the "the winter strawberry capital of the world," and the local strawberry festival draws nearly a million participants each year. I represent many of the strawberry growers from the area and have met with them on several occasions.

Small family farms dot the countryside in the region and there is a mixed land use of small farms and rural and suburban homeowners in close proximity to strawberry production has coexisted for decades. According to the Florida Strawberry Growers Association, the median sized strawberry farm is 34 acres and the average farm is 53 acres.

Methyl bromide has been the strawberry industry norm for pre-plant fumigation since the early 1960's. The potential loss of methyl bromide as a fumigant has been taken seriously by Florida' agriculture community. Like other growers from the state, the strawberry growers in my district feel that there are no reliable alternatives for methyl bromide available for their use at this time.

The closest available alternative is Telone. However, there are several aspects to its use that make it undesirable to Florida's growers. First, it requires a 300-foot setback in the State of Florida, which could remove over 40 percent of our suburban acres currently used for strawberry production from use.

Telone also has personal protection equipment (PPE) limitations that would require 45 minutes of rest for each hour in the field for temperatures over 85 degrees. The average high temperature during Florida's fumigation season for strawberries is 87 degrees. I am sure this limitation impacts Florida's vegetable industry as well.

Label restrictions on the use of Telone on lands designated as Karst geology are specific. The subsurface geology of the Plant City/Dover area is riddled with limestone fissures which could eliminate the use of Telone in these areas.

Florida's strawberry growers fear that they will be forced out of business if methyl bromide is phased-out without viable alternatives being available to them. They have been actively involved with the Florida Fruit and Vegetable Growers Association to develop a "critical use exemption." However, in light of the recent actions of the Technology and Economic Assessment Panel (TEAP) of the Montreal Protocol, they are concerned that their request will not be granted.

Mr. Chairman, I have a letter from the Florida Strawberry Growers Association that outlines the organization's concerns that I would like to submit for the record. I look forward to hearing from today's witnesses and to working with you and the other members of the Energy and Commerce Committee on addressing the needs of the nation's growers as we deal with the requirements of the Montreal Protocol.

FLORIDA STRAWBERRY GROWERS ASSOCIATION
May 29, 2003

Representative MICHAEL BILIRAKIS
2269 Rayburn House Office Building
Washington, D.C. 20515-0909

DEAR REPRESENTATIVE BILIRAKIS: Florida has been the primary domestic source of fresh strawberries for over a century. The area around Plant City and Dover is justifiably known as "The Winter Strawberry Capital of the World". Last year, the farm gate value of strawberries in the county was $170 million. Strawberries are integral to the local economy and the culture of the community.

Small family farms dot the countryside extending to the metropolitan area of Tampa to the west. This mixed land use of small farms and rural/suburban homeowners in dose proximity to strawberry production has coexisted for decades. Homeowners appreciate the open space and the rural character of the strawberry fields. In many cases, multiple sides of a strawberry field have residences overlooking the fields.

The loss of the strawberry industry would have tremendous local impacts upon the economy and land use. It would have a major impact upon consumers, as the majority of the nation's winter fresh strawberries come from this community. Yet that is a probability if the current runaway train associated with the phase out of methyl bromide without viable alternatives isn't rethought.

There are no reliable alternatives available for Florida strawberry growers at this time. The closest to an alternative is Telone, which provides lower yields and erratic performance. It also requires a 300-foot setback in the state of Florida, which would remove over 40 percent of our suburban acres for consideration. Telone has Personal Protection Equipment (PPE) limitations that would require 45 minutes of rest for each hour in the field for temperatures over 85 degrees. The average high temperature during the fumigation season is 87 degrees. These two factors alone would eliminate Telone as a viable option, but the production is also in Karst geological areas, which may eliminate its availability for Florida.

This time last year, we were placing our hopes on the EPA's Critical Use Exemption (CUE) process. We worked for months bringing together the best scientists and technical expertise to state our case for an exemption until we could transition to something that wouldn't disrupt our community. EPA was charged with a Herculean task to examine and evaluate the dozens of CUE applications nationwide. They missed some things, but deserve credit for dispatching their duty in a professional manner.

EPA requested a CUE for 39 percent of the 1991 baseline level. This was less that we felt we justified, but was nine percent more than was currently allowed through the phase out schedule. When the EPA CUE request was forwarded to TEAP, we were uneasy, knowing the volume of data we had assembled, and the short time the committee had allowed for review. It appears our fears were justified. TEAP alleges that EPA didn't submit sufficient information to justify the CUE. They totally ignored local situations like our own in their analysis.

We are absolutely petrified that TEAP never had any intention of fairly reviewing our request, and that we have no chance of receiving an exemption through the CUE process. That would be a disaster to our community. It would also be a sad statement for our country, to allow foreign agendas to limit our ability to produce food.

We are running out of time and options. We have played by the rules. We have tried everything to meet this deadline, spending huge amounts of money on research. We have utilized the supposed remedy to our situation in good faith. We need your help in granting us more time to find an alternative that works, is practical, and doesn't damage the environment more than the compound it is supposed to replace.

We are eager to provide any additional support information you might need. Please contact us at the Association office if we can help.

Sincerely,

CHARLES F. HINTON, PH.D.

Mr. BILIRAKIS. I guess Ms. Bono asked the question whose side are you on and we sometimes wonder, don't we? I wonder, you know negotiating takes place and I appreciate it is a heck of a lot more complex than I can imagine. But, you know, the unintended consequences again, as she referred to. But I represent an area in Florida, and after all this is a representative republic and we do

represent those areas and we care about them, and so we get a little bit local in our thinking. But that is okay. That is the way the founders intended it. But my area is the winter strawberry capital of the world. And my strawberry farmers are going through a rough time. I know later on some of the Floridians here will be testifying on behalf of the Florida tomato people, which I think some of those are grown in our area, too. But according to the Florida Strawberry Growers Association, a medium size strawberry farm is 34 acres and the average farm is 53 acres. They are small family farms is what they are. Not great big conglomerates but small family farms, and I wonder if the negotiators are aware of that. I wonder if they are aware that at least now in any case, as I understand, the closest available alternative is telone. I am not sure whether I pronounced that correctly. However, there are several aspects to its use that make it undesirable to Florida's growers. Our negotiators, our State Department, Agriculture Department, are they aware that it requires a 300-foot setback in the State of Florida, which could remove over 40 percent, gentleman, over 40 percent of the acres currently used for strawberry production from use. It also has personal protection equipment limitations that would require 45 minutes—and I don't understand this stuff but in any case that is what I hear—would require 45 minutes of rest for each hour in the field for temperatures over 85 degrees. And the average high temperature during Florida's fumigation system for strawberries is 87 degrees. So you can see that this limitation certainly impacts the strawberry people and I think it also would impact Florida's vegetable industry as well.

Also the geology, the subsurface geology of the area is very significant in terms of limestone fissures which could eliminate the use of telone in these areas. So, you know, gentlemen, decisions are made and I oftentimes wonder whether counsel has taken place with the real world's agriculture community or the real world people who are so very responsible for these jobs. And I don't know whether you were aware of all this when you made your decisions, when you allowed this so-called developing nations to use methyl bromide until 2015, that some of these developing nations are among our biggest food and agriculture competitors, that approximately 40 nations have not yet even ratified the Protocol or its amendments, many of them our competitors. How can we be certain that these nations meet the phaseout schedule? They haven't even ratified it, for crying out loud. Do they even use it? Do they continue to use it? They haven't ratified it. What enforcement mechanism is currently in place? I think Mr. Whitfield pretty well asked that. Under the Protocol to assure that information received on methyl bromide from other countries is true and correct, a whole slew of questions there. But basically I throw these out because I want them a part of the record. But more than anything else, come on. Unintended consequences. We face it up here all the time with some of the legislation we pass and we are sometimes sorry later on because of unintended consequences. We are hurting our own people who we represent, who pay our taxes, pay our salaries.

Comments.

Mr. BURNAM. Well, we are aware of the factors that you mentioned and they were concerned in the interagency's review. The decision to allow developing countries a different timeframe than developed countries was made in the early 1990's when the question was would they come under the Protocol at all. And so it was in the context of are they going to be part of the Protocol or are they not. And the position, you know, the differentiation and the timeframe for the developing countries and the developed countries was made in 1991 and 1992.

As I testified before, I think it is very important that the critical use exemption not be politicized; that the parties make this on an objective basis and if indeed, you know, there is a need for the use of methyl bromide in Florida, as there certainly is, that the parties recognize that need and grant the exemption.

Mr. BILIRAKIS. Is the Federal—well, I see the red light is on, Mr. Chairman. With your indulgence I would ask is the administration, whoever is responsible on our side, going to take this into consideration and make a move to maybe get a change made there?

Mr. BURNAM. In the phaseout?

Mr. BILIRAKIS. Yes.

Mr. BURNAM. The European Union has made a suggestion for an accelerated phaseout for developing countries and we just received that proposal. Twenty of the developing countries have agreed to phase it out sooner than required under the Protocol. But under the current provision the developing countries are capped at 80 percent of their 1995, 1998 use after 2005 and unlike the United States they would not be entitled to a critical use exemption under that provision. In other words, they will be bound with an 80 percent cap whereas we would be able to pursue critical use.

Mr. BILIRAKIS. I yield back whatever time I don't have, Mr. Chairman, but I would hope someone would ask the question how do you go about amending this thing.

Mr. BARTON. I have already asked it once.

Mr. BILIRAKIS. Have you?

Mr. BARTON. I am going to ask it again on wrap-up.

Mr. BILIRAKIS. Thank you, sir.

Mr. BARTON. Mr. Shimkus, who deferred his questions while I was out of the room. I apologize. I thought he had asked questions. So he is recognized for 5 minutes.

Mr. SHIMKUS. Thank you, Mr. Chairman. I appreciate the efficiency of the State Department. However, I think they left page 5 out, so I don't have page 5. But to show that I have read it, I want to ask about the last question in response——

Mr. BURNAM. I have page 5 here somewhere.

Mr. SHIMKUS. That is okay.

Mr. BARTON. He doesn't have 1, 2, 3 and 4 but he has 5.

Mr. SHIMKUS. The last question asked about the parties to the Montreal Protocol that do not use or have never used particular ozone depleting substance who receive multilateral fund grants. This was also part of my opening statement, and that is why I wanted to see if the letter had been—if the letter had been responded to. Basically the response is generally no. And then you go on to mention Panama, which is the subject of the question, and then that is where I got cutoff. But isn't it true to say that any

country can say they might use methyl bromide and then get funds to do the research on alternatives? When that occurs, that takes additional money out of the methyl bromide using countries to fund research on alternatives. Wouldn't that be the case? And I will throw that out.

Mr. BURNAM. No. The fund under which Panama, which on page 5 has reported using methyl bromide and has received funding for methyl bromide related projects——

Mr. SHIMKUS. Can you tell me what Panama has, what they use methyl bromide for? Not that I don't trust the—obviously the Panamanians, but I am being told that they do not use methyl bromide.

Mr. BURNAM. Well——

Mr. SHIMKUS. I mean you don't have to do it now.

Mr. BURNAM. More importantly, the budget for research on alternatives to methyl bromide is a budget within USDA. The budget that the developing countries receive is a budget which helps them adapt to new technologies. The developing countries said——

Mr. SHIMKUS. Which we pay into?

Mr. BURNAM. The multilateral fund.

Mr. SHIMKUS. Which we pay into about 25 percent?

Mr. BURNAM. Right. They basically said to us you have the technology, we don't. Why don't you give it to us and we said, well, we are not giving it to you but we are willing to help you purchase the American technology.

Mr. SHIMKUS. The same technology that we really have no alternative right now in this country to replace in a lot of items. Is that the same technology you are referring to?

Mr. BURNAM. Well I was referring more generally to refrigerants and CFCs where back in 1991 they said we don't have this technology. We said, well, we will help you get it. But in the case of methyl bromide, as the USDA witnesses indicated, it has been very hard to find alternatives for all crops and all soils, so——

Mr. SHIMKUS. What would be the opportunity for this administration, which you all represent, I guess it would be this fall, to renegotiate the United Nations' Montreal Protocol treaty this year and allow the U.S. more time beyond 2005?

Mr. BURNAM. We don't believe there needs to be any changes in the Montreal Protocol or in current law. The United States is firmly committed to this process for critical use exemption and we don't——

Mr. SHIMKUS. Obviously, the vast majority of members who have spoken, not all of them, but are skeptical, I guess you could say, that we will see a large critical use exemption especially to those crop areas that are needed.

Mr. BURNAM. Well, the proof is in the pudding. The decision will be made in November for the years 2005 and maybe 2006, but as I have said many times, the State Department will push very hard and use every diplomatic effort we can muster between now and November to make sure that the parties don't politicize this process.

Mr. SHIMKUS. Mr. Holmstead, do you have a response to that question?

Mr. HOLMSTEAD. Yeah. I think it is premature to talk about any need to change the Protocol. We are quite confident based on the experience of our folks that we will get the critical use exemption that we need.

Mr. SHIMKUS. Mr. Brown.

Mr. RODNEY BROWN. Well, USDA's role in this of course is to come up with the alternatives, but we participated with the other agencies in putting together the package for the critical use exemptions. We think it was thoroughly done and carefully done. We think it covers the areas where we don't have alternatives. If there are other areas where we find we don't have alternatives, we could apply for those also. We think it is supportable and we think we should push as hard as we can to get those exemptions to the full extent we requested.

Mr. SHIMKUS. But application is not receipt of, correct?

Mr. RODNEY BROWN. Correct. We won't know until November.

Mr. SHIMKUS. And that is when we go before the international body and so there is no certainty that we will get any critical use exemption?

Mr. RODNEY BROWN. That is technically correct.

Mr. SHIMKUS. That is the problem, Mr. Chairman. I yield back.

Mr. BARTON. The gentleman from Idaho wish to ask questions?

Mr. OTTER. Thank you, Mr. Chairman.

Mr. BARTON. If so, he is recognized for 8 minutes.

Mr. OTTER. I thank the panel for being here and trying to at least sort through the Montreal Protocol for us. I want to follow a line of questioning that was introduced earlier in this discussion. It revolves around you know, No. 1, how do we verify that these folks are in compliance? What kind of verification do we use? I know how you verify the folks in Idaho and I know how you verify the folks in Imperial and San Joaquin Valley and places like that. But how do you verify it in Chihuahua?

And the reason I ask that question is because I remember years and years and years ago where we agreed not to use DDT and I could still go down there as recently as a few years ago, which I spent many days down there, and I could still find 55 gallon drums of DDT and none of us were using it. Yet 900 trucks a day of lettuce and all the other kinds of fruits and vegetables that compete with our farmers in the southern region, our producers in the southern region, are lined up at the border at Nogales coming across the border. Our folks can't use them. Their folks can use them. And I have a real problem with the sincerity that the State Department, that the EPA, that the U.S. Agriculture Department use in the compliance and the verification.

Now, let me say at the outset that methyl bromide, although it is important to us in Idaho because we have a lot of nematode problems and we have lots of soil borne pathogens, but we are visited every year by the greatest fumigant there is and that is called about 10 days of subzero weather, and what it doesn't kill it weakens pretty bad. So we don't have to use it too bad. But unfortunately, they don't have that in the San Joaquin Valley. They don't have that in the Imperial Valley. They don't have that in a lot of areas that don't enjoy the weather that we do in the northern cli-

mate. And so take a minute here or two and run through the verification process for me if you will, somebody.

Mr. HOLMSTEAD. Let me give you the highlights and then we can provide an answer in more detail for the record.

Mr. OTTER. Okay.

Mr. HOLMSTEAD. Under the Montreal Protocol the reporting mechanisms have worked quite well.

Mr. OTTER. Are these volunteer or do you check on the checker?

Mr. HOLMSTEAD. We actually have ways of checking on the checker.

Mr. OTTER. How do you do that?

Mr. HOLMSTEAD. Well, in particular for instance, methyl bromide we know there is really only three producers in the world of any size. Two of those are located in the United States and we know a lot about how much they make. We actually have explicit authority under the Clean Air Act to get information and they provide that to us. We get confidential business information about how much they make, how much they store, how much they ship, where they ship it to, and so we know a great deal about where the methyl bromide goes.

Also there are less formal mechanisms for making sure. I mean, in other areas we get tips from competitors and they say, hey, you know, look at so and so. You know, they seem to have a source of CFCs which are illegal. So there are a number of formal and informal mechanisms. And I have to say, thus far anyway, we are very confident that the reporting under the Protocol has been quite accurate and fair. People have reported noncompliance in some cases. It is by very small amounts. But there is a whole series of a normal and informal enforcement mechanisms that are built into the Protocol, and we could provide you more detailed information about that.

Mr. OTTER. Okay. Mr. Burnam.

Mr. BURNAM. Yes, I would just endorse Mr. Holmstead's answer on that point. We have not had a case yet where we have identified a party that has not reported on its noncompliant status, although obviously the informal checks that Mr. Holmstead was indicating are important. I mean I don't say that it hasn't happened. But we are not aware of a case where a party has failed to report that it is not in compliance. The one major case of noncompliance involved Russia for a couple of years recently. But they are now back in compliance.

Mr. OTTER. When they went out of compliance, did we stop shipments of anything to the United States?

Mr. BURNAM. No, what generally happens under the Protocol usually it is a very small amount where they are out of compliance and they work with the Secretary and the parties to the Protocol or a get well plan. I mean often it is because of a civil war in the Democratic Republic of the Congo or Belize doesn't have the capacity to monitor. So what generally happens is they work with the parties to the Protocol on a get well plan. That is what Russia did. But Russia was the only case where there was a party with pretty significant abilities that was out of compliance.

Mr. OTTER. Okay. Well, I don't want to spend any more time on that. I am not totally satisfied, but that question will follow later.

One of the things that I do want to go over is what the ranking member brought up, and that is the process by which American domestic producers enter their requirements, enter their requests for the use of such material. Is this pretty much uniform across the United States? In other words, does a request, let's say, from Texas meet with the same enthusiasm and permission for a request where there is a whole lot more votes in the Congress than a request from Idaho, where there is only two?

Mr. HOLMSTEAD. We take seriously requests from Idaho and Texas and, let's see, California. The process is very regularized. We actually provide a Federal Register notice to put everyone on notice. We also go informally out through trade associations, and I would say it is a very robust process that involves—our office is the Air Office but we have an Office of Pesticide Programs that knows exactly where all the methyl bromide users are. We have numerous folks who spend, you know, several months of time working with their counterparts in USDA, and it is a very open air process.

Mr. OTTER. So we have pretty much domestic balance?

Mr. HOLMSTEAD. Yeah.

Mr. OTTER. We have pretty much domestic balance on it. The other question that comes to mind is we are having a real problem with, quote-unquote, GMOs. I think it is an artificial trade barrier myself because there isn't any crop that we have got today that hasn't been genetically modified one way or the other. And interestingly enough the Montreal Protocol is silent on that and yet advancing GMOs in the world could make a plant nonsusceptible to nematodes or other pathogens. It would seem to me that we need to modify things like the Montreal Protocol so that we could breed plants to genetically modified organisms in order to make them nonsusceptible so that we wouldn't need to use these kind of chemicals. And we seem to have the breeding characteristics and the grafting characteristics in our agricultural areas to do this now. And it would seem to me that if there is a process by which we could modify the Montreal Protocol that we would champion that effort and encourage that.

Would you like to respond to that? Yes, sir.

Mr. RODNEY BROWN. USDA's role isn't so much to modify the Protocol as the plants and in fact we are doing that very thing. One of the things you would be interested in is plants that are less susceptible to nematodes and many of the others that you have mentioned.

Mr. BARTON. The gentleman's time has expired.

Mr. OTTER. Thank you, Mr. Chairman.

Mr. BARTON. We are not going to do a second round. We have got seven more witnesses. Oh, Mr. Radanovich has just arrived. So he is recognized for 5 minutes. Oh, you are here.

Mr. RADANOVICH. Thank you, sir. If somebody—let's see, Mr. Brown or Mr. Holmstead, if could you answer this question for me. The administration is placing great faith on the success of the CUE process. In essence it is leaving the future of our food and agriculture interests to be decided by foreign governments. What steps is the administration prepared to pursue if it turns out that reliance on the CUE process is misplaced? For example, what will the administration response be if the requested CUE nomination by

the U.S. Government is not approved in total? Remember that the EPA has critically determined after exhaustive review that 39 percent of the baseline represents a critical need for the United States.

Mr. BURNAM. Well, I don't think it would be wise to speculate on what we might do if we don't get our request satisfactorily resolved. I have indicated in previous answers that we are prepared to take every diplomatic step necessary. If, for example, we were to suggest some modification to the Protocol at this time, I think that would undermine any attempt we might make to get a critical use exemption.

Mr. RADANOVICH. Just between us friends; we don't have to formalize it in any way?

Mr. BURNAM. Well, I mean our position is that the critical use exemption is adequate. We can make it work. We can get the farmers what they need, and that is our position. We don't believe we need to modify any provisions of the Protocol to achieve that.

Mr. RADANOVICH. The TEAP's recommendation suggests that the U.S. Government simply did not do their job properly in submitting the key request. Is it conceivable that the TEAP is correct or instead does it now make it clear that UNEP is predisposed to not approve most uses of methyl bromide particularly for pre-plant soils in the United States.

Mr. BURNAM. No. I don't think it is conceivable. I think it is a very complex matter involving different soils, different crops. I think it is only natural that they would want more information and we are happy to supply them with it. There have been cases in the past where more information was asked for, it was supplied. We don't believe the request for more information indicates an adverse view on their part.

Mr. RADANOVICH. Okay. Given the TEAP recommendations, can the CUE process be relied on to protect U.S. interests, do you think?

Mr. BURNAM. Absolutely. I think it can be relied on to fully protect U.S. interests, and the State Department intends to ensure that that is the case.

Mr. RADANOVICH. Okay. Thank you, Mr. Chairman. Those are the only questions I have got.

Mr. BARTON. Okay. Before we let the panel go, I want to thank you for your attendance and the sincerity of which you testified. I still have a lingering concern. I sense that you are trying to work within the framework, but it is a framework that is very difficult to work within because there is no alternative in these critical use exemptions that are being requested of some amorphous body of 183. And I look through the list and they are countries I don't know where they are. I didn't even know they were countries, yet they have a vote on this if it comes to a vote. We have a rider on an appropriation bill that extended the deadline. I think we did that back in 1998. I feel very strongly that the authorizing committees should authorize.

I don't know which of you is the senior ranker of administration, so I am just going to ask all three of you to go back to your respective agencies. I understand we need to let the process work. I think that is what you said makes a little sense. But we are going to end up in November, Congress is still going to be in session because it

is not an election year. If we need to do something I want this subcommittee to do it. I don't want to sit around and have to go through the appropriation process if they reject it. So, I mean, look at your hole cards, you know, and I think you are making a good faith effort but we have got lots of—Mr. Whitfield and Mr. Bilirakis and Mr. Radanovich and Ms. Bono and Mr. Issa all, their people are suffering and we could say the same thing on the Democratic side of the aisle. So if you think you are making progress and you are going to get these special use exemptions, critical use exemptions, the sooner we know that the better. If that ain't going to work, then somebody—just pull a country out of the air, France is going to object, you know, let us know. I mean, but my guess is that right now you want the Congress to just monitor, but not put a legislative bill in play. Is that a fair assessment?

Mr. BURNAM. Well, we certainly appreciate your calling this hearing and flagging the issue, and we will keep you very informed and work very closely with you in the coming months. But, no, we would not recommend any changes in law.

Mr. BARTON. Well, we are a coequal branch and we do exercise that coequalness and there is a lot of support on this subcommittee to do something. Now I have one special personal request. I want each of you three gentlemen to stay in the audience and listen to the next panel. We have got seven witnesses on a bipartisan basis, and you are going to get an earful. But you need to hear it because we hear it. If you are in an ag district, you know, when we go home, this is what we hear and sometimes administration is off in the ivory towers and they don't hear it. So if y'all would do me this favor and listen to the next panel, it may help in the negotiations. Are y'all willing to do that? It will only be another 35 minutes or so. Okay, this panel is excused and we are going to hear from our next panel.

The subcommittee will come to order. We have had to expand the table because of the number of witnesses. And if everybody could be seated, we have a few special introductions.

Mr. Radanovich. Is Congressman Radanovich——

Mr. ISSA. I think he just stepped out, Mr. Chairman.

Mr. BARTON. Is he in the anteroom?

