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## **ENVIRONMENTAL PROTECTION AGENCY**

**[FRL- 9929-86-OAR]**

### **Protection of Stratospheric Ozone: Request for Methyl Bromide Critical Use Exemption Applications**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice.

**SUMMARY:** The Environmental Protection Agency (EPA) is providing notice of the process for submitting applications for critical use exemptions for 2018 and subsequent years. Critical use exemptions are exceptions to the phaseout of production and import of methyl bromide, a controlled class I ozone-depleting substance. Critical use exemptions must be permitted by the Parties to *the Montreal Protocol on Substances that Deplete the Ozone Layer* and must also be in accordance with the Clean Air Act and EPA regulations. Applications received in response to this notice will be considered as the basis for submitting potential nominations for critical use exemptions to future Meetings of the Parties to the Montreal Protocol. Critical use exemptions allow production, import, and use of methyl bromide in the specific year for which the Parties to the Montreal Protocol permit the use. All entities interested in obtaining a critical use exemption must provide EPA with the technical and economic information outlined in this notice to support a “critical use” claim by the deadline specified in this notice, even if they have applied for an exemption in previous years.

**DATES:** Applications for critical use exemptions must be submitted to EPA no later than

September 15 of the calendar year three years prior to the calendar year for which the exemption is sought. An application for a critical use exemption for calendar year 2018, for example, must be submitted by September 15, 2015.

**ADDRESSES:** Application forms are available at [www.epa.gov/ozone/mbr/cueinfo.html](http://www.epa.gov/ozone/mbr/cueinfo.html). EPA encourages users to submit applications electronically to [arling.jeremy@epa.gov](mailto:arling.jeremy@epa.gov). Users can also submit applications by U.S. mail to: U.S. Environmental Protection Agency, Office of Air and Radiation, Stratospheric Protection Division, Attention Methyl Bromide Team, Mail Code 6205J, 1200 Pennsylvania Ave, N.W., Washington, DC 20460.

**Confidentiality:** Application materials that are confidential should be submitted under separate cover and be clearly identified as “confidential business information.” Information covered by a claim of business confidentiality will be treated in accordance with the procedures for handling such information under 40 CFR part 2, subpart B, and will be disclosed only to the extent and by means of the procedures set forth in that subpart. If no claim of confidentiality accompanies the information when it is received by EPA, the information may be made available to the public by EPA without further notice to the submitter (40 CFR 2.203). EPA may place a copy of Worksheet 6 from the application in the public domain. Any information on Worksheet 6 shall not be considered confidential and will not be treated as such by the Agency.

**FOR FURTHER INFORMATION CONTACT:**

General Information: U.S. EPA Stratospheric Ozone Information inbox, [spdcomment@epa.gov](mailto:spdcomment@epa.gov); also [www.epa.gov/ozone/mbr](http://www.epa.gov/ozone/mbr).

Technical Information: Bill Chism, U.S. Environmental Protection Agency, Office of Pesticide Programs (7503P), 1200 Pennsylvania Ave., N.W., Washington, DC, 20460, 703-308-8136.

Email: [chism.bill@epa.gov](mailto:chism.bill@epa.gov)

Regulatory Information: Jeremy Arling, U.S. Environmental Protection Agency, Stratospheric Protection Division (6205T), 1200 Pennsylvania Ave., N.W., Washington, DC, 20460, 202-343-9055. EPA encourages users to submit their applications electronically to arling.jeremy@epa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **I. Background on the Critical Use Exemption**

The *Montreal Protocol on Substances that Deplete the Ozone Layer* is the international agreement aimed at protecting the ozone layer by reducing and eliminating the production and consumption of stratospheric ozone-depleting substances. Methyl bromide was added to the Protocol as an ozone-depleting substance in 1992 through the Copenhagen Amendment.

While the Protocol requires developed countries like the United States to phase out the production and consumption of Methyl Bromide in 2005, it also states that the Parties may exempt from that phaseout “the level of production or consumption that is necessary to satisfy uses agreed by them to be critical uses” (Art. 2H para 5). The Parties to the Protocol included this language in the treaty’s methyl bromide phaseout provisions in recognition that alternatives might not be available by the 2005 phaseout date for certain uses agreed by the Parties to be “critical uses.”

In their Ninth Meeting (1997), the Parties agreed to Decision IX/6, setting forth the following criteria for a “critical use” determination and an exemption from the production and consumption phaseout:

- (a) That a use of methyl bromide should qualify as “critical” only if the nominating Party determines that:
  - (i) The specific use is critical because the lack of availability of methyl bromide

for that use would result in a significant market disruption; and

(ii) There are no technically and economically feasible alternatives or substitutes available to the user that are acceptable from the standpoint of environment and health and are suitable to the crops and circumstances of the nomination.

