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**JOINT TESTIMONY OF ENVIRONMENTAL PROTECTION
AGENCY, DEPARTMENT OF STATE AND DEPARTMENT OF
AGRICULTURE**

**DELIVERED BY
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OF THE
U.S. ENVIRONMENTAL PROTECTION AGENCY,
BEFORE THE
SUBCOMMITTEE ON AIR AND ENERGY
OF THE
COMMITTEE ON ENERGY AND COMMERCE,
U.S. HOUSE OF REPRESENTATIVES**

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 recommendation 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 environmental 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.