Mr. ISSA. He is coming back.

Mr. BARTON. All right. We want to welcome our second panel. We have Mr. Bill Pauli, who is President of the California Farm Bureau; Mr. Reginald Brown, who is Vice President of the Florida Tomato Exchange; Mr. Rich Siemer, who is President of Siemer Milling Company in Teutopolis, Illinois; Mr. Michael Mellano, Senior Vice President of Mellano and Company in San Louis Rey, California; Dr. Joseph Noling, at the University of Florida Cooperative Extension Service's Citrus Research and Education Center; Dr. Jack Norton, who is the manager for Interregional Research Project No. 4 of the Methyl Bromide Alternatives Program, Edmond, Oklahoma; last but not least Mr. David Doniger, who is the Policy Director of the Climate Center for the Natural Resources Defense Council.

And so we are going to recognize Mr. Radanovich to introduce Mr. Pauli and then Mr. Issa to introduce Mr. Mellano.

Mr. RADANOVICH. Thank you, Mr. Chairman. I want to welcome the third term President of the California Farm Bureau, Mr. Pauli, to be here testifying today. Bill, good to see you. And just a reminder of California, it is a State with about 200 different types of crops. It is a specialty crop State with a net worth of $30 billion a year. It is the State's largest industry, and Bill Pauli does a wonderful job representing California agriculture here in California and also in Washington. So I want to welcome Bill and we look forward to your testimony.

Mr. BARTON. Okay. Mr. Issa.

Mr. ISSA. Mr. Chairman, thank you. It is my pleasure to welcome my constituent, my friend, and a leader in our community. Dr. Mellano has spent his entire life in the cut flower industry, holds a Ph.D. And has been active in just about every organization in a State in which we dominate the United States market for cut flowers, $6.5 billion portion of California's agricultural market. It goes without saying that I am thrilled to have Dr. Mellano here today and to have the benefits of his years of experience and his understanding, particularly with methyl bromide, of where there are viable alternatives and where there are not.

So thank you, Mr. Chairman.

Mr. BARTON. Thank you. Gentlemen, welcome. Your testimony is in the record in its entirety. We are going to start with Mr. Pauli, ask each of you to summarize in 5 minutes. Since we have seven witnesses and we are expecting a series of votes in the next 30 minutes, we would like to at least get your testimony summarized before we have to go vote. Welcome to the subcommittee, Mr. Pauli.

STATEMENTS OF BILL PAULI, PRESIDENT, CALIFORNIA FARM BUREAU FEDERATION; REGINALD BROWN, VICE-PRESIDENT, FLORIDA TOMATO EXCHANGE; RICHARD C. SIEMER, PRESIDENT, SIEMER MILLING COMPANY; H. MICHAEL MELLANO, SENIOR VICE PRESIDENT, MELLANO AND COMPANY; JOSEPH W. NOLING, UNIVERSITY OF FLORIDA, FLORIDA COOPERATIVE EXTENSION SERVICE, CITRUS RESEARCH AND EDUCATION CENTER, INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES; JACK NORTON, MANAGER, INTERREGIONAL RESEARCH PROJECT NO. 4, METHYL BROMIDE ALTERNATIVES PROGRAM; AND DAVID D. DONIGER, POLICY DIRECTOR, CLIMATE CENTER, NATURAL RESOURCES DEFENSE COUNCIL

Mr. PAULI. Thank you, Mr. Chairman and members of the committee and fellow Californians who are on the committee. It is a pleasure for me to be here today, and I have submitted written comments for the record. Let me summarize a few of those comments.

No. 1, I am a farmer. I am a wine grape grower and Bartlett pear farmer in northern California. I am representing both the American Farm Bureau and the California Farm Bureau here today. There are really three points I think that we need to focus on today. Obviously we focused on how important methyl bromide is to the industry and we all understand that; No. 2, the Montreal Protocol and how badly flawed we believe the process appears to be; and, third, what Congress must do to be sure that we receive

an adequate amount of the 39 percent under the CUEs that have been requested.

I don't think there is any disagreement about methyl bromide and its importance. We have talked about that. All of you have heard that. We understand both from a pre-plant and a post-harvest standpoint how important it is. The number was kicked around a little earlier, whether it is 85 to 95 percent of the use. But it is clearly more like 95 percent of the use is for a fumigant rather than post harvest. A wide variety of crops use it: Grapes, almonds, tomatoes, peppers and particularly cut flowers. As a post harvest fumigant we use it in grains, dried beans, raisins, prunes, almonds, walnuts and certain other crops, and it is very important there as well.

Methyl bromide, it is cost effective. It works extremely well. It is an effective product, and it is a safe product. And certainly, through our worker safety programs we have tried to assure that it is safe. It is always safe. We recognize that there are challenges there as well.

What are the alternatives to methyl bromide? You know, we all keep hoping there is a silver bullet and yet we haven't found that silver bullet of an alternative. We have spent in excess of $100 million and probably over $150 million by USDA, various registrants, by universities and by private firms to try to find effective alternatives, and yet we have not found viable alternatives that are nearly as effective or cost effective as methyl bromide. We also have to recognize that with these alternatives come problems and challenges related to worker safety and that they are less efficient, that they are more costly. But they too have environmental effects. Hopefully, in the short-term, we will begin to find some meaningful alternatives.

Let's talk for a second about what is occurring because of the lack of methyl bromide availability in our country and the phase-down. Production is simply shifting to other countries. In the end, who does that hurt? The California consumer, the California farmer, and the United States economy. The phase-in is leading to increasing dependence on imported food from other countries. Any environmental benefits achieved by American farmers because of the reduced methyl bromide use has been undone by increasing use in other countries.

Accordingly, in 1991 the United Nations reported China's consumption of methyl bromide was expected to increase tenfold by 2002, and we believe that they are beginning to increase their production of methyl bromide and that there are more than the number of facilities that were talked about in the earlier testimony.

Critical use exemption process. This is the key point that I think we have to focus on today. The CUE process has been touted to provide the necessary relief. Commodity groups committed significant time, expertise and financial resources in working with the EPA to prepare the CUE requests. Producers have attended workshops, participated with the EPA and done everything we can to help build that case. All to no avail. We are afraid. We will see what the final results are, but our concern is that we will not receive the 39 percent requested.

Let me put that in perspective. 821 tons is about 1.8 million pounds. At 200 pounds of active ingredient per acre that will allow the fumigation of only 900 acres. California has averaged 25,000 acres of strawberries alone in the last few years. Let's talk for a second about the Montreal Protocol. It is seriously flawed. Contrary to the U.S. EPA assertion that the amount of methyl bromide being requested was necessary because of the lack of feasible alternatives from the threat of disruption of the American agriculture, the TEAP determined that the U.S. Government had not submitted sufficient information to substantiate the U.S. request. The rejection comes in the face of thousands of man-hours, the expertise of scientists and agriculture economists and EPA's commitment to putting together its nominations to the United Nations. Further, it rejects the realm of data compiled from millions of dollars of agriculture research conducted by both the USDA and other commodity groups.

Let me summarize because I know we run really, really close on time. You know, despite years of research there are not alternatives. Commodity groups have committed significant time, expertise and financial resources to work with the EPA on the CUEs. Following submission of the CUE requests TEAP developed additional criteria to evaluate the nomination package without notifying the nominating countries. The recommendations issued by the review committee confirm that the CUE process is fatally flawed and cannot be relied on to protect our Nation's consumers or farmers. A couple of things were said——

Mr. BARTON. You do need to summarize.

Mr. PAULI. 30 seconds. No. 1, the process is working well, according to Mr. Holmstead. We have serious reservations about that. No. 2, Mr. Brown stated the full amount will be granted and I am certainly relieved to hear that that will be the case, although I have serious reservations.

We appreciate the opportunity to be present today, and our record will be submitted.

[The prepared statement of Bill Pauli follows:]

PREPARED STATEMENT OF BILL PAULI, PRESIDENT, CALIFORNIA FARM BUREAU FEDERATION ON BEHALF OF THE AMERICAN FARM BUREAU FEDERATION

Good afternoon Mr. Chairman, members of the Committee. My name is Bill Pauli; I farm in California's Mendocino County producing wine grapes and Bartlett pears. I am president of the California Farm Bureau Federation and a member of the American Farm Bureau's Board of Directors. On behalf of the thousands of Farm Bureau members who use methyl bromide, I thank you for the opportunity to address you today regarding our concerns.

Methyl bromide is an essential tool for crop production, grain storage facilities, public health and general pest control. It is a crucial production tool in providing consumers with a safe and reliable food supply. As you are aware, use of methyl bromide in the U.S. is being phased-out in accordance with the Montreal Protocol as incorporated in the federal Clean Air Act.

I'm here to make three points:

1. Securing the continued availability of methyl bromide is critical for many U.S. farms and uses.
2. The Montreal Protocol Critical Use Exemption (CUE) process is flawed.
3. Congress must work with the Administration to act to ensure U.S. consumers and farmers receive meaningful, much needed relief from the phase-out.

IMPORTANCE

Methyl bromide has two main agricultural uses: fumigation of soil prior to planting and post-harvest commodity treatments.

In 1997, USDA's Economic Research Service (ERS) estimated that about 70 percent of methyl bromide used in the U.S. was for pre-plant soil fumigation. A March 2003 USDA-Agricultural Research Service (ARS) report states that 95 percent of strawberry acreage in California and, by Florida Strawberry Growers Association estimates, 100 percent of strawberry acreage in Florida is fumigated prior to planting each year. The strawberry industry will see some of the most significant projected losses due to the phase-out of methyl bromide—a nationwide loss of $131.5 million born by producers. A 1996 study estimates that a complete methyl bromide ban will increase the farm-gate price of strawberries by 18.2 percent—$132.62 more per ton. Methyl bromide is a critically needed pre-plant soil fumigant for other important commodities such as grapes, almonds, tomatoes, peppers and cut flowers.

Using methyl bromide means yields improve because the need to hand weed and cultivate is reduced, allowing for the use of drip irrigation. Better yields mean better margins. Pre-plant soil fumigation also controls soil-borne fungal pathogens and various pests contributing to the reduced vigor of newly planted crops.

Methyl bromide is an important post-harvest treatment used to meet sanitary standards set by the Food and Drug Administration and importing countries for grains, dry beans, raisins, prunes, figs, dates, almonds and walnuts. These products are typically treated before and during storage, and prior to being packed or shipped. Storage structures, containers and processing facilities are also fumigated to ensure proper sanitation.

For most users, methyl bromide continues to be an extremely simple, cost-effective treatment that can be applied within a flexible treatment timeframe—it works every time, all the time.

Over the last 10 years, a great deal of effort has been expended to find alternatives to methyl bromide use. Research efforts by registrants, university researchers, private firms, and other government agencies are estimated to have totaled over $120 million. But, problems still exist in finding and developing viable alternatives to methyl bromide. There is no one size fits all replacement or combination of replacements that works as well, as consistently or as cost-effectively as methyl bromide.

Previously proposed alternatives have problems, such as possible carcinogenic traits and groundwater contamination, far greater than any posed by use of methyl bromide. Some potential replacements require higher rates of application, or application in conjunction with other products to control all the target pest and diseases. Plus, varying soil types affect the ability of a product to absorb to appropriate soil depths. So far, proposed alternatives have limited real world use due to application restrictions and other concerns. No product comes close to functioning as cost-effectively or efficiently as methyl bromide.

Even when potential alternatives are identified, developing all the data necessary to support the product's registration by EPA takes years and requires meeting the conditions of a variety of laws such as the Food Quality Protection Act. And, that's assuming that an alternative's potential use in the market justifies a registrant taking a product through registration. Many uses needing alternatives are "minor crops" representing smaller market shares. There is no guarantee that a registrant could recoup the costs of these registrations while still making the price to producers affordable. As a result, farmers and users are helpless in determining long-term feasibility of their dependence on methyl bromide and planning for the future of their operation.

The progression of the phase-out and lack of suitable replacements has caused the cost of methyl bromide to skyrocket. As reported by ERS in April 2003, "The U.S. average price rose from $2.50 per pound of active ingredient in 1999, when the first reduction began, to $4.50 in 2001." At an application rate of 200-250 pounds of methyl bromide per acre, that's an additional $400-$500 per acre in production costs. For most farmers, there is no way to recoup or pass along these added costs.

Already, producers of tree fruit and nuts cannot afford to use methyl bromide. Switching to less effective products causes pest pressures to build. It will take a few more years before we know the full consequences on yield, quality and competitiveness from these producers going without methyl bromide applications. To cope with the lack of adequate crop protections, some U.S. producers are even choosing to move large parts of their production to Mexico or elsewhere.

The University of Florida, ERS and the National Center for Food and Agricultural policy all recognize that losses are occurring as a result of the methyl bromide phase-out. An ERS and University of Florida collaborative study found that a com-

plete ban on production uses of methyl bromide for annual fruit and vegetable crops in California and Florida would result in estimated losses of "about $200 million annually in gross shipping point revenues, which represented about 20-30 percent of estimated revenues from treated commodities in each state."

Without a doubt, the phase-out of methyl bromide will lead to increased imports from China and "developing" countries that can continue to use methyl bromide long after the U.S. and other "developed" nations have been cut off. China and developing nations, such as Chile and Mexico, will have access to methyl bromide until 2015 while the U.S. faces a phase-out deadline of January 1, 2005. Many of these developing nations and China are major competitors with U.S. producers in specialty crop markets such as tomatoes, peppers and strawberries, to name a few.

In the end, American consumers will suffer most from the U.S. loss of methyl bromide. The phase-out means the U.S. will increasingly dependence on imported, international food sources that are less regulated, less reliable and less safe. A perfect example: recent outbreaks of Hepatitis A in U.S. consumers from eating imported strawberries and cantaloupes.

Any environmental benefits and protection of the ozone layer achieved by American agriculture's reduced usage of methyl bromide is negated by the increasing usage in other countries not yet subject to the phase-out. According to a 1991 United Nations report, China's consumption of methyl bromide alone was expected to increase ten-fold by 2002 to 4,000 tons.

Regardless of whether farmers believe the accuracy of the science used to justify the phase-out of methyl bromide, agriculture has drastically reduced its use of methyl bromide while searching for alternatives. We've adjusted application rates and looked at using different combinations of products. Over the last 10 years, commodity groups have made significant contributions to researching alternatives and participated in field trials. Yet, readily available alternatives have still not been identified. Production agriculture has reduced the use of methyl bromide to the bare minimum, but we have come to our breaking point on further compliance with the phase-out.

The CUE process as the answer to providing meaningful relief to American agriculture, Commodity groups committed significant time, expertise and financial resources in working with EPA to prepare individual CUE request applications. Producers attended workshops to better understand the CUE application process and provided EPA the vast amounts of data requested to build a strong case for CUEs.

But, to no avail. The Protocol's Technology and Economic Assessment Panel (TEAP) has recommended that the Parties approve less than 10 percent of the U.S. government's full CUE nomination request for pre-plant treatment use (831 long tons), while, the EPA-prepared U.S. nomination requested that agriculture retain 39 percent of the 1991-established baseline, about 9,942 long tons.

To put this in perspective: 831 long tons is about 1.8 million pounds. At an average of 200 pounds of active ingredient per acre, that allows fumigation of 9,000 acres nationwide. Over the last three years alone, California averaged 25,000 acres of strawberries; Florida averaged 35,000 acres of tomatoes. Keep in mind this is just two commodities in two states and does not include other crops, states or any post-harvest uses.

MONTREAL PROTOCOL IS FLAWED

Despite the U.S. government's position that that the methyl bromide exemption request is necessary and justified due to the lack of feasible alternatives and the threat of economic disruption of American agriculture, TEAP determined that the U.S. had not submitted sufficient information to substantiate our request. In a letter to EPA, TEAP did not even articulate the additional information that would be needed to re-evaluate the U.S. request.

This international decision—or lack thereof—comes after thousands of man-hours, expertise of U.S. government and industry scientists, agricultural economists and EPA's commitment to put together a "rigorous" nomination to the United Nations. Further, the TEAP response unjustifiably ignores the reams of data compiled from the millions of dollars of agricultural research conducted by USDA/ARS and commodity groups.

Many individuals and groups have questioned the legitimacy and objectivity of the CUE process. The recommendations of TEAP issued this month on the U.S. government CUE request confirm that the international process is not objective, transparent or science-based.

According to its own recent report, TEAP, during the review process, developed "new" criteria for evaluating CUE requests. These "new" criteria were not presented or discussed with the applicant nations before submitting their nominations. Among

the "new" criteria: TEAP used the amount of money the U.S. has given to developing third world nations under the UN Environment Program (UNEP) multilateral fund for researching third world alternatives to methyl bromide as a guide for determining the economic feasibility of alternatives in the U.S. This type of criteria has nothing to do with the any alternative's feasibility or economic impact in the U.S. attributable to the phase-out of methyl bromide. This process is yet another example of the international community—many our direct market competitors—establishing U.S. agricultural policy without accountability or consequence, and without concern for the severe impacts on our farmers, consumer and economy.

This so-called "technical review" process is extremely politicized. Looking at the recommendation, it's interesting that the U.S. received our post-application use grain requests, but in the commodity markets in which we are most competitive with developing nations—fruit and vegetables, we didn't fare so well. Interestingly, the committee should notice that in comparison, other developed nations like France fared quite well. TEAP recommended that France receive about 80 percent of its CUE request, compared to the U.S. recommendation of less than ten percent. Farm Bureau and many others in agriculture strongly believe that it is the intention of TEAP and the international community effectively makes planting decisions for American farmers that threaten our competitiveness and enforce their political grudges against the U.S. economy.

It is very hard to imagine that the U.S. government simply did not do its job properly in submitting its CUE request, as TEAP would have us believe. Rather, UNEP's action makes it clear that its international members are predisposed to not approve most U.S. uses of methyl bromide, particularly for pre-plant soil application. Farm Bureau does not believe there is any hope that the CUE process can be relied on to protect American consumers or farmers.

RELIEF NEEDED

Farm Bureau respectfully requests that Congress urge the Administration to either take the steps necessary to renegotiate the Montreal Protocol as soon as possible or provide a legislative fix freezing the phase-out. We ask you to ask of them, what do they intend to do between now and November? What is their strategy to ensure American farmers' continued access to methyl bromide?

We also need your guidance and assistance to ensure that in the final months of the CUE resubmittal process, the Administration, specifically EPA, advocates on our behalf to their fullest ability. Once final CUE decisions are made by TEAP, how does EPA intend to allocate the exemptions among farmers, commodities and states? Administering the exemptions will be a nightmare and producers need more information for planning future years' production.

Although American farmers are drastically reducing use of methyl bromide, other countries, some parties to the Protocol and some not, continue increasing their usage and production of methyl bromide. Will Congress and the Administration continue to let the American economy, consumers and farmers struggle or will the U.S. take our fate back into our own hands?

Will the American government allow its consumers to access to U.S. food produced using less methyl bromide or compel them to consume less regulated imported food produced with the unrestricted use of methyl bromide?

I thank you for the opportunity to address the subcommittee today regarding this complex issue and voice our concerns over the incredibly flawed process governing the phase-out the use of methyl bromide.

Mr. BARTON. Thank you. Mr. Reginald Brown.

STATEMENT OF REGINALD BROWN

Mr. REGINALD BROWN. We appreciate the opportunity to be here, and I would second Mr. Pauli's comments and depart from my written statement to a large extent to talk about real issues and the realities of the world as we see it. Hopefully the discussion this morning involved the CFC and the elimination of the air-conditioning compounds. Hopefully our solution for methyl bromide will work better than the AC in this room.

Mr. BARTON. There may be a method in that. We focus your attention that way.

Mr. REGINALD BROWN. We have spent a tremendous amount of time as industry in this country preparing critical use applications that went to the EPA. The Florida application alone at the end of the table is over 3,000 pages and weighs some 70 pounds. It would weigh more than that if we had not economized the shipment of the product and used the references to the research that has been done in the State over the last 10 years in order to minimize the shipping cost. But it is a herculean task we are facing on an annual basis.

Now, we went through the process and we asked for more—63 percent of the number that EPA—the EPA granted or moved forward with 39 percent. We don't have a problem with EPA's process. It was open and we were engaged in that process. What we have a real problem with is we move over to the MBTOC committee. They review the information in 5 days from all the parties in the world that made application. They failed or refused to communicate, operated in secret, moved the information over to TEAP. And TEAP then proceeds to evaluate the information from MBTOC and they in turn make decisions that the U.S. Application fails to meet the muster.

We have a fundamental problem with the blatant unfairness, the lack of transparency, and the lack of interchange that took place in this whole process.

Now TEAP says we need more information. We had 3,000 pages of information. And I would surmise that there is not a country in the world that has done more and worked harder to solve the problem than the farmers in this country and in this process to try and replace methyl bromide. But the reality is even our own government agrees, as we as producers agree, we don't have a solution to the problem. We are headed to a train wreck. If we don't do something to resolve this problem, American agriculture is going to be seriously injured at the end of this international process.

Many of your business people, right—how would you like it if 83 of your best competitors—we are in an international traded commodity business in agriculture in this country—to vote up or down as to whether you stay in the business or not. Methyl bromide is a fundamental tool to the enterprises in this country. We are working to replace it. Until we have a replacement, don't throw us over the wall. We either have to do one of two things. We need to have the administration to move forward to adjust the Montreal Protocol in that process of international treaties or we need the Congress to recognize the crisis that we are going to be in and move forward to make adjustments to the phaseout period.

Now, we are not asking that methyl bromide be kept indefinitely. We are asking for a delay until a solution is found. We are reasonable people. We care for the environment just much as any of you on that panel. We care for our workers, but we like to employ Americans. We like to grow food for America. And we like very much to be in business in this country because we are in fact Americans. We do not want to leave this country and grow production somewhere else. But if you take our tools away, somebody is going to provide food to America, and it is an international marketplace and it won't be American agriculture.

You have got to wake up to the problem we are creating with decisions that were made years ago in a process—that ozone depletion is your concern, Mrs. Capps. Man-made ozone only represents 20 to 25 percent of the methyl bromide in the environment. Most of it comes from the ocean or from biomass burning. We are only asking for a small continuation of that less than 25 percent number to keep Americans in business, to keep Americans employed, and for our survival long term in this business.

We appreciate the opportunity to be here. Our concern is real and we appreciate this opportunity.

[The prepared statement of Reginald Brown follows:]

PREPARED STATEMENT OF REGINALD BROWN, CHAIRMAN, CROP PROTECTION COALITION

Mr. Chairman, I am Reginald Brown. I am Chairman of the Crop Protection Coalition (CPC) and Executive Vice President of the Florida Tomato Exchange. The CPC is comprised of agricultural organizations in the United States representing tens of thousands of American farmers, processors, and horticultural interests, billions of dollars of agricultural production and employing hundreds of thousands of people. Our commodities, farmers, mills and the economic contribution they make, are an extremely important economic factor in many rural communities of the United States.

While the crops we produce are diverse, we share a common concern about the potential loss of an important crop protection tool—methyl bromide. Our message is simple. The current phaseout of methyl bromide under the Clean Air Act and the Montreal Protocol will cause serious economic disruption to many segments of the American agriculture, economic losses to communities that rely on our farmers, the loss of jobs and a loss of international competitiveness. In short, this is a wreck waiting to happen.

We believe there are many critical uses of methyl bromide, including use as a preplant soil fumigant, post-harvest commodity treatment and structural treatment of processing and storage facilities, for which feasible alternatives are not available. This belief has been confirmed most recently by the U.S. government, including the U.S. Environmental Protection Agency (EPA). Specifically, in response to an exhaustive evaluation of substantial applications for critical use exemptions (CUE), involving a large number of EPA and USDA Ph.D. scientists, the U.S. government determined that there was a lack of feasible alternatives for many uses of the chemical. It is understood that the U.S. government recommended approval of approximately 22 million pounds of methyl bromide under the CUE process. This translates into almost 10,000 long tons. The CUE applications reviewed by EPA to reach this conclusion were extensive. In fact, CUE applications for just three Florida crops exceeded 3,000 pages of supporting documentation from the industry. The industry devoted significant and substantial resources to make certain that the applications submitted were rigorous and reliable. Thousands of industry man hours were required to develop the applications to achieve the degree of rigor that the U.S. government had said would be needed to obtain the CUE. Extension scientists were very heavily involved in this effort as well. The industry met with EPA and USDA officials on numerous occasions to make certain that what the U.S. government said was needed to support a CUE application, was in fact provided. In short, a good working relationship developed between industry and the EPA to make certain that the U.S. government had all the information necessary to support the approval of the CUE application.