(b) That production and consumption, if any, of methyl bromide for a critical use should be permitted only if:

(i) All technically and economically feasible steps have been taken to minimize the critical use and any associated emission of methyl bromide;

(ii) Methyl bromide is not available in sufficient quantity and quality from existing stocks of banked or recycled methyl bromide, also bearing in mind the developing countries' need for methyl bromide;

(iii) It is demonstrated that an appropriate effort is being made to evaluate, commercialize and secure national regulatory approval of alternatives and substitutes, taking into consideration the circumstances of the particular nomination... Non-Article 5 Parties [which includes the U.S.] must demonstrate that research programs are in place to develop and deploy alternatives and substitutes.

In 1998, Congress amended the Clean Air Act to require EPA to conform the U.S. phaseout schedule for methyl bromide to the provisions of the Protocol and to allow EPA to provide a critical use exemption. These amendments were codified in Section 604 of the Clean Air Act, 42 U.S.C. 7671c. Under EPA implementing regulations, the production and consumption of methyl bromide were phased out as of January 1, 2005. Section 604(d)(6), as added in 1998, allows EPA to exempt the production and import of methyl bromide from the

phaseout for critical uses, to the extent consistent with the Montreal Protocol. EPA has defined “critical use” at 40 CFR 82.3 based on the criteria in paragraph (a) of Decision IX/6.

EPA regulations at 40 CFR 82.4 prohibit the production and import of methyl bromide in excess of the amount of unexpended critical use allowances held by the producer or importer, unless authorized under a separate exemption. The use of methyl bromide that was produced or imported through the expenditure of production or consumption allowances prior to 2005, while not confined to critical uses under EPA’s phaseout regulations, is subject to the labeling restrictions under FIFRA as specified in the product labeling.

## **II. Critical Use Nomination Process**

Entities requesting critical use exemptions should send a completed application to EPA on the candidate use by September 15, three years prior to the year of the intended use. This timing is necessary for the U.S. Government to complete its consideration for nomination to the United Nations Environment Programme and the Parties to the Montreal Protocol in a timely manner; for the Parties to reach a decision on the nomination; and for EPA to undertake notice-and-comment rulemaking. For example, applications for the 2018 growing season must be submitted by September 15, 2015. Critical use exemptions are valid for only one year and do not automatically renew. All users wanting to obtain an exemption must apply to EPA annually even if they have applied for critical uses in prior years. Because of the potential for changes to registration status, costs, and economic aspects of producing critical use crops and commodities, applicants must fill out the application form completely.

Upon receipt of applications, EPA will review the information and work with other interested Federal agencies as required in section 604 of the Clean Air Act to determine whether the candidate use satisfies Clean Air Act requirements, and whether it meets the critical use

criteria adopted by the Parties to the Montreal Protocol and warrants nomination by the United States for an exemption.

All Parties, including the United States, choosing to submit nominations to the UNEP Ozone Secretariat must do so by January 24 to be considered by the Parties at their annual meeting later that year. The UNEP Ozone Secretariat forwards nominations to the Montreal Protocol's Technical and Economic Assessment Panel (TEAP) and the Methyl Bromide Technical Options Committee (MBTOC). The MBTOC and the TEAP review the nominations to determine whether they meet the criteria for a critical use established by Decision IX/6, and to make recommendations to the Parties for critical use exemptions. The Parties then consider those recommendations at their annual meeting before making a final decision. If the Parties determine that a specified use of methyl bromide is critical and permit an exemption from the Protocol's production and consumption phaseout for that year, EPA may then take domestic action to allow the production and consumption to the extent consistent with the Clean Air Act.

### **III. Information Required for Critical Use Applications**

In prior years, EPA issued an annual notice requesting applications for critical use exemptions. Through this action, EPA provides the information necessary to enable applications to be submitted for critical use exemptions for methyl bromide for all future control periods (calendar years). Entities interested in obtaining a critical use exemption must complete the application form available at [www.epa.gov/ozone/mbr/cueinfo.html](http://www.epa.gov/ozone/mbr/cueinfo.html).

Applications requesting critical use allowances should include information that U.S. Government agencies and the Parties to the Protocol can use to evaluate the candidate use according to the criteria in Decision IX/6 described above. Applications that fail to include sufficient information may not be nominated.