Based on the extensive record it had, the EPA recommended that CUE applications equating to 39% of 1991 baseline levels should be recommended for approval. It should be noted that the original CUE applications from all sectors totaled 35 million pounds or 62% of the 1991 baseline levels. Through the critical review process, EPA reduced this number to the 39% figure. Clearly, no one can say that he Agency simply "rubber stamped" the CUE applications it received. If the EPA or USDA did have questions concerning a specific application request, the government would contact the applicant and seek clarification of the request or the information submitted with it. Attached to this testimony is the sector analysis that was provided by the EPA, which analysis describes EPA's review of the applications received. (Attachment 1)

The CUE process might have a chance to work if it simply required a review and approval by the U.S. government. However, as the chairman knows, this is not how the CUE process works. In fact, securing the U.S. government's recommendation for approval is simply an early step in the CUE process. Once such recommendation is given, the U.S. government forwards it for approval to the Montreal Protocol. This then entails review by the Methyl Bromide Technology Options Committee (MBTOC). That review occurred over a 5-day period in May, 2003. The MBTOC's deliberations are apparently secret. Even when the EPA was asked after the MBTOC meeting, what the MBTOC had decided, senior Agency representatives indicated that they did not know. MBTOC would not disclose its analysis and conclusions to the EPA.

Once MBTOC commented on the CUE applications, its recommendations were forwarded to the Technology and Economic Assessment Panel (TEAP) for review. Ultimately, the TEAP determined that most of the U.S. applications were inadequate. While it did approve the U.S. requests associated with post-harvest and structural uses, it approved less than 10% of the U.S. CUE application requests. This equates to only approximately 830 long tons. Unfortunately, 90% of the pre-plant uses were not recommended for approval by TEAP (more than 9,000 long tons). TEAP stated that the U.S. government had not submitted sufficient information to support the U.S. request. It left the door open for the U.S. government to do a better job, submitting more information. Then, perhaps, maybe the TEAP could support approval of additional CUE requests.

Given the response of the TEAP in considering applications for continued use of ozone depleting substances for use in asthma inhalers, a use which can help save lives and mitigate a public health threat, the CPC is not optimistic about he likelihood that the U.S. requests for pre-plant soil uses will ever be approved, regardless of the volumes of supporting material that the U.S. includes with its CUE requests. There simply is a bias that exists in TEAP against approving any exemptions that could continue the use of ozone depleting chemicals, regardless of the legitimate needs of various sectors.

It is clear that the CUE process is substantially and fatally flawed. This conclusion is based on the observation of the operations under the Montreal Protocol. It would be one thing if the CUE system was designed to not present an undue regulatory burden, that is was a transparent, open, objective and fair review process. However, the CUE process is none of these things. The application itself is overwhelming! Such application process is structured on a yearly basis. As noted above, the amount of resources needed to complete the application are enormous. Even with all that effort, and after securing EPA approval, it turns out that the bureaucrats of the UNEP committees can act to derail the approval process, all under the guise that the U.S. government had not submitted quite enough information to substantiate the application requests. No wonder that Johnathan Banks, co-chair of MBTOC publicly announced at an alternatives research conference in 1997 that industry should not place any hope in the CUE process. No significant amounts of methyl bromide would be allowed under the Montreal Protocol. The sooner the U.S. industry "got over it", it would then move on to full implementation of alternatives to methyl bromide and achieve complete phase out of the chemical. This was from one of the leaders under the Montreal Protocol.

Unlike the review conducted by EPA and USDA of the CUE applications, it appears that neither MBTOC nor TEAP decided to conduct their evaluations in the sunlight nor engage the countries involved in any meaningful dialogue over the requests that had been submitted. Further, these committees under the Montreal protocol appear to be perfectly content to create whatever standards they want to in evaluating CUE application requests. There is no public comment opportunity on these standards before they are adopted by the committees. A simple example of this involved a criteria that TEAP adopted to determine whether an alternative was economically feasible. Instead of relying on the economic analysis associated with a particular use, the TEAP adopted an analysis that was tied to the amount of funds given to developing countries under the Montreal Protocol Multilateral Fund to encourage the elimination or reduction of methyl bromide use in that developing country. This created a cost per ton figure. If the CUE request was below such amount, this would indicate that economically viable alternatives did exist and the CUE should not be granted. Only if the alternatives costs in the developed nation were above that figure, would the alternatives be considered not economically viable.

Setting aside the obvious questions regarding the appropriateness of such criteria, nevertheless, it remains that such standard was never put forth for public comment. It was simply unilaterally adopted by TEAP in evaluating the U.S. CUE requests. I am certain that the leaders of these committees believed that they have not done

anything wrong. While serving on these committees they operate divorced from their countries. They serve as universal soldiers in a fight to protect the environment. They know their goal and because it is for the greater good, they feel comfortable with taking whatever approach necessary to achieve that goal. Unfortunately, questions about facts, due process and fundamental fairness tend to get swept aside in such a system. Accountability to the public becomes irrelevant.

This same phenomena can be seen in the operation of the Multilateral Fund (MLF) under the Montreal Protocol. It is understood that a total of $1.3 billion has been spent on the MLF from 1991 to the present date. The U.S. government's share of this is approximately 27% or $350 million. Since 1997, MLF has spent approximately $81 million on methyl bromide projects. Roughly 40% of that amount has gone directly to nations that are agricultural competitors of the U.S., including Mexico, China, Chile, Costa Rica, Guatemala and Argentina. The MLF requires recipient countries to file progress reports. However, progress reports have not been submitted for 40% of the methyl bromide projects (~$27 million). The non-reporting countries include Costa Rica, Argentina, Guatemala, Chile and Turkey. These countries are therefore technically out of compliance with the Montreal Protocol.

Additionally, some nations that had not yet ratified the relevant amendments to the Montreal Protocol, have received MLF funding for methyl bromide projects. For example, China received over a million dollars for methyl bromide alternatives research before it signed the Copenhagen Amendments to the Protocol. (Incidentally, during this time, China was also building a new methyl bromide production facility.) Further, MLF funding for methyl bromide projects was given to countries that *never* even reported using methyl bromide (e.g., Albania, Panama and Burkina Faso).

The foregoing demonstrates that a lot of funds, including U.S. funds have been spent under the MLF with little or no supervision, accountability or results. Again, since the apparent, environmental goal is justified, the mechanics used to achieve that goal appear to have little importance under the Protocol.

The Congress and this Administration cannot pin their hopes on such a flawed system to protect our nation's interests. The Congress and this Administration should not abrogate their responsibility to our nation's food, fiber, or horticultural industries by defaulting to the decisions of other foreign countries, particularly when such decisions are final and not reviewable. This is simply wholly inconsistent with the principles of our country.

The CPC is not at this time advocating an end to the phase out of methyl bromide. The issue is not whether the chemical has an ozone depletion potential value that warrants its phaseout, regardless of the uncertainties associated with that value. We seek a delay. We recognize that developing nations have access to the product long after the developed countries are to have phased out the chemical. We believe the playing field should be leveled. We believe the phaseout date should be extended for all parties under the Montreal Protocol until 2010. We believe freezing the production level at 50% of the 1991 baseline would not significantly impact the restoration of the ozone layer. Again, it should be remembered that man's contribution to the production of the chemical is approximately 15-25% of all methyl bromide produced. (Most of the methyl bromide is produced naturally such as by the oceans or by biomass burning.) We have discussed this issue with several ozone scientific experts who privately agreed that such an adjustment would not have a significant impact on the restoration of the ozone layer.

When the foregoing is contrasted with the adverse economic effects to a wide variety of food, agriculture, and horticultural interests that will result if methyl bromide is not available, it is clear that an adjustment to the phase out schedule must be implemented. Action must be taken by the Parties to the Montreal Protocol to achieve such a change. If the Parties are unwilling to make such a change, then Congress and this Administration must make the change through a change in the domestic law, the Clean Air Act. Action is needed now so that all affected parties have an opportunity to know what tools will be available to them come January 1, 2005.

CPC appreciates the opportunity to provide these comments to the subcommittee. We hope that meaningful action will result to address this critical problem for our nation.

Mr. BARTON. We are going to turn off what we call the TV lights. There are no TV cameras here, so that will cool things down a little bit. And I want to let the panel know that Mr. Holmstead of EPA is still here, he is listening. And Mr. Brown of USDA is still here, and he's listening. But Mr. Burnam of the State Department had a prior engagement and said he had to go to. He heard Mr. Pauli

and he had to excuse himself. But we have two of the three administration officials still here and listening, and the State Department is represented in the audience; just Mr. Burnam is not here. So Mr. Siemer, you are recognized.

STATEMENT OF RICHARD C. SIEMER

Mr. SIEMER. Thank you, Mr. Chairman. Glad to have the opportunity to talk to you this afternoon. My name is Rick Siemer and I am the President of Siemer Milling Company. We are wheat processors. We make flour for cookies, crackers, cakes, pretzels, that sort of product. We have plants in Teutopolis, Illinois; Hopkinsville, Kentucky, in Mr. Whitfield's district; and Gainesville, Missouri, which is now in Ms. Emerson's district, unfortunately—well, fortunately, but used to be in Mr. Blunt's district.

I am testifying today on behalf of the North American Millers' Association. We are 44 companies operating wheat, corn, and oat mills in 38 States, and we make 90 percent of the Nation's supply of wheat, flour, cornmeal, oatmeal and similar products.

We would like to offer three reasons for the continued use of methyl bromide beyond 2004. For our purposes, there are no generally available viable alternatives at this time. We do not believe that our use and, in fact, industrial use of manufactured methyl bromide at reduced levels is a serious environmental hazard, and we also believe, as other witnesses have stated, that the international phaseout program under the Montreal Protocol, including the CUE, is illogical, unfair, and at best a questionable proposition.

Now, we are processors. We are taking a product that is grown and turning it into something else, so our use is a little bit different than has already been described, and I would like to go into that a little bit. We are using methyl bromide, of course, because the public expects and we want to provide a clean and wholesome food product. We have standards to meet, set by the FDA, and methyl bromide is one of the tools that we use within the context of an integrated pest management program to ensure that we meet those standards, in fact exceed those standards, and meet our obligations and the public's expectations.

How do we use methyl bromide as a structural and space fumigant? We don't fumigate the grain. We don't fumigate the end product. We take the building after it has been evacuated of those natural substances and we fill it with methyl bromide, sometimes methyl bromide in combination with a substance such as carbon dioxide which also kills bugs, and let it sit there for a period of time. Typically 30 to 36 hours is the total process. And that accomplishes the task of eliminating—typically eliminating insect presence in our building. Compared to current alternatives, we feel that methyl bromide is fast; it works faster than currently available alternatives, and time is money. Every day that our mill is shut down is approximately $200- to $220,000 in lost revenue. And in the meantime, our occupancy and overhead costs and some labor costs continue.

So a speedy acting tool is extremely important to us. It is thorough. It kills bugs at all life stages. It gets into the cracks and crevices that we don't even know exist and eliminates, as I said, the insect life in all phases. It is usable in almost all facilities.

There are alternatives that can't be used in some facilities because of their structural integrity or lack of same, because of their inability to be closed up effectively, because they are old. Methyl bromide seems to be effective in all of those—in practically all facilities in the industry. It is relatively inexpensive compared to alternatives. And frankly, there are no new alternatives that we have seen made available to us.

Secretary Holmstead's testimony described alternatives. He listed 10 compounds. And I think Assistant Secretary Brown also alluded to this. Of those 10 compounds listed in the written testimony, none are for structural uses like sanitizing grain mills. We have taken steps to reduce our reliance on methyl bromide. We have accomplished a 60 percent reduction in the last 10 years. We use methyl bromide at less than a 20 percent label rate, but we would be very hard-pressed to do without it altogether, and we do not understand why we should have to do so.

I see that my time is close to expiring, so I will not repeat what others have said before me, but we do believe that banning it in the U.S., banning methyl bromide will threaten the cleanliness and wholesomeness of the food supply and the survivability of small processors. Allowing its continued use elsewhere shifts jobs and economic activity offshore with no possible offsetting gain to the environment. It is illogical and unfair to U.S. Growers and processors.

We recommend to the Congress that either the Montreal Protocol be renegotiated this year because the deadline is very close, and if manufacturers are going to continue manufacturing, if they need to have some certainty, to allow the U.S. More time beyond 2005 or enact legislation to amend U.S. Law to freeze the phaseout level at the 50 percent level in place prior to 2003.

That concludes my testimony, Mr. Chairman. Thank you very much.

Mr. BARTON. You would be a great PA announcer. I could just hear you in Yankee Stadium. You would be great.

Mr. SIEMER. St. Louis Cardinals.

Mr. BARTON. I would say the Texas Rangers.

[The prepared statement of Richard C. Siemer follows:]

PREPARED STATEMENT OF RICHARD C. SIEMER, PRESIDENT, SIEMER MILLING COMPANY

Thank you Mr. Chairman and members of the Committee. I am Rick Siemer, president of Siemer Milling Company. Siemer Milling Company operates flour mills in Teutopolis, Illinois, Hopkinsville, Kentucky and Gainesville, Missouri. Together, the three Siemer Milling Co. facilities produce more than 2.1 million pounds of product each day.

Siemer Milling Company is a family- and employee-owned company. It was founded in 1882 with my great grandfather Joseph Siemer as proprietor.

Siemer Milling Company's primary product is wheat flour milled to different specifications for the making of such foods as cookies, crackers, cakes, pretzels, bread and buns.

We are proud to have received numerous awards including the 2000 Business Ethics and Social Involvement Award from Eastern Illinois University and East Central Illinois Development Corporation.

I am testifying today on behalf of the North American Millers' Association (NAMA). NAMA is the trade association representing 46 companies that operate 169 wheat, oat and corn mills in 38 states. Their collective production capacity exceeds 160 million pounds of product each day.

The purpose of my statement is to encourage Congressional action to extend the use beyond 2004 of methyl bromide as a food safety and sanitation tool by the flour

milling and food processing industries. There are three reasons for this extension: 1) Methyl bromide is easily the most cost-effective tool—and for many facilities, the only practical tool—currently available to protect grain processing facilities against insect pests; 2) Food and agricultural uses of methyl bromide are not a critical environmental hazard; and 3) The internationally-established program to eliminate methyl bromide is environmentally irrational and profoundly unfair to U.S. growers and processors.

WHY AND HOW WE USE METHYL BROMIDE

At Siemer Milling Company, we use methyl bromide for one reason—to keep insects out of our nutritious, wholesome food products. Methyl bromide allows us to meet the U.S. Food and Drug Administration's strict rules for clean and wholesome food. We take those rules very seriously. We do so because it's the law, but just as importantly because clean food is something we want to provide and consumers expect.

You may remember watching your grandmother or mother sifting flour when she baked. The main reason she sifted the flour was to remove the insects. Nobody sifts flour anymore because there are no insects in the flour. Methyl bromide helps us make sure of that. Our customers expect and appreciate that commitment to cleanliness and safety.

Let me tell you how we use methyl bromide. We use it to fumigate the physical mill structure and the equipment contained in the mill. We do not use it to fumigate raw wheat or corn, nor processed products like flour.

Our mills typically receive one or two general fumigations with methyl bromide over any two-year period. The fumigation usually occurs over a three-day weekend so as to minimize downtime. At the beginning of the fumigation process, grain is shut off entering the mill from the grain elevator storage facility. The mill continues to run until all incoming grain has been milled and conveyed into finished product or by-product storage.

The machinery in the mill is opened and all remaining residues of grain and finished product are cleaned out. The machinery is left open to achieve maximum exposure to the fumigant. Deep structural cleaning is done also since fugitive dust and grain fractions in the structure will affect the effectiveness of treating the entire facility. There may also be treatment of empty storage bins at this time.

The mill structure is then completely evacuated except for the trained applicators under supervision of the certified outside contractor who conducts the fumigation. The mill structure is sealed to prevent gas leakage. Applicators begin releasing the methyl bromide into the mill.

The label approved by the U.S. Environmental Protection Agency (EPA) allows for usage at up to 6.0 lb. per 1000 cubic feet. But the common dosage for a 100% methyl bromide fumigation in the milling industry is 1.0-1.5 lb. per 1000 cu. ft., depending on the tightness and structural integrity of the building. Since 1998, we have used a combination of methyl bromide and carbon dioxide; this reduces the dosage for methyl bromide to 0.75-1.0 lb. per 1000 cu. ft. We have cut our total methyl bromide usage by nearly 60% in the last decade.

The gas is held in the facility for 24 hours. At the appropriate time, the applicators aerate the facility and test the atmosphere to ensure safety. Workers then enter the mill to re-assemble the mill systems, close up the equipment, remove the sealing materials and prepare the mill for start-up.

After the equipment has been closed, the mill is re-started and the flow of grain into the mill begins. The first few minutes of production may be diverted into by-product storage to scour the milling equipment and spouting essentially free of methyl bromide residues before the product destined for human consumption flows through.

On the subject of residues, it is worth noting that the milling industry association funded a methyl bromide residue study in 1993 to meet EPA requirements. Despite the earlier comments about methyl bromide not being used to fumigate wheat or corn, grain was fumigated with the compound in order to generate worst-case scenario data. Also, the fumigant was applied at an exaggerated rate of 8.0 lb. per 1000 cubic feet. Even with an extremely sensitive level of detection of 0.25 parts per million, there were no residues.

ALTERNATIVES

More than $140 million has been spent by the USDA alone to find alternatives for the many uses of methyl bromide, with very little success.

The milling industry, too, is experimenting widely with potential alternatives, with mixed success. For example, high heat treatments have shown some promise

in certain facilities. However, industry-wide experiences with heat treatments emphasize the importance of the structural integrity of the mill.

In many mills heat treatments are not feasible. Those mills are not tight enough to facilitate raising and holding the temperature at high levels, nor do mills possess the heating capacity to raise the temperatures in the structure or equipment to insecticidal levels. There is considerable initial cost associated with outfitting a mill for heat-up, including changing sprinkler heads, kick-outs on motors, etc.

Phosphine, effective in treating stored grain, empty bulk storage bins and grain and product transport vehicles, may not be a wise choice for the mill. This is mostly due to the extensive electrical equipment present. Phosphine is highly corrosive and can seriously damage electrical contacts, motors, programmable controllers, etc.

We believe that an effective integrated pest management (IPM) program is the best answer for ensuring good sanitation. This includes non-chemical and chemical means so as to minimize the reliance on any one tool.

An alternative is not truly an alternative if it is not BOTH economically and technically viable. For example, an average wheat flour mill produces about one million pounds of flour each day. One likely alternative treatment currently being tested will require about 48 hours longer to complete than does a methyl bromide fumigation. At a sales price of about $0.12 per pound of flour, the miller will lose $240,000 in revenue every time the facility is treated with the slower-acting alternative. In the meantime, labor, depreciation, tax and overhead costs continue. And the compounds currently being considered for EPA approval will likely cost much more than methyl bromide.

So while there may be other treatments that can control the insects in the mill, they are not viable if they are not affordable. U.S. milling is an extremely competitive industry. Our profit margins are razor thin. Approximately 10 percent of our industry capacity has closed in the last two years. For a mature industry like flour milling, that is a huge adjustment.

Losing methyl bromide would likely make more mills subject to closure, taking good paying jobs and economic activity with them. As noted above, our industry has drastically reduced the amount of methyl bromide we use, but complete elimination does not yet appear to be generally practical, or even possible.

SCIENCE

EPA's web site states that human-made methyl bromide has contributed only about 4% to ozone depletion over the past 20 years, with only 2.5% attributed to agricultural uses. That raises a serious question as to whether delaying the ban on methyl bromide will aid in restoration of the ozone layer.

If our uses of methyl bromide are, contrary to logic, very harmful to the environment, then it should be banned globally on the same date, and the sooner the better. However, the Montreal Protocol phase-out schedule suggests that it is not imminently harmful, since the schedule allows ten extra years of use for some very economically significant "developing countries." Banning methyl bromide in the U.S. while allowing its continued use elsewhere shifts jobs and economic activity offshore with no real gain to the environment. That is stupid and unfair to U.S. farmers and businesses, both small and large.

CRITICAL USE EXEMPTION

Some potential alternatives have been identified, but for a significant range of uses, technically and economically viable alternatives do not exist. EPA and USDA have acknowledged this in the recent U.S. Critical Use Exemption (CUE) submission to the Parties of the Montreal Protocol. In fact, after an exhaustive objective review by government and university scientists, EPA confirmed that almost 40% of the baseline uses of methyl bromide do not have viable alternatives.

There are several problems with the CUE process, not the least of which is that it doesn't take effect until 2005, the year when methyl bromide is scheduled to be banned in the U.S. Second, the U.S. cannot issue a CUE by itself, but must receive approval from the United Nations for exemptions. American agriculture is justifiably skeptical about fair treatment from the United Nations for the following reasons:

The UN approval process is agenda-driven and highly politicized. Ultimately, the fate of the U.S. CUE applications that are recommended to the parties of the Montreal Protocol will be determined by a handful of individuals unaccountable to U.S. taxpayers, behind closed doors, despite the hours and expertise EPA committed to this process. It is inevitable that the decision-makers will be biased toward an ideological environmentalist agenda. A pervasive anti-U.S. antagonism in the group is not an unreasonable assumption. Some of the people are from countries that are ag-

ricultural competitors of the U.S., and they might be sorely tempted to maintain the competitive advantage that has been handed to their homelands.

EPA did not allow us to see or comment on the conclusions it reached prior to submitting our CUE application to the Montreal Protocol. We had no chance to respond to any incorrect assumptions or resolve any open questions. In the end, the U.S. EPA recommended to the United Nations that a quantity of methyl bromide be made available for grain milling and other food processing industries that is much smaller than the quantity we requested for milling alone.

If EPA is wrong and its recommended quantity is inadequate, how will the agency allot the available fumigant? Who gets to make that decision, and on what basis?

In short, on one hand, the elimination of this tool will significantly adversely affect the food and agriculture industries in many states. This is certain. On the other hand, extending the phase-out will not impact the restoration of the ozone layer.

ACTION NEEDED

In closing, let me state that NAMA believes the Administration must either (1) renegotiate the United Nations Montreal Protocol Treaty this year to allow the U.S. more time beyond 2005, or (2) support legislation to amend U.S. law to freeze the phase-out level at 50%, the level in effect prior to 2003.

That concludes my testimony, Mr. Chairman. I would be happy to answer any questions you or other committee members may have.

Mr. BARTON. Dr. Mellano, we would like to hear from you.

STATEMENT OF H. MICHAEL MELLANO

Mr. MELLANO. Mr. Chairman and members of the committee, we appreciate the opportunity to present our testimony on behalf of the nursery, landscape, and floriculture industry of the U.S. This topic of the continued availability of methyl bromide is of huge importance to our industry and we actually represent 11 percent of the dollar value of agriculture in the United States, so it is a big thing for us. So with your permission, I have submitted my written statement and I will read a short summary.

Mr. BARTON. Without objection.

Mr. MELLANO. I will now tell you a little bit about how methyl bromide is used in our industry, discuss the research we have supported, and finally go over this critical use exemption process.

I also have here today, with me today, Ms. Nancy Rechcigl from Yoder Brothers, who prepared that company's application for an exemption, which we chose to use as a very good example today. Methyl bromide is used before we plant the crop. We treat the soil to eliminate soil-borne pests, including wheat seeds. At Mellano & Company in southern California, it can cost up to $50,000 an acre to produce each of the 50 different crops that we grow. Methyl bromide is a critical part of our attempt to protect our investment.

The situation is actually very similar in a worldwide basis. The MBTOC report that was dated 2003 verifies that statement. One very important point that I want to emphasize, and I respectfully disagree with Congresswoman Capps, methyl bromide is actually much safer than most of the alternatives that are proposed. Since methyl bromide leaves zero residues in the soil, there is actually no exposure to farm workers and to consumers. Now, this point is seldom discussed to make a comparison and I think it is very important and needs to be talked about more often.

Moving to the topic of research, in the early 1990's, the California Cut Flower Commission started with a $150,000 research project, and nationwide since then, hundreds of thousands of dollars of their own money has gone to research. I want to make a point. In the 1960's, I worked in the laboratory of Dr. Donald

Munnecke, and he is the world's leading authority on soil fumigation. We worked on the same things 40 years ago as we are talking about today as alternatives. And the fact of the matter is that all this money has been spent and methyl bromide is still the best, and in many cases the only material that is available.

Now, finally, as far as the seaweed process, the process is supposed to allow a critical use to continue using it in industries like ours that have no alternatives. But our experience with that process has been a very, very sad disappointment. You have already heard that. We use Yoder Brothers as an example. Yoder Brothers submitted a very, very good application and their objective was to reduce their methyl bromide fumigation from 30 percent of a facility in Florida to 100 percent. After 10 years of research and preparation of a very good application, EPA and everybody else said it was a very good application and it was forwarded to MBTOC.

The MBTOC has now appeared to deny their application and they are requiring—they will require Yoder to fumigate—steam their whole operation now, even though they don't have the generators to do it.

Now, in addition to that, to add insult to injury, they approved similar applications in other countries, for instance France, Australia, and Spain, that made the application under the same criteria as Yoder. Now the French, that really irks me personally, because one of my biggest competitors on one of the crops I grow uses methyl bromide, and he got the exemption and we don't have it, and that is not fair.

So to be quite frank with you, if this decision is allowed to stand, it really is a sham. And I have to be frank about it, okay? Remember that one criteria was to show that you were making progress, and Yoder did that. So now Yoder is being penalized for actually meeting the application criteria. That doesn't seem quite right to us.

The California growers are now doing some more applications, but to be quite frank with you, we are not really encouraged about it.

So in closing, we would like to ask the U.S. Government to support the U.S. Growers and to ensure that we still have methyl bromide, and we certainly hope that you don't capitulate to this unfair and biased decisionmaking process at the international level.

[The prepared statement of H. Michael Mellano follows:]

PREPARED STATEMENT OF H. MICHAEL MELLANO, SENIOR VICE PRESIDENT, MELLANO & COMPANY ON BEHALF OF THE SOCIETY OF AMERICAN FLORISTS, AMERICAN NURSERY & LANDSCAPE ASSOCIATION, CALIFORNIA CUT FLOWER COMMISSION, FLORIDA NURSERYMEN & GROWERS ASSOCIATION, AND OFA—AN ASSOCIATION OF FLORICULTURE PROFESSIONALS

Chairman Barton, Ranking Member Boucher, and Members of this Committee, we are grateful for the opportunity to present joint testimony on behalf of the nursery, landscape and floriculture industry of the U.S. The topic of continued availability of methyl bromide to U.S. nursery and floriculture growers is of huge importance to our industry.

The Society of American Florists (SAF) is the national trade association representing the entire floriculture industry, a $19 billion component of the U.S. economy. Membership includes about 14,000 small businesses, including growers, wholesalers, retailers, importers and related organizations, located in communities nationwide and abroad. The industry produces and sells cut flowers and foliage, foliage plants, potted flowering plants, and bedding plants.

The American Nursery & Landscape Association (ANLA) is the national trade association for the nursery and landscape industry. ANLA represents 2,500 production nurseries, landscape firms, retail garden centers and horticultural distribution centers, and the 16,000 additional family farm and small business members of the state and regional nursery and landscape associations. The Association's grower members are estimated to produce about 75% of the nursery crops moving in domestic commerce in the U.S. that are destined for landscape use.

The California Cut Flower Commission (CCFC) is a non-profit public corporation formed in October 1990 by and for growers, under the laws of the State of California. Its mission is to provide a unified effort by growers to enhance the performance of the California cut flower and greens industry, by providing promotion, marketing, government education, and research on behalf of the industry. It was voted into being by a referendum of cut flower growers and is financially supported by grower assessments on the sales of fresh cut flowers and cut greens.

The Florida Nurserymen and Growers Association represents Florida's entire environmental horticulture industry. The Association represents the interests of nearly 2,000 foliage, woody and floriculture producers, landscape contractors and interiorscapers, retailers and allied suppliers. Representation, professional education and marketing encompass the services provided to its members and the industry.

OFA—an Association of Floriculture Professionals is a non-profit, all-industry, educational organization with more than 3,500 members representing 50 states, the District of Columbia, one U.S. territory, and 28 countries. The Association holds 76 percent of its membership outside of Ohio, and 7 percent outside the United States. Each year, OFA sponsors the Short Course, U.S. floriculture's premier educational and trade show event.

I. BACKGROUND ON THE INDUSTRY

According to the USDA's National Agricultural Statistics Service (NASS), the nursery and greenhouse industry remains the fastest growing agricultural sector in cash receipts. The 1997 Census of Agriculture shows that nursery, greenhouse and floriculture crop sales totaled $10.9 billion in 1997, up from $7.6 billion in 1992. This represents a 43 percent increase in sales over the previous 1992 Census. Together these crops make up 11 percent of total U.S. farmgate receipts, up from 10 percent. Some 33,935 farms produced nursery plants as their principal crop; floriculture farms numbered 21,824.

In crop value, nursery and greenhouse crops have surpassed wheat, cotton, and tobacco and are now the third largest plant crop—behind only corn and soybeans. Nursery and greenhouse crop production now ranks among the top five agricultural commodities in 24 states, and among the top 10 in 40 states. Growers produce THOUSANDS of varieties of cultivated nursery, bedding, foliage and potted flowering plants in a wide array of different forms and sizes on 1,305,052 acres of open ground and 1,799 million square feet under the protective cover of permanent or temporary greenhouses.

II. METHYL BROMIDE USE IN THE FLORICULTURE AND NURSERY INDUSTRY

Methyl bromide is a critically important part of ornamental production in many areas of the U.S. Field-grown cut flowers, shade house production of some flowers in the ground, caladiums and even treatment of dried flowers and materials such as tree fern totems (used for some vining foliage plants), are key uses in ornamental production.

The diversity and intensity of cropping systems in ornamental production greatly aggravates the issue of the pending loss of methyl bromide, especially when our main competitors in third-world countries will continue to be able to use methyl bromide well beyond the U.S. phase-out, giving them a strong competitive advantage.

At Mellano & Company, in southern California, we produce over 50 different crops with upwards of 20 different varieties within a crop. New crops are our lifeblood and are being introduced annually at an extremely rapid pace, often with only a few years of market appeal. Without methyl bromide, we will not be able to respond to these rapidly changing market trends. The cost of establishing ornamental crops is extremely high—in some crops, costs can exceed $50,000 -$60,000 per acre. Methyl bromide helps insure that our investment isn't decimated by plant diseases.

Methyl bromide is used as a preplant soil treatment that eliminates unwanted soil-borne plant pathogens and weed seeds. It is a general biocide, with virtually no residual activity or phytotoxicity to our ornamental crops. In addition, methyl bromide greatly reduces (and can even eliminate) weed populations, reducing our dependence on the labor-intensive process of handweeding. Handweeding is currently under intense scrutiny in California by California-OSHA, and has the potential of

being banned in the near future. Such a ban could be disastrous to horticultural producers, particularly if methyl bromide is not available to reduce the weed pressures.

One very important point that I want to emphasize is that methyl bromide is actually safer—both for workers and for consumers—than many of the suggested alternatives. Methyl bromide has no "residual activity." It is applied, by professional, certified applicators who are hired by us specifically to apply methyl bromide. Our regular workers who work day in and day out planting, caring for and harvesting crops have NO exposure to methyl bromide—which is not true of many of the other alternatives being considered. Many of those do have residual activity and are used over the entire crop cycle, which would raise worker safety concerns. In addition, methyl bromide is applied on fields which are covered with tarps or plastic to prevent it from escaping into the air. Once the fumigation process is complete, the tarps are removed and only then does the crop planting process begin.

The same thing is true of consumer safety—because methyl bromide has no residual activity—it does not stay on the crop—there are no chemical residues to worry about. There are virtually no consumer safety concerns related to methyl bromide use.

Similarly, for Florida growers, methyl bromide has been one of the most crucial tools used by the flower industry. Due to the Florida climate, without using a sufficiently clean soil to plant into, growers could not compete in the world flower industry. Growing any crop is difficult due to a variety of challenges growers deal with every day from cold to heat to rain to drought. Florida growers have stated that, if they lost methyl bromide tomorrow, they would have to shut down a large portion of their businesses, due to the fact that there are no practical chemical alternatives. Despite the fact that the whole agriculture sector, along with the USDA, have been looking for a substitute for years, no suitable substitute has been endorsed by anyone involved with that effort.

For the nursery industry, too, methyl bromide is a critical tool in the production and shipment of plant material that must be acceptably free of regulated plant pests, including pathogens and weeds. Freedom from regulated pests is important toward the broad goal of safeguarding agricultural and environmental plant resources. While alternatives to methyl bromide are being actively researched, the fact remains that feasible alternatives do not exist for many critical uses that relate to regulatory plant protection. Such uses are especially important for that portion of the nursery industry engaged in propagation of plants ranging from fruit and nut trees to strawberries, grapes, roses, chrysanthemums, trees, and perennials. Simply stated, failure to adequately control regulated pests at the propagating nursery source jeopardizes the orchardists, vineyards, and other nurseries that are producing fruit or finished plants for sale to the public.

III. RESEARCH ON ALTERNATIVES

In the early 1990s, the California Cut Flower Commission (CCFC) took the lead in funding research on methyl bromide alternatives in floriculture, by providing $150,000 to begin research projects. Since then, CCFC has continued grants over the past 12 years, with hundreds of thousands of private industry funds invested in research on alternatives. Research has involved everything from alternative fumigants, solarization, treatment of soil with steam, microwave or UV, soil fertility and amendment with green manures and biological agents. The current alternatives include fumigants such as 1, 3-D (Telone), chloropicrin, basamid and metam sodium (Vapam) applied alone and in various combinations.

During the 1960s, as a graduate student at the University of California-Riverside, I worked for five years in the laboratory of Dr. Don Munnecke, one of the world's leading researchers on methyl bromide and methyl bromide alternatives. During that time, we were working on many of the alternatives that are still being considered today—solarization, steam, and alternative fumigants, trying to find alternatives from a production and economic point of view. Despite the fact that 40 years have intervened, we still have not found alternatives that are economically viable, or effective from a production point of view.

Moreover, none of these products can give the control of the pests that methyl bromide can. They very often require use of additional pesticides to improve efficacy. This use of additional pesticides results in an increased load on the environment over the current scenario. There are, of course, no guarantees that these materials will remain available in the future—many alternatives being considered today would have to go through a lengthy EPA registration process before they were commercially usable. In some cases, the alternatives are much more toxic—both to the environment and to workers and perhaps even to consumers—than methyl bromide.

Our day-to-day workers, for example, could be exposed throughout the whole crop cycle. Much of the new research sponsored by the California cut flower industry has concentrated on weed control, although work on controlling soilborne pathogens such as Fusarium wilt fungi and nematodes is also ongoing. Trials have been run on a very diverse range of crops, including ranunculus, gladiolus, callas lilies, delphiniums, Dutch iris, and stock, to name just a few. Although methyl bromide is used in polyethelene covered greenhouses in both California and Florida, the bulk of the product is used in field production and therefore, much of the research has been done in the field. We hope to see some greenhouse research performed in the next year on crops such as snapdragons, freesia and Lisianthus. In addition to pest control data, data on crop response in phytotoxicity as well as yield have been gathered.

New materials not currently registered are also an important part of the work that is being done with products such as Midas (by Arveta, formerly Tomen-Agro) and Sodium Azide (by American Pacific and Cal Agri Products), showing future promise. However, trials with these newer experimental formulations have had mixed results in both California and Florida. Nonetheless, research continues. Even if these newer materials are registered soon, however, it will be several years before enough experience has been gathered to consider them acceptable alternatives.

The use of chemicals in our industry, in California, in Florida, and in other parts of the U.S., is the subject of much research, both publicly and privately funded, as growers attempt to move toward more environmentally and worker-friendly chemicals and toward integrated pest management (IPM) practices, which also reduces our production costs. Yet in the case of methyl bromide, our industry is being pushed to rely on those more toxic, more harmful chemicals, which runs counter to all of the public policy concerns we are discussing and which our industry is investing in and is attempting to embrace.

IV. THE CRITICAL USE EXEMPTION PROCESS

Perhaps the most troublesome aspect of the methyl bromide story involves the application for a "critical use exemption". In September 2002, CUE applications were filed with the EPA for consideration in exempting the use of methyl bromide for 2005 when the product can no longer be produced or imported into the US. Many of the uses were for post harvest use such as treatment of nuts and dried fruits. Others were filed for production agricultural use on crops such as tomato, pepper, strawberry and cucumbers. A few were filed for ornamental uses.

Yoder Brothers, Inc., of Ohio, with major production facilities in Florida, is a large, yet family-owned horticultural company that is world-renowned for its production of culture- and virus-indexed chrysanthemums and other starter plant material. Present at today's hearing on behalf of Yoder is Nancy A. Rechcigl. As a member of Yoder's technical services group, she provides advisory, extension and research support services to Yoder operations on entomology and pathology issues. Ms. Rechcigl was also responsible for the preparation and submission of Yoder's Critical Use Exemption (CUE) in August of 2002, for the use of methyl bromide in chrysanthemum production. Many hundreds of corporate hours were devoted to preparing the CUE document, not to mention to the alternatives research which the company has been supporting for over the past 10 years.

Unfortunately, the international body, the MBTOC committee, appears to have denied Yoder's application, **even though the U.S. EPA (after extensive consultation with Yoder) found the application met the criteria for an exemption.** Yoder's application requested 69,650 pounds of methyl bromide for 2005, with reduced amounts in succeeding years. However, EPA apparently combined the Yoder application together with an unrelated application for California nursery production of rose plants. This combination was made even though the application process required that to apply as a consortium or as a group, applicants had to have the same use patterns, pest issues and production practices—in other words, the same general issues. The nomination appeared to simply summarize the chrysanthemum production practices, and the rose production practices—which clearly differed significantly. It was unclear whether Yoder's original supporting documentation was ever even seen by MBTOC, much less considered.

Yoder Brothers currently has the capability of steaming 30 percent of its facility, and so stated in its application. Complete adoption of steam sterilization as an alternative to methyl bromide is planned to be phased in over the next five to six years. The purpose of requesting this CUE was to provide Yoder Brothers, Inc. with additional time to raise the capital needed (over a million dollars) to expand its steam sterilization capabilities to the remaining 70 percent of its facility, while at the same time, allowing the company to continue investigations of alternatives

(Idomethane), as an additional viable alternative. However, it appears that MBTOC found the steaming to be "economically feasible" at present, based on the specific revenue and cost numbers the company provided—which were for chrysanthemum production alone, and, per the application requirements, did not reflect overall financial health or other financial obligations of the company.

EPA's nomination stated that the chrysanthemum grower needed methyl bromide to treat 35 hectares in 2005 with 31,593 kilograms methyl bromide (a rate of 902 kg/hectare), noting that the grower expected the critical methyl bromide need to decline as it increased its investment in steam sterilization. The request for nursery roses in the U.S. was for 235,868 kilograms, over 680 hectares, at a 347 kg/hectare rate. (A higher per-hectare rate is required in Florida production due to different pest complexes.) Thus, the total US industry request for the arbitrarily grouped ornamentals sector was 589,650 pounds.

EPA's nomination reduced that request for the arbitrarily grouped ornamentals sector to a total of 63,299 pounds *total, based on EPA's assumption that the industry's needs could be met by the quarantine exemption.* Further reductions with margin of error multipliers and other calculations resulted in a total "ornamentals" request of 64,843 pounds, or 29,412 kilograms. In every industry case, it also appears that EPA massaged the numbers to reach a final request figure that would not exceed 39 percent of the 1991 U.S. baseline—rather than basing the nomination on actual grower needs and data which were so laboriously and carefully compiled and submitted to EPA.

In response to the EPA nomination, the final recommendation from MBTOC noted as follows:

> "MBTOC recommends that a reduced allocation of 14.7 t be approved for this CUN on the basis that feasible alternatives are available for chrysanthemum cuttings (e.g. substrates) and adoption of reduced dosages with emission control strategies. MBTOC noted that the industry is aware of the technically available alternatives and appears to be making an effort to adopt these alternatives. From the case presented MBTOC is unable to recommend a CUE for Chrysanthemums as steaming and production in substrates are technically and economically feasible. Roses are successfully grown in substrates worldwide. The Party may wish to recalculate the nomination on the basis of use of reduced MB dosages combined with emission control technologies and availability of alternatives.'"

At this time, EPA "doesn't know" how it would divide the 14.7 tons, and the MBTOC application appears to state that Yoder would not receive any of the allocation. If this decision is allowed to stand, the whole application process is a sham: one of the criteria was the requirement to show that the applicant was making progress toward decreasing its use of methyl bromide. **Yoder is one of the few companies that has successfully developed steam sterilization, through very significant private investments of the company's capital. This decision, if allowed to stand, will actually penalize Yoder for meeting the application criteria and trying to invest money (which could have been well-used elsewhere) in finding methyl bromide alternatives.**

What became clear was that the members of MBTOC either did not get the original packet that was submitted, which contained all of the pertinent information, or they did not bother to fully read it. It is also apparent that the EPA application was based on a pre-determination of a total amount of methyl bromide that EPA staff believed would not be ridiculed by MBTOC.

A copy of Yoder Brothers, Inc.'s letter to a member of this Committee is attached to this testimony and submitted for the hearing record.

The Society of American Florists has joined with the California Cut Flower Commission to file a joint application, covering uses by ornamentals growers in both California and Florida. We have started the process of gathering the data from Florida growers and researchers and plan to submit one or more CUE applications for ornamental uses (especially cut flowers and caladiums) in 2003.

If the CUE application is considered sound it will be forwarded out of the EPA review into a series of international committees where each use will be scrutinized. The possibility of obtaining an exemption from the international community is unknown. However, based on the Yoder experience, we are not optimistic.

The process is extremely costly and burdensome, and there are no guarantees that an exemption will get through U.S. EPA, let alone that the exemption will be gathered by the international review panel. Our major competitors in third-world countries, however, will continue to have methyl bromide available for their usage for several years beyond the U.S. phaseout.

CONCLUSION

The United States government must support the U.S. agricultural economy in ensuring that methyl bromide remains available to growers, until suitable alternatives are found and can be implemented. We cannot simply bow to decisions which appear to be predetermined and which will put our agricultural sector at a very significant competitive disadvantage with growers in third-world countries. The phaseout of methyl bromide is a critical issue for U.S. agriculture, and we respectfully request this Committee for support and assistance in reaching a reasonable solution to what is rapidly becoming a crisis for many producers, and the workers they employ across the United States.

Mr. RADANOVICH. Thank you Mr. Mellano.

Mr. BARTON. Dr. Noling, thank you. If you would like to begin your testimony.

STATEMENT OF JOSEPH W. NOLING

Mr. NOLING. I would like to begin first by telling you it is a real honor to be here and testifying at an important hearing like this. And I am here as an agricultural expert representing the research and extension arms of the University of Florida and not of any particular agricultural industry or commodity group.

For the past 18 years I have worked as a research and extension nematologist, developing and evaluating various pest control strategies in commercial agriculture; and for the past 10 years have worked on alternatives to methyl bromide research. For 4 years, I served as a U.S. Expert on the Methyl Bromide Technological Committee, and during the period of 1996 to 2001, I served as the statewide coordinator for alternatives to methyl bromide research in the State of Florida. During that period, we invested $1.4 million in 54 different projects to evaluate many different chemical and nonchemical and combination IPM treatments for their effectiveness against the various pests and maladies that affect the fruits and vegetables of Florida. The results of this work has been published widely on an annual basis and, in fact, was probably a significant part of the drought factor for the critical use exemptions that were submitted to MBTOC.

I would like to summarize, I guess, for the next 3 minutes of what some of that research has told us. And the first thing I would like to tell you is that no other country in the world has invested as much in resources and labor and just research as the United States, and no one understands it in a more comprehensive way and has a more comprehensive understanding of the mechanism which drives the activity and efficacy of the alternatives that we have explored.

We have made pretty significant advances in the evaluations of these over the years and the integration of them, but what I can tell you is that there is no single chemical compound that will match equivalently the activity, the broad-spectrum activity of methyl bromide. So what we recognized early and what we have invested a significant amount of time in is the coupling or the coformulation or coapplications of a number of fumigants. And in fact the next best alternatives, as we have defined them in Florida, include 1,3 dichloropropene which is Telone in combination with chloropicrin, which is now a formulated fumigant that is applied with methyl bromide. But, as importantly, it also requires the coapplication of a separately applied herbicide to manage effectively

the weeds that occur in these fields that also compete with the production of the crop.

None of these are perfect, and I will tell you the benchmark for alternatives in Florida is consistency. And one of the things we have discovered in the past 10 years is the expectation that losses cannot be avoided. The losses that we have defined for the use of Telone and chloropicrin are in the neighborhood of 5 to 10 percent, depending upon the application methodology involved.

It was earlier brought up, the strawberry growers of Florida. In fact, if there are not any regulatory changes that address the buffer issues or the protective equipment issues of these products, there is no alternative in the State of Florida for the strawberry producers, and they will quite literally be forced to move to areas where buffer zones are not as restrictive as they are now.

Finally, I would like to invest a moment, since it came up, that I am somewhat familiar with the critical use exemption process, particularly in the ways and means in which the Methyl Bromide Technical Operation Committee may evaluate these. And I invested a few days, I guess, in reading a 180-page document. By far the biggest shortcoming that occurs with the TEAP document itself is they have invested a lot of multilateral fund money in 230 projects, 44 of which address demonstration projects to replace soil fumigant uses in methyl bromide. In the summaries of these studies, all they can address or indicate is that the results are comparable to that of methyl bromide. Black and white, north and south are comparable. They are 180 degrees apart, but they are comparable, and yet they use these results to proclaim that alternatives exist in the underdeveloped countries and use that to indicate that no critical use exemptions will be permitted as long as effective alternatives exist in the underdeveloped countries. This is patently wrong.

And I guess there are two things that I would conclude with: that given the significant impacts that are likely to occur and the result that methyl bromide is removed in Florida, it is critical we provide a provision of some kind to continue the use of methyl bromide after the phaseout date; and second, some accountability within TEAP to ensure that the analysis of the data that has been collected overseas is reflective of a true comparison with that of the United States. So I would ask you to review their data as we have been instructed to do in the United States, and with that I conclude.

[The prepared statement of Joseph W. Noling follows:]

PREPARED STATEMENT OF JOSEPH W. NOLING, DEPARTMENT OF ENTOMOLOGY AND NEMATOLOGY, CITRUS RESEARCH AND EDUCATION CENTER, INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES, UNIVERSITY OF FLORIDA

It is an honor for me to be here and I appreciate the opportunity to participate in this important hearing. I am here today to serve as a scientific expert, representing the research and extension arms of the University of Florida, Institute of Food and Agricultural Sciences. I am not here to specifically represent any particular agricultural industry or commodity group of Florida.

As a research and extension nematologist with the University of Florida, it is my responsibility to develop farm level, pest management strategies which are cost effective, environmentally compatible, and worker safe. During the past 18 years, I have had many opportunities to research various pest management, methyl bromide alternative tactics and to observe the outcomes of this experimentation and the degree to which various pest problems or cultural practices effect fruit and vegetable crop production within Florida. As a scientific expert representing the USA, I served

four years on the Methyl Bromide Technical Options Committee (MBTOC) under the auspices of the United Nations Environment Programme (UNEP). During the period 1996 to 2002, I also served as the statewide coordinator for alternatives to methyl bromide research in Florida. I am very familiar with the breadth and diversity of U.S. research on alternatives to methyl bromide and understand the potential problems associated with its phase out.

During the six year period for which I served as statewide coordinator of a University of Florida task force to research alternatives to methyl bromide, over $1.4 million dollars of research funding was made available by congressional mandate through the United States Department of Agriculture—Agricultural Research Service (USDA ARS). Monies were provided on an annual basis ($243,000) to support the long term USDA-ARS Specific Cooperative Agreement (SCA) *58-6617-6-013 "Field Scale Demonstration/Validation Studies of Alternatives For Methyl Bromide in Plastic Mulch Culture in Florida".* Overall, fifty-four projects, involving 21 University of Florida and USDA scientists, were funded during the six year granting period 1996-2002. The diversity of projects was broad, involving evaluations of various chemical, nonchemical, and integrated pest management (IPM) tactics. The principal objective of this SCA was to evaluate and validate the effectiveness and economic viability of alternatives to methyl bromide soil fumigation for nematode, disease, and weed control in plastic mulch vegetable production systems in Florida. The results of this work has been annually reported in various trade and scientific journals, conference proceedings, as well as in a five volume, comprehensive final report and executive summary submitted to USDA (see literature citation section this document). Much of this research information was submitted to EPA and MBTOC in U.S. nominations for Critical Use Exemption (CUE) for Florida crops.