Specifically, applications should include the information requested in the current version of the TEAP Handbook on Critical Use Nominations. The handbook is available electronically at [http://ozone.unep.org/Assessment\\_Panels/TEAP/Reports/MBTOC/Handbook%20CUN-version5-27Nov06.pdf](http://ozone.unep.org/Assessment_Panels/TEAP/Reports/MBTOC/Handbook%20CUN-version5-27Nov06.pdf). EPA requests that applications contain the following information, as described in the handbook, in order for the U.S. to provide sufficient information to the Montreal Protocol's technical review bodies within the nomination:

- A clear statement on the specific circumstances of the nomination which describe the critical need for methyl bromide and quantity of methyl bromide requested;
- Data on the availability and technical and economic feasibility of alternatives to the proposed methyl bromide use;
- A review of the comparative performance of methyl bromide and alternatives including control of target pests in research and commercial scale up studies;<sup>1</sup>
- A description of all technically and economically feasible steps taken by the applicant to minimize methyl bromide use and emissions;
- Data on the use and availability of stockpiled methyl bromide;
- A description of efforts made to test, register, and commercially adopt alternatives;
- Plans for phase-out of critical uses of methyl bromide; and
- The methodology used to provide economic comparisons.

EPA's website ([www.epa.gov/ozone/mbr/alts.html](http://www.epa.gov/ozone/mbr/alts.html)) contains a list of current and potential alternatives. To support the assertion that a specific use of methyl bromide meets the requirements of the critical use exemption, applicants must demonstrate that none of the listed

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<sup>1</sup> Where an alternative is not registered for use in a particular jurisdiction, growers in that jurisdiction need not address the performance of that particular alternative.

alternatives are technically and economically feasible for that use. In addition, applicants should describe research plans which include the pest(s), chemical(s), or management practice(s) they will be testing to support their transition from methyl bromide.

The Office of Management and Budget (OMB) has approved the information collection requirements contained in this notice under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. and has assigned OMB control number 2060-0482.

Since neither the Protocol nor the Clean Air Act establish a specific end date for Critical Use Exemptions, anyone interested in obtaining a critical use exemption may apply. However, the language and spirit of controls on ozone depleting substances under the Montreal Protocol envision a phaseout of methyl bromide and for the critical use exemption to be a “temporary derogation” from that phaseout. Over the last decade, the research, registration, and adoption of alternatives has allowed many sectors to successfully transition from methyl bromide. The number of sectors nominated has declined from seventeen for 2006 to one for 2017. Below is information on how the agency evaluated recent applications for specific uses when considering nominations for critical uses, as well as specific information needed for the United States to successfully defend any future nominations for critical uses.

#### Commodities such as dried fruit and nuts

Data reviewed by EPA for commodities such as dried fruit and nuts indicate that sulfuryl fluoride is effective against key pests. The industry has mostly converted to sulfuryl fluoride and no market disruption has occurred. Rapid fumigation is not a critical condition for this sector and therefore, products can be treated with sulfuryl fluoride or phosphine and be held for relatively long periods of time without a significant economic impact.

To support a nomination, applicants should address potential economic losses due to pest

pressures, changes in quality, changes in timing, and any other economic implications for producers when converting to alternatives. Alternatives for which such information is needed are: sulfuryl fluoride, propylene oxide (PPO), phosphine, and controlled atmosphere/temperature treatment systems.

Applicants should include the costs to retrofit equipment or design and construct new fumigation chambers for these alternatives. For the economic assessment applicants should provide: the amount of fumigant gas used (for both methyl bromide and alternatives, which may include heat), price per pound of the fumigant gas from the most recent use season, application rates, differences in time required for fumigation, differences in labor inputs (i.e., hours and wages) associated with alternatives, the amount of commodity treated with each fumigant/treatment and the value of the commodity being treated/produced. Applicants should also provide information on changes in costs for any other practices or equipment used (e.g. sanitation and IPM) that are not needed when methyl bromide is used for fumigation, including information on the size of fumigation chambers where methyl bromide is used, the percent of commodity fumigated under tarps, the length of the harvest season, peak of the harvest season and duration, and volume of commodity treated daily at the harvest peak.

Where applicable, also provide examples of specific customer requests regarding pest infestation and examples of any phytosanitary requirements of foreign markets (e.g., import requirements of other countries) that may necessitate use of methyl bromide accompanied by explanation of why the methyl bromide quarantine and preshipment (QPS) exemption may not be applicable for this purpose. In addition, include information on what pest control practices organic producers are using for their commodity. Applicants should also address their efforts to secure and use stockpiled methyl bromide.