A similar research program in California, receiving identical USDA ARS funding, was initiated during the same period to evaluate alternatives to methyl bromide for many different annual and perennial crops and pest management tactics and crop production systems. Considering both the Florida and California programs, it should be clear that the U.S. has made a substantial investment of time, labor, and capital resources to independently research and specifically define alternatives to methyl bromide in the USA. No other country in the world has invested more in research than that of the USA. Undisputedly, the U.S. has assumed a leadership role within the international scientific community with regard to the breadth and diversity of research, and as a result of this leadership, have a more comprehensive understanding of the merits and possible impacts of implementing the proposed alternatives to methyl bromide in commercial U.S. agriculture. Once again, much of this research information was submitted EPA and MBTOC in U.S. nominations for Critical Use Exemptions to support continued use of methyl bromide after the 1 January 2005 phaseout date.

During the period of USDA funding, significant advances were made in the evaluation and integration of various chemical and nonchemical tactics. A number of pest management or crop production systems have been devised which either have some potential as economically viable replacements for methyl bromide or may contribute to a replacement tactic. As a University of Florida scientist, I am here to provide testimony and opinion regarding the extent to which viable alternatives currently exist and to help define potential impacts to Florida agriculture with the phase out of methyl bromide.

The main message of my testimony is that every currently defined potential alternative, at their present stages of research and development, comes with certain practical constraints or incompatibilities, which affect the technological or economical feasibility of the potential alternative. These constraints, such as high costs, lower efficacy, increased production or environmental risks, regulatory constraints, and/or reduced farm profitability can negatively impact future widespread adoption of such alternatives. The adoption of these alternatives will involve trade-offs of one sort or another, and can have tremendous future impacts on Florida agriculture. In addition, the extent to which we can rely on many of these tactics, and those proposed by UNEP Technical and Economic Assessment Panel (TEAP) and MBTOC, as long-term solutions in the absence of methyl bromide has not been scientifically, statistically, or even "practically" established.

ALTERNATIVES TO METHYL BROMIDE RESEARCH—FLORIDA EFFORTS

Since 1993, when methyl bromide was added to the class 1 category of ozone depleting substances and a phase out date of 2001 established under the Clean Air Act, a substantial amount of research has been conducted by University of Florida scientists, the objective of which was to identify and evaluate alternatives to methyl

bromide with minimal agricultural impact. As a statewide coordinator of these efforts, I am familiar with current research on alternatives to methyl bromide.

A brief summary of Florida research would indicate that no single, equivalent replacement (chemical or nonchemical) currently exists which matches the broad spectrum efficacy of methyl bromide. For example, a summary of over 40 large scale field demonstration trials evaluating various chemical alternatives suggests that a chemical cocktail of different fumigants (1,3 dichloropropene with chloropicrin) and separate, but complementary herbicide treatment(s) have potential as a methyl bromide alternative to control soilborne pests and sustain crop yield. Since 1996 these trials have focused on comparisons of Telone C-17 or Telone C-35 applied in-row or broadcast, in combination with herbicides such as Tillam to methyl bromide for weed, disease, and nematode control and for tomato crop yield response. Although with some variability, average yield of the Telone C-17 or Telone C-35 + Tillam in-row applied treatments is expected to be within 1 to 5% of methyl bromide yield. The requirement for a full spray suit, rubber gloves, boots, and a full face respirator by all personnel in the field at the time of fumigant application prompted a refocusing of research efforts towards evaluation of broadcast, *rather than in-row,* treatments applied prior to bedding to minimize the numbers of field workers and personnel protective equipment requirements. Based on the results of other large-scale demonstration trials, tomato yields averaged from broadcast Telone treatments are expected to be about 10% less than that of methyl bromide. It is reasonable to believe at this time that yield losses currently estimated for use of Telone broadcast treatments potentially can be reduced with additional research and refinements in application technology, and or when combined with an additional fumigant application of Chloropicrin at the time of bedding.

It is not clear at this time however, whether any U.S. EPA regulatory change to reduce the requirement for personal protective equipment (boots, gloves, respirators, etc.) or to reduce buffer zones, which currently restrict application of Telone products within 300 feet of any occupied dwelling, is achievable in the near term. Nor is their any certainty whether certain herbicides such as Tillam (Pebulate), which serves as an integral component of the methyl bromide potential alternative for tomatoes, will be available in the future if a new manufacturer is not identified, and certain regulatory issues are not resolved between the U.S. EPA and this new manufacturer.

The impact of regulatory constraints regarding use of Tillam, Telone products (1,3-dichloropropene), and even future reregistration of chloropicrin cannot be overstated. For example, regulatory implementation of buffer zone restrictions will almost assuredly preclude use of this best alternative approach within the majority of the current Florida strawberry producing acreage due to the close proximity of residential housing to most fields. These fields are actually bounded on most sides by either commercial structures, grower homes, or residential housing. To satisfy federal pesticide label requirements, Florida strawberry growers only recourse at this time is to actually acquire new land and move production to isolated rural areas where buffer zones are not a consideration. At this time, no other alternative pest and production system has been identified which does not result in significant strawberry yield and profit reduction. Nor is there land available which is environmentally suited for strawberry production and at the same time is permitted for irrigation use of water by state water management districts. In the short term, significant impacts to the Florida strawberry industry are expected with the methyl bromide phaseout. Some critical use exemption or provision for the continued use of methyl bromide must be considered to preserve the economic viability of these very important agricultural industries.

If broadcast application technologies cannot be developed to sustain economic production, then the requirement for rubber gloves, boots, full face respirator, and coveralls for all workers in the field at the time of fumigant application constitutes yet another major obstacle to the implementation of Telone (1,3 dichloropropene) and chloropicrin combination product. Given current state and federal rules and recommendations governing heat stress avoidance in workers by growers, continuance of personal protective equipment requirements could as much as triple labor requirements (if additional labor forces can be made available) for the field application process of this compound. In some states, field workers are prohibited from working in full spray suits at temperatures in excess of 85°F. Temperatures of this magnitude are common in Florida agriculture.

The breadth and focus of the methyl bromide alternatives research program in Florida is not limited exclusively to evaluations of chemical combination treatment regimes. Rather, the program encompasses an evaluation of a diversity of nonchemical tactics as well. It should be recognized that many of the nonchemical alternatives specifically evaluated are already an established component of commercial

crop production practice in Florida agriculture (items 1,2,3,6,7,9,10, and 11 below). Since 1993, the nonchemical alternatives which have been evaluated for broad spectrum soil borne pest control in field experimentation include:

1) Cover Crops
2) Host Plant Resistance
3) Organic Amendments
4) Solarization/Biofumigation
5) Biological Control Agents
6) Paper and Plastic Mulch Technologies and Emissions Reduction
7) Natural Product Pesticides
8) Super Heated Water (Hotwater) and Steam
9) Crop Rotation
10) Supplemental Fertilization
11) Fallowing

In general, the results from some of the nonchemical studies has been encouraging, but in most cases must be construed as incomplete from a soil pest control or crop yield enhancement perspective when evaluated in the absence of soil fumigant treatment. Many are only marginally effective, but also impractical, cost prohibitive, or having requirements for specialized equipment and operators. As such, none of the nonchemical tactics should be considered stand alone replacement strategies for methyl bromide soil fumigation at this time.

I should also point out that research within Florida has been principally confined to the tomato and strawberry industries. Moreover, a host of other crops currently dependent upon methyl bromide still require a considerable amount of "discovery" type research. These crops include: pepper, eggplant, cucurbits, cut flowers, caladiums, turf, and ornamentals. Further, the consequences to the current double cropping systems have not been broadly considered for most of the crops identified above. It is often the profit from a second crop, benefiting from residual pest control properties of the initial methyl bromide treatment, that economically sustains the overall production system in Florida. Besides farm level impacts, please recognize that all of these industries are very important to state and local economies, and significant multiplier effects are expected to spill over into other areas of the private sector. In these cases as well, some critical use exemption or provision for the continued use of methyl bromide after the phaseout must be considered to preserve the economic viability of these very important agricultural industries, particularly if regulatory constraints cannot be satisfactorily resolved.

COMPARISON OF USA AND INTERNATIONAL RESEARCH EFFORTS:

The TEAP progress report states that similar field research efforts, funded by UNEP, UNIDO, and Multilateral Fund monies, have been initiated on a global scale and several methyl bromide alternatives have been selected for extensive adoption as part of a Methyl Bromide phaseout investment projects. For example, the TEAP progress report indicates that by December 2002 the Multilateral Fund had approved a total of 232 methyl bromide projects in more than 63 countries. This included 44 demonstration projects for evaluating and customizing alternatives to soil fumigation uses of methyl bromide. As reported by TEAP, these projects: '*trialled a wide range of chemical and non-chemical alternatives, in diverse countries, climatic zones, soil types and cropping systems, and for many different types of methyl bromide users and economic situations*'. According to the TEAP report, one or more of the alternatives tested in each crop situation have proven '*comparable*' to methyl bromide in their technical effectiveness for the control of pests and diseases. As a major shortcoming of both TEAP and MBTOC reports, no mention is made of differences in crop yield among treatments and demonstration sites, and the degree to which these alternatives actually '**compare**' with methyl bromide has not been quantified in summary document or tabular format by either MBTOC or TEAP, or more importantly, subjected to the same statistical and scientific scrutiny as that of the U.S. based research data. It would appear, that we are expected to accept the UNEP/UNIDO/Multilateral funded studies *carte blanc,* not to judge them for scientific merit, or via actual numerical and statistically comparison of treatment differences, **but by** MLF dollars spent, shear number of demonstrations conducted, and pounds of methyl bromide that could be eliminated in Article 5 undeveloped countries if the alternatives were adopted. Since grower opinion surveys are never presented within TEAP or MBTOC reports, it also seems possible that a grower consensus in each of these countries has not been attained, and the growers themselves might even disagree with validity of TEAP and MBTOC claim for the various alternatives.

Utilizing the results of much of this work, MBTOC and TEAP have declared the existence of alternatives for *all* uses of methyl bromide. In this regard it would appear that the U.S. is being held to comparison by a standard or benchmark for alternatives response which has not, or can not be confirmed via summaries of Multilateral Fund (MLF) field demonstration studies. Based on U.S. experiences, the cultural, biological, and environmental disparities that invariably and unavoidably occur between demonstration site locations preclude their (MBTOC,TEAP) abilities to validly compare and discriminate between the myriad of treatments and crops evaluated in these studies, ie., declare one alternative superior to another. There is simply not enough statistically valid, site-standardized data to summarize and support such broad global claims of technical feasibility, economic viability, and global transferability. The U.S. is keenly aware of the response variability problem that can occur, since over 40 field demonstrations were performed in Florida alone comparing a single alternative fumigant compound with that of methyl bromide. Similar to the demands placed on countries who nominate a specific critical use exemption, TEAP and MBTOC must also be held accountable to quantitatively show the accuracy and validity of research claims and adequacy of various substitute they propose for methyl bromide.

Conversely, it has been our observation and research philosophy in Florida and other areas of the U.S., that treatment response consistency is the benchmark for success when defining a next best alternative to methyl bromide. In the U.S., alternatives with defined potential to replace methyl bromide have been repeatedly evaluated as independent treatments in replicated field trials, often in the same location, with the same crops for repeated production cycles to insure response consistency and or to characterize any response degradation. In these published U.S. trials, treatment responses are statistically characterized by means and standard errors, and oftentimes even characterized on a relative basis to show and report deviations from a methyl bromide standard. In this regard, the U.S. in its leadership role has adopted a higher standard of acceptability and consistency than that of TEAP or MBTOC for defining a technically feasible and economically viable alternative to methyl bromide. To do otherwise would be disservice to U.S. farmers and discredit to the research institutions of this country. Conversely, to permit TEAP to judge and compare U.S. CUE's using such low, and or, unsubstantiated standards for treatment response consistency is patently wrong and in this case, performs a travesty to U.S. farmers who currently rely on methyl bromide for their livelihoods.

GENERAL CONCLUSIONS

Since 1996, the research and extension faculty of the University of Florida, in collaboration with USDA-ARS research scientists, have conducted field research programs to identify and evaluate a diverse mix of pest control products, application technologies, nonchemical pest management tactics and treatment regimes, as well as entirely new crop production system approaches to replace soil fumigant uses of methyl bromide. Initially, we invested heavily in an alternative chemical approach and only later expanded to include nonchemical tactics and approaches. Significant advances have been made in the integration of some of these tactics, and a pest management system has been devised which has the potential to replace methyl bromide. Overall, it has been a building process, in which new blocks of information, developed and acquired on an annual basis, have all contributed to the development of an overall IPM strategy. It began with the recognition that the simple substitution of one alternative fumigant for that of methyl bromide was not the answer and that other IPM components were essential.

During the past ten years, we have widely published the results of this research, documenting our continuing quest to develop an effective and economically viable alternative to methyl bromide soil fumigation. During this period, a number of significant scientific advancements have been made which have important, practical implications. For example, we have enhanced our basic understanding of drip irrigation water movement and how to most efficiently use the drip tube for delivery of agrichemicals. We have identified post plant pest control strategies (crop rescue) which serve to reduce pest pressure and help restore crop yield potential. Conversely, we have demonstrated how early crop destruction can provide expanded opportunity to enhance overall integrated pest management strategy. We have demonstrated the utility of virtually impermeable plastic mulches (VIF) and identified some of the problems with its use.

Overall, the results of this collective work also have shown that tank mix applications of various herbicides will likely be required to effectively broaden the spectrum of weed control to the near equivalence of methyl bromide. The large scale field demonstration trials and small plot herbicide tolerance and efficacy studies have

demonstrated that crop growth can be severely restricted, and yield significantly reduced in response to some preplant, preemergence, or post emergence applied herbicides. Differences in timing, rates, and methods of herbicide application and incorporation can all be important factors contributing to phytotoxic crop response and weed control efficacy. The results of these studies also serve to document the need by growers to learn how to effectively choose, apply, and incorporate these herbicides to maximize weed control and to avoid dealing with unsolvable production problems of plant stunting, mortality, and or crop loss.

During the tenure of the USDA project, the combined results of the alternative chemical studies continued to show the combination of 1,3 -D (Telone II) and chloropicrin, formulated as Telone C-17 or Telone C-35 as the most promising, currently registered, alternative fumigant combination to that of methyl bromide for Florida fruit and vegetable production. In general, these studies indicate that tomato yields were greater following use of Telone C-35 compared to that of Telone C-17 and that in-row applications were generally superior to broadcast applications. The higher yields obtained with in-row applications are likely the simple result of more uniform fumigant dispersion, distribution, and reduced dissipation under the raised, plastic mulch covered beds compared to bare ground, broadcast applications made to undisturbed soil subjected to environmental flux. Even though tomato yields improved with in-row and or broadcast applications of Telone C-17 or Telone C-35, they were not always to the level of methyl bromide. The results of recent studies further suggests that when soilborne disease pressure is low, broadcast application of Telone C-35 can be as effective as in bed application; however, when disease pressure is greater, broadcast application of Telone C-35 benefits from the addition of another fumigant treatment with chloropicrin at the time the beds are formed.

Regardless of alternative chemical or application method, the culmination of this work shows that pest control efficacy for all of the fumigant alternatives can be a little less than that of methyl bromide and are more highly dependent upon uniform delivery and distribution. Unlike methyl bromide, prevailing soil and climatic conditions, pre and post fumigant application, are much more important determinants of efficacy and crop response with the alternative chemicals. With these new alternatives, it has also become apparent that the growers themselves can cause significant response variability due to inappropriate land preparation or substandard application procedures.

USDA-ARS funded research has helped to identify and further define optimum conditions and procedures required to maximize performance of Telone, chloropicrin, and other fumigant and herbicide products. However, the culmination of this research also has demonstrated that satisfactory yield responses probably cannot be achieved consistently in every field or in every season as equivalent to that of methyl bromide. As a result, growers must learn to expect some disease, some loss, and recognize that some inconsistency is unavoidable. The biggest continuing challenge facing the scientific community and growers of Florida is developing and improving alternatives which further minimize the 5-10% impacts on yield for each of the methyl bromide dependent crops. It is also imperative that regulatory changes occur to declare the new system which includes Telone, Chloropicrin, and various herbicide products a viable alternative.

And finally, please recognize that MBTOC and TEAP claims of comparability of proposed alternatives (ie., soil solarization and biofumigation) cannot be confirmed or denied, but nor should they be accepted as unchallenged fact with such critical issues of national importance at stake. The pest control performance and economic viability of most of these approaches have been repeatedly discounted in replicated, statistically valid, U.S. field experimentation. Both MBTOC and TEAP make judgement that a variety of alternatives perform satisfactorily in the undeveloped Article 5 countries, and that they are economically feasible, and apparently transferable, when U.S. data shows that they are not. These international committees are fully aware of the significant body of U.S. research and choose to ignore it or claim to be unaware of its existence. This concern is important and must be raised since TEAP indicates that "**No** CUE will be awarded if there is an alternative practice in use in the global market, and that this alternative is available to the applicant". In this case, MBTOC and TEAP make judgements that their alternatives are viable, showing no data or scientific confirmation, and discount our research demonstrating the converse. This is but one example to show how the TEAP and MBTOC system is significantly flawed and manipulated by biased individuals, often steeped with conflict of interest. Based on personal experience, I have no confidence in the way the international process has worked, the timetables in which CUE's have been requested and more importantly evaluated, and finally, the flawed scientific and eco-

nomic standards which are used to judge and discriminate among nominations and international need.

Mr. RADANOVICH [presiding]. Thank you Dr. Noling. I appreciate the testimony.

Dr. Jack Norton, welcome to the subcommittee. If you would like to begin your presentation.

STATEMENT OF JACK NORTON

Mr. NORTON. Thank you very much, Mr. Chairman, and also I appreciate the opportunity to sit before the committee today; or at least I think I do.

Mr. BOUCHER. Mr. Norton, could you bring your microphone a bit closer?

Mr. NORTON. I am Dr. Jack Norton and I manage the methyl bromide alternative research program for IR-4. And I think probably everyone here knows what IR-4 is all about; that it is a Federal/State partnership program between USDA and the State land grant institutions to develop data to support the regulatory clearance of chemical and biological crop protection products for minor crops. These crops are valued at over $40 billion a year, and for the most part these crops offer little economic incentive for the agricultural chemical industry to develop supporting data to meet the regulatory data requirements to meet EPA's registration requirements.

IR-4 has a long history of facilitating registration of safe and effective crop protection solutions for the domestic grower of fruits, vegetables, herbs and ornamental crops. IR-4 is celebrating this year its 40-year anniversary, so it has been in business for a long time. And during this time, the project has been extraordinarily successful, with over 6,000 food use clearances, 9,100 ornamental clearances, and 220 biopesticide clearances to its credit. And over the past 8 years the program has concentrated almost all of its research efforts on new technology or pest management tools to define reduced risks by EPA.

This is part of my written testimony. I won't read through the whole thing. I will go to my testimony verbally in my summary for the methyl bromide alternatives program. I will say that our budget is much smaller than what we heard quoted earlier and it is funded primarily by the chemical industry. They support the IR-4 methyl bromide alternatives program. I manage that program for IR-4 as a consultant, so I am not on the payroll of IR-4 except in a consulting capacity. And during the past 5 years, we have run large-scale field trials both in California and Florida on tomatoes and strawberries. And the last 2 years we expanded the program to include peppers and some ornamental bulb crops. And we have gone into Michigan, where we are working on cucurbit vegetables in the IR-4 methyl bromide programs.

In all of our trials, we set those up to mimic commercial applications. There are large block trials where we actually put the products out, like following commercial practice to make sure it could mimic what the farmer could do if these products were registered. They are very data-intensive programs. We collect not only information on the diseases, nematodes and weeds, but we also carry the trials through to complete yield in strawberries and that means

22 weeks of picking strawberries twice a week. But we compile enough data that we can do an economic assessment of the products we are evaluating.

And we are looking at a lot of different products, some of which will never make it to registration, but we compare those products against methyl bromide, chloropicrin 67 to 33 percent, which is the formulation most widely used, and we also include other registered products like Telone that has been mentioned; 1,3 dichloropropene, and also metam sodium or Vapam. We look at the registered products in comparison to the early development products and methyl bromide. And our results have shown—and we have conducted these trials now since 1998, eight trials, four each in Florida and California, in each State, two trials on tomatoes and two on strawberries. So that is eight trials per year, four each on strawberries and tomatoes, and we equally divide those between the two States, the States where mostly methyl bromide is used on these crops.

And our results have shown based on efficacy, and just based on efficacy—and I want to make that clear—I want to say we have technical economically viable alternatives, but I did not take into account the regulatory implications that impact on the products that Dr. Noling mentioned and some of the other panelists mentioned—the setback restrictions, PPE in the case of Telone. There are also some counties where you can't use Telone in Florida. When it comes to Telone, we don't have at this point a fully viable alternative for strawberries and tomatoes because of those regulatory restrictions.

There are some other products that are coming along. It will be marketed as Midas. And I do believe this product has the potential of being a replacement for methyl bromide, based on efficacy again, but there could be an economic problem with that from what I am hearing. The costs may be difficult to make it usable by the growers. I don't know that for sure but the feeling is it is going to be a very expensive product to use.

And there are other products that could be used in combinations, in a cocktail approach that I think EPA is moving ahead with as quickly as they can. I am encouraged by the effort of EPA to register these products.

So I guess that means I need to stop.

Mr. BARTON. We have one more witness, and we have been lucky that we have not had to go vote, so we are going to try to get Mr. Doniger's testimony in and hopefully we can get some questions in before we have to go vote.

[The prepared statement of Jack Norton follows:]

PREPARED STATEMENT OF JACK NORTON, MANAGER, INTERREGIONAL RESEARCH PROJECT NO. 4, METHYL BROMIDE ALTERNATIVES PROGRAM

Good afternoon. I am Dr. Jack Norton, and I manage methyl bromide alternative research for Interregional Research Project Number Four (IR-4). IR-4 is a federal-state partnership program between USDA and the state land-grant institutions to develop data to support the regulatory clearance of chemical and biological crop protection products by U.S. Environmental Protection Agency (EPA) for use on high value, specialty crops. These crops that are valued over $40 billion annual are also known as minor use crops. For the most part, these crops offer very little economic incentive to the agricultural chemical industry to develop the supporting data to meet the regulatory data needs of EPA. IR-4 has a long history of facilitating registration of safe and effective crop protection solutions for the domestic grower of

fruits, vegetables, herbs, and ornamental crops. In fact the IR-4 Program is celebrating its 40th anniversary this year. During this time, the Project has been extraordinarily successful, with over 6000 food use clearances, 9100 ornamentals clearances and 220 biopesticide clearances to its credit. Over the past eight years the program has concentrated almost all of our research efforts on new technology or pest management tools defined as "Reduced Risk" by EPA. Collaborations are the strength of the IR-4 program. Input is sought continually from the growers and commodity organizations, researchers including scientists at land grant universities and USDA, cooperative extension, as well as input from the crop protection industry, and federal/state regulators. This input allow IR-4 to identify the most important pest management needs and quickly develop the supporting data to support the registrations of the solution. Food crop projects are the largest part of the IR-4 work plan. However, in 1977 the Ornamentals Program was added for nursery and floral crops, forest seedlings, Christmas trees, woody ornamentals and perennials. In 1982, IR-4 expanded to include a Biopesticide Program to support research and registration activities on biological based pest control agents. In 1998, IR-4 organized a Methyl Bromide Alternatives Program. Since the establishment of the methyl bromide alternative objective, IR-4 has been actively working with the agricultural chemical industry, USDA's Agriculture Research Service and university scientists, EPA's Office of Pesticides Programs Registration Division, and California Department Pesticide Registration in exploring product uses and combinations that may be useful in replacing methyl bromide when it is scheduled for full phase out in 2005 under the provisions of the Montreal Protocol. IR-4 involvement in this research arena was deemed necessary by our stakeholders because methyl bromide is a product that has been widely used in numerous minor crops. In fact, for many minor crops it has been the dominant soil fumigation product for control of nematodes, soil-borne diseases and weeds. Beginning in 1998, IR-4 has conducted large-scale field programs with potential methyl bromide replacements. The research program consisted of eight studies each year. Research on tomatoes and strawberries were conducted in California and in Florida at two sites per crop per state. These field trials involve many acres and are conducted on commercial farms so as to duplicate conventional applications and agronomic conditions. And all the trials have been replicated so as to provide scientifically valid data. The results and protocols of the IR-4 programs are available for public viewing at www.cook.rutgers.edu/~ir4. These data-intensive programs compared all aspects of methyl bromide alternative applications against the methyl bromide standard—aspects such as efficacy against pests, yield and crop quality. Collecting all the data enabled us to make economic assessments about the alternative programs

Our assessment, derived over the five-year period, is that for tomatoes and strawberries, there are products currently registered that can be used in combination as technically and economically viable alternatives for the nematode, disease and weed control provided by methyl bromide.

For other fruiting vegetables such as peppers and eggplant and cucurbits such as cucumbers, melons and squash, alternative programs require further testing but are showing promise. This is especially true for the fruiting vegetables where much of the knowledge gained from tomato can be applied to pepper and eggplant. For other crops, especially cut flowers, we have not seen any alternative program that is acceptable.

Much of our research has involved soil fumigants containing 1,3-dichloropropene, sold under the brand name Telone or InLine. These products have shown nematode control comparable to methyl bromide. When chloropicrin is combined with 1,3-D, we have seen disease control comparable to methyl bromide.

Weed control has been an issue, but over the five-year testing period we have seen that weeds can be managed effectively. Metam sodium (trade name Vapam) applied as a bed top treatment at low rates after the soil fumigation has shown control of annual weeds comparable to methyl bromide in California. We have also seen better consistency of control from metam sodium as we learn better the optimum conditions for application. Frequently statistically equivalent control of nematodes, weeds, and fungal pathogens have been obtained from full use rates of metam sodium compared to methyl bromide when properly applied. Weed control in Florida, however, has been a problem, especially for control of yellow and purple nutsedge.

However, new herbicide registrations promise to address those limitations. Recently halosulfuron (trade name Sandea) has been registered for use on a number of crops, including tomatoes, asparagus, cucumbers, melons, pumpkins, squash, eggplant and peppers. This is an excellent control of purple and yellow nutsedge and can be used in combination with soil fumigants such as 1,3-D and chloropicrin to address the critical need for nutsedge control.

In peppers, Sandea is registered only for use in row middles, however metolachlor (trade name Dual Magnum) can be used in peppers to provide in-row control, rounding out the methyl bromide alternative program for that crop.

Another promising herbicide, trifloxysulfuron sodium (trade name Envoke) is receiving an expedited review by the EPA. These products, which IR-4 has evaluated in our field programs, provide nutsedge control comparable to methyl bromide and hold promise to solve the weed control issues that have made peppers a crop of concern as methyl bromide phase-out nears.

Another product that is not yet registered has shown control of all three pest types—nematodes, diseases and weeds—comparable to methyl bromide. The product is iodiomethane, trade name Midas. Depending on how the product is priced, once it is registered it could be a drop-in replacement for methyl bromide.

Other non-registered products also are showing promise in IR-4 trials. These include fosthiazate for nematode control and dazomet (Basamid) for weed control on bed tops. For broad spectrum pest control, SEP-100 (sodium azide) has shown promise, as have propylene oxide and MULTIGUARD™ PROTECT + VAPAM HL followed by post-transplant applications of MULTIGUARD™ PROTECT.

While currently registered products have shown they are a viable alternative to methyl bromide, there is a potentially limiting factor in that the use of 1,3-D and chloropicrin is subject to regulatory requirements such as buffer zones and limits on how much can be applied in a given township in California. In some cases, these regulatory restrictions could limit the use of these otherwise viable alternatives to methyl bromide. It is my understanding that these issues are being addressed.

In addition to our work with crops, I would also like to mention that IR-4 has been evaluating post-harvest fumigation needs as well. Through our work with registrants and the EPA's Registration Division, propylene oxide and sulfuryl fluoride are now registered and effective post-harvest uses with stored agricultural commodities providing control equal to methyl bromide in many situations.

Five years ago, the task of replacing methyl bromide seemed very daunting. Each year, however, we have learned more about how existing products can be used in a cocktail approach as effectively as the industry standard. It should be pointed out that methyl bromide went through a similar history when it was introduced. Until research showed how to use it most effectively, it was not a cure-all.

We are learning more every year about how to use the alternative programs. Not just researchers, but growers also are learning to use the products in a prescription approach. As methyl bromide prices have gone higher, an increasing number of growers have begun to use programs based on 1,3-D , chloropicrin and metam sodium. While they might prefer to continue with the methyl bromide program they know, they are demonstrating that they can move away from the standard if issues—in this case pricing—force them to. They are demonstrating what five years of IR-4 data have shown—that phase-out of methyl bromide will not be doomsday for tomatoes, strawberries and peppers.

To summarize, based on five years of extensive in-field research at sites in Florida and California, the results of IR-4 studies indicate that some of the currently registered products, when used in combination, deliver pest management results that are comparable to methyl bromide treatments in strawberries, tomatoes and peppers. These three crops account for most of the methyl bromide use in fruit and vegetable production. Furthermore, products that likely will be registered in the near future and several other products in earlier stages of development have shown great potential to expand the effectiveness of alternative programs in these crops. The EPA has been very responsive to the crop protection chemicals that show promise in the IR-4 research. EPA has given fast-track registration review attention to these products that promise to fill efficacy gaps in methyl bromide replacement programs.

Thank you for hearing my presentation today. And I reinvite you to visit the IR-4 website, where all of our written reports are available.

Mr. BARTON. Mr. Doniger, you are recognized for 5 minutes.

STATEMENT OF DAVID D. DONIGER

Mr. DONIGER. I have a different perspective. The Montreal Protocol is a global success story. It is a bipartisan support stemming back to President Reagan. It is saving millions of people here in this country from skin cancer, death and illness; tens of millions of people around the world.

Now, why did we enter the Montreal Protocol? We did it because protecting the American people from ozone depletion and the ill-

nesses that come from it is something we can't do by ourselves. We can't heal the ozone layer above America and ignore what happens from emissions and to the ozone layer and the rest of the world. And so this is something where if we are going to succeed—and we have succeeded so far—we have to do it together with other countries in the world. It is in our self-interest to be part of this treaty and to make it work. It is against our self-interest to run away from this treaty.

Now, it is working, but it will still take 50 more years for the ozone layer to recover; and that assumes that we stay the course and eliminate all of these chemicals, including methyl bromide. Now is not the time to tamper with this treaty or with the Clean Air Act. Methyl bromide is the most dangerous ozone-destroying chemical and is still in widespread use. The latest scientific assessment confirms that methyl bromide's potency is in the same league with the CFCs and the other chemicals that have already been eliminated. It is twice as potent as some that have already been eliminated. Its impact on the ozone layer alone, methyl bromide, is equal to the total impact of all the hydrofluorocarbons, the HCFCs that are used to replace the CFCs.

If you want to keep the methyl bromide on tap and have the same benefit for the ozone layer, you would have to get rid of all the alternative refrigerants and solvents which have been put into play since the 1990's.

Methyl bromide is also increasingly linked to cancer among pesticide applicators and other ag workers who are exposed to it. A 55,000-worker study completed by the National Cancer Institute finds an increase in prostate cancer associated with methyl bromide use, the clearest thing of all the pesticides that were investigated in that study.

On the process, the process for looking for critical use exemptions in our view is transparent, it is fair, it has clear standards. The TEAP applies those standards and provides written explanations. That is why everyone has this 188-page report to look at. It is an interim report. They asked for comment. They asked for reaction. They asked for more information. This is the kind of back-and-forth which any fair and open process should have. If anything is broken in the critical use exemption process it is here in America, because the Bush administration has abused the critical use exemption process by submitting a bloated application that exceeds the maximum that is allowed under the treaty. It says so in the opening pages of the explanation, with extra margins of safety on the assumption that for every single-use category, nothing gets better.

If you look at the best estimates of what is going to happen, the use requirements are for less than what was asked, but the application is padded against the possibility that absolutely every use stalls out where it is now and no further progress in reducing. I am not saying there shouldn't be any critical use exemptions granted. I am in favor of the structure of the protocol. Having the exemptions there as a possibility for 2005 and beyond is what made it possible to sell to American farmers and to other countries' farmers the viability of a phaseout program. We need that exemption process. And I expect exemptions will be granted, but not 39 per-

cent. There is a legal limit of 30 percent and that needs to be observed.

If the U.S. Goes ahead and grabs for excessive and unnecessary exemptions, it risks a backlash and a breakdown of the consensus that we need here in the United States to protect our own people from ozone depletion and the ultraviolet radiation that endangers their health.

If the Bush administration pushes too hard on this, it is going to stick its finger in the eye of yet another international treaty and risk a backlash that will imperil the health of Americans, of your constituents all across this country.

And I want to say a word about a second issue there hasn't been much comment about, the quarantine issue. That is another exemption that was put forward on the basis that quarantine use was a small use and it was very valuable. And I agree that it was very valuable. Also it has been small. It was the tail on the dog, and the parties agreed to focus on the dog, not the tail. But the Bush administration is on the verge of taking new actions that would explode the quarantine exemptions so that the tail would dwarf the dog. And we are talking about a requirement that all wood packaging be fumigated before products can be transferred from one country to another. This is something we do now with respect to packages coming from China, packed in raw wood, because beetles can ride in the wood and it is a real hazard. But the answer is not to perpetually fumigate the packaging. The answer is to phaseout raw wood packaging, junk wood packaging.

Mr. BARTON. You do need to summarize.

Mr. DONIGER. The USDA agreed in 1999 to look at the option of phasing out raw wood packaging. It would leave us with methyl bromide use in an interim period, and then we get rid of the packaging and you could kill two birds with one stone, protect the ozone layer and prevent the pests from traveling into this country.

But the USDA has broken its promise and abandoned even looking at the option of phasing out the raw wood packaging. It is ready to explode the quarantine use and it could triple the world use of methyl bromide. That is not good for our farmers and not good for our ozone layer, and that is something we need to stop.

[The prepared statement of David D. Doniger follows:]

PREPARED STATEMENT OF DAVID D. DONIGER, POLICY DIRECTOR, CLIMATE CENTER, NATURAL RESOURCES DEFENSE COUNCIL

Mr. Chairman, member of the subcommittee, my name is David Doniger. Thank you for the opportunity to testify today. I am Policy Director of the Natural Resources Defense Council's Climate Center. I have worked to protect the ozone layer for more than 20 years in both non-governmental and governmental capacities, dealing with all of the important ozone-destroying chemicals, from the CFCs to methyl bromide. During the 1980s and early 1990s, I represented NRDC in negotiations on the Montreal Protocol and its follow-on agreements, and worked to enact and implement the ozone protection title of the 1990 Clean Air Act Amendments. I served in the Environmental Protection Agency during the Clinton administration and participated in deliberations leading to the 1997 Protocol amendments on methyl bromide. I rejoined NRDC in 2001, and I continue to monitor international and domestic policy on protecting the ozone layer.

GLOBAL THREAT AND GLOBAL RESPONSE

There are few more harrowing threats to our health and our environment than destruction of the Earth's protective ozone layer. And there are few more heartening

success stories than the global effort to phase out the ozone-damaging chemicals. The Montreal Protocol—which has enjoyed bipartisan support from three presidents, beginning with Ronald Reagan—is saving literally millions of Americans, and tens of millions of people around the world, from death and disease.

Every American, and every citizen on this Earth, relies on the ozone layer to block dangerous ultraviolet radiation that causes skin cancer, cataracts, immune disorders and other diseases. Yet the ozone shield has been—and continues to be—badly damaged by a range of man-made chemicals, from CFCs to methyl bromide. Nearly all of the high-potency ozone-destroying chemicals have been successfully eliminated. Methyl bromide is only one still in widespread use.

The Antarctic ozone hole is the most striking symbol of humanity's capacity to injure the environment on a global scale and in ways that no one foresaw. But the damage is not confined to the ends of the Earth. The ozone layer directly over our heads has been weakened, sharply increasing our exposure to dangerous UV radiation. Millions of Americans—including farmers—must work everyday in the sun. Millions more—from school children to seniors—spend hours of their days out of doors. Millions of concerned parents check the UV Index and cover their kids with sunscreen before letting them go out in the sun.

The Montreal Protocol is working and has begun to heal the ozone layer, but it will still take at least 50 more years to fully recover—assuming we stay the course and complete the phase-out of all potent ozone-destroyers, including methyl bromide. As stated in the latest ozone science assessment:

> **The Montreal Protocol is working, and the ozone-layer depletion from the Protocol 's controlled substances is expected to begin to ameliorate within the next decade or so . . .**
>
> **Failure to comply with the Montreal Protocol would delay or could even prevent recovery of the ozone layer.** For example, continued constant production of ozone-depleting substances at the 1999 amount would likely extend the recovery of the ozone layer well past the year 2100. The total atmospheric abundance of ozone-depleting gases will decline to pre-Antarctic-ozone-hole amounts only with adherence to the Montreal Protocol's full provisions on production of ozone-depleting substances.[1]

This is no time to slacken efforts to protect the ozone layer or to tamper with the world's most effective environmental treaty. Americans know what causes ozone depletion, and they expect their government to do what it takes to stop it. They will not reward leaders who bash the Montreal Protocol or attack the Clean Air Act.

Dozens of other industries have stepped up and accepted their responsibility to replace CFCs, halons, and other ozone-destroying chemicals they had grown accustomed to. They innovated and adopted new technologies and practices, and they successfully eliminated these chemicals within a decade or less. Their new products are as good as or even better than the ones they replaced.

Producers and users of methyl bromide have already had a dozen years to work on replacements—more time than any other industry. Many farmers and food processors have accepted the science and faced up to the challenge of eliminating methyl bromide, and much progress has been made. Progress will continue as existing alternatives are more fully adopted and new ones are successfully registered under the pesticide laws.

But some factions in this industry have chosen denial and obstruction and are waging a campaign to stop or even reverse the phase-out of methyl bromide. Their campaign, based on misrepresentation and innuendo, must not be allowed to succeed. Leaders who pander to their pressure are punishing those farmers who played by the rules, endangering the health of millions of Americans, and making our country into an international outlaw.

METHYL BROMIDE: STILL DANGEROUS AFTER ALL THESE YEARS

Methyl bromide is the most dangerous ozone-destroying chemical still in widespread use. Some, however, would have you believe that new science has virtually exonerated it. But the latest scientific assessment confirms that methyl bromide is in the same league with the potent chemicals that have already been eliminated, with an "ozone depletion potential" of 0.38.[2] That is nearly twice the 0.2 level that defines a "Class I" chemical that must be eliminated under the Clean Air Act. Methyl bromide is nearly four times more potent than methyl chloroform, which was phased out in the 1990s, and HCFC-141b, a CFC replacement that has been nearly

[1] *Scientific Assessment of Ozone Depletion: 2002* (UNEP 2002), pp. xxiv and xxv, available at http://www.unep.org/ozone/sap2002.shtml.

[2] *Scientific Assessment of Ozone Depletion: 2002* (UNEP 2002), p. Q11.

eliminated. In fact, the latest *Scientific Assessment* indicates that methyl bromide is causing nearly as much damage to the ozone layer as *all HCFCs combined*.[3]

We have long known that short-term exposures can cause severe illness and death, and many communities have restricted its use in fields located near homes and schools.

Now new information links methyl bromide with increased cancer risks among farmers and other workers who are directly exposed. Most recently, the National Cancer Institute reported in May that methyl bromide has been linked to increased prostate cancer risks in a study of 55,000 pesticide applicators, including farmers, nursery workers, and workers in warehouses and grain mills.[4]

THE CRITICAL USE EXEMPTION PROCESS: BROKEN AT HOME, NOT ABROAD

Other witnesses would have you believe that they are being victimized by an unfair process under the Montreal Protocol. In fact, it is the Bush administration and U.S. agribusiness that are abusing the critical use exemption process.

A brief description of the Protocol's phase-out requirements and the critical use process is important. The U.S. agreed to these provisions and is legally bound by them. Moreover, Congress passed amendments to the Clean Air Act in 1998 requiring the phase-out of methyl bromide in this country to proceed on the same terms.[5]

The Protocol sets out a four-step reduction in methyl bromide production.[6] After a freeze in 1995 at 1991 levels, methyl bromide must be cut by at least 25 percent starting in 1999, 50 percent in 2001, 70 percent in 2003, and 100 percent in 2005.[7]

The Protocol allows critical use exemptions *from the last step only*. There are no critical use exemptions from the interim 25, 50, and 70 percent reductions. Only after 2005, when the reduction otherwise reaches 100 percent, can there be any such exemptions. The exemption provision is located in the paragraph that mandates the final step from 70 to 100 percent reduction: "This paragraph will apply save to the extent that the Parties decide to permit the level of production or consumption that is necessary to satisfy uses agreed by them to be critical uses."[8]

In this way, the total amount of critical use exemptions granted is limited to a maximum of 30 percent of a country's base 1991 level. Critical use exemptions under the Clean Air Act are limited to the same amount.[9]

The process of applying for critical use exemptions is transparent, with clear standards and explanations, and many opportunities for a country to make its case. The Protocol parties set forth exemption criteria in 1997.[10] The application process began this year with national applications. Applications must show that "[t]he specific use is critical because the lack of availability of methyl bromide for that use would result in a significant market disruption;"[11] that "[t]here are no technologically and economically feasible alternatives or substitutes available;"[12] and that "[a]ll technically and economically feasible steps have been taken to minimize the critical use and any associated emission of methyl bromide."[13] Applicants also have to demonstrate that "an appropriate effort is being made to evaluate, commercialize and secure national regulatory approval of alternatives and substitutes" and that "research programmes are in place to develop and deploy alternatives and substitutes."[14]

Applications are reviewed first by expert panels reporting to the Protocol's standing expert advisory group (the Technical and Economic Assessment Panel (TEAP)), which will make recommendations to the parties. In May, the TEAP published an interim progress report on all countries' applications, recommending that many ex-

---

[3] *Id.* at p. xxv.

[4] *Agricultural Pesticide Use May Be Associated With Increased Risk of Prostate Cancer*, National Cancer Institute, Cancer.gov (May 1, 2003) available at http://www.nci.nih.gov/newscenter/pressreleases/AgricultureHealthStudy.

[5] Clean Air Act, sec. 604(h) ("The Administrator shall promulgate rules for reductions in, and terminate the production, importation, and consumption of, methyl bromide under a schedule that is in accordance with, but not more stringent than, the phaseout schedule of the Montreal Protocol Treaty as in effect on October 21, 1998.").

[6] Montreal Protocol, Article 2H.

[7] Montreal Protocol, Article 2H.

[8] Article 2H, paragraph 5.

[9] Clean Air Act, sec. 604(d)(6), 42 U.S.C. sec. 7671c(d)(6) (critical use exemptions allowed "[t]o the extent consistent with the Montreal Protocol").

[10] Report Of The Ninth Meeting Of The Parties To The Montreal Protocol On Substances That Deplete The Ozone Layer, http://www.unep.org/ozone/mop/09mop/9mop-12.e.pdf.

[11] Decision IX/6, paragraph 1(a)(i).

[12] Decision IX/6, paragraph 1(a)(ii).

[13] Decision IX/6, paragraph 2(b)(i).

[14] Decision IX/6, paragraph 2(b)(iii).

emptions be granted, and that some be denied because proven alternatives are available.[15] For a large number of specific crops and other applications from many different countries, however, the TEAP's progress report states that the national applications do not give sufficient information to form a technically sound recommendation. Each country now has the opportunity to supply the needed information before the TEAP makes its final recommendations to the parties. The parties will meet to discuss the applications in July, and will make final decisions six months later at their official annual meeting in December.

The Bush administration has abused the critical use process in three ways. First, it has requested exemptions that greatly exceed the 30 percent upper limit. The U.S. baseline amount is 25,528 metric tons. Thirty percent of that amount is 7,568 metric tons. The administration, however, requested exemptions totaling 9,921 tons for 2005, and 9,445 tons in 2006—39 percent and 37 percent, respectively, of our baseline. This is far more than the maximum level allowed under the Protocol and the Clean Air Act.

The administration apparently denies that there is a binding 30 percent upper limit on critical use exemptions. If that were true, the parties could agree to *any amount* of exemptions—all the way up to a country's 1991 baseline level. This is an absurd reading of the Protocol. It would mean that after reducing methyl bromide without exceptions by at least 70 percent in the years leading up to 2005, the parties would then be free to reverse the phase-out and *increase* methyl bromide production again—all the way back to the freeze level of 1991.

The second abuse is that the administration's application is deliberately bloated. The executive summary of the request reveals that that the application was *purposely constructed to ask for more methyl bromide than the administration's best estimate of what is really needed.* The amount requested for each of the 16 covered sectors contains a hefty "margin of safety" that exceeds the best estimate of need. The application notes that previous exemption requests for other chemicals ran 30 to 40 percent higher than the amounts actually needed. The application then urges "a similar, understanding approach" for similarly inflated methyl bromide exemptions.[16]

The consequences of padding of each sector's application are further exaggerated by the fact that the administration is asking for a "lump sum" allocation and the freedom to re-deploy unneeded excesses in one sector to any other users.[17] There might be an argument for allowing this freedom to move methyl bromide around between sectors if the total request had been built up from best estimates of each sector's needs, rather than padded figures. In that case, some sectors would be likely to do better than expected with alternatives, while others might fall behind. The freedom to move methyl bromide from one sector to another would allow for a much smaller total request while still having an adequate margin of safety overall. As presently constructed, however, the total amount is way more than needed.

The third abuse—perhaps the biggest "black box" of all—is the administration's failure to define what constitutes "significant market disruption." As noted, each country must show that "[t]he specific use is critical because the lack of availability of methyl bromide for that use would result in a significant market disruption."[18] The term "significant market disruption" indicates a focus on market impacts, not just costs for a specific grower group. A pertinent measure of market disruption would be the effect on consumer prices for that commodity. And there must be more than just an effect—the effect must be significant. The U.S. application is full of claims about increased costs for producers, but the administration has yet to articulate any definition of what market impacts constitute a significant disruption.

As should have been expected, the U.S. application is now drawing questions from the TEAP expert panels. The TEAP progress report indicates favorable recommendations for the full amount requested for a number of U.S. sectors—for example, fruit tree nurseries, orchard replanting, strawberry runners, mills and processors, smokehouse hams, and dried fruit, bean, and nut storage.[19] The TEAP report indicates a wholly negative recommendation for only one U.S. usage—tobacco seed-

---

[15] Report of the Technology and Economic UNEP Assessment Panel, Progress Report (May 2003), available at http://www.unep.org/ozone/index-en.shtml.

[16] U.S. Critical Use Nominations, executive summary, pp. 12-13.

[17] *Id.*, pp. 11-12.

[18] Decision IX/6, paragraph 1(a)(i). This determination is made by the national government alone and is not reviewed by the TEAP or the parties. But it will be subject to review domestically when the administration proposes regulations under the Clean Air Act to implement any exemptions at home.

[19] Report of the Technology and Economic UNEP Assessment Panel, Progress Report (May 2003), Appendices A and B, pp. 175-188.

lings—on the basis that at least five specific alternatives are available and in use in other countries.

For a number of U.S. sectors—including the heaviest users, such as field fumigation of tomatoes and strawberries—the report states that the expert panel is "unable to complete its evaluation" due to incomplete information. For each of these sectors, the report frames specific questions for the U.S. to address concerning potential alternatives.

The TEAP's progress report treats the U.S. application no better or worse than any other nation's. Each application received the same scrutiny and many other nations, including, Australia, Belgium, France, Greece, Italy, Israel, Japan, Portugal, Spain, and the U.K, have received recommendations for reduced use or have been asked for more information on important sectors.

The Bush administration may now be tempted to try to bull its way through to approval of the entire request, putting politics and special interests first and public health and international cooperation last. Grabbing for everything risks a destructive confrontation here at home and with other countries abroad. It could trigger a downward spiral that destroys the consensus for protecting the ozone layer. If the U.S. breaks up that consensus, other countries are likely to slow or even abandon their phase-outs of methyl bromide and other chemicals as well.

Does the Bush administration—or the Congress—really want the responsibility for wrecking another international agreement? For preventing repair of the ozone layer and exposing millions more Americans to skin cancer and other illnesses?

QUARANTINE OUT OF CONTROL

The Subcommittee has also asked for views on the quarantine exception. The short answer is that the quarantine process is out of control.