### Dried Cured Pork

Applicants should list how many facilities have been fumigated with methyl bromide over the last three years; the rate, volume, and target concentration over time [CT] of methyl bromide at each location; volume of each facility; number of fumigations per year; and the materials from which the facility was constructed. It is important for applicants in this sector to specify research plans into alternatives and alternative practices that support the transition from methyl bromide, as well as information on the technical and economic feasibility of using recapture technologies. Applicants should also address their efforts to secure and use stockpiled methyl bromide. This is particularly important for this sector given the low volume of methyl bromide usage.

### Cucurbits, Eggplant, Pepper, and Tomato

EPA found in its review of applications for cucurbits, eggplant, pepper, and tomato that although no single alternative is effective for all pest problems, multiple year data indicates that the alternatives in various combinations provide control equal or superior to methyl bromide plus chloropicrin. Several research studies show that the three-way mixture of 1,3-dichloropropene plus chloropicrin plus metam sodium can effectively suppress pathogens (*P. capsici*, *F. oxysporum*) and nematodes.

To support a nomination, applicants should address potential changes to yield, quality, and timing when converting to alternatives, including: the mixture of 1,3-dichloropropene plus chloropicrin, the three-way mixture of 1,3-dichloropropene plus chloropicrin plus metam (sodium or potassium) or allyl isothiocyanate (Dominus™) used in place of metam, dimethyl disulfide (DMDS), and any fumigationless system (if data are available).

Applications should address regulatory and economic implications for growers and your

region's production of these crops using these alternatives, including the costs to retrofit equipment and the differential impact of buffers for methyl bromide plus chloropicrin compared to the alternatives. For the economic assessment, applicants should provide the following: price per pound of fumigant gas used (both methyl bromide and alternatives) from the most recent use season; application rates; value of the crop being produced; differences in labor inputs (i.e., hours and wages); and any differences in equipment costs or time needed to operate equipment associated with alternatives. Applicants should also address their efforts to secure and use stockpiled methyl bromide.

### Strawberry Fruit

Based on EPA's review of information as part of the 2016 nomination process, EPA believes alternatives are available as advances have been made: 1) in safely applying 100% chloropicrin, 2) in strategies to improve efficacy in applying 1,3-dichloropropene, or mixtures of 1,3-dichloropropene plus chloropicrin, 3) in using the three-way mixture of 1,3-dichloropropene plus chloropicrin plus metam (sodium or potassium) or allyl isothiocyanate (Dominus™) used in place of metam in states other than California, and 4) in transitioning from experimental to commercial use of non-chemical tools, such as steam, anaerobic soil disinfestations, and substrate production.

To support a nomination, applicants should address potential changes to yield, quality, and timing when converting to alternatives, including: straight chloropicrin, the mixture of 1,3-dichloropropene plus chloropicrin, the three-way mixture of 1,3-dichloropropene plus chloropicrin plus metam (sodium or potassium) or allyl isothiocyanate (Dominus™) used in place of metam in states other than California, or dimethyl disulfide (DMDS), and any fumigationless system (if data are available).

Applications should address regulatory and economic implications for growers and their region's production of these crops using these alternatives, including the costs to retrofit equipment and the differential impact of buffers for methyl bromide plus chloropicrin compared to the alternatives. For the economic assessment, applicants should provide the following: price per pound of fumigant gas used (both methyl bromide and alternatives) from the most recent use season; application rates; value of the crop being produced; differences in labor inputs (i.e., hours and wages); and any differences in equipment costs or time needed to operate equipment associated with alternatives. Applicants should also address their efforts to secure and use stockpiled methyl bromide.

#### Orchard Replant

Data reviewed by EPA for orchard replant indicate that while no single alternative is effective for all pest problems, numerous field trials indicate alternatives to methyl bromide are effective. Therefore, EPA has concluded that transitioning to the alternatives is feasible without substantial losses. Registered alternatives are available for individual-hole treatments, and soil preparation procedures are available to enable effective treatment with alternatives even in soils with high moisture content.

To support a nomination, applicants should address potential changes to yield, quality, and timing when converting to alternatives, including: the mixture of 1,3-dichloropropene plus chloropicrin, the three way-mixture of 1,3-dichloropropene plus chloropicrin plus metam (sodium or potassium), dimethyl disulfide (DMDS), and steam.