Historically, the amount of methyl bromide used for quarantine—fumigation of domestic and international shipments to meet food purity standards and prevent the spread of pests—has been relatively small. In the early 1990s, before the phase-out of other uses began, quarantine and pre-shipment uses combined were estimated to be about 10 percent of total production. The volume used for this purpose does not appear to have changed dramatically in the 1990s, although the percentage went up as the volume of other uses was reduced. The TEAP reports that about 19-21 percent of total world production in 2000—between 10,475 and 11,800 tons—was for quarantine and pre-shipment purposes.[20]

Because of both the importance of quarantine fumigation and its small scale, the parties to the Montreal treaty agreed to exempt quarantine and pre-shipment production from the phase-out. In effect, they made a pragmatic decision to focus on the dog, not the tail. Thus the Protocol and the Clean Air Act currently allow continued production of methyl bromide for this purpose, both before and after 2005.

Now, however, the Bush administration is on the verge of two new actions that would explode the quarantine exemption far beyond any contemplation and create huge loopholes in the methyl bromide phase-out. In short, the tail is about to overwhelm the dog.

The first of these actions is a new rule proposed by the U.S. Department of Agriculture (USDA) that would require the treatment of all raw wood packing material imported into or exported from this country.[21] If promulgated, the new rule will lead to a massive and unnecessary increase in the amount of methyl bromide used for quarantine fumigation.

The proposed rule would require all imports and exports of products packaged in raw wood to be heat-treated or fumigated with methyl bromide to kill any pests in the wood. In practice, because heat treatment is more expensive, most products packed in raw wood will be fumigated with methyl bromide.

USDA has not provided consistent estimates of how much methyl bromide will be used to meet this requirement. In the draft environmental impact statement (EIS) for this rule, USDA estimates that methyl bromide emissions will increase by 5,145 metric tons.[22] That would *double* current world use for fumigation purposes, and would increase total world usage by more than 10 percent.

This estimate is likely to be on the low side because it assumes that raw wood packing material would be fumigated *before* goods are packaged in it. We know from experience in China, however, that fumigation occurs at port facilities, *after* goods are packed in raw wood materials.

---

[20] Report of the Technology and Economic UNEP Assessment Panel, Progress Report (May 2003), p. 99.

[21] USDA, *Importation of Solid Wood Packing Material,* 68 Fed. Reg. 27480 (May 20, 2003).

[22] USDA, *Importation of Solid Wood Packing Material: Draft Environmental Impact Statement,* Oct, 2002, p. 57, available at http://www.aphis.usda.gov/ppd/es/ppq/swpmdeis.pdf

Under that scenario, another USDA EIS predicts a massive increase in methyl bromide use—by more than 102,000 tons per year.[23] That would increase current world use for quarantine purpose by *10 times*. It would be *more than double* total world use of methyl bromide *for all purposes*.

To be sure, raw wood packing presents a real risk of carrying new and destructive pests onto our shores. But treating such packing material with methyl bromide is both an incomplete defense against these pests and a large new threat to the ozone layer. The way out of this dilemma—to protect both the ozone layer and to prevent pest infestations—is *to phase out the use of raw wood packaging*.

In 1999, USDA publicly committed to study and consider phasing out raw wood packing material instead of ordering huge increases in methyl bromide use. The department's 1999 advance notice specifically identified this as a solution that would be assessed.[24] The notice identified a third option: "to prohibit the importation of SWPM [solid wood packaging material] in any form and from any country . . ." Alternatives would include packing material made from "processed wood (e.g., particle board, plywood, press board) and nonwood materials (e.g., plastic)." USDA went on to say:

> The advantages of this option are that *it would provide the greatest protection against pest risk and could eventually result in decreased use of methyl bromide.* A disadvantage of this option is that it could have an undesirable effect on international trade. *This effect could be mitigated by a phasein period* to allow shippers to adjust to the prohibition, and, during this time, heat treatment, treatment with preservatives, fumigation, or other effective alternative treatments could be required before SWPM could be imported." [emphasis added]

The notice explicitly asked for public comment addressing several questions, including:

- What would be the economic, environmental, or other effects of prohibiting the importation of SWPM from any country, including disruption in trade and potential delays in shipping, effects of alternative materials on the environment, etc.?
- If importation of SWPM into the United States were to be prohibited, or if treatment of some kind were to be required for all SWPM imported into the United States, would the shipping industry need a phasein period to allow time to adapt? If yes, how long?

But since then USDA has broken its commitment to consider the option of phasing out raw wood packing. The department's draft EIS and its proposed rule contain not a word examining this option.

The Bush administration's second big expansion of quarantine fumigation would allow major evasion of the phase-out of *non*-quarantine uses. The administration is developing a proposed rule that would allow state agriculture agencies to reclassify many ordinary uses of methyl bromide as "quarantine" uses. USDA would then "rubber stamp" the state requests. Thus relabeled, these now non-quarantine uses of methyl bromide production would evade the phase-out.

A rubber-stamp proposal would violate Section 419 of the Plant Protection Act, 7 U.S.C. Sec. 7719, passed as part of the 2002 farm bill. Section 419(a) states that: "The Secretary shall not authorize such treatments or applications unless the Secretary finds there is no other registered, effective, and economically feasible alternative available." In other words, USDA must carefully review each state classifications and reject those that lack merit.

If the Bush administration moves ahead with huge expansions of quarantine use, it is courting another major conflict among the Montreal Protocol parties. Seeing the quarantine exemption used to evade the phase-out, and seeing quarantine use grow to equal or to dwarf other uses, many countries will likely move for new treaty restrictions on quarantine use. And once again the Bush administration will be on the wrong side of a critical environment issue and an international treaty dispute.

I would be happy to answer your questions.

Mr. BARTON. We have about 30 minutes before we have to go do 3 or 4 votes, so we are going to end this hearing. We are not going to hold you hostage. So I am going to recognize myself and I am going to ask each member of the panel to try to be brief and the

---

[23] USDA, *Rule for the Importation of Unmanufactured Wood Articles from Mexico With Consideration for Cumulative Impact of Methyl Bromide Use, Final Environmental Impact Statement—September 2002,* p. 65, available at http://www.aphis.usda.gov/ppd/es/mb.html.

[24] 64 *Fed. Reg.* 3049 (Jan. 20, 1999).

answers to be brief so we give everybody a chance. So the Chair recognizes himself for a quick—put me down for 4 minutes.

Mr. Norton, you seem to think that the $150 million figure that the administration threw out on research was money you hadn't seen. How would they be spending money that you haven't seen if you are the one doing the research? Are there other groups doing the research?

Mr. NORTON. IR-4 does collaborate with ARS, so we actually work closely with them on some programs. So we are deriving some of the benefit of those funds through that connection. And also—and we received a small grant from USDA-ARS about 2 years ago that was about $150,000. So we have direct support from ARS.

Mr. BARTON. As our experimentalist here, and maybe Dr. Noling also, are you confident that given enough time and money you could find alternatives that are efficient and meet the needs that methyl bromide currently needs?

Mr. NORTON. I am fairly confident that we will given time, but he we are not there yet. We are still working on it and we have a ways to go. I think we are a lot closer in some commodities than others. Certainly cut flowers has been mentioned. And you asked the question a number of times, would we be seeking these CUEs indefinitely, and I think for that crop it will be a long time coming before we can find fully effective alternatives.

Mr. BARTON. So the cut flowers is the most difficult one.

Mr. NORTON. I think so, yes. And there are some other areas.

Mr. BARTON. Dr. Noling, do you have a comment on that?

Mr. NOLING. Well, I would tell you, if you reflect where agricultural production occurs, there are environments that are really conducive for pest outbreak—Florida, the hot, humid environments. Ultimately it translates to—and I think it is pretty broadly known it is going to require some kind of chemical treatment. My discussions with people in the chemical industries, the manufacturers themselves, indicate that they pretty much exhausted the research on new product fumigant chemistry. There won't be new fumigants that come out and are registered within USDA. I think it is pretty unequivocal that this idea we might ultimately rely on organic-type approaches is not going to happen in an economic framework that we can envision right now. We will rely on the tools that are currently registered or will be continued to be registered in the future.

Mr. BARTON. Mr. Pauli or Mr. Brown, do you see a need for an exemption for methyl bromide indefinitely? Is there some base level beyond which we can't go that there is no alternative?

Mr. PAULI. Sir, we certainly hope that there are other alternatives equal to methyl bromide that are equally cost effective.

Mr. BARTON. In your best judgment, as a real live farmer person.

Mr. PAULI. We are eternal optimists.

Mr. BARTON. You think you can find an alternative? What about you, Mr. Brown?

Mr. REGINALD BROWN. At some point in time, hopefully science and chemistry will provide us the tools to be able to go forward without methyl bromide, but the commitment of the CUE process isn't until we reach that point. Mr. Barton, we need a tool.

Mr. BARTON. I yield back the balance of my time and recognize Mr. Boucher.

Mr. BOUCHER. Thank you very much. I am going to be very brief with this panel. I would like to ask Dr. Noling and Dr. Norton to respond, if you would, to the statement that was made by Assistant Administrator Holmstead in his testimony on the earlier panel concerning his view that both processes that are at work here are fair, reasonable, and calculated to lead to a proper result. One is the process by which agricultural users and other users of methyl bromide can make a complaint and ask that an application for an exemption be awarded. Does that process, in your opinion, work well?

And the other process is the process that is employed under the protocol itself in order to consider the applications that are filed by the countries that are treaties to the protocol. He also was of the opinion that that process is effective and that it is structured in such a way as to receive a fair result. He said, for example, that the requests for additional information that have been forwarded back to the U.S. Government from the Protocol Technical and Economic Advisory Committee were not unexpected, and that we should not take that as a sign of the ultimate rejection of the application that has been made for exemptions in these particular areas.

Your comment, if you would, on both of those processes. How well do they both work? Are you satisfied or dissatisfied?

Mr. NOLING. I am not sure how to respond to this, but being a former member, I can tell you that it wasn't but a few years ago that the co-chair of the soils committee was quoted as saying he didn't understand why the United States was pursuing critical use exemptions because they weren't going to get them. And I can tell you——

Mr. BOUCHER. Who said that?

Mr. NOLING. His name was Jonathan Banks.

Mr. BOUCHER. What is his position?

Mr. NOLING. He is still affiliated with the committee. He may still be a co-chair.

Mr. BOUCHER. But he has an official position with the committee.

Mr. NOLING. Yes, sir.

Mr. BOUCHER. I am sorry, go ahead.

Mr. NOLING. As far as the review process, I think when you look at who the constituents of the committees are, these are people from the underdeveloped countries and they really don't rely on chemical tools to solve their problems. They are relying on local resources and materials to assist them in managing pests themselves. They declare soil solarization and biofumigation to be two very important pest management tools that effectively address all of their pest management problems. And yet the aggregate research that has been conducted here shows them to be unacceptable. In fact, in Florida——

Mr. BOUCHER. I think you said some of this in your testimony. I wasn't asking you to repeat all of that. But what about the statement Mr. Holmstead made that it was not unexpected that we would get these additional requests for information? He does not take that as a rejection of the request for an exemption. Do you take it as a rejection?

Mr. NOLING. When you look at in general the documents that they reference in there don't include many U.S. Documents that would refute some of their tactics, I would contend that that is bla-

tant. That is an opportunity to send it back to us to request more information.

Mr. BOUCHER. Let me ask Dr. Norton for a brief comment.

Mr. NORTON. I would agree with what Dr. Noling has said. I never really understood why it would be in the interest of these companies to act favorably for the U.S. And say in some cases they compete with us in production.

Mr. DONIGER. A complaint is being made that this is a secret, closed, one-stop process. And then a complaint is being made that the committee produces a report which lays out its tentative reasons and asks more questions and asks for more information. These two complaints are inconsistent. You have a process and they reached some initial views and they asked for more information and reaction to those initial views. And this is on a step-up process that will ultimately go to the parties to make the decision. This is the way this should work. That is the first point.

Second point is it is not as though they have aimed their fire at the U.S. Alone. There is a whole slew of countries, six or eight of them which I listed in my testimony, which also got requests for more information and also got reductions in the initial reaction, also got some negatives and some positives. So we are being treated in an open process, and I think one should be a little concerned when people yell bias too early.

Mr. BARTON. Mr. Issa.

Mr. ISSA. Thank you, Mr. Chairman.

Mr. Doniger, that is interesting that you have an opinion that things are so fair and open. I couldn't help but notice that you expressed a constant interest in the bias and the tactics of the Bush administration. It did seem like at every turn you felt like President Bush's administration was trying to thwart the intent of this legislation. Briefly, can you tell me your basis for this feeling that came out in your testimony?

Mr. DONIGER. I am giving you my reaction to specific actions: the excessive size of the critical use request, the fact that it is over the legal limit.

Mr. ISSA. Isn't that an interpretation with which the administration disagrees?

Mr. DONIGER. It may be, but sometimes legal facts are facts. We will see how it comes out.

Mr. ISSA. And your second reason?

Mr. DONIGER. The second thing is to take the quarantine example, and that is in my testimony. There is a third way out of the methyl bromide dilemma on the raw wood packaging and that is to change the packaging. And we had a commitment in the previous administration to look at that, to examine that, and that has evaporated.

Mr. ISSA. I appreciate that. I just wanted to get the understanding for why the Bush administration seemed to be able to do no right in this case.

Dr. Mellano, one of the questions that I don't think I fully understand—and you have the breadth of experience; can you take us through the steps that led to the decision to eliminate methyl bromide, from your observations?

Mr. MELLANO. First of all, I want to state I am not an atmospheric scientist, I am a plant pathologist and a farmer. However, the decision to eliminate methyl bromide was based on the fact that it is a known ozone depleter. Now, that fact has never been shown and there are 2 or 3 things that were ignored when they made that decision. The first and the biggest and the most important one is the buffering effect of the ocean. The oceans cover a very large percentage of the Earth and it acts as a buffer relative to the amount of methyl bromide that is in the atmosphere. And that effect was ignored, okay?

And the second effect that was ignored was that bromide and other sources besides the ocean and besides farming operations were not considered. A primary example would be the examples that Mr. Pauli brought up, which were volcanoes and biomass burning. Those things were ignored.

The other thing was the situation was not studied over time. Mr. Doniger said that the ozone situation is getting better. That may well be just a natural fluctuation. The things that happen in the upper atmosphere happen over a long period of time. Those things were never considered. And to make a decision like this without considering the entirety of the problem is pretty—I think it is ill-conceived and needs to be relooked at.

Mr. BARTON. Your time is about to expire.

Mr. ISSA. In fairness to the others, I yield back.

Mr. BARTON. Mr. Hall.

Mr. HALL. Mr. Chairman, thank you. I am interested, of course, in Dr. Norton's rather biased opinion when he complains about the administration—called some of their acts "bloated," and he is fearful of sticking the finger in the eye of some of those people. I think we ought to apply the boot to the back of the lap to a lot of them.

Mr. BARTON. It is Mr. Doniger who said that.

Mr. DONIGER. I would take responsibility for your response.

Mr. HALL. Wherever the shoe fits, why, put it on. But they ought to renegotiate, the United Nations, for our people, the Montreal Protocol that allowed the United States more time beyond 2005, because it was pushed on us by developing countries such as Mexico and China and others that have the chemical available at least until 2015. To our detriment, a lot of them in northern Europe, those countries led the effort in the Montreal Protocol to eliminate the product, but these nations have very little need for it because of favorable climatic conditions. And if they can't do that, then we ought to have the courage to put some legislation on the books to amend the U.S. Law to a phaseout level of 50 percent that was in effect prior to 2003. I think we owe that.

And with that, Mr. Siemer, I will ask you one question and I think the answer is obvious. If methyl bromide were banned in the U.S., would that make you less competitive? And of course your answer is yes, it would.

Mr. SIEMER. It would certainly increase our operating costs in an industry that has very thin profit margins and to that extent it would make us less viable.

Mr. HALL. I understand your industry submitted a critical use exemption application for the use of methyl bromide beyond the phaseout date. What did that application calculate as to costs to

your industry of using alternatives to methyl bromide? And we have seen the potential alternatives and they have been identified. I think I heard testimony that more than $140 million has been spent by the USDA alone to find alternatives for the many uses of methyl bromide, with very little success. And I think there has been testimony both ways on that. But what did that application calculate as to your cost?

Mr. SIEMER. Well, I am very grateful, but I personally had nothing to do with writing that application, but I am advised by our staff that the number in there was $60 million on an annual basis.

Mr. HALL. How were these costs calculated? If you had nothing to do with it, tell me who do you want to use the shoe on?

Mr. SIEMER. It would have to be calculated on the basis of the use of alternative treatments, on the basis of requiring more time for treatments; that is, treatments that took a longer amount of time, which means more down time, which means lost production, which means more expensive alternatives, and the requirements that would be necessary to improve our processes to ensure the wholesome and clean food product that we——

Mr. BARTON. Gentleman's time has expired in 8 seconds.

Mr. HALL. I would like to ask him what his impression of the Montreal Protocol is, but I yield back.

Mr. BARTON. In fairness, we need to hear the other side.

Mr. DONIGER. Just a response to the first part of your comment. The United States was the biggest advocate for bringing methyl bromide into the protocol. It wasn't done to us, it was done by us; and we took the lead. China, to the extent they are building up methyl bromide capacity, it is to meet this wood packaging rule that comes again from our concerns about the bugs coming in on the raw wood. Could we not focus on what the real problem is, which is the raw wood, and then we could protect our forests and protect the ozone layer?

Mr. HALL. We might have some thought about protecting our own people that are providing sustenance and trying to make an honest profit. And I don't agree with you that the United States is the one that pushed that. I think the developing countries such as China, Mexico, and others that have advantage and have the chemical through 2015, to our detriment, are the ones that pushed it. And you can testify and talk all day and you can't change my mind.

Mr. DONIGER. There are no strawberries coming from China.

Mr. BARTON. We can have that debate out in the hall or you can holster pistols and go at it.

The gentlelady from California is recognized.

Mrs. BONO. Thank you, Mr. Chairman. I want to thank each of the panelists. It is clear that there are very strong emotions and opinions on each side of this.

Mr. Pauli, though, you spoke briefly I believe about China and didn't cover it in your testimony; but in between the two panels, you mentioned to me that you believe China is currently producing methyl bromide. And do you really believe that to be the case? The earlier panel answered me and said only three places are manufacturing it and we know that nobody will use this because we monitor where it goes. Actually I think there is a conflicting statement to that effect, but can you talk about China producing this now?

Mr. PAULI. Well, I think that was my reaction, was the concern that the panel members said there were really only the three sources and it is clear that China now is producing methyl bromide. It is a question of how much additional methyl bromide they will produce and whether or not they will export that availability to other countries. We don't know the exact amount.

Mrs. BONO. Are they currently reducing their use or increasing their use?

Mr. PAULI. My understanding is that they are both producing it and increasing their use. Both.

Mr. BARTON. They signed—China has signed on the protocol.

Mr. PAULI. That doesn't seem to prevent other people from doing things.

Mr. BARTON. But the documents at the State Department, they are one of the signatories of the agreement.

Mrs. BONO. I just wanted—Mr. Pauli, you represent California and work very hard for the growers in California, and at a time when workers' comp is skyrocketing and we have got so many issues, but the $200 million figure is staggering to me and the number of jobs we are talking about.

But I am going to move on to Mr. Doniger because it seems it will be so much fun. I want to thank you for your work that you have done in the Clinton administration and in DC, but I ask you a quick question. Sometimes—I have only been doing this 5 years, and I learn something every day.

Mr. DONIGER. I am glad you didn't ask me what a nematode was.

Mrs. BONO. But the Montreal Protocol was about ozone depletion. Yet in your testimony here, you talk about cancer and you talked about the Bush administration having a bias. Isn't that a bit of a bias on your part? I am hearing in your statement in this hearing discussing specifically the Montreal Protocol, yet you talk about the National Cancer Institute citing increased incidence of cancer. So that to me doesn't seem like this is the proper venue for that discussion, but I hope you are having that discussion at the proper place.

Mr. DONIGER. There were a number of questions asked of the first panel about the registration process for pesticides. And there is an interesting thing that happened with methyl bromide. It would have been one of the top chemicals for the pesticide office to be reviewing carefully for all of its effects.

Mrs. BONO. But this was not the point of the Montreal Protocol.

Mr. DONIGER. And that is my point. But because it was scheduled for phaseout, or at least down to the critical use level under the protocol, the pesticide office put the review of its toxicity for other reasons on a slower track. I think if we were going to talk about the use of a chemical, it is important to know all of the goods that it produces and all of the bads that it produces.

Mrs. BONO. I am sorry, reclaiming my time. What is your position on developing countries of methyl bromide and why were you unsuccessful in 1997, as part of the previous administration, in putting the developing world on the same track to phaseout methyl bromide in developed countries?

Mr. DONIGER. We moved them from no track to the track they are on, and they start at a level of use which is much much smaller

per capita, per farm, per tomato, per any measure that you want to use. And they are phasing down. As one of the panelists earlier said, when you take into account the critical use exemptions that we expect to get—and again I am not quarreling with their getting some—we are still going to be using a lot more than Mexico and a lot more than the other agricultural competitors.

Mrs. BONO. Do you dispute Mr. Pauli's mention that China is actually producing this and increasing their use?

Mr. DONIGER. China is producing some for domestic use within their quotas and some to treat the packages that we are making them treat.

Mrs. BONO. And my last——

Mr. DONIGER. They are not exporting any of it to other countries.

Mrs. BONO. When you hear this massive economic impact, specifically to California and Florida, can you and your organization perhaps work within this to try—I think so often your organization is very myopic in what they are trying to achieve, and I respect your work, but perhaps we could have a sit-down and have a discussion on how to help my farmers here.

Mr. DONIGER. I would like to see the critical use exemptions coming under the limit, and I am not opposing the granting of critical use exemptions.

Mrs. BONO. You have to start somewhere.

Mr. BARTON. The gentlelady's time has expired. And last but not least, the gentleman from Kentucky, Mr. Whitfield.

Mr. WHITFIELD. Thank you, Mr. Chairman. You had mentioned that the United States was the most significant advocate for phasing out methyl bromide. And yet the industry that uses methyl bromide the most, agriculture, milling, so forth, they have all indicated they certainly were not advocating that. So who in the United States was advocating the phasing out of methyl bromide?

Mr. DONIGER. There is a very strong constituency in this country, from school kids to seniors, for protecting the ozone layer. And the Congress has been very responsive to that. The previous administration has been very responsive to that. And even this administration does not want to be seen as back-pedaling on protection of the ozone layer, because it means millions of people's health and safety.

Well, I think to a great extent this was coming—the general desire of the public to deal with the ozone layer is mediated through groups like my own and it is coming from environmental organizations, local and national. It is coming from school kids. It is coming from seniors.

Mr. WHITFIELD. Now, you had also made the comment that the United States is using more methyl bromide than any other country, and of course we are one of the wealthiest nations in the world. We have a large agricultural industry that uses more of this. So why shouldn't we use more of this than other countries?

Mr. DONIGER. I am not saying we should not use this compound. I am just saying that we should not use more than we need and we have asked for more than we need.

Mr. WHITFIELD. But why should other countries be given 10 more years than we are given?

Mr. DONIGER. They start from a very low base and they are reducing. As the previous panelists indicated, some, I think he said 20, of those countries have already agreed to phaseout more quickly.

Mr. WHITFIELD. And so if that harms our farmers and does not hurt their farmers, that is acceptable?

Mr. DONIGER. I don't think this is a question of hurting American farmers.

Mr. WHITFIELD. They have testified, the industry has testified that it is going to be harmful to them.

Mr. DONIGER. The competitive—the argument for a competitive disadvantage is extremely thin, and it is based on the idea that there is a lot of methyl bromide, more methyl bromide available to be used, let's say, in Mexico than there is in the United States. It is just not true. It is the other way around. We have got the methyl bromide, and that is true whether you look at this on an a per tomato, per acre, per person basis. We have more than they do.

Mr. WHITFIELD. But you believe that their arguments about making them less competitive does not really hold water?

Mr. DONIGER. I think that we have, our farmers have the capacity to be competitive in a world in which they use transition to alternative compounds as quickly as they are available. We agree on that general objective. What I would say is that $140 million to work on a problem of this magnitude should be viewed as a small amount spent, not a large amount spent, and we need to keep at it.

Mr. WHITFIELD. Now, in your testimony you said that some factions in this agriculture industry have chosen denial and obstruction and are waging a campaign to stop or reverse the phaseout. Which factions are you referring to?

Mr. DONIGER. Well, there are a number of people represented on this panel who have advocated that this Congress take legislation to stop or reverse the phaseout. So that speaks for itself. There is material from the Crop Protection Coalition which I have seen, and others, which question still whether methyl bromide is dangerous to the ozone layer. One of the witnesses raised questions about that today. This to me is denial. If you want to have a science hearing on this, I invite you to do so because the science on the connection between methyl bromide and the other ozone depleting chemicals and depletion of the ozone layer is rock solid.

Mr. WHITFIELD. And you said that their information, it is based on—their argument is based on misrepresentation.

Mr. BARTON. This will have to be the gentleman's last question.

Mr. WHITFIELD. Is based on misrepresentation and innuendo. Is that what you are referring to, that they are not giving the correct information on the science side?

Mr. DONIGER. One constant implication is that if we only knew what the science said we would realize this wasn't a potent ozone depleter anymore, and that is just wrong.

Mr. WHITFIELD. Thank you.

Mr. BARTON. We want to thank this panel. Y'all have been great witnesses. We have had a good dialog. We give special thanks to our USDA witness. He is still here and we appreciate you. There will be some written questions and we want you to be expeditious.

We have this meeting in November, and if we are going to take legislative action we want to prepare that draft legislation sooner rather than later. So as we send the written questions please reply very quickly. But we thank you for your attendance, and we are adjourned.

[Whereupon, at 5:05 p.m., the subcommittee was adjourned.]

[Additional material submitted for the record follows:]

U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON ENERGY AND COMMERCE
May 29, 2003

The Honorable CHRISTINE TODD WHITMAN
Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

DEAR ADMINISTRATOR WHITMAN: As you know, on June 3, 2003, the Energy and Air Quality Subcommittee will hold a hearing regarding the "Status of Methyl Bromide under the Clean Air Act and the Montreal Protocol." In order to better prepare the Subcommittee for this hearing and to gather information relevant to issues concerning the current and future utilization of methyl bromide, I would like to ask that you provide the Subcommittee with the following information:

(1) It is my understanding that the Environmental Protection Agency has collected data and information related to the current stockpile of methyl bromide. I would request that you provide the data and related information concerning the size of the methyl bromide stockpile that has been carried into 2003 that can be used in 2003 and beyond. I would also like to request that you summarize, in the aggregate and without attribution to any specific entities, information on the current methyl bromide stockpile.

(2) The production and consumption of methyl bromide is subject to production and consumption limits in 2003 and 2004 under the Clean Air Act and the Montreal Protocol. We understand that these limits do not directly affect the allowable use of methyl bromide, since previously stockpiled amounts may be used for such activities as pre-plant fumigation. However, when It is likely that growers and other users will feel the effect if the reduced production/consumption cap? How long is it likely that the methyl bromide stockpile will continue to exist, if it is utilized at its current rate of use?

(3) What is the current utilization of methyl bromide in the United States? What is the current utilization of methyl bromide by developing (Article 5) countries? Under the Montreal Protocol, what legal ability do Article 5 countries have to increase their utilization of methyl bromide between now and 2015? Do you expect Article 5 country utilization of methyl bromide to increase or decrease? Why would you expect such utilization by Article 5 countries to increase or decrease?

(4) If the United States were to be in violation of its obligations under the Montreal Protocol, what legal recourse would be available to other countries both under the Montreal Protocol and any other international agreements? Could U.S. exports to other signatories be affected? What U.S. products or commodities could be affected?

Thank you for your kind assistance in this request. If you have any questions or concerns related to this request, please do not hesitate to contact committee staff (Robert Meyers, 202-225-2927).

Sincerely,

JOE BARTON, *Chairman*
Subcommittee on Energy and Air Quality

PREPARED STATEMENT OF NATIONAL GRAIN AND FEED ASSOCIATION

The National Grain and Feed Association (NGFA) is pleased to provide the following statement supporting the statement presented Mr. Rick Siemer, Siemer Milling Company, on behalf of the North American Millers Association (NAMA), at the June 3, 2003 hearing of the Subcommittee on Energy and Air Quality to explore the status of Methyl Bromide under the U.S. Clean Air Act and UN's Montreal Protocol.

The NGFA consists of 1,000 grain, feed, processing and grain-related companies that operate about 5,000 facilities that store, handle, merchandise, mill, process and

export more than two-thirds of all U.S. grains and oilseeds. Also affiliated with the NGFA are 36 state and regional grain and feed associations.

BACKGROUND

To protect the ozone layer, 24 nations, including the United States, signed the so-called Montreal Protocol in 1987 to identify and begin the phase out of ozone depleting substances. While Methyl Bromide is a critically important fumigant to the U.S. milling industry, it has been determined also to be an ozone depleting substance. In 1992, parties to the protocol agreed to a phase out of Methyl Bromide. In 1993, Congress amended the Clean Air Act to begin the phase out of several ozone depleting substances, including Methyl Bromide. Under the Clean Air Act, the U.S. is scheduled to completely ban the use of Methyl Bromide in 2005. Developing countries have been granted an extension until 2015 to continue using Methyl Bromide.

IMPACT OF THE BAN ON U.S. MILLERS

In NAMA's prepared statement, Mr. Siemer discussed the role and importance of Methyl Bromide in his company's efforts to provide a quality product to U.S. consumers, and the potential impact loss of Methyl Bromide would have on his company's ability to continue providing a quality product to U.S. consumers. Importantly, Mr. Siemer noted the folly of continuing to phase out Methyl Bromide despite the lack of a viable and cost-effective alternative. Clearly, Congress must play close attention to these issues when determining if the U.S. should continue adhering to the 2005 phase-out schedule.

NAMA also raised legitimate questions on the actual environmental benefits that might accrue from a total ban on the use of Methyl Bromide by the U.S. beginning in 2005. In light of the fact that developing countries will have an additional 10 years to use Methyl Bromide, NAMA's concerns regarding the potential that a U.S. ban might have the unintended consequence of shifting jobs and economic activity out of the U.S. deserve serious Congressional consideration. Economic difficulties created in the flour milling industry would also serve to create reduced demand and challenging economic times for the U.S. wheat producer and wheat handling industry.

In addition, NAMA talked about U.S. efforts to obtain a so-called Critical Use Exemption under provisions of the UN's Montreal Protocol for up to 40% of current Methyl Bromide uses beyond the 2005 deadline. Mr. Siemer questioned whether the U.S. would be successful in the face of a UN process that lacks transparency and is inherently biased against granting such exemptions.

NGFA agrees that the U.S. government's process to develop its CUE application and the potential inadequacy of the requested CUE are troubling and should be closely scrutinized by Congress.

Finally, we support NAMA's request that the United States either renegotiate the Montreal Protocol this year to allow the U.S. more time beyond 2005 to develop viable and cost effective alternatives to Methyl Bromide or amend the U.S. Clean Air Act to freeze the phase-out at 2003 levels.

Thank you for allowing us to provide these remarks. If we can be of further assistance, please feel free to contact Mr. Thomas C. O'Connor, NGFA Director of Technical Services, at 202/289-0873.

PREPARED STATEMENT OF AMERICAN FOREST AND PAPER ASSOCIATION

INTRODUCTION

The American Forest & Paper Association (AF&PA) appreciates the opportunity to submit a statement for the record on the importance and use of methyl bromide to the forest products industry. We strongly support the efforts of the subcommittee in examining the status of methyl bromide under the Clean Air Act and the Montreal Protocol. The American Forest & Paper Association is the national trade association of the forest products industry. AF&PA represents more than 200 member companies and related trade associations involved in growing, harvesting, and processing wood and wood fiber; manufacturing pulp, paper, and paperboard from both virgin and recycled fiber; and producing solid wood products.

BACKGROUND

Methyl Bromide is a critical chemical that is essential for growing tree seedlings in forest nurseries. These seedlings, grown by companies, state nurseries and small privately-owned entities, supply our country with a renewable and sustainable for-

est resource. With more than 40 million acres of plantations in the eastern U.S., the wood harvested from these areas helps to place the forest industry among the top 10 manufacturing employers in 42 states, employs some 1.5 million people, and produces wood and paper products valued at more than $230 billion each year. America's forest products industry is also among the most competitive in the world, with annual exports totaling over $23 billion.

This vital sector of the U.S. economy will be affected by the phase-out of methyl bromide. The forest industry's ability to achieve the goals of sustainable forestry could be impaired if healthy and vigorous seedlings are unavailable for prompt reforestation that promotes wildlife and water quality protection.

Seventy percent of all forest land in the southeastern U.S. is owned by non-industrial private forest landowners, with 20% owned by forest industry and 10% public. Non-industrial private landowners are highly sensitive to the price of reforestation. Studies have shown that a relatively small increase in reforestation costs results in fewer landowners reforesting. This is particularly true for deciduous hardwood species that are usually planted for wetland restoration, wildlife and aesthetic purposes.

Given the importance of non-industrial owners on the general timber supply in the southern region, a reduction in reforestation efforts by this group may have serious long-term negative impacts on sustainability of the resource. Moreover, in specific reference to the industry, forest products companies must carry reforestation costs across an entire rotation and are only allowed to expense these costs at the time of harvest. Any increases in reforestation costs make them less competitive on the world market or provide another incentive to sell the land where it is likely to be converted to non-forest use.

METHYL BROMIDE USE

Methyl bromide (Mb) is a pesticide used in the control of pest insects, nematodes, weeds, pathogens and rodents. Mb is used primarily for soil fumigation in agriculture (85%) and commodity and quarantine treatment (10%). Of the 85% used in agriculture, it is calculated that forest nurseries consume approximately 1%.

Methyl bromide fumigation proves cost-effective control of nutsedge and, its loss will result in an increase in herbicide use and/or an increase in handweeding. Surveys indicate that nurseries annually spend an average of only 368 hours handweeding. With the loss of methyl bromide, it is estimated that the amount of handweeding may increase several fold. Although cost effective herbicides are available for forest tree nurseries, they are not effective against all weeds. We anticipate the increase in weeding costs will be sufficient to result in higher seedling prices for both pines and deciduous hardwood species. Hardwood may in fact be more adversely affected as there are few selective herbicides labeled for hardwoods, and fumigation is, in fact, the backbone of hardwood nursery weed control.

At the present time, there are no commercial substitutes available to methyl bromide for use in forest nurseries. It is estimated that the USDA Agricultural Research Service has spent $150 million over the past ten years looking for a substitute that is technically feasible and economically achievable for commodities that use methyl bromide as a soil fumigant. To date, no chemical substitutes have been found to replace methyl bromide. For forest nurseries, a phase-out on the use of methyl bromide for soil fumigation could result in a shift to container-grown seedling production with a production cost increase of approximately $100 million per year.

The use of methyl bromide is critical to sustaining and perpetuating America's forestlands. Poor, erratic bareroot seedling crops can result from no soil fumigation. Without soil fumigation, soil-borne diseases will likely increase to levels found in nurseries in 1950. In the past, nurseries have been closed due to persistent disease problems. The cost of moving a nursery to avoid diseases can exceed $6 million, a tactic that would only provide temporary relief at best.

A potential consequence of the phase-out of methyl bromide would be the increased use of pesticides for weeding and insect control. Generally speaking, efforts are underway in the forestry community to minimize pesticide use, and the phase-out could thwart that objective.

CRITICAL USE EXEMPTION (CUE)

The critical use exemption process, established within the Montreal Protocol, provides an exemption from the phase-out based on the lack of technically feasible or economically achievable alternatives. Given that the government submitted a 14-sector request for a specific allotment of methyl bromide to the Technical Economic Assessment Panel (TEAP) of the Montreal Protocol. The tree seedling nursery appli-

cation, which combined individual applications submitted by several AF&PA member companies and the Auburn University Cooperative, was rejected by the TEAP for lack of information on alternatives. We believe this decision was improper and strongly assert that the methyl bromide requested in the application represents the quantities necessary to continue to produce vigorous, healthy and pest-free seedlings for reforesting America.

Given that the French government's application for methyl bromide use in forest nurseries was accepted and the allotment granted, we believe that further inquiry into this discrepancy is necessary. The applications submitted by the companies and the Cooperative were comprehensive and contained all relevant information relative to any substitute chemicals, economic achievability and technical feasibility.

METHYL BROMIDE ALLOTMENTS UNDER THE CUE

Once the Parties to the Montreal Protocol agree to a methyl bromide allocation to each sector, it is the responsibility of the U.S. Environmental Protection Agency to develop regulations on how to allocate this amount to users. This stage of the process represents one of the most crucial decisions since it will determine the availability, accessibility and price of methyl bromide.

It will be extremely important for the Subcommittee to take an active oversight role in reviewing the EPA proposal, which is expected to be published in early fall 2003. In June, EPA conducted various workshops around the country aimed at creating preliminary options to deal with the Mb dilemma. Of the three proposals currently being considered, none seem to be feasible solutions. The first option, a public methyl bromide auction, is not a fair or equitable system since one bidder could potentially purchase the entire quantity of methyl bromide. Other options being floated are more reasonable, but the essence of the allotment must be that critical use exemption applicants should be given a purchasing preference. Given the time, resources and expense of applying for the methyl bromide CUE application, it would seem equitable to provide these entities preferences in purchasing methyl bromide.

CONCLUSION

Forest nurseries in the U.S. produced enough seedlings (1.6 billion) to plant 2.6 million acres in 1997. In order to sustain and produce vigorous, healthy and pest-free seedlings, methyl bromide must be made available to continue to provide a healthy and pest-resistant forest.

We would like to continue to work with the subcommittee as they review the status of methyl bromide, oversight of the Montreal Protocol critical use exemption process and any efforts that might be considered to extend the methyl bromide phase-out date to be consistent with developing countries.

U.S. ENVIRONMENTAL PROTECTION AGENCY
February 10, 2004

The Honorable JOE BARTON
Chairman, Subcommittee on Energy and Air Quality
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515-6115

DEAR MR. CHAIRMAN: I am writing to you as follow-up to EPA's letter of August 13, 2003, responding to four questions that were submitted for the record of the Subcommittee's hearing on "the Status of Methyl Bromide under the Clean Air Act and the Montreal Protocol."

Thank you for the opportunity to provide this information for the record. If you have further questions, please contact me or your staff may contact Peter Pagano, in EPA's Office of Congressional and Intergovernmental Relations, at (202) 564-3678.

Sincerely,

DONA DELEON
Acting Associate Administrator

Enclosure

Question 1) It is my understanding that the Environmental Protection Agency has collected data and information related to the current stockpile of MeBr. I would request that you provide the data and related information concerning the size of the MeBr stockpile that has been carried into 2003 that can be used in 2003 and be-

yond. I would also like to request that you summarize, in the aggregate and without attribution to any specific entities information on the current MeBr stockpile.

Response: In early 2003, EPA issued Section 114 letters to a handful of key industrial entities that we believed would be most likely to have stockpiles of methyl bromide in 2003.

[Information about specific stockpile amounts was claimed by the submitting businesses as Confidential Business Information and, therefore, the aggregate information has been redacted from the public version of this document. EPA has not made determinations on the confidentiality claims, but the information is being treated as CBI. EPA's limited disclosure of this information to Congress was authorized by 40 C.F.R. 2.209(b) and did not constitute a waiver of any confidentiality claim.]

Given the confidentiality requests made on the data, and the fact that the total tonnage figure itself does not provide contextual information needed to determine significance, we would respectfully suggest that if the issue of stockpiles is discussed in public, the confidentiality concerns of those queried could be addressed to a large degree if the above noted sum of MeBr in the stockpile could be discussed in a more qualitative manner, such as: EPA efforts to quantify the stockpile through discussions with a subset of users, producers and distributors of MeBr have yielded the conclusion that the stockpile, when combined with allowable levels during 2003 and 2004, is sufficient to enable access to levels of MeBr similar to those allowed to be accessed during 2001 and 2002, when the US was complying with the Clean Air Act's required 50% reduction in MeBr production and consumption.

Question 2) The production and consumption of MeBr is subject to production and consumption limits in 2003 and 2004 under the Clean Air Act and Montreal Protocol. We understand that these limits do not directly affect the allowable use of Mebr since previously stockpiled amounts may be used for such activities as preplant fumigation. However, when is it likely that growers and other users will feel the effect of the reduced production/consumption cap? How long is it likely that MeBr stockpile will continue to exist, if it is utilized at this current rate of use?

Response: The Montreal Protocol and Clean Air Act regulate production and consumption of MeBr on an annual basis. Neither the Protocol nor the Clean Air Act regulate use. Consumption is defined as the level of MeBr produced in a calendar year plus the level of MeBr imported in a calendar year, minus the level of MeBr exported in that same year. Thus, under the Protocol and Clean Air Act, EPA allocates allowances to produce and import to historic producers and importers of MeBr. While these producers and importers can produce and import up to allowable levels, those receiving allowances do not have to use all of their allowances. Further, they can choose to use all of their allowances to maintain a stockpile, rather than sell some of the MeBr they produce or import. As the response to question 1 above notes, stockpiling has indeed taken place.

Regarding the 70% reduction cap that went into effect on January 1 of this year, it is difficult to predict when growers will experience an effect. As noted above, it is clear that the stockpile, when combined with allowable production/importation levels during 2003 and 2004, will be sufficient to enable access to levels of MeBr similar to those allowed to be produced or imported during 2001 and 2002, when the US was complying with the Clean Air Acts required 50% reduction in MeBr production and consumption. However, when growers will feel the effect of the reduction will depend on how those holding the stockpile and/or the right to new production and import decide to allocate the existing MeBr stockpile between current and future sales.

Question 3) What is the current utilization of MeBr in the United States? What is the current utilization of MeBr by developing (Article 5) countries? Under the Montreal Protocol, what legal ability do Article 5 countries have to increase their utilization of MeBr between now and 2015. Do you expect Article 5 country utilization of MeBr to increase or decrease. Why do you expect such utilization of Article 5 countries to increase or decrease?

Response: As noted above, the Clean Air Act and Montreal Protocol regulate production and consumption. In 2001, the latest year for which data has been calculated and verified, US consumption was at 41% of baseline use, or 10,665 metric tons (6,399 ODP tonnes). This US level is actually 18% lower than the level allowed by the Clean Air Act during 2001. However, as noted above, "consumption" is not necessarily equivalent to use, as that 41% could have been augmented by stockpiles existing before 2001, and/or some of that 41% could have been stockpiled, rather than used during the calendar year 2001. EPA does not normally collect usage data. However, the usage data that is commercially available (so-called Doanes data) suggest that the use of MeBr in 2001 may have been closer to 47%.

Regarding Article 5 countries, under the Protocol, the Article 5 countries have an obligation to freeze their consumption in 2002 at the average level of their consump-

tion during 1995-1998. In the aggregate, the compliance baseline of the 114 developing countries is 9233 Ozone Depleting Potential (ODP) tonnes. Of these 114 countries, almost 50 do not consume any MBR at all, an additional 32 have a baseline of below 15 ODP tonnes, and only 6 countries have a baseline of over 500 ODP tonnes. This compares to the US baseline of over 15,000 ODP tonnes, and the US critical use exemption request for continuing use of almost 6000 ODP tonnes. Under the Protocol, beginning this year, developing countries are not allowed to increase their consumption beyond their baseline limits, and while we will not have full 2002 data until the end of this year, we anticipate that this obligation will be met. In addition to achieving the freeze in 2002, developing countries are required to reduce their consumption level by 20% in 2005, and they are required to phaseout their consumption by 2015. Because of these obligations, we fully expect Article 5 consumption to decrease between now and 2005, and between 2005 and 2015. This expectation is bolstered by the commitments that have been made by over 20 countries through the Multilateral Fund to achieve a virtual phaseout of MBR between 2004 and 2010, five to ten years faster than required under the Protocol

Question 4) If the United States were to be in violation of its obligations under the Montreal Protocol, what legal recourse would be available to other counties both under the Montreal Protocol and any other international agreements? Could U.S. exports to other signatories be affected? What US products or commodities could be affected?

Response: Given the foreign affairs and treaty aspects of the question you pose, we have coordinated our response with the Department of State. Our joint response follows.

In 1997, the United States actively participated in negotiations with the Parties to the Protocol, and agreed on a phaseout schedule for MeBr. That schedule became a treaty obligation and it was subsequently put into US law by Congress. Although the process for consideration of legal recourse that other Protocol Parties could have under the Protocol is clear, the specific actions that may be taken would likely be effected by the manner in which a violation was brought about and the extent of any such violation. In this respect, it should be noted that the monetary consequences of non-compliance under the Clean Air Act to producers and importers makes the probability of accidental non-compliance in the United States a very remote possibility. Assuming, however, that the United States were to take non-compliant acts, there are at least two international fora where non-compliance could be raised as a legal matter.

First, the Protocol provides for bilateral dispute settlement under terms agreed in the Vienna Convention. As a result, although this provision has never been used before, it is theoretically possible that another Party or Parties could invoke these provisions against us. Although the United States has not opted for the possibility of binding arbitration under the Protocol, if this provision were invoked, the Protocol would require the United States to go through a conciliation procedure. No dispute settlement mechanisms have been invoked before under any of the existing major environmental agreements, so, even if non-binding, the results of any conciliation procedure could be viewed as significant.

Second, the Protocol has a well-established non-compliance procedure that can be triggered by the Protocol's secretariat or another Protocol Party, and reviewed by the Protocol's Implementation Committee. In the proposed case, the United States would likely find itself subject to that procedure once we reported our non-compliant MeBr production and/or consumption. That Committee is charged with reviewing cases of non-compliance, and making recommendations to the Parties on "steps to bring about full compliance with the Protocol." In the U.S. view, this would not include any binding measures as there is no authority in the Protocol for the imposition of binding measures by the Implementation Committee.

In 1992, the Parties agreed to an indicative list of measures that may be taken by a Meeting of the Parties with respect to non-compliance. That list consisted of the following actions:

A. Appropriate Assistance, including assistance for the collection and reporting of data, technical assistance, technology transfer and financial assistance, information transfer and training.

B. Issuing cautions

C. Suspension, in accordance with the applicable rules of international law concerning the suspension of the operation of a treaty, of specific rights and privileges under the Protocol, whether or not subject to time limits, including those concerned with industrial rationalization production, consumption, trade, transfer of technology, financial mechanism and institutional arrangement.

In the past, where non-compliance has always been the result of either an accident, or an event outside of the control of the Party concerned, the Implementation

Committee has met with the Party and recommended agreement on a specific "get well plan" including interim reduction milestones that was designed to bring the Party back into compliance in an expeditious manner. These get well plans were then adopted by a meeting of the Parties, and progress on meeting agreed milestones was reviewed annually.

The Protocol Parties have not to date considered a case of purposeful, conscious non-compliance on the part of any Party. In such a situation, the initial process would be the same as that described above. Consistent with the terms of the Protocol, the case of non-compliance would be reviewed by the Protocol's Implementation Committee. However, consideration of a case of conscious non-compliance with the MeBr provisions of the Protocol by the United States could be expected to take on a different tone. Given that the United States is the world's largest MeBr producer and consumer, and given a purposeful, unilateral breach of the Protocol, it is likely that the Implementation Committee and the Parties would consider using the full extent of the powers authorized under the Protocol for cases of non-compliance. This includes authorizing other Parties to suspend the treaty's operation, in whole or in part, as between themselves and the United States. While the authority would not necessarily, in the U.S. view, include suspending trade in MeBr with the United States, other Parties may take that view and push for such a result with the Meeting of the Parties.

Apart from the possibilty that the whole Protocol or parts of it could be suspended, is the possibility that in light of U.S. non-compliance individual developing countries might walk away from their obligations on MeBr and perhaps even all substances. Developing countries might make this decision to walk away from their Montreal Protocol obligations because U.S. methyl bromide obligations (even the 50% to 30% reduction) are equivalent to many developing countries' entire consumption of all ozone-depleting substances under the Montreal Protocol, including CFCs, halons, carbon tetrachloride, methyl chloroform and methyl bromide. Large scale defections from the Protocol could have significant health and environmental consequences. While many developing countries on an individual level only consume a small amount of ozone depleting substances, the combined impact of many small users failing to meet their targets is large. This is particularly a concern as developing countries have not yet faced a final phaseout obligation with respect to the chlorofluorocarbons, the CFCs. These are highly potent ozone depleters, and an unchecked growth in their use in developing countries into the future could negate the billions of dollars already invested by the U.S. and other developed countries in ozone layer protection.