Applications should address regulatory and economic implications for growers and your region's production of these crops using these alternatives, including the costs to retrofit equipment and the differential impact of buffers for methyl bromide plus chloropicrin compared

to the alternatives. For the economic assessment, applicants should provide the following: price per pound of fumigant gas used (for both methyl bromide and alternatives) from the most recent use season; application rates; value of the crop being produced; differences in labor inputs (i.e., hours and wages); and any differences in equipment costs or time needed to operate equipment associated with alternatives. Applicants should also address their efforts to secure and use stockpiled methyl bromide.

### Ornamentals

EPA found in its review of applications for ornamentals that while no single alternative is effective for all pest problems, multiple-year data indicate that the alternatives in various combinations provide control equal or superior to methyl bromide plus chloropicrin. Research demonstrates that 1,3-dichloropene plus chloropicrin, the three way mixture of 1,3-dichloropene plus chloropicrin plus metam sodium, and dimethyl disulfide plus chloropicrin all show excellent results. To support a nomination, applicants should address potential changes to yield, quality, and timing when converting to alternatives, including: the mixture of 1,3-dichloropropene plus chloropicrin, the three way mixture of 1,3-dichloropropene plus chloropicrin plus metam (sodium or potassium) or allyl isothiocyanate (Dominus™) used in place of metam, dimethyl disulfide (DMDS), and steam.

Applications should address regulatory and economic implications for growers and their region's production of these crops using these alternatives, including the costs to retrofit equipment and the differential impact of buffers for methyl bromide plus chloropicrin compared to the alternatives. For the economic assessment, applicants should provide the following: price per pound of fumigant gas used (both methyl bromide and alternatives) from the most recent use season; application rates; value of the crop being produced; differences in labor inputs (i.e.,

hours and wages); and any differences in equipment costs or time needed to operate equipment associated with alternatives. Applicants should also address their efforts to secure and use stockpiled methyl bromide.

### Nurseries

In considering this sector in the 2016 nomination process, EPA noted that a Special Local Need label allows Telone II to be used in accordance with certification standards for propagative material.<sup>2</sup>

To support a nomination, applicants should address potential changes to yield, quality, and timing when converting to alternatives, including: the mixture of 1,3-dichloropropene plus chloropicrin, the three-way mixture of 1,3-dichloropropene plus chloropicrin plus metam (sodium or potassium) or allyl isothiocyanate (Dominus™) used in place of metam in states other than California, dimethyl disulfide (DMDS), and steam.

Applications should address regulatory and economic implications for growers and your region's production of these crops using these alternatives, including the costs to retrofit equipment and the differential impact of buffers for methyl bromide plus chloropicrin compared to the alternatives. For the economic assessment, applicants should provide the following: price per pound of fumigant gas used (for both methyl bromide and alternatives) from the most recent use season; application rates; value of the crop being produced; differences in labor inputs (i.e., hours and wages); and any differences in equipment costs or time needed to operate equipment associated with alternatives. Applicants should also address their efforts to secure and use stockpiled methyl bromide.

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<sup>2</sup> EPA also noted that growers can use a combination of methyl bromide for quarantine situations and 1,3-D plus chloropicrin for non-quarantine situations to meet certification requirements

## Golf Courses

EPA has not found that a significant market disruption would occur in the golf industry in the absence of methyl bromide. To support a nomination, applicants should address potential changes to quality when converting to alternatives, including: Basamid, chloropicrin, 1,3-dichloropene, 1,3-dichloropene plus chloropicrin, metam sodium, or allyl isothiocyanate (Dominus™), and steam. Non-fumigant alternatives currently in use (e.g. additional pesticides, fertilizers, different cultural practices, and increased management) should also be described.

Applications should address regulatory and economic implications for growers using these alternatives, including the costs to retrofit equipment and the differential impact of buffers for methyl bromide compared to the alternatives. For the economic assessment, applicants should provide the following: price per pound of fumigant gas used (both methyl bromide and alternatives) from the most recent use season; application rates; economic impact for the golf course from a transition to alternatives (e.g. downtime when resurfacing, years between fumigations); differences in labor inputs (i.e., hours and wages); and any differences in equipment costs or time needed to operate equipment associated with alternatives. Supporting evidence could be included that would demonstrate that alternatives lead to more frequent resurfacing and therefore, greater adverse economic impacts. Applicants should also address their efforts to secure and use stockpiled methyl bromide.

**Authority:** 42 U.S.C. 7414, 7601, 7671-7671q.

Dated: June 23, 2015.

Sarah Dunham, Director,  
Office of Atmospheric Programs.

